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December 30, 1991

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JAN 23 1992
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Director
Arkansas Department of Pollution Control & Ecology
Attention: Air Division
P. O. Box 9583
Little Rock, Arkansas 72219

Attention: David Morrow

Re: Transmittal of Application for Modification to an
Air Pollution Control Permit
Camden Mill
International Paper
Permit No. 990-A
WCC File 91B531C

Dear Sir:

Enclosed is the application to modify International Paper's Camden Mill Air Pollution Control Permit, Permit No. 990-A. The ADPCE application form(s) will be sent under separate cover from International Paper.

If you have any questions, please feel free to contact us.

Very truly yours,

Walter Scott Wilby

BRContractor

Bharat R. Contractor, P. E.

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JAN 29 1992
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WSW:klu
Enclosure

AAIA531.CVL IP1

PSD PERMIT APPLICATION TO MODIFY EXISTING STATE AIR PERMIT 990-A
VOLUME I OF III

INTERNATIONAL PAPER
CAMDEN MILL
OUACHITA COUNTY, ARKANSAS

Prepared for
International Paper
Dallas, Texas

December 1991

WCC File 91B531C

Woodward-Clyde Consultants

Consulting Engineers, Geologists, and Environmental Scientists
2822 O'Neal Lane, Baton Rouge, LA 70896

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1.0 INTRODUCTION

International Paper has constructed a gas turbine cogeneration facility at its existing paper and pulp mill located in Camden, Ouachita County, Arkansas. The Arkansas Department of Pollution Control and Ecology (ADPCE) granted permit number 990-A to International Paper on January 10, 1990 to authorize construction and operation of this existing cogeneration turbine.

Following the installation of the cogeneration turbine, International Paper experienced difficulty in meeting its permitted hourly emission rates for carbon monoxide (CO) and oxides of nitrogen (NO_x). Discussions between the ADPCE and International Paper have led to the decision to file an air permit application which addresses Prevention of Significant Deterioration (PSD). International Paper wishes to clearly state that it is their position that the existing cogeneration facility is not now, nor has it ever been, subject to the provisions of PSD. This position is substantiated by the continuous emission monitor data contained in Appendix D which demonstrates that the actual annual emissions of NO_x and CO are within the limits set by air permit number 990-A. However, International Paper wishes to resolve this issue and has agreed to submit this air permit application.

The existing cogeneration turbine is a General Electric Frame 5 gas turbine which is being used as the prime mover for a 27 megawatt (MW) electric generator. Almost 100 percent of this generator's output is used for the Camden Mill's internal energy requirements. Natural gas is the only fuel utilized in this cogeneration turbine. The operating schedule for the cogeneration turbine is 24 hours per day, 365 days per year (i.e., 8,760 hours per year).

The facility location is approximately 3 miles south of Camden, Arkansas just east of Highway 7 at 1944 Adams Avenue. The existing Camden Mill occupies approximately 350 acres of land. A site location map is provided in Figure 1-1 and Figure 1-2 shows a

detailed plot plan for the Camden Mill highlighting the location of the existing cogeneration turbine.

The exhaust gases from the cogeneration system will exit from emission point SN-13. Sensible heat from the gas turbine exhaust gases will be recovered in a downstream waste heat boiler. A duct burner will be used to provide supplemental firing to ensure a stable supply of steam is provided by the waste heat boiler.

The design and operation of the facility includes several measures to minimize emissions. These measures include:

1. Using natural gas as the sole fuel to power the gas turbine and the duct burner.

2. Injecting steam into the turbine combustor nozzles to lower the combustor flame temperature and, therefore, the NO_x emissions.

The existing cogeneration turbine is subject to Standards of Performance for Stationary Gas Turbines Constructed After October 3, 1977, (40 CFR 60, Subpart GG, adopted September 10, 1979 and amended November 5, 1987), and is subject to the emission limitation of 150 ppmvd NO_x. Additionally, the duct burner is subject to Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units Constructed After June 19, 1984, (40 CFR 60, Subpart Db, adopted December 16, 1987).

The controlled emission rate of at least one federally regulated pollutant will exceed 100 tons per year and subject the facility to regulations for the Prevention of Significant Deterioration of Air Quality (PSD), 40 CFR 52.21 as amended through July 1, 1991. As defined by these regulations, the Camden Mill is a "major" stationary source and all "significant" pollutants emitted by the gas turbine cogeneration facility are subject to PSD review.

International Paper will construct and operate this facility in compliance with all applicable local, state, and federal air quality regulations.

2.0
PROCESS DESCRIPTION

The equipment and process designations referred to in this section are taken from the process flow diagram shown in Figure 2-1. The equipment numbers also correspond to those shown on the plot plan in Figure 1-2.

2.1 FUEL

Fuel used for the Cogeneration Unit will consist solely of natural gas. No alternate fuels such as fuel gas or fuel oil will be fired in this equipment. Typical characteristics of the natural gas to be used are shown on the Emission Source Table (Table 1) in Volume I, Appendix A. The firing rate for the gas turbine (A) will be 351 Mscf per hour with the downstream duct burner (B) firing at rates between 0 and 238 Mscf per hour. This rate will vary depending on the additional firing required to satisfy the plant steam and electrical requirements. The Cogeneration Unit is comprised of the G.E. Gas Turbine (A), the 27 MW Electrical Generator (E), and the Waste Heat Recovery Boiler (B).

The Power Boilers (C) will be used as backup to the Cogeneration Unit when it is not operational due to maintenance or repairs. They will be kept in a cold down state when not in use. They will provide steam to the mill and fire up to 300,000 scf per hour of natural gas under normal supply conditions, and will use No. 6 fuel oil as an emergency fuel during shortages of natural gas. International Paper would like the authority to periodically use No. 6 fuel oil in these boilers to assure their capability to operate under such emergency conditions. The bark and recovery boilers (D) also produce steam for the mill electrical and steam distribution systems (G) and (I).

The power boilers will be used at times when the Cogeneration Unit is operating. International Paper would like the authority to fire these boilers simultaneously with the Cogeneration Unit for a total of 80 boiler days. This would allow the simultaneous firing of the boilers for a maximum of 40 days. When the Power Boilers are needed during concurrent operation with the Cogeneration Unit, the amount of time it takes to

heat them to the proper operating temperature will be counted against the 80 boiler days.

2.2 STEAM

The steam produced by the Waste Heat Recovery Boiler (B) and the Bark and Recovery Boilers will be used for injection into the G.E. Gas Turbine (A), for use in driving the plant steam turbines (F) to produce electricity (H) for the International Paper Power Distribution System (G), and to provide steam for the International Paper Steam Distribution System (I).

The Waste Heat Boiler (B) will produce between 128,000 and 300,000 lbs per hour of steam depending on the needs of the Power and Steam Distribution Systems. Up to 45,000 lbs per hour of this will be used for steam injection to the gas turbine (A). The Power Boilers (C) will not normally produce steam except when the Cogeneration Unit is down.

A total of 600,000 lbs per hour of steam is routed to the International Paper Steam Distribution System. The Power Boilers (C) will be used to maintain the 600,000 lbs per hour demand from the plant when one or more of the Cogeneration Unit, the Bark Boiler, or the Recovery Boiler is down.

2.3 ELECTRICITY

The output shaft of the G.E. Gas Turbine (A) will drive an electrical generator (E) to produce 27 megawatts of electrical power. The Waste Heat Boiler provides steam to existing steam turbines (F) which produce an average total of 7 megawatts of electrical power. The total electrical output of 34 megawatts will normally be used at the plant site. On the rare occasions when power generation from the G.E. Gas Turbine (A) or the steam turbines (F) is interrupted or during periods of excess capacity, a utility tie-in with Arkansas Power and Light will be utilized.

2.4 COGENERATION UNIT

The following description will refer to the process flow diagram in Figure 2-2.

Compressed air from the Compressor Turbines (A) along with steam and natural gas are injected into the Combustor (B) to produce approximately 990,000 lbs per hour of exhaust gas to drive the Expander Turbines (C). Up to 45,000 lbs per hour of steam, and 15,000 lbs per hour of fuel will be injected into the Combustor. The Expander Turbines drive the output shaft to produce electricity. The exhaust gases are then routed to the heat recovery section. The temperature of the exhaust gases as they enter this section (1) is approximately 900°F. The gases pass over a superheater (E) before passing over the duct burner (F). The duct burner is fired up to 238 MMBtu per hour with natural gas. This combustion basically utilizes and depletes the remaining oxygen in the turbine exhaust.

The exhaust temperature (2) immediately downstream of the duct burner (F) increases to about 1560°F. This heat from the exhaust gas is recovered by the superheaters (E) and (G), the boiler (H), and the recuperator (I) which comprise the Waste Heat Recovery Section. After the exhaust gases pass through all these heat exchangers (3), the temperature drops to approximately 350°F. From here the exhaust gas is routed up the exhaust stack (SN-13).

3.0
APPLICABLE STATE AND FEDERAL PROGRAMS

3.1 STATE PROGRAMS

These sources will be in compliance with Arkansas State Implementation Plan. These sources will also be in compliance with all sections of the Prevention of Significant Deterioration Supplement to the Regulations of the Arkansas Plan of Implementation for Pollution Control. All parts under Section 4 of the PSD Supplement have been followed in the preparation of this permit modification application including:

- Section 4(c) Ambient Air Increments: Dispersion modeling indicates that there is no significant NO_x impact. Because of this, there is no need to conduct a NO_x increment analysis. Volume II, Appendix G contains additional information relevant to this section.

- Section 4(d) Ambient Air Ceilings: The National Ambient Air Quality Standards (NAAQS) for NO_x and CO were not exceeded. Information relevant to this section of the PSD Supplement is contained in Section 5.0 and Tables 5-3, 5-4, and 5-5 of this permit modification application.

- Section 4(h) Stack Heights: All stack heights conform to "Good Engineering" Practice.

- Section 4(i) Review of Major Stationary Sources and Major Modifications - Source Applicability and Exemptions: Though International Paper maintains that the Cogeneration Unit is not and has not been subject to the requirements of 40 CFR 52.21, this application has been prepared as if it was. Since this application to modify permit number 990-A was mandated by the ADPCE, representations made in this application now make the Cogeneration Unit subject to PSD review

(40 CFR 52.21). This unit is not exempt from PSD review by any of the paragraphs or parts of Section 4(i).

- Section 4(j) Control Technology Review: An analysis of the best available control technology (BACT) is contained in Section 4.0 of this permit modification application. This BACT Analysis was conducted for NO_x and CO, the only pollutants emitted in significant quantities.

- Section 4(k) Source Impact Analysis: A Source Impact Analysis was conducted based on the dispersion modeling of NO_x and CO emissions from the Cogeneration Unit (SN-13). No violation of the NAAQS or baseline concentrations were found.

- Section 4(l) Air Quality Models: Only the current versions EPA approved models were used for this application. Output from these models is contained in Volume II, Appendix H of this permit modification application.

- Section 4(m) Air Quality Analysis: In the preapplication analysis, no significant impact was shown for NO_x or CO. This analysis was conducted according to the protocol attached in Volume II, Appendix G of this permit modification application. This modeling protocol was discussed with the ADPCE during the required preapplication meeting, and was submitted previously for their comments. Section 5.0 of this application contains information relevant to Section 4(m) of the PSD Supplement.

- Section 4(o) Additional Impact Analysis: Section 5.0 of this permit modification application contains information relevant to Section 4(o) of the PSD Supplement.

- Section 4(p) Sources Impacting Federal Class I Areas - Additional Requirements: Emissions from the Cogeneration Unit were found to have no significant impact on Federal Class I areas.

3.2 NEW SOURCE PERFORMANCE STANDARDS

This turbine is subject to the emission limitations defined in NSPS, Subpart GG. Paragraphs 60.332(d) and 60.332(a)(2) describe the NO_x emission standard as follows:

$$STD = 0.0150 \left(\frac{14.4}{y}\right) + F$$

where

STD	=	Allowable NO_x emissions in percent by volume on a dry basis with 15 percent oxygen
F	=	Fuel bound nitrogen
y	=	Manufacturer's rated heat rate at manufacturer's rated peak load in kilojoules per watt-hour

By this definition

$$y = 11{,}370 \frac{BTU}{KW\text{-}hr} \times \frac{1\ KW}{1{,}000\ W} \times \frac{1{,}054.35\ Joules}{BTU} \times \frac{1\ KJ}{1{,}000\ Joules}$$

$$= 11.99 \frac{KJ}{W\text{-}hr}$$

and

$$STD = 0.0150 \left(\frac{14.4}{11.99}\right) + 0$$

$$= 0.01802 \textit{ volume percent}$$

$$= 1.802 \textit{ E-4 volume fraction}$$

$$= 180 \textit{ ppmvd at 15 percent oxygen}$$

This turbine will also comply with the SO_2 standards of paragraphs 60.333(a) and (b) by using only natural gas with 2 grains of sulfur per 1,000 scf as fuel. This is equivalent to 0.00068 weight percent.

The steam generating portion of the Cogeneration Unit is subject to the Standards of Performance for Industrial-Commercial-Institutional Steam Generation Units, NSPS, Subpart Db. It is not subject to Subpart D because the maximum heat release of the duct burner is less than 250 million Btus per hour. Since this is not an electric utility boiler (less than 1/3 of the output is used off-site), it is not subject to NSPS, Subpart Da.

The duct burner will minimize emissions of SO_2, particulate matter and NO_x by burning only natural gas as fuel. Firing only natural gas will result in SO_2 and particulate matter emission factors of 0.0006 and 0.003 pound per million Btu, respectively. Those factors are less than any of the standards listed in NSPS, Subpart Db. Paragraph 60.44(b) of this subpart limits NO_x emissions to 0.2 pounds per million Btu since the duct burner is used in a combined cycle system. However, NO_x emissions from the duct burner alone are not expected to exceed 0.1 pounds per million Btus because of the use of low NO_x burners.

The Standards of Performance for Kraft Pulp Mills, 40 CFR 60, Subpart BB, does not apply to the Cogeneration Unit since it does not meet the applicability requirements of Section 60.280.

3.3 NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS

None of the NESHAP rules apply to this unit.

4.0
BEST AVAILABLE CONTROL TECHNOLOGY ASSESSMENT

4.1 REQUIREMENTS AND APPLICABILITY

As shown in Tables 1-1 through 1-5, the only emissions that are subject to PSD review are those of NO_x and CO. By limiting the hours of operation of the power boilers, the decrease in their emissions of PM-10 offsets the PM-10 emissions from the Cogeneration Unit. Emission of SO_2 and VOC remain insignificant without the corresponding offsets. Since NO_x and CO emissions are significant, they are subject to PSD review. As such, a Best Available Control Technology (BACT) analysis for NO_x and CO is required.

BACT is defined as an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation which the administrative authority, on a case-by-case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable. BACT limitations must not cause the exceedance of any applicable New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Pollutants (NESHAP). BACT limits must also comply with all of the applicable limits established by the Arkansas Department of Pollution Control and Ecology. In addition, BACT analysis is equipment/pollutant specific, and it should be examined on a case by case basis. An evaluation of the air pollution control techniques and systems, including a cost-benefit analysis of alternative control technologies capable of achieving a higher degree of emission reduction than NSPS, is required. The cost-benefit analysis requires the documentation of the materials, energy, and economic penalties associated with the proposed and alternative control systems as well as the environmental benefits derived from these systems. A decision on BACT is based on sound judgement, balancing environmental benefits with energy, economic and other impacts (USEPA 1978). Figure 4-1 shows the EPA's top-down approach followed for the BACT analysis of this project. The BACT assessment (1) identifies alternative control methods, (2) considers the technical feasibility of each method, (3) ranks the technically feasible alternatives in terms of control effectiveness, (4) evaluates the economic, energy, and environmental aspects of technically feasible alternatives, and (5)

identifies the control method considered BACT for each pollutant and source combination.

4.2 NO_x CONTROL TECHNOLOGIES

NO_x formation is a function of three main variables: fuel bound nitrogen in the fuel, burned in the combustion chamber, combustion chamber flame temperature, and combustion chamber residence time. Conceptually, several types of NO_x control technologies exist to control the formation of NO_x at its source of formation. This can involve limiting the fuel bound nitrogen; lowering the flame temperature of the combustion chamber through wet injection, chamber design, and/or fuel to air ratios (combustion control); and decreasing the residence time of the fuel in the combustion chamber usually through the design of the combustion device.

The other type of control technology involves reducing the NO_x content of the combustion exhaust gases (post-combustion control). This can involve Selective Catalytic Reduction, Nonselective Catalytic Reduction, and Selective Noncatalytic Reduction. These control technologies can also be used in combination with the technologies that control NO_x at its source of formation.

The Camden Cogeneration Unit currently controls the amount of NO_x formed from fuel bound nitrogen by limiting the fuel for this unit to only natural gas. The flame temperature of the gas turbine combustion chamber is lowered, thereby reducing the amount of NO_x formed, by steam injection. Water injection is not used in the Cogeneration Unit. Also, the flame temperature of the downstream duct burner is controlled through the use of low NO_x burners. The General Electric Frame 5 Turbine as well as the existing Coen Duct Burner limit NO_x emissions by their design.

The following sections will discuss these and other control options as they relate to BACT. Given the controls that are currently in place, the control techniques are listed below in the hierarchy of the most stringent emission limit.

1. Wet Injection with Selective Catalytic Reduction
2. Wet Injection with Nonselective Catalytic Reduction
3. Wet Injection with Selective Noncatalytic Reduction
4. Wet Injection

4.2.1 Technically Impractical or Infeasible Options

The only technically impractical or infeasible control method for this application is Nonselective Catalytic Reduction (NSCR). NSCR is effective only in a fuel-rich combustion environment where the oxygen content of the combustion gas are less than 3%. Such a condition does not exist in gas turbines because they operate with high levels of excess air, typically 14 to 16% oxygen in the exhaust.

4.2.2 Technically Practical Control Options

Based on their efficiency of NO_x removal, the feasible control options are ranked as below:

1. Wet Injection with Selective Catalytic Reduction (60-90% efficiency)
2. Wet Injection with Selective Noncatalytic Reduction (60-90%)
3. Wet Injection (50-80%)

The control efficiencies listed above are typical values for the given technology.

4.2.2.1 <u>Wet Injection with Selective Catalytic Reduction</u>

Selective Catalytic Reduction (SCR) is a post combustion control technique which uses a gas phase reaction to remove NO_x from the exhaust gas. The gas phase reaction between NO_x and ammonia (NH_3) in the presence of a solid phase catalyst, as shown on the following page, reduces NO_x to N_2. Figure 4-2 presents a generalized diagram of a selective catalytic reduction system. Ammonia is taken from a liquid storage tank, vaporized and mixed with the flue gas prior to its contact with the catalyst. The optimum temperature for the process is between 570-750°F.

Chemical Reactions:

$$6\ NO + 4\ NH_3 + catalyst \rightarrow 5\ N_2 + 6\ H_2O$$
$$6\ NO_2 + 8\ NH_3 + catalyst \rightarrow 7\ N_2 + 12\ H_2O$$

(assume 90% NO_x is NO and 10% is NO_2)

Figure 2-2 shows the process diagram for the International Paper Cogeneration Unit. From this diagram, the location of a suitable temperature range for this reaction appears to be non-existent. The exhaust gas from the gas turbine (Point 1) is at a temperature of about 900°F. After this, the exhaust gas passes through a superheater then to the Duct Burner where the temperature increases to about 1560°F (Point 2). The heat from this gas is recovered by a series of heat exchangers: two superheaters, a boiler, and a heat recuperator. The temperature of the exhaust gas falls to about 350°F after is passes the heat exchangers (Point 3) and is finally routed to the exhaust stack. The operating conditions of the Cogeneration Unit and the placement of the equipment make the installation of an SCR system anywhere but downstream of the heat exchangers difficult at best. It would be far too costly and technically impractical to remove the ductwork and equipment upstream of the exhaust stack to make room for the SCR system. This could include not only relocating major components of the Cogeneration Unit but could also involve relocating all feed water pumps, water and electrical connections and process control connectors, and reconstructing a significant amount of ductwork.

If an SCR system were to be installed in the Cogeneration Unit, it would have to be installed downstream of the last heat exchanger. To make this a viable option, additional heat must be added to the exhaust gas after the heat recovery section to raise the exhaust temperature to a level within the range of effective SCR operation (620°F). Evaluation of SCR for economic, energy and environmental is shown in the following sections.

4.2.2.1.1 Economic Factors. The only practical way to install an SCR system in the Cogeneration Unit will be to remove the ductwork downstream of the heat recuperators and install an additional duct burner to raise the temperature of the exhaust gas to within the range of optimum NO_x conversion. Additional equipment will also be needed to provide combustion air for the added duct burner. Table 4-1 contains an annualized cost evaluation for the SCR alternative. It incorporates information provided by Babcock & Wilcox and shows that the annualized cost of controlling the Cogeneration Unit's NO_x emissions amounts to $8,323 per ton per year. This evaluation follows the procedures outlined in EPA's control cost manual (USEPA, 1990a) and EPA's draft top-down BACT guidance document (USEPA). International Paper considers the annualized cost of an SCR system for the Cogeneration Unit too high to make SCR the alternative of choice.

4.2.2.1.2 Energy Factors. Additional energy will be needed to raise the temperature of the exhaust gas. The amount of fuel necessary to raise the temperature of the exhaust gas to just above 600°F would be in excess of 80,000 scf of natural gas per hour. At the current market rate, this accounts for an annual cost of $4,328 per ton of NO_x controlled. Energy expenditures for a SCR system also consist of the added electric power needed to operate the ammonia handling system. The additional fuel requirements are sufficient in themselves to eliminate SCR from consideration.

4.2.2.1.3 Environmental Factors. The combustion of additional fuel to raise the exhaust gas temperature will add over 1.05 tons per year of PM-10, 0.21 tons per year of SO_2, 0.49 tons per year of VOC, and more importantly, 13.96 tons per year of additional CO and 34.91 tons per year of additional NO_x emissions to those already occurring from the Cogeneration Unit. The calculations used to determine these emission are located in Appendix C. Emissions of ammonia, an air toxic pollutant, will also result from SCR devices due to ammonia slip. In addition, the storage and handing of ammonia pose the potential for an accidental release. Another environmental disadvantage is the periodic need to dispose of spent or contaminated catalyst which would be considered a hazardous waste.

4.2.2.1.4 **Conclusion**. Based on the evaluation of SCR alternative for economic, energy and environmental aspects, SCR is rejected as BACT for this application.

4.2.2.2 Wet Injection with Selective Noncatalytic Reduction

Selective Noncatalytic Reduction (SNCR) is a control technology that removes NO_x from the exhaust gases. This process can be used in conjunction with combustion controls. SNCR involves the injection of a NO_x reactant without the use of a catalyst. Examples of this technology are the Exxon "Thermal $DeNO_x$" method and the "NO_xOUT" method. The Exxon Thermal $DeNO_x$ method entails injection of ammonia. Its effectiveness depends on initial exhaust gas NO_x concentration and on the temperature of the exhaust gas. Optimum NO_x reduction is achieved when ammonia is injected within a temperature range of 1700-1800°F. The NO_xOUT method uses a chemically enhanced urea solution for reaction with NO_x. The effectiveness of this method is also dependent on initial NO_x concentration and on the temperature in the reaction zone. A temperature range of 1800-1900°F is needed for greatest reduction. Both Thermal $DeNO_x$ and NO_xOUT methods require ancillary storage and handling systems for the ammonia or urea.

As shown in Figure 2-2, the maximum temperature of the exhaust gas, 1560°F, occurs after passing through the duct burner (Point 2). This temperature is not within the suitable range to make SNCR an acceptable option for controlling NO_x emissions unless an additional duct burner is installed. If the additional duct burner were installed at Point 2 of Figure 2-2, extensive rework of the cogeneration unit would have to be performed for its accommodation. This would include reconstructing the foundation, relocating either the gas turbine or the entire group of heat exchangers and removing and rebuilding a substantial amount of ductwork. In addition, feed water pumps, utility connections and process control connection would also need to be relocated. The other alternative would be to install the additional duct burner downstream of the heat exchangers at Point 3.

4.2.2.2.1 **Economic Factors**. The only practical way to install an SNCR system, without reconstructing the part of the Cogeneration Unit downstream of the gas turbine, would

be to remove the ductwork downstream of the heat recuperators (Point 3, Figure 2-2) and install an additional duct burner there to raise the temperature of the exhaust gas from 350°F to within the 1700 - 1900°F range of optimum NO_x conversion. If a SNCR system were installed downstream of the heat recuperators (Point 3), the annual fuel cost alone would exceed $9,000,000. Fuel cost per ton of NO_x controlled would total over $27,000. International Paper believes the fuel usage and associated cost are unreasonable and rejects this option as BACT on those grounds.

If the same system were installed between the duct burners and the heat recuperators, a substantial amount of fuel savings compared to the previously considered location would be realized. However, a considerable amount of additional relocation and reconstruction work would need to be done on the existing Cogeneration Unit in order to accommodate the SNCR system. The ductwork downstream of the SNCR system would need to be refabricated in order to handle the increased mass flow. The heat exchangers themselves would have to be relocated and possibly replaced. This would require extensive foundation work, and the relocation of water, steam, electrical and control connections. International Paper estimates that this work would amount to nearly $2.5 million. This is based on a labor cost of 50 percent of the "to date" labor costs of construction of the Cogeneration Unit and 75 percent of the original material costs of construction of the Cogeneration Unit. As shown in Table 4-2, this results in a control cost of $6,519 per ton of NO_x removed. International Paper considers this cost to control NO_x emissions as excessive.

4.2.2.2.2 <u>Energy Factors</u>. A substantial amount of energy will be needed to raise the temperature of the exhaust gas to around 1,800°F. The amount of natural gas necessary to accomplish this would be in excess of 468,600 scf of natural gas or 468.6 MMBtu per hour if the additional duct burner were installed downstream of the heat exchangers and 6,180 scf of natural gas or 6.18 MMBtu per hour if the additional duct burner were installed immediately downstream of the existing duct heater. The calculations describing these amounts of natural gas can be found in Appendix C. At $2.21 per MMBtu, this results in energy costs ranging from $119,000 to $9 million.

4.2.2.2.3 Conclusion. Based on the evaluation of SNCR alternative for economic and energy aspects, SNCR is rejected as BACT for this application.

4.2.2.3 Wet Injection

Wet injection is a means of reducing NO_x emissions through combustion control by reducing the combustion chamber temperature. Water or steam may be used, but in this application steam injection is used. The only difference between steam and water injection is that water has a higher heat absorbing capacity than steam due to the temperature and latent heat of vaporization associated with water. Steam has no latent heat absorbing capacity so more steam is required to achieve the same quenching effect.

Steam is injected into the primary combustion chamber to act as a heat sink, lowering the peak flame temperature of combustion. This lowers the quantity of thermal NO_x formed. The injected steam then exits the turbine as part of the exhaust. The key factor affecting NO_x reduction is the steam to fuel ratio. Typical steam injection rates can range from 0.5 pounds of steam per pound of fuel and higher. In this operation, approximately three pounds of steam are injected into the combustion chamber per pound of fuel to control NO_x in the turbine exhaust to 42 parts per million on a dry volume basis (ppmvd).

4.2.3 NO_x BACT Selection

The control options of wet injection for NO_x reduction in the gas turbine, and the combustion control technologies built into the designs of the gas turbine and duct burner, represent the best available control technology for this application. These options provide an affordable, energy efficient and environmentally acceptable alternative. Since these controls already exist for the Cogeneration Unit, no additional controls are proposed.

4.3 CO CONTROL TECHNOLOGIES

Carbon monoxide (CO) emissions in gas turbines arise from inefficient or incomplete combustion of fuel. There are three major factors which influence CO formation in gas turbines: firing temperature, combustion chamber residence time, and combustor mixing characteristics.

BACT analysis will address CO control for the Cogeneration Unit (gas turbine and duct burners). The control of CO emission from the Cogeneration Unit involves oxidizing the CO to a less noxious pollutant, CO_2. The options currently available to reduce the CO emissions, based on their CO removal efficiency, are the following:

1. Thermal Oxidation (95-98%)
2. Catalytic Oxidation (90%)

4.3.1 Thermal Oxidation

Thermal oxidation involves the conversion of CO to CO_2 at temperatures of 1400-1500° F in an oxidizer. The reaction that converts CO to CO_2 is described by

$$2\ CO + O_2 \rightarrow 2\ CO_2$$

This shows that 1 mole of oxygen is needed to convert 2 moles of carbon monoxide. In terms of weight, 1 pound of oxygen (or about 4.5 pounds of air is needed to convert 1.75 pounds of CO. The oxygen or air must also be heated to the temperature range for the thermal oxidation of CO.

4.3.1.1 <u>Economic Factors</u>

Tables 4-4 and 4-5 show the cost analyses of a thermal oxidation system installed in two different locations. International Paper considers one of the two possible locations for a thermal oxidation system to be directly upstream of the duct burner (Point 1, Figure 2-2). However, such a location would require substantial reconstruction of the

downstream portions of the Cogeneration Unit. This could include relocating the duct burners, all the heat exchangers, all feed water pumps and utility connections, and process control connections. Ductwork would also have to be replaced in order to handle the increased mass flow of the exhaust. Installing such a system is estimated to cost over $31,678 per ton of CO controlled (Table 4-5).

The other possible location of a thermal oxidation system would be downstream of the heat exchangers (Point 3, Figure 2-2). Such a location would avoid most of the cost of relocating and replacing equipment. The control cost of this alternative is estimated to be over $29,780 per ton of CO removed (Table 4-4).

Based on the economic factors alone, International Paper considers this option to be cost prohibitive.

4.3.1.2 Energy Factors

The amount of fuel needed to implement a thermal oxidation system to control CO emissions is large. Based on calculations in Appendix C for both alternatives, this amounts to 387 to 394 MMBtu/hr. This results in an annual fuel cost ranging from $7.8 million to $7.9 million. International Paper believes that this amount of fuel is excessive to control emissions which detailed dispersion modeling (Section 5.0) has shown to cause no significant impacts.

4.3.1.3 Environmental Factors

With the combustion of these significant quantities of fuel, substantial additional emissions of NO_x, particulate matter, SO_2, VOC, and CO_2 would occur. As shown in Appendix C, these emissions can amount to nearly 172 tpy of NO_x, 5.18 tpy of PM-10, 2.41 tpy of VOC and 1.04 tpy of SO_2.

4.3.1.4 Conclusion

Based on the costs and quantities of energy, the cost of equipment relocation and replacement, and the amount of additional emissions, International Paper rejects the aforementioned thermal oxidation alternatives as BACT for this application.

4.3.2 Catalytic Oxidation

Catalytic oxidation involves oxidation of CO to CO_2 in the presence of a catalyst such as platinum or rhodium at temperatures typically greater than 1,000°F. The catalyst is used to promote the oxidation reaction at these temperatures. The catalyst is placed on the activated alumina base. The catalyst acts by supplying the active sites on its surface for the oxidation reaction to occur. The typical CO removal efficiency with this control technology is 90 percent. This option is considered technically feasible since there are no traces of heavy metals or sulfur compounds in the gas stream. These can either poison the catalyst used in the catalytic oxidation, be converted to sulfuric acid mist across the catalyst bed, or react with the ammonia to form ammonium sulfate or ammonium bisulfate. The sulfate compounds can then be deposited on cooler downstream surfaces causing fouling and/or corrosion.

For the Cogeneration Unit, the only locations International Paper believes a catalytic oxidation system can be installed is downstream of the heat exchangers (Point 3, Figure 2-2) and upstream of the duct burners (Point 1, Figure 2-2). Installation downstream of the duct burners (Point 2, Figure 2-2) is made difficult by either an improper temperature range or necessary reconstruction of the portions of the Cogeneration Unit.

In this application there is no location where such a system can be installed other than downstream of the heat exchangers. Not including any necessary dismantling and reconstruction of the Cogeneration Unit, to install such a system will require additional duct burners to raise the temperature of the exhaust gas to above 1,000°F and a system to provide combustion air to the additional burners.

Why can't the Catalytic Oxidation Unit be placed after the duct burner

4.3.2.1 Economic Factors

Tables 4-3 and 4-6 contain annualized cost evaluation for the catalytic oxidizer alternatives. The annualized cost per ton to control CO by catalytic oxidation ranges from $16,736 to $29,780 per ton of CO controlled. Substantial costs would be realized in reconstructing ductwork and relocating utility connections, makeup water connections, and process control connections. Locating a catalytic oxidation system at Point 1 (Figure 2-2) would also require additional foundation work to relocate the duct burners and heat exchangers.

4.3.2.2 Energy Factors

The temperature of the gas stream leaving the heat recuperator is approximately 350° F. To achieve the desired temperature of the gas stream for the catalytic oxidizer, the gas stream has to be heated to a temperature of above 1,000°F. The amount of fuel required to heat the gas stream to the operating temperatures of the thermal oxidizer would amount to 225 MMBtu/hr or 255,000 scf of natural gas per hour. Cost for the electricity requirements to operate this energy at $2.21 per MMBtu would be almost $5 million per year. The fuel cost for locating a catalytic oxidation system at Point 3 (Figure 2-2) would amount to nearly $2.25 million per year. These calculations can be found in Appendix C.

4.3.2.3 Environmental Factors

Additional emissions of NO_x, PM-10, VOC and SO_2 will occur. These could amount to 111.9 additional tons per year of NO_x as well as 3.35 tpy of PM-10, 1.57 tpy of VOC and 0.07 tpy of SO_2. Disposal problems may also occur when replacing spent catalyst since it can be considered a hazardous waste.

4.3.2.4 Conclusion

Based on the evaluation of catalytic oxidation for economic, energy and environmental aspects, it is rejected as BACT for this case.

4.3.3 CO BACT Selection

Since carbon monoxide (CO) emissions in gas turbines arise from inefficient or incomplete combustion of fuel, there are three major factors which influence CO formation in gas turbines: firing temperature, combustion chamber residence time, and combustor mixing characteristics. By increasing the combustion chamber and residence time, the rate of CO conversion to carbon dioxide (CO_2) increases thereby reducing CO emissions. However, by increasing the combustion temperature and residence time, NO_x emissions increase. Thus a dichotomy exists between CO and NO_x control at their source of formation. By reducing the rate of formation of one, the rate of formation of the other increases. Since NO_x is of greater concern from the point of ambient air quality and ozone formation, it is not considered environmentally acceptable to lower the CO emissions at the expense of further NO_x emissions.

International Paper also considers the duct burner to act as a thermal oxidizer to control or minimize CO emissions. The temperature of the exhaust gas is raised to 1,560°F (Point 2, Figure 2-2), which is near the optimum range for thermal oxidation of CO to CO_2. Because of this and the other previously mentioned reasons, International Paper considers the existing base case as BACT for CO control. No additional CO controls are proposed.

Since International Paper added a Cogeneration Unit to its Camden Mill, the ADPCE has stated that the source is major and a PSD air quality analysis for the "major" pollutants is required. This section describes the ambient air impacts resulting from the modified emission rates represented in this application.

The ADPCE has stated that this expansion has resulted in a significant increase in the emissions of oxides of nitrogen (NO_x), and carbon monoxide (CO) as discussed in Section 1.0. This requires a PSD air quality analysis for the two aforementioned pollutants.

5.1 MODELING AND MODEL INPUTS

To perform the modeling analyses, the most recent versions of the ISCST, ISCLT (Industrial Source Complex Short Term and Long Term Models) and the COMPLEX I Model were employed. These are EPA approved air dispersion models which were used in this analysis as per the modeling protocol (see Volume II, Appendix G).

The ISC models were run in the rural and regulatory modes. The Schulman-Scire downwash algorithm was invoked where appropriate (see Plot Plan, Figure 1-2, and Structure Heights, Table 5-2).

The COMPLEX I model was run in the rural mode with default parameters used. All stack parameter data is summarized in Table 5-1.

5.2 METEOROLOGICAL DATA

The ISCST and COMPLEX I Models utilized five consecutive years of binary data constructed from Shreveport, Louisiana, National Weather Service (NWS) Station surface observations and Longview, Texas, NWS Station upper air radiosonde

observations. The years of meteorological data used for modeling were 1981 through 1985.

The ISCLT Model used five consecutive separate years of joint frequency distribution stability array (STAR) data for the same years (1981 through 1985) as the above-mentioned binary data.

5.3 RECEPTOR GRIDS

The ISC models employed receptors of 100-meter spacing along the property line, 100-meter spacing from the property line to one kilometer (km), and one km spacing from two to five km. This resulted in a total of 745 receptors. Four additional receptors were added at the most prominent elevations in the 5 km grid square. Thus, a total of 749 receptors were input into the models. These were also input as discrete receptors and, in addition, all receptor elevations were then input into the ISC models.

The COMPLEX I model utilized only the subset of receptors of the ISC grid which were above the height of the 75-foot stack serving the turbine and duct burner. The resulting receptor grid consisted of 62 locations.

5.4 SCREEN MODELING

The minimum distance to ambient air (State Highway 7) is 60.40 meters from the cogeneration stack. The maximum concentration for both NO_x and CO occurs at 41 meters from the stack according to the SCREEN model. The SCREEN model assumes the most conservative assumptions for all input parameters and does not incorporate recorded weather data. This model only predicts worst-case impacts and should not be used solely for determining impacts if the impacts exceed a maximum allowable level.

This model calculated a maximum 1-hour concentration of 253.8 $\mu g/m^3$ for NO_x and 158.3 $\mu g/m^3$ for CO at 60 meters from the source. Thus, the maximum concentration is within the property line. The cavity length for both the NO_x and CO SCREEN runs

was calculated to be 60.25 meters. This is within the property line and the results of the COMPLEX I and ISC models should be sufficient for the ambient air analysis.

The NO_x concentration predicted by the SCREEN model is not to be compared with the NAAQ standard of 1 $\mu g/m^3$ since the concentration predicted by the SCREEN model is an hourly (or short-term) maximum. The NAAQ standard is an annual (or long-term) maximum.

5.5 RESULTS

All pollutants subject to PSD regulations were modeled and the predicted maximum concentrations were below the significance levels. Also, these pollutants resulted in concentrations well below the de minimis levels for preconstruction monitoring.

ISC modeling results are summarized in Table 5-3, COMPLEX I modeling results are summarized in Table 5-4, and applicable results are summarized in Table 5-5. The applicable results are the higher of the ISC and COMPLEX I modeling runs.

As a result of the above analysis, no further modeling was performed. All modeling runs are in Volume II, Appendix H, Sections H.1 to H.20.

6.0
ADDITIONAL IMPACT ANALYSIS

Analysis of the impact of the project's air pollutant emissions associated with construction and related growth are presented in this section. Assessment of the modification's impact on soil, vegetation, and visibility are also presented.

6.1 CONSTRUCTION AND GROWTH IMPACT

There will be no construction and growth impacts associated with the scope of this application at the Camden Mill. The equipment associated with this permit is existing and no modifications to the equipment, other than operating times, will occur. This will not require the hiring of additional plant employees. The expected growth in the vicinity due to the proposed modification will be negligible.

6.2 IMPACT ON SOILS

The secondary National Ambient Air Quality Standards (NAAQS) are intended to protect the public welfare from adverse effects of airborne effluent. This protection extends to agricultural soil. As demonstrated in the Air Quality Analysis, predicted maximum pollutant concentrations throughout the study area are well below the secondary NAAQS. Since the secondary NAAQS is intended to protect the public welfare, no significant adverse impact on soil is anticipated due to the proposed plant modification.

6.3 IMPACT ON VEGETATION

The effects of gaseous air pollutants on vegetation may be classified into three rather broad categories: acute, chronic and long-term. Acute effects are those that result from relatively short (less than one month) exposures to high concentrations of pollutants. Chronic effects occur when organisms are exposed for months or even years to certain threshold levels of pollutants. Long-term effects include abnormal changes in eco-

systems and subtle physiological alterations in organisms. Acute and chronic effects are caused by the gaseous pollutant acting directly on the organism, whereas long-term effects may be indirectly caused by secondary agents such as changes in soil pH.

The maximum predicted pollutant concentrations associated with the proposed modification are below the applicable air quality standards; thus, no significant impact on vegetation is likely.

6.4 IMPACT ON VISIBILITY

Any facility emitting significant amounts of NO_x and/or CO has a potential adverse impact on visibility through atmospheric discoloration or reduction of visual range due to increased haze. The Clean Air Act Amendments of 1977 require evaluation of visibility impairment in the vicinity of PSD Class I areas due to emissions from new or modified air pollution sources. The nearest Class I area is well over 250 km from the Camden Mill. Since NO_x and CO emissions from the mill's modified sources has no significant radius of impact, it is unlikely that these emissions from the Cogeneration Unit at the Camden Mill will have any measurable impact in the nearest Class I area.

6.5 AIR TOXICS

The sources covered by this permit emit only products of combustion, the regulated compounds of which are oxides of nitrogen (NO_x), carbon monoxide (CO), particulate matter (PM-10), sulfur dioxide (SO_2) and volatile organic compounds (VOC). The VOC component of these emissions consists of the uncombusted portion of natural gas that is burned as fuel. As of yet, no regulations have been promulgated or proposed under Title III of the Federal Clean Air Act that would regulate the use of any of the fuels utilized at the Cogeneration Unit or Power Boilers.

7.0
SAMPLING PROGRAM

Stack sampling has been conducted on each of the Power Boilers. The results of these tests are located in Volume I, Appendix D of this application. A continuous emission monitoring system (CEMS) has been installed in the Cogeneration Unit to monitor the exhaust concentrations of NO_x and CO. This CEMS consists of a monitor placed downstream of the duct burner. This monitor measures the emissions of NO_x and CO from either the duct burner or gas turbine.

Since the duct burner cannot be operated independently of the gas turbine, International Paper believes that this is the only effective means of demonstrating continuous compliance with the emission limitations for both the gas turbine and duct burner. CEM data is contained in Volume I Appendix D of this application.

8.0
EQUIPMENT SPECIFICATIONS

The equipment specifications for the G. E. Frame 5 gas turbine and the Coen duct burner are contained in Volume I, Appendix E of this permit modification application. These specifications represent the expected performance of this equipment as new under clean operating conditions.

TABLES

TABLE 1-1

SUMMARY OF NO_x EMISSIONS[1]

Pollutant	Source	Emissions Before Permit 990-A Issued (tpy)	Emissions After Permit 990-A Issued (tpy)	Proposed Emissions (tpy)	Net[2] Change (tpy)	PSD Significance Level (tpy)
NO_x	SN-13	0.0	249.0	362.68	+362.68	
	SN-10	150.0	3.24[3]	17.38[4]	-132.62	
	SN-11	150.0	4.19[3]	18.43[4]	-131.57	
NO_x Total		300.0	256.43	398.49	+98.49	40.0

NOTES:

1 Based on natural gas firing only.

2 Net change compares proposed emissions with emissions prior to issuance of Permit No. 990-A.

3 Current actual emissions based on stack test reports in Volume I, Appendix D and 240 operating hours for each boiler (20 boiler days total).

4 Proposed emissions for the Power Boilers based on 960 operating hours for each boiler (80 boiler days total).

TABLE 1-2

SUMMARY OF CO EMISSIONS[1]

Pollutant	Source	Emissions Before Permit 990-A Issued (tpy)	Emissions After Permit 990-A Issued (tpy)	Proposed Emissions (tpy)	Net[2] Change (tpy)	PSD Significance Level (tpy)
CO	SN-13	0.0	119.0	226.18	+226.18	
	SN-10	15.46	0.424[3]	1.69[4]	-13.77	
	SN-11	16.26	0.375[3]	1.78[4]	-14.48	
CO Total		31.72	119.80	229.65	+197.93	100.0

NOTES:

1. Based on natural gas firing only.
2. Net change compares proposed emissions with emissions prior to issuance of Permit No. 990-A.
3. Current actual emissions based on stack test reports in Volume I, Appendix D and 240 operating hours for each boiler (20 boiler days total).
4. Proposed emissions for the Power Boilers based on 960 operating hours for each boiler (80 boiler days total).

TABLE 1-3

SUMMARY OF PM-10 EMISSIONS[1]

Pollutant	Source	Emissions Before Permit 990-A Issued (tpy)	Emissions After Permit 990-A Issued (tpy)	Proposed Emissions (tpy)	Net[2] Change (tpy)	PSD Significance Level (tpy)
PM-10[3]	SN-13	0.0	11.83[6]	24.65	+24.65	
	SN-10	23.10	0.324[4]	2.53[5]	-20.57	
	SN-11	15.66	0.429[4]	1.72[5]	-13.94	
PM-10 Total		38.76	12.58	28.90	-9.86	15.0

NOTES:

1. Based on firing with natural gas only.
2. Net change compares proposed emissions with emissions prior to issuance of Permit No. 990-A.
3. All particulate emissions are assumed to be PM-10.
4. Current actual emissions based on stack test reports in Volume I, Appendix D and 240 operating hours for each boiler (20 boiler days total).
5. Proposed emissions for the Power Boilers based on 960 operating hours for each boiler (80 boiler days total).
6. Based on emission rate given on Table 1 of Permit 990-A.

TABLE 1-4

SUMMARY OF SO_2 EMISSIONS[1]

Pollutant	Source	Emissions Before Permit 990-A Issued (tpy)	Emissions After Permit 990-A Issued (tpy)	Proposed Emissions (tpy)	Net[2] Change (tpy)	PSD Significance Level (tpy)
SO_2	SN-13	0.0	1.41	1.55	+1.55	
	SN-10	0.390	0.011[3]	0.043[4]	-0.347	
	SN-11	0.390	0.011[3]	0.043[4]	-0.347	
SO_2 Total		0.780	1.432	1.636	0.856	15.0

NOTES:

1. Based on firing natural gas only.
2. Net change compares proposed emissions with emissions prior to issuance of Permit No. 990-A.
3. Current emissions based on AP-42 emission factors for natural gas combustion and 240 operating hours for each boiler (20 boiler days total).
4. Proposed emissions for the Power Boilers based on 960 operating hours for each boiler (80 boiler days total).

TABLE 1-5

SUMMARY OF VOC EMISSIONS[1]

Pollutant	Source	Emissions Before Permit 990-A Issued (tpy)	Emissions After Permit 990-A Issued (tpy)	Proposed Emissions (tpy)	Net[2] Change (tpy)	PSD Significance Level (tpy)
VOC	SN-13	0.0	78.62[3]	12.07	+12.07	
	SN-10	1.84	0.051[4]	0.202[5]	-1.638	
	SN-11	1.84	0.051[4]	0.202[5]	-1.638	
VOC Total		3.68	78.52	12.464	8.784	40.0

NOTES:

1. Based on firing natural gas only.
2. Net change compares proposed emissions with emissions prior to issuance of Permit No. 990-A.
3. Emission rates based on Table I of Permit 990-A.
4. Current emissions based on AP-42 emission factors for natural gas combustion and 240 operating hours for each boiler (20 boiler days total).
5. Proposed emissions for the Power Boilers based on 960 operating hours for each boiler (80 boiler days total).

TABLE 4-1

COST ANALYSIS FOR SELECTIVE CATALYTIC REDUCTION OF NO_x DOWNSTREAM OF HEAT RECUPERATORS

I.	CAPITAL INVESTMENT	
	A. DIRECT COSTS (DC)	Babcock & Wilcox
	1. Purchased Equipment SCR basic equipment Ammonia system Structure support Instrumentation	$1,550,000.00
	2. Ammonia Storage	40,000.00
	3. Freight (0.05 x 1)	77,500.00
	4. Sales Tax (0.07 x 1)	108,500.00
	Total DC	$1,776,000.00
	B. INDIRECT COSTS (IC)	
	1. Installation	
	a. Engineering and supervisions (0.10 x DC)	$177,600.00
	b. Construction and field expenses (0.05 x DC)	88,800.00
	c. Construction contractor fee (0.10 x DC)	177,600.00
	2. Other Indirect Costs	
	a. Startup and testing (0.03 x DC)	53,280.00
	3. Duct Reconstruction and Relocation	
	a. Labor (5% original labor)	201,338.00
	b. Material (40% original material)	242,243.00
	Total IC	$940,861.00
	TOTAL CAPITAL INVESTMENT (TCI) = DC + IC	$2,716,861.00
II.	ANNUALIZED COST	
	A. DIRECT OPERATING COSTS (DOC)	
	1. Operating Labor	
	a. Operator (8,760 hr/yr @ $20/hr)	$175,200.00
	b. Supervisor (15% of operator cost)	26,280.00

TABLE 4-1 (Continued)

COST ANALYSIS FOR SELECTIVE CATALYTIC REDUCTION OF NO_x DOWNSTREAM OF HEAT RECUPERATORS

2. Maintenance (8% of DC)	142,080.00
3. Replacement Parts a. Catalyst	147,000.00
4. Utilities a. Natural gas (80 MMBtu/hr @ $2.21/MMBtu)	1,548,768.00
5. Spent Catalyst Disposal Cost	36,000.00
6. Ammonia (28 lbs/hr @ $825/ton)	101,178.00
Total DOC	$2,176,506.00
B. INDIRECT OPERATING COSTS (IOC)	
1. Overhead (80% of operating labor and maintenance)	$274,848.00
2. Property Taxes (1% of TCI)	27,169.00
3. Insurance (1% of TCI)	27,169.00
4. Administration (2% of TCI)	54,337.00
Total IOC	$383,523.00
C. CAPITAL RECOVERY COST (CRC)	
Cost Recovery Factor of 0.1627 x (TCI - replacement parts)	$418,116.00
TOTAL ANNUALIZED COSTS (DOC + IOC + CRC)	$2,978,145
Total NO_x Produced with SCR Control (tons/yr)	397.59
Control Efficiency (%)	90.00
Emission Reduction (tons/yr)	357.83
Annual Cost/ton of NO_x Removal	$8,322.79

NOTES: Cost Recovery Factor = $i(i+1)n/[(i+1)n-1]$ n = equipment life (10 years)
i = interest rate (10%)

TABLE 4-2

**COST ANALYSIS FOR
SELECTIVE NONCATALYTIC REDUCTION OF NO_x
PRIOR TO THE HEAT RECUPERATORS AND AFTER THE DUCT BURNER**

I.	CAPITAL INVESTMENT	
	A. DIRECT COSTS (DC)	Babcock & Wilcox
	1. Purchased Equipment SNCR basic equipment Ammonia system Structure support Instrumentation	$1,550,000.00
	2. Ammonia Storage	40,000.00
	3. Freight (0.05 x 1)	77,500.00
	4. Sales Tax (0.07 x 1)	108,500.00
	Total DC	$1,776,000.00
	B. INDIRECT COSTS (IC)	
	1. Installation	
	a. Engineering and supervisions (0.10 x DC)	$177,600.00
	b. Construction and field expenses (0.05 x DC)	88,800.00
	c. Construction contractor fee (0.10 x DC)	177,600.00
	2. Duct Reconstruction and Equipment Relocation	
	a. Labor (50% original labor)	2,013,374.00
	b. Material (75% original labor)	454,205.00
	3. Other Indirect Costs	
	a. Startup and testing (0.03 x DC)	53,280.00
	Total IC	$2,964,859.00
	TOTAL CAPITAL INVESTMENT (TCI) = DC + IC	$4,740,859.00
II.	ANNUALIZED COST	
	A. DIRECT OPERATING COSTS (DOC)	
	1. Operating Labor	
	a. Operator (8,760 hr/yr @ $20/hr)	$175,200.00
	b. Supervisor (15% of operator cost)	26,280.00

TABLE 4-2 (Continued)

**COST ANALYSIS FOR
SELECTIVE NONCATALYTIC REDUCTION OF NO_x
PRIOR TO THE HEAT RECUPERATORS AND AFTER THE DUCT BURNER**

2. Maintenance (8% of DC)	142,080.00
3. Utilities a. Natural gas (6.18 MMBtu/hr @ $2.21/hr)	119,642.00
4. Ammonia (28 lbs/hr @ $825/ton)	101,178.00
Total DOC	$564,380.00
B. INDIRECT OPERATING COSTS (IOC)	
1. Overhead (80% of operating labor and maintenance)	$274,848.00
2. Property Taxes (1% of TCI)	47,409.00
3. Insurance (1% of TCI)	47,409.00
4. Administration (2% of TCI)	94,818.00
Total IOC	$464,484.00
C. CAPITAL RECOVERY COST (CRC)	
Cost Recovery Factor of 0.1627 x (TCI - replacement parts)	$1,148,898.00
TOTAL ANNUALIZED COSTS (DOC + IOC + CRC)	$2,143,762.00
Total NO_x Produced with SNCR Control (tons/yr)	365.38
Control Efficiency (%)	90.00
Emission Reduction (tons/yr)	328.84
Annual Cost/ton of NO_x Removal	$6,519.12

NOTES: Cost Recovery Factor = $i(i+1)n/[(i+1)n-1]$ n = equipment life (10 years)
i = interest rate (10%)

TABLE 4-3

COST ANALYSIS FOR CATALYTIC OXIDATION OF CO DOWNSTREAM OF HEAT RECUPERATORS

I.	CAPITAL INVESTMENT	
	A. DIRECT COSTS (DC)	ARI *
	1. Purchased Equipment Basic equipment Structure support Instrumentation	$1,006,000.00
	2. Freight (0.05 x 1)	50,300.00
	3. Sales Tax (0.07 x 1)	70,420.00
	Total DC	$1,126,720.00
	B. INDIRECT COSTS (IC)	
	1. Installation	
	a. Engineering and supervision (0.10 x DC)	$112,672.00
	b. Construction and field expenses (0.05 x DC)	56,336.00
	c. Construction contractor fee (0.10 x DC)	112,672.00
	2. Duct Reconstruction and Equipment Relocation	
	a. Labor (5% original labor)	201,338.00
	b. Material (40% original material)	242,243.00
	3. Other Indirect Costs	
	a. Startup and testing (0.03 x DC)	33,802.00
	Total IC	$759,063.00
	TOTAL CAPITAL INVESTMENT (TCI) = DC + IC	$1,885,783.00
II.	ANNUALIZED COST	
	A. DIRECT OPERATING COSTS (DOC)	
	1. Operating Labor	
	a. Operator (8,760 hr/yr @ $20/hr)	$175,200.00
	b. Supervisor (15% of operator cost)	26,280.00
	2. Maintenance (8% of DC)	90,138.00

TABLE 4-3 (Continued)

**COST ANALYSIS FOR
CATALYTIC OXIDATION OF CO
DOWNSTREAM OF HEAT RECUPERATORS**

3. Replacement Parts a. Catalyst	136,000.00
4. Utilities a. Natural gas (255.5 MMBtu/hr @ $2.21/MMBtu)	4,946,378.00
5. Spent Catalyst Disposal Cost	36,000.00
Total DOC	$5,409,996.00
B. INDIRECT OPERATING COSTS (IOC)	
1. Overhead (80% of operating labor and maintenance)	$233,294.00
2. Property Taxes (1% of TCI)	18,858.00
3. Insurance (1% of TCI)	18,858.00
4. Administration (2% of TCI)	37,716.00
Total IOC	$308,726.00
C. CAPITAL RECOVERY COST (CRC)	
Cost Recovery Factor of 0.1627 x (TCI - replacement parts)	$284,690.00
TOTAL ANNUALIZED COSTS (DOC + IOC + CRC)	$6,003,812.00
Total CO Produced with CATOX Control (tons/yr)	270.95
Control Efficiency (%)	90.00
Emission Reduction (tons/yr)	243.86
Annual Cost/ton of CO removal	$24,619.91

NOTES: Cost Recovery Factor = $i(i+1)n/[(i+1)n-1]$ n = equipment life (10 years)
i = interest rate (10%)

* This is based on a similar estimate for a catalytic oxidation system which was scaled by comparing the SCR estimate for the two different applications.

TABLE 4-4

COST ANALYSIS FOR THERMAL OXIDATION OF CO DOWNSTREAM OF HEAT RECUPERATORS

I.	CAPITAL INVESTMENT	
	A. DIRECT COSTS (DC)	ARI *
	1. Purchased Equipment Basic equipment Structure support Instrumentation	$1,006,000.00
	2. Freight (0.05 x 1)	50,300.00
	3. Sales Tax (0.07 x 1)	70,420.00
	Total DC	$1,126,720.00
	B. INDIRECT COSTS (IC)	
	1. Installation	
	a. Engineering and supervision (0.10 x DC)	$112,672.00
	b. Construction and field expenses (0.05 x DC)	56,336.00
	c. Construction contractor fee (0.10 x DC)	112,672.00
	2. Duct Reconstruction and Removal	
	a. Labor	201,338.00
	b. Material	242,243.00
	3. Other Indirect Costs	
	a. Startup and testing (0.03 x DC)	33,802.00
	Total IC	$759,063.00
	TOTAL CAPITAL INVESTMENT (TCI) = DC + IC	$1,885,783.00
II.	ANNUALIZED COST	
	A. DIRECT OPERATING COSTS (DOC)	
	1. Operating Labor	
	a. Operator (8,760 hr/yr @ $20/hr)	$175,200.00
	b. Supervisor (15% of operator cost)	26,280.00
	2. Maintenance (8% of DC)	90,138.00

TABLE 4-4 (Continued)

COST ANALYSIS FOR THERMAL OXIDATION OF CO DOWNSTREAM OF HEAT RECUPERATORS

3. Utilities	
a. Natural gas (387.4 MMBtu/hr @ $2.21/MMBtu)	7,499,909.00
Total DOC	$7,791,527.00
B. INDIRECT OPERATING COSTS (IOC)	
1. Overhead (80% of operating labor and maintenance)	$233,294.00
2. Property Taxes (1% of TCI)	18,858.00
3. Insurance (1% of TCI)	18,858.00
4. Administration (2% of TCI)	37,716.00
Total IOC	$308,726.00
C. CAPITAL RECOVERY COST (CRC)	
Cost Recovery Factor of 0.1627 x (TCI - replacement parts)	$306,817.00
TOTAL ANNUALIZED COSTS (DOC + IOC + CRC)	$8,407,070.00
Total CO Produced with THERMOX Control (tons/yr)	294.06
Control Efficiency (%)	96.00
Emission Reduction (tons/yr)	282.30
Annual cost/ton of CO removal	$29,780.88

NOTES: Cost Recovery Factor = $i(i+1)n/[(i+1)n-1]$ n = equipment life (10 years)
i = interest rate (10%)

* This is based on a similar estimate for a catalytic oxidation system which was scaled by comparing the SCR estimate for the two different applications.

TABLE 4-5

**COST ANALYSIS FOR
THERMAL OXIDATION OF CO
PRIOR TO THE DUCT BURNER**

I.	CAPITAL INVESTMENT	
	A. DIRECT COSTS (DC)	ARI *
	1. Purchased Equipment Basic equipment Structure support Instrumentation	$1,006,000.00
	2. Freight (0.05 x 1)	50,300.00
	3. Sales Tax (0.07 x 1)	70,420.00
	Total DC	$1,126,720.00
	B. INDIRECT COSTS (IC)	
	1. Installation	
	a. Engineering and supervision (0.10 x DC)	$112,672.00
	b. Construction and field expenses (0.05 x DC)	56,336.00
	c. Construction contractor fee (0.10 x DC)	112,672.00
	2. Duct Reconstruction and Equipment Relocation	
	a. Labor (50% original labor)	2,013,374.00
	b. Material (75% original material)	454,205.00
	3. Other Indirect Costs	
	a. Startup and testing (0.03 x DC)	33,802.00
	Total IC	$2,783,061.00
	TOTAL CAPITAL INVESTMENT (TCI) = DC + IC	$3,909,781.00
II.	ANNUALIZED COST	
	A. DIRECT OPERATING COSTS (DOC)	
	1. Operating Labor	
	a. Operator (8,760 hr/yr @ $20/hr)	$175,200.00
	b. Supervisor (15% of operator cost)	26,280.00
	2. Maintenance (8% of DC)	90,138.00

TABLE 4-5 (Continued)

COST ANALYSIS FOR THERMAL OXIDATION OF CO PRIOR TO THE DUCT BURNER

3. Utilities	
1. Natural gas (394.4 MMBtu/hr @ $2.21/MMBtu)	7,635,426.00
Total DOC	$7,927,044.00
B. INDIRECT OPERATING COSTS (IOC)	
1. Overhead (80% of operating labor and maintenance)	$233,294.00
2. Property Taxes (1% of TCI)	39,098.00
3. Insurance (1% of TCI)	39,098.00
4. Administration (2% of TCI)	78,196.00
Total IOC	$389,686.00
C. CAPITAL RECOVERY COST (CRC)	
Cost Recovery Factor of 0.1627 x (TCI - replacement parts)	$636,121.00
TOTAL ANNUALIZED COSTS (DOC + IOC + CRC)	$8,952,851.00
Total CO Produced with THERMOX Control (tons/yr)	294.40
Control Efficiency (%)	96.00
Emission Reduction (tons/yr)	282.62
Annual cost/ton of CO removal	$31,678.05

NOTES: Cost Recovery Factor = $i(i+1)n/[(i+1)n-1]$ n = equipment life (10 years)
i = interest rate (10%)

* This is based on a similar estimate for a catalytic oxidation system which was scaled by comparing the SCR estimate for the two different applications.

TABLE 4-6

**COST ANALYSIS FOR
CATALYTIC OXIDATION OF CO
PRIOR TO THE DUCT BURNER**

I.	CAPITAL INVESTMENT	
	A. DIRECT COSTS (DC)	Babcock & Wilcox
	1. Purchased Equipment Basic equipment Structure support Instrumentation	$1,006,000.00
	2. Freight (0.05 x 1)	50,300.00
	3. Sales Tax (0.07 x 1)	70,420.00
	Total DC	$1,126,720.00
	B. INDIRECT COSTS (IC)	
	1. Installation	
	a. Engineering and supervisions (0.10 x DC)	$112,672.00
	b. Construction and field expenses (0.05 x DC)	56,336.00
	c. Construction contractor fee (0.10 x DC)	112,672.00
	2. Duct Reconstruction and Equipment Relocation	
	a. Labor (50% original labor)	2,013,374.00
	b. Material (75% original material)	454,205.00
	3. Other Indirect Costs	
	a. Startup and testing (0.03 x DC)	33,802.00
	Total IC	$2,783,061.00
	TOTAL CAPITAL INVESTMENT (TCI) = DC + IC	$3,909,781.00
II.	ANNUALIZED COST	
	A. DIRECT OPERATING COSTS (DOC)	
	1. Operating Labor	
	a. Operator (8,760 hr/yr @ $20/hr)	$175,200.00
	b. Supervisor (15% of operator cost)	26,280.00
	2. Maintenance (8% of DC)	90,138.00

TABLE 4-6 (Continued)

COST ANALYSIS FOR CATALYTIC OXIDATION OF CO PRIOR TO THE DUCT BURNER

3. Replacement Parts a. Catalyst	136,000.00
4. Utilities a. Natural gas (116.0 MMBtu/hr @ $2.21/MMBtu)	2,245,714.00
5. Spent Catalyst Disposal Cost	36,000.00
Total DOC	$2,709,332.00
B. INDIRECT OPERATING COSTS (IOC)	
1. Overhead (80% of operating labor and maintenance)	$233,294.00
2. Property Taxes (1% of TCI)	39,098.00
3. Insurance (1% of TCI)	39,098.00
4. Administration (2% of TCI)	78,196.00
Total IOC	$389,686.00
C. CAPITAL RECOVERY COST (CRC)	
Cost Recovery Factor of 0.1627 x (TCI - replacement parts)	$613,994.00
TOTAL ANNUALIZED COSTS (DOC + IOC + CRC)	$3,713,012.00
Total CO produced with CATOX Control (tons/yr)	246.50
CATOX Control Efficiency (%)	90.00
Emission Reduction (tons/yr)	221.85
Annual cost/ton of CO Removal	$16,736.59

NOTES: Cost Recovery Factor = $i(i+1)n/[(i+1)n-1]$ n = equipment life (10 years)
i = interest rate (10%)

TABLE 4-7

COST ANALYSIS FOR SELECTIVE NONCATALYTIC REDUCTION OF NO_x AFTER THE HEAT RECUPERATORS

I.	CAPITAL INVESTMENT	
	A. DIRECT COSTS (DC)	Babcock & Wilcox
	1. Purchased Equipment SNCR basic equipment Ammonia system Structure support Instrumentation	$1,550,000.00
	2. Ammonia Storage	40,000.00
	3. Freight (0.05 x 1)	77,500.00
	4. Sales Tax (0.07 x 1)	108,500.00
	Total DC	$1,776,000.00
	B. INDIRECT COSTS (IC)	
	1. Installation	
	a. Engineering and supervisions (0.10 x DC)	$177,600.00
	b. Construction and field expenses (0.05 x DC)	88,800.00
	c. Construction contractor fee (0.10 x DC)	177,600.00
	2. Duct Reconstruction and Equipment Relocation	
	a. Labor (5% original labor)	201,338.00
	b. Material (40% original labor)	242,243.00
	3. Other Indirect Costs	
	a. Startup and testing (0.03 x DC)	53,280.00
	Total IC	$940,861.00
	TOTAL CAPITAL INVESTMENT (TCI) = DC + IC	$2,716,861.00
II.	ANNUALIZED COST	
	A. DIRECT OPERATING COSTS (DOC)	
	1. Operating Labor	
	a. Operator (8,760 hr/yr @ $20/hr)	$175,200.00
	b. Supervisor (15% of operator cost)	26,280.00

TABLE 4-7 (Continued)

COST ANALYSIS FOR SELECTIVE NONCATALYTIC REDUCTION OF NO_x AFTER THE HEAT RECUPERATORS

2. Maintenance (8% of DC)	142,080.00
3. Replacement Parts a. Catalyst	147,000.00
4. Utilities a. Natural gas (468.6 MMBtu/hr @ $2.21/hr)	9,071,909.00
5. Spent Catalyst Disposal Cost	36,000.00
6. Ammonia (28 lbs/hr @ $825/ton)	101,178.00
Total DOC	$9,699,647.00
B. INDIRECT OPERATING COSTS (IOC)	
1. Overhead (80% of operating labor and maintenance)	$274,848.00
2. Property Taxes (1% of TCI)	27,169.00
3. Insurance (1% of TCI)	27,169.00
4. Administration (2% of TCI)	54,337.00
Total IOC	$383,523.00
C. CAPITAL RECOVERY COST (CRC)	
Cost Recovery Factor of 0.1627 x (TCI - replacement parts)	$418,116.00
TOTAL ANNUALIZED COSTS (DOC + IOC + CRC)	$10,501,286.00
Total NO_x Produced with SNCR Control (tons/yr)	308.29
SNCR Control Efficiency (%)	90.00
Emission Reduction (tons/yr)	328.84
Annual Cost/ton of NO_x Removal	$37,847.79

NOTES: Cost Recovery Factor = $i(i+1)n/[(i+1)n-1]$ n = equipment life (10 years)
i = interest rate (10%)

TABLE 5-1

COGENERATION STACK PARAMETERS

UTM Easting (meters)	516,323.0
UTM Northing (meters)	3,711,890.0
Elevation (meters)	34.4
Stack Height (meters)	22.86
Stack Diameter (meters)	3.42
Stack Temperature (° Kelvin)	427.59
Exit Velocity (meters/sec)	16.61
NOx Emission Rate (grams/sec)	10.433
CO Emission Rate (grams/sec)	6.507

Cogen
stack
Parameters

TABLE 5-2

STRUCTURE HEIGHTS

A	16 feet	J	38 feet
B	30 feet	K	36 feet
C	30 feet	L	38 feet
D	15 feet	M	40 feet
E	67 feet	N	26 feet
F	78 feet	O	95 feet
G	40 feet	P	150 feet
H	12 feet	Q	50 feet
I	38 feet		

TABLE 5-3

RESULTS OF ISC MODELING RUNS

Pollutant	Time Period	Model	Maximum Concentration ($\mu g/m^3$)	Location (UTM Coordinates)	Significance Level ($\mu g/m^3$)	National Ambient Air Quality Standards ($\mu g/m^3$)
CO	1 hour	ISCST	37.20	516264.6, 3712122 Between Old Highway No. 7 and disposal ponds 1625 meters north of Farview Avenue	2,000	40,000
	8 hour	ISCST	11.69	516179.3, 3712061 1565 meters north of Fairview Avenue 50 meters west of Old Highway No. 7	500	10,000
NO_x	Annual	ISCLT	0.54	516277, 3714176 East of Highway No. 7 between the west bound on/off ramps of US 79	1	100

Woodward-Clyde Consultants

TABLE 5-4

RESULTS OF COMPLEX I MODELING RUNS

Pollutant	Time Period	Maximum Concentration ($\mu g/m^3$)	USGS Location (mm)	Significance Level ($\mu g/m^3$)	National Ambient Air Quality Standards ($\mu g/m^3$)
CO	1 hour	6.38	515980, 3710480 130 miles west, and 30 meters south of the intersection of Fairview Avenue and New Highway No. 7.	2,000	40,000
	8 hour	2.38	515780, 3710380 330 miles west, and 130 miles south of the intersection of Fairview Avenue and New Highway No. 7.	500	10,000
NOx	Annual	0.12	515280, 3716180 300 miles east on US 79 from California Avenue then 75 meters south.	1	100

TABLE 5-5

APPLICABLE MODELING RESULTS

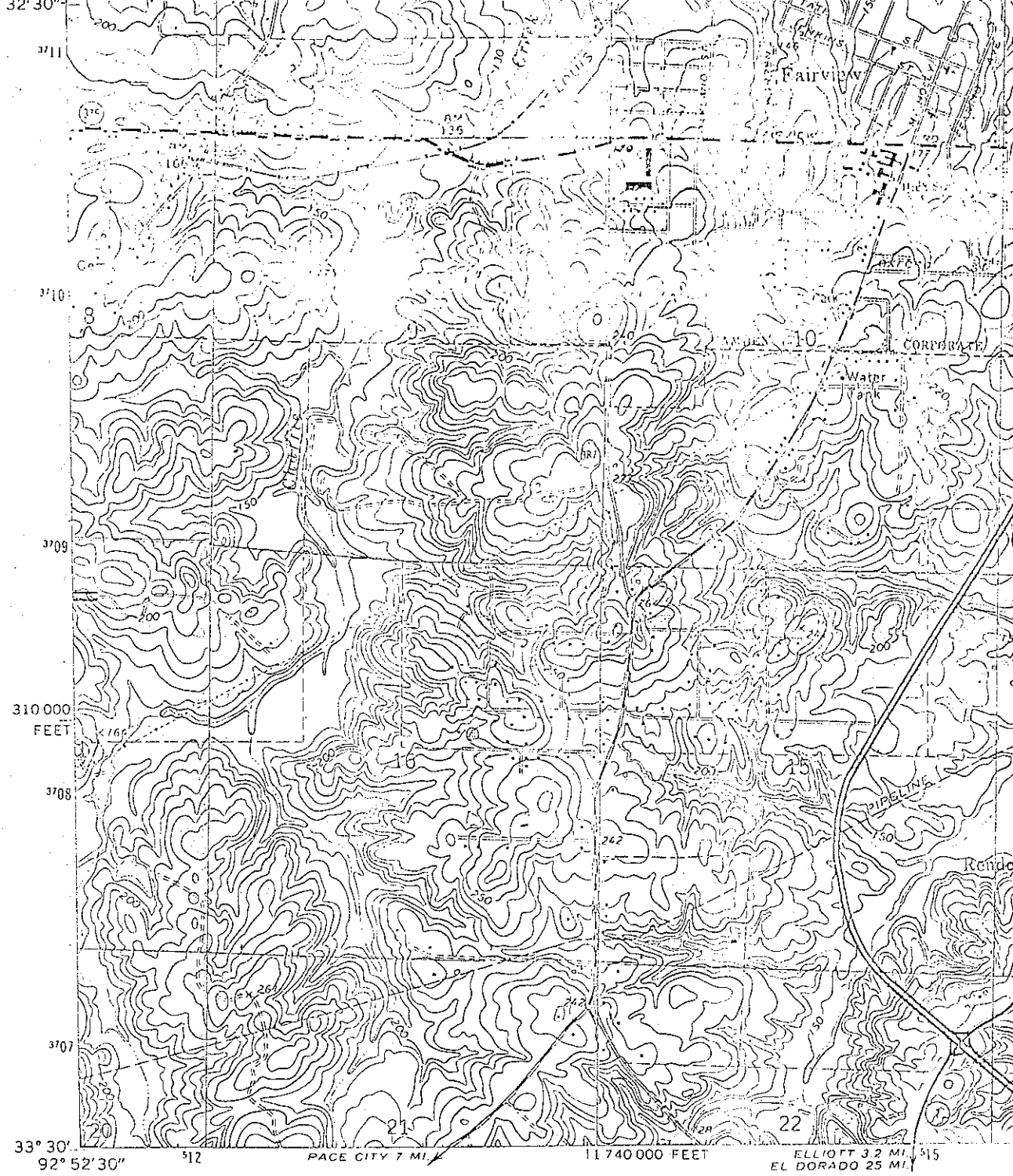
Pollutant	Time Period	Model	Maximum Concentration ($\mu g/m^3$)	Location	Significance Level ($\mu g/m^3$)	National Ambient Air Quality Standards ($\mu g/m^3$)
CO	1 hour	ISCST	37.20	516264.6, 3712122 Between Old Highway No. 7 and disposal ponds 1625 meters north of Farview Avenue	2,000	40,000
	8 hour	ISCST	11.69	516179.3, 3712061 1565 meters north of Fairview Avenue 50 meters west of Old Highway No. 7	500	10,000
NO_x	Annual	ISCLT	0.54	516277, 3714176 East of Highway No. 7 between the west bound on/off ramps of US 79	1	100

Woodward-Clyde Consultants

FIGURES

FIGURE 1-1

AREA MAP



(BUENA VISTA)
7.5' IV NW

Mapped, edited, and published by the Geological Survey in cooperation with Arkansas Geological Commission

Control by USGS and USC&GS

Planimetry by photogrammetric methods from aerial photographs taken 1940. Topography by planetable surveys 1949–50
Revised from aerial photographs taken 1970. Field checked 1971

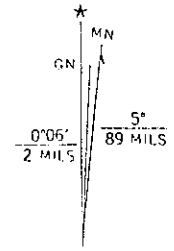
Polyconic projection. 1927 North American datum
10,000-foot grid based on Arkansas coordinate system, south zone
1000-meter Universal Transverse Mercator grid ticks, zone 15, shown in blue

Red tint indicates areas in which only landmark buildings are shown

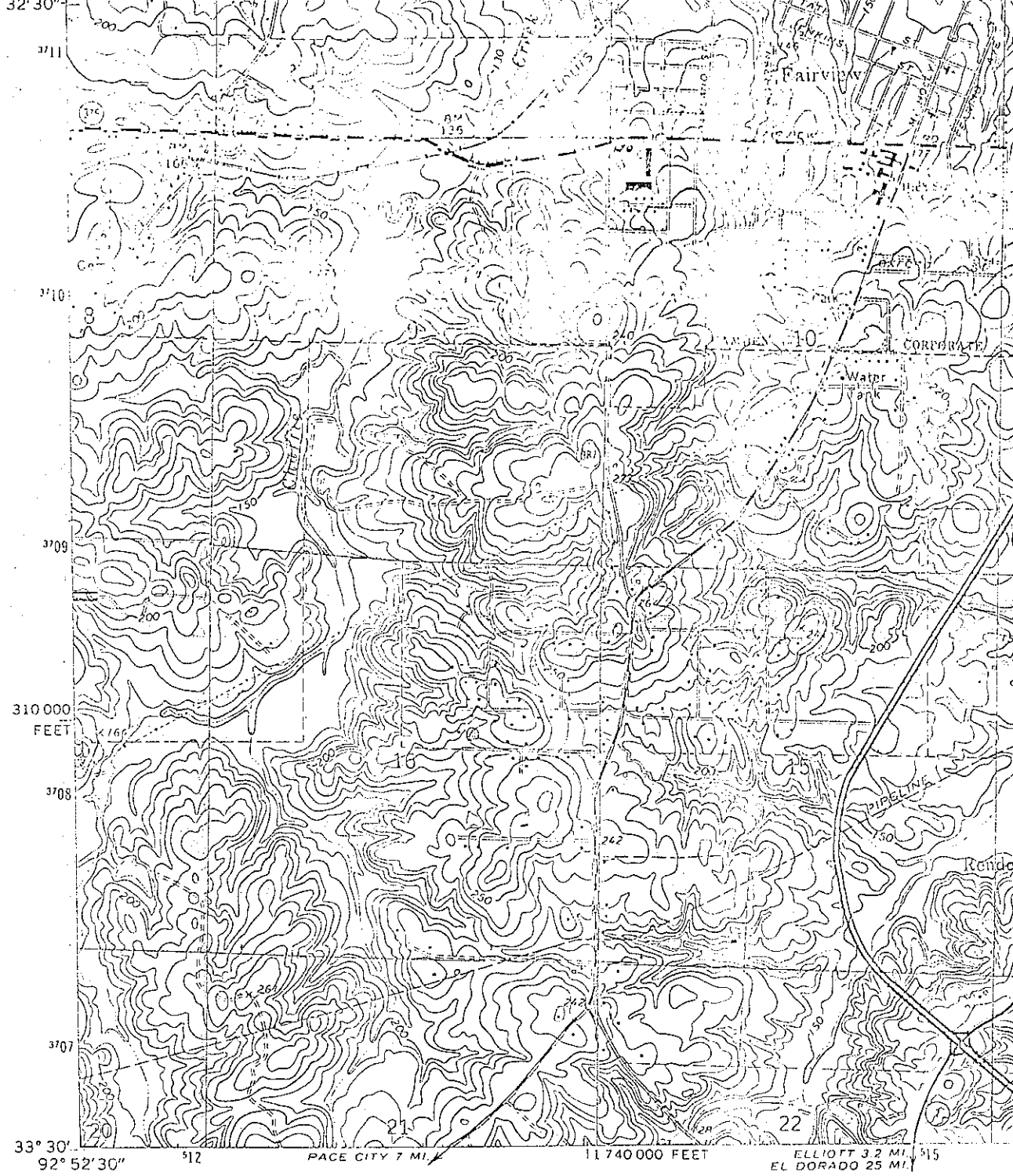
Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked

To place on the predicted North American Datum 1983, move the projection lines 10 meters south and 15 meters east as shown by dashed corner ticks

Purple tint indicates extension of urban areas



UTM GRID AND 1985 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET



(BUENA VISTA)
7.5' IV NW

Mapped, edited, and published by the Geological Survey
in cooperation with Arkansas Geological Commission

Control by USGS and USC&GS

Planimetry by photogrammetric methods from aerial photographs
taken 1940. Topography by planetable surveys 1949–50
Revised from aerial photographs taken 1970. Field checked 1971

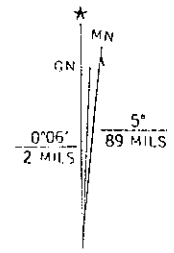
Polyconic projection. 1927 North American datum
10,000-foot grid based on Arkansas coordinate system, south zone
1000-meter Universal Transverse Mercator grid ticks,
zone 15, shown in blue

Red tint indicates areas in which only landmark buildings are shown

Fine red dashed lines indicate selected fence and field lines where
generally visible on aerial photographs. This information is unchecked

To place on the predicted North American Datum 1983,
move the projection lines 10 meters south and
15 meters east as shown by dashed corner ticks

Purple tint indicates extension of urban areas



UTM GRID AND 1985 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
AND ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARKANSAS 72204
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

Revisions shown in purple compiled from aerial photographs taken 1984 and other sources. This information not field checked. Map edited 1985

ROAD CLASSIFICATION

Primary highway, hard surface
Light-duty road, hard or improved surface
Secondary highway, hard surface
Unimproved road
Interstate Route
U. S. Route
State Route

CAMDEN, ARK.

33092-E7-TF-024

1971
PHOTOREVISED 1985
DMA 7451 III SE—SERIES V884

CAMDEN FACILITY EXCESS EMISSIONS

REPORT FOR GAS TURBINE - NOx

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	(PPH) MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
991											
/01	15:00	1600	60	92.9				X			
/02	14:00	15:00	60	57.5				X			
/02	16:00	17:00	60	58.5				X			
/03	9:00	10:00	60	59.2				X			
/03	11:00	12:00	60	51.3				X			
/03	14:00	24:00	600	618.9				X			
/04	7:00	16:00	540	887.4				X			
/04	17:00	24:00	420	447.8				X			
/05	0:00	07:00	420	427				X			
/05	8:00	24:00	960	1006.7				X			
/06	7:00	8:00	60	65.3				X			
/06	11:00	14:00	180	180.1				X			
TOTAL											

CAMDEN FACILITY EXCESS EMISSIONS

REPORT FOR GAS TURBINE - NOx

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	(PPH) MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
991											
/06	16:00	20:00	240	248.2				X			
/07	0:00	4:00	240	243.7				X			
/07	8:00	11:00	180	203.7				X			
/08	21:00	24:00	180	173.8				X			
/09	2:00	4:00	120	116.4				X			
/09	9:00	18:00	540	548.4				X			
/10	6:00	7:00	60	58.6				X			
/10	8:00	9:00	60	58.2				X			
/10	10:00	16:00	360	369.3				X			
/10	20:00	24:00	240	239.4				X			
/11	0:00	2:00	120	116.4				X			
/11	14:00	23:00	540	555.6				X			
TOTAL											

REPORT FOR CAMDEN FACILITY GAS TURBINE NOx EXCESS EMISSIONS

REASONS FOR EMISSIONS (MINUTES)

ATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	(PPH) MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
991 12	11:00	16:00	300	303.7				X			
13	1:00	2:00	60	57.9				X			
13	4:00	6:00	120	117.4				X			
13	10:00	12:00	120	215.8				X			
14	20:00	23:00	180	188.1				X			
15	1:00	6:00	300	293.8				X			
15	7:00	10:00	180	182.1				X			
16	8:00	10:00	120	126				X			
17	16:00	17:00	60	74.1				X			
20	13:00	14:00	60	87.5				X			
20	16:00	17:00	60	61.3				X			
22	16:00	17:00	60	61.8				X			
TOTAL											

CAMDEN FACILITY EXCESS EMISSIONS

REPORT FOR GAS TURBINE - NOx

REASONS FOR EMISSIONS (MINUTES)

	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
2	21:00	22:00	60	58.2				X			
3	10:00	14:00	240	241.6				X			
3	15:00	17:00	120	116.5				X			
3	18:00	24:00	360	358.3				X			
4	1:00	3:00	120	118.3				X			
4	9:00	13:00	240	257.4				X			
4	14:00	15:00	60	57.3				X			
9	1:00	2:00	60	58.1				X			
0	15:00	16:00	60	58.5				X			
OTAL			9300	9,985.1							

CAMDEN FACILITY EXCESS EMISSIONS

REPORT FOR GAS TRUBINE - NOx

REASONS FOR EMISSIONS (MINUTES)

ATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	(PPH) MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
01											
01	00:00	01:00	60	63.4				X			
01	02:00	08:00	300	360.1				X			
02	19:00	20:00	60	51.9				X			
04	11:00	15:00	240	243.5				X			
05	08:00	09:00	60	2514.7				X			
05	14:00	15:00	60	102.7				X			
07	14:00	17:00	180	180.6				X			
08	14:00	15:00	60	62.6				X			
08	16:00	18:00	120	116.5				X			
10	11:00	13:00	120	3553.7				X			
10	18:00	19:00	60	58.7				X			
10	20:00	21:00	60	57.3				X			
TOTAL											

CAMDEN FACILITY EXCESS EMISSIONS

REPORT FOR GAS TRUBINE - NOx

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	(PPH) MAGNITUDE	START UP/ SHUTDOWN	CLEANING (SOOT BLOWING)	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
5/10	23:00	24:00	60	57.2				X			
5/11	00:00	01:00	60	57.3				X			
5/11	11:00	13:00	120	133.5				X			
5/11	14:00	16:00	120	145.2				X			
5/13	10:00	12:00	120	170.9				X			
5/14	14:00	15:00	60	57.4				X			
5/18	08:00	09:00	60	87.8				X			
5/19	09:00	11:00	120	133.0				X			
5/19	14:00	15:00	60	59.5				X			
5/20	12:00	14:00	120	121.1				X			
5/20	23:00	24:00	60	57.4				X			
5/26	16:00	24:00	480	496.0				X			
TOTAL											

CAMDEN FACILITY EXCESS EMISSIONS

REPORT FOR GAS TURBINE - NOx

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	(PPH) MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
[illegible]											
/27	00:00	01:00	60	57.6				X			
/27	08:00	09:00	60	60.0				X			
/27	11:00	13:00	120	127.4				X			
/27	17:00	24:00	420	430.7				X			
/28	00:00	02:00	120	121.5				X			
/28	03:00	04:00	60	58.3				X			
/28	06:00	07:00	60	57.9				X			
/29	15:00	21:00	360	353.9				X			
TOTAL			4,080	10,215.1							

EXCESS EMISSIONS

REPORT FOR GAS TURBINE - CO

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	(PPH) MAGNITUDE	START UP/ SHUTDOWN	CLEANING (SOOT BLOWING)	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
/1	02:00	08:00	360	144.7				X			
/1	19:00	00:00	240	120.2				X			
/2	01:00	12:00	420	199.6				X			
/3	01:00	12:00	540	244.6				X			
/3	18:00	00:00	240	127.7				X			
/4	00:00	12:00	660	511.7				X			
/4	20:00	13:00	180	108.7				X			
/5	00:00	17:00	660	808.9				X			
/6	03:00	04:00	60	22.7				X			
/6	09:00	10:00	60	22.6				X			
/6	16:00	00:00	360	253.3				X			
/7	00:00	08:00	480	303.5				X			
TOTAL											

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE - CO

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	(PPH) MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
/07	13:00	17:00	240	101.7				X			
/07	21:00	23:00	120	56.1				X			
/08	00:00	00:00	1200	1190.6				X			
/9	00:00	12:00	540	382.8				X			
/09	19:00	23:00	120	54.4				X			
/10	01:00	02:00	60	22.4				X			
/10	08:00	13L00	300	123.3				X			
/10	17:00	22:00	240	125.4				X			
/11	01:00	02:00	60	27.9				X			
/11	06:00	07:00	60	37.0				X			
/11	14:00	15:00	60	29.2				X			
/11	19:00	23:00	240	231.4				X			
TOTAL											

CAMDEN FACILITY EXCESS EMISSIONS

REPORT FOR GAS TRUBINE - CO

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	(PPH) MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
91 12	06:00	10:00	240	254.3				X			
12	19:00	23:00	180	70.7				X			
13	01:00	06:00	240	100.0				X			
.3	21:00	00:00	180	73.3				X			
.4	04:00	05:00	60	21.4				X			
.4	06:00	11:00	180	69.8				X			
4	14:00	00.00	540	456.7				X			
5	00:00	12:00	600	401.0				X			
5	18:00	00:00	360	238.0				X			
6	00:00	00:00	1260	678.3				X			
7	00:00	09:00	420	216.4				X			
7	13:00	23:00	300	199.1				X			
OTAL											

REPORT FOR CAMDEN FACILITY GAS TRUBINE - CO EXCESS EMISSIONS

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1991											
4/18	04:00	22:00	480	228.5							
/19	00:00	10:00	420	188.4				X			
/19	13:00	20:00	240	113.6				X			
/20	07:00	09:00	120	44.2				X			
TOTAL			13,260	3,604.1							

REPORT FOR CAMDEN FACILITY GAS TRUBINE - CO EXCESS EMISSIONS

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	(PPH) MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
91											
[illegible]	24:00	24:00	600	474.4				X			
5/08	5:00	6:00	60	23.6				X			
5/09	12:00	15:00	180	80.8				X			
5/08	16:00	17:00	60	23.9				X			
5/09	18:00	19:00	60	24.9				X			
5/09	20:00	21:00	60	23.6				X			
/11	22:00	24:00	120	50.0				X			
/12	1:00	2:00	60	27.5				X			
/12	17:00	19:00	120	55.4				X			
/13	6:00	9:00	180	119.1				X			
/13	13:00	23:00	600	371.4				X			
/14	1:00	8:00	420	221.6				X			
TOTAL											

CAMDEN FACILITY EXCESS EMISSIONS

REPORT FOR GAS TURBINE CO

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	(PPH) MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1991											
5/25	20:00	21:00	60	25.0				X			
5/25	23:00	24:00	60	25.3				X			
5/28	0:00	14:00	840	498.3				X			
5/28	15:00	17:00	120	45.7				X			
5/29	9:00	16:00	420	205.8				X			
5/30	22:00	24:00	120	51.1				X			
TOTAL			9,780	5,472.4							

CAMDEN FACILITY

EXCESS EMISSIONS

REPORT FOR GAS TRUBINE - CO

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1991											
/2	11:00	14:00	180	65.3				X			
/02	23:00	24:00	60	22.4				X			
/03	01:00	05:00	240	110.9				X			
/03	14:00	16:00	120	49.2				X			
.03	21:00	22:00	60	24.1				X			
/03	23:00	24:00	60	22.0				X			
/04	00:00	02:00	120	50.2				X			
/04	93:00	06:00	180	74.7				X			
/04	08:00	09:00	60	22.6				X			
/04	18:00	24:00	360	184.9				X			
/05	00:00	03:00	180	79.1				X			
/05	06:00	11:00	300	2493				X			
TOTAL											

CAMDEN FACILITY EXCESS EMISSIONS

REPORT FOR GAS TURBINE - CO

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1991											
5/05	12:00	15:00	180	248.4				X			
5/05	17:00	18:00	60	27.2				X			
5/07	08:00	10:00	120	46.5				X			
5/07	17:00	18:00	60	24.8				X			
5/08	19:00	20:00	60	21.6				X			
5/10	12:00	13:00	60	1519.4				X			
5/11	07:00	08:00	60	57.2				X			
5/11	10:00	14:00	240	496.1				X			
5/11	17:00	18:00	60	29.9				X			
5/11	21:00	22:00	60	21.3				X			
5/18	20:00	21:00	60	22.2				X			
5/19	09:00	11:00	120	72.3				X			
TOTAL											

CAMDEN FACILITY EXCESS EMISSIONS

REPORT FOR GAS TURBINE - CO

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1991											
/19	21:00	22:00	60	25.7				X			
/20	15:00	24:00	540	292.6				X			
/27	10:00	11:00	60	26.3				X			
/28	02:00	03:00	60	30.6				X			
/28	04:00	07:00	180	100.3				X			
/30	23:00	24:00	60	22.1				X			
TOTAL			4,020	6,552							

TABLE II

CONTINUOUS MONITORING SYSTEM OPERATION FAILURES

REASON FOR MONITOR DOWN TIME (MINUTES)

TE	TIME FROM	TIME TO	TOTAL MIN.	INSTRUMENT	MONITOR EQUIPMENT MALFUNCTION	NON-MONITOR EQUIPMENT MALFUNCTION	QUALITY ASSURANCE	OTHER KNOWN MONITOR DOWNTIME	UNKNOWN
991 /01	0:00	13:00	840	NOx	X				
/02	5:00	12:00	420	NOx	X				
/15	10:00	14:00	240	NOx	X				
/16	10:00	14:00	240	NOx	X				
/17	3:00	4:00	60	NOx	X				
/17	5:00	14:00	540	NOx	X				
/21	10:00	19:00	540	NOx		X			
/24	3:00	8:00	300	NOx	X				
/30	8:00	9:00	60	NOx			X		
/31	21:00	24:00	180	NOx	X				
TAL			3,420						

TABLE 11

CONTINUOUS MONITORING SYSTEM OPERATION FAILURES

REASON FOR MONITOR DOWN TIME (MINUTES)

ATE	TIME FROM	TIME TO	TOTAL MIN.	INSTRUMENT	MONITOR EQUIPMENT MALFUNCTION	NON-MONITOR EQUIPMENT MALFUNCTION	QUALITY ASSURANCE	OTHER KNOWN MONITOR DOWNTIME	UNKNOWN
1991 /01	08:00	20:00	720	NOx	X				
/04	10:00	11:00	60	NOx	X				
/04	16:00	24:00	480	NOx	X				
/05	00:00	07:00	420	NOx	X				
/05	09:00	10:00	60	NOx	X				
/05	11:00	12:00	60	NOx	X				
/06	10:00	11:00	60	NOx	X				
/06	16:00	17:00	60	NOx	X				
/06	20:00	21:00	60	NOx	X				
/10	06:00	07:00	60	NOx	X				
/14	22:00	24:00	120	NOx	X				
/15	00:00	02:00	120	NOx	X				
/15	08:00	11:00	180	NOx	X				
OTAL									

TABLE II

CONTINUOUS MONITORING SYSTEM OPERATION FAILURES

REASON FOR MONITOR DOWN TIME (MINUTES)

ATE	TIME FROM	TIME TO	TOTAL MIN.	INSTRUMENT	MONITOR EQUIPMENT MALFUNCTION	NON-MONITOR EQUIPMENT MALFUNCTION	QUALITY ASSURANCE	OTHER KNOWN MONITOR DOWNTIME	UNKNOWN
1991 /18	07:00	08:00	60	NOx			X		
/19	11:00	13:00	120	NOx	X				
/22	08:00	09:00	60	NOx			X		
/26	10:00	11:00	60	NOx	X				
/26	15:00	16:00	60	NOx	X				
/27	14:00	15:00	60	NOx			X		
/28	07:00	13:00	360	NOx	X				
OTAL			3,240						

TABLE II

CONTINUOUS MONITORING SYSTEM OPERATION FAILURES

REASON FOR MONITOR DOWN TIME (MINUTES)

ATE	TIME FROM	TIME TO	TOTAL MIN.	INSTRUMENT	MONITOR EQUIPMENT MALFUNCTION	NON-MONITOR EQUIPMENT MALFUNCTION	QUALITY ASSURANCE	OTHER KNOWN MONITOR DOWNTIME	UNKNOWN
991 /01	0:00	13:00	840	CO	X				
/02	5:00	12:00	429	CO	X				
/05	10:00	14:00	240	CO	X				
/16	10:00	14:00	240	CO	X				
/17	3:00	4:00	60	CO	X				
/17	5:00	14:00	540	CO	X				
/21	2:00	3:00	60	CO	X				
/21	10:00	19:00	540	CO		X			
/24	3:00	8:00	300	CO	X				
/30	8:00	9:00	60	CO			X		
/31	21:00	24:00	180	CO	X				
TAL			3,480						

TABLE II

CONTINUOUS MONITORING SYSTEM OPERATION FAILURES

REASON FOR MONITOR DOWN TIME (MINUTES)

TE	TIME FROM	TIME TO	TOTAL MIN.	INSTRUMENT	MONITOR EQUIPMENT MALFUNCTION	NON-MONITOR EQUIPMENT MALFUNCTION	QUALITY ASSURANCE	OTHER KNOWN MONITOR DOWNTIME	UNKNOWN
91 22	08:00	09:00	60	CO			X		
26	10:00	11:00	60	CO	X				
26	15:00	16:00	60	CO	X				
27	02:00	03:00	60	CO	X				
27	14:00	15:00	60	CO			X		
28	07:00	13:00	360	CO	X				
TAL			2,340						

TABLE II

CONTINUOUS MONITORING SYSTEM OPERATION FAILURES

REASON FOR MONITOR DOWN TIME (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL MIN.	INSTRUMENT	MONITOR EQUIPMENT MALFUNCTION	NON-MONITOR EQUIPMENT MALFUNCTION	QUALITY ASSURANCE	OTHER KNOWN MONITOR DOWNTIME	UNKNOWN
1991 6/01	02:00	03:00	60	CO	X				
6/01	08:00	20:00	720	CO	X				
6/04	02:00	03:00	60	CO	X				
6/04	10:00	11:00	60	CO	X				
6/06	10:00	11:00	60	CO	X				
6/06	16:00	17:00	60	CO			X		
6/06	20:00	21:00	60	CO	X				
6/10	06:00	07:00	60	CO	X				
6/14	20:00	24:00	120	CO	X				
6/15	00:00	02:00	120	CO	X				
6/15	08:00	11:00	180	CO	X				
6/18	07:00	08:00	60	CO			X		
6/19	11:00	13:00	120	CO	X				
TOTAL									

CAMDEN MILL QUARTERLY OPERATING REPORT

SOURCE	HOURS OPERATED	GAS BURNED	EMISSION, TONS NOx	CO
NO. 1 POWER BOILER	225	18111	1.6	
NO. 2 POWER BOILER	0	0	0	
GAS TURBINE	1926		*	
WASTE HEAT BOILER	1926		46.5	18.7
ONE YEAR ROLLING TOTAL			205	77.3
SIMULTANEOUS OPERATION	150			

Ex = 332 1

306

(No. 1 Power boiler was operated 69.5 hours simultaneously with the gas turbine to facilitate the relative accuracy test audit of the continuous emission monitors by allowing nonvarying operation of the gas turbine. This time was not needed for mill operation.)

* - GAS TURBINE EMISSIONS ARE INCLUDED WITH WASTE HEAT BOILER

NATURAL GAS BURNED

DATE		GAS TURBINE MCF/HR	WASTE HEAT BOILER MCF/HR
1	1	308	182
	2	304	164
	3	301	170
	4	324	166
	5	321	161
	6	310	147
	7	305	145
	8	318	189
	9	312	134
	10	300	104
	11	290	154
	12	284	146
	13	271	155
	14	310	183
	15	310	186
	16	293	162
	17	314	158
	18	322	158
	19	320	150
	20	289	155
	21	0	0
	22	0	0
	23	0	0
	24	0	0
	25	0	0
	26	0	0
	27	0	0
	28	0	0
	29	0	0
	30	0	0
3	1	142	47
	2	252	139
	3	289	128

DATE		GAS TURBINE MCF/HR	WASTE HEAT BOILER MCF/HR
5	4	307	120
	5	300	142
	6	300	150
	7	296	162
	8	312	146
	9	312	134
	10	308	129
	11	312	135
	12	302	116
	13	319	113
	14	308	116
	15	315	132
	16	296	153
	17	331	131
	18	321	97
	19	318	80
	20	326	90
	21	224	70
	22	297	61
	23	328	133
	24	326	174
	25	323	171
	26	318	178
	27	326	173
	28	288	136
	29	311	177
	30	316	138
	31	309	92
6	1	314	107
	2	329	132
	3	309	92
	4	303	113
	5	325	129

DATE		GAS TURBINE MCF/HR	WASTE HEAT BOILER MCF/HR
6	6	331	103
	7	330	128
	8	317	116
	9	317	137
	10	318	171
	11	323	151
	12	323	151
	13	321	170
	14	312	145
	15	302	170
	16	300	173
	17	322	180
	18	319	146
	19	292	105
	20	313	142
	21	306	135
	22	303	110
	23	308	129
	24	309	169
	25	332	157
	26	332	166
	27	320	137
	28	324	119
	29	326	157
6	30	298	94

QUARTERLY EXCESS EMISSIONS REPORT

PART 1.

a. Quarterly emission reporting period ending: (circle one)

March 31 (June 30) September 30 December 31

b. Reporting Year: 1991

c. Reporting Date: July 29, 1991

d. Total plant operating time (min) 116,640

Total violation time (min) 14,160

Total monitor operating time (min) 109,980

Total downtime for monitor (min) 6,660

e. Person Completing Report: Russell Delezen

f. Plant Name: International Paper - Camden Facility

g. Plant Location: Camden, AR

h. Phone Number for 1.g. above (501) 231-4321

Part 2. Instrument Information Complete for Each Instrument.

a. Monitor type (circle one)

Opacity SO_2 (NO_x) O_2 CO_2 T.R.S., CO

b. Manufacturer: STI

c. Model No. 8844

d. Automatic Calibration Value 225 ppm

e. Basis for Gas Measurement Data (wet or dry) Dry

f. Conversion Factor (F-Factor, etc.) 8740

QUARTERLY EXCESS EMISSIONS REPORT

PART 1.

a. Quarterly emission reporting period ending: (circle one)

March 31 (June 30) September 30 December 31

b. Reporting Year: 1991

c. Reporting Date: July 29, 1991

d. Total plant operating time (min) 116,640

Total violation time (min) 27,060

Total monitor operating time (min) 110,820

Total downtime for monitor (min) 5,820

e. Person Completing Report: Russell Delezen

f. Plant Name: International Paper - Camden Facility

g. Plant Location: Camden, AR

h. Phone Number for 1.g. above (501) 231-4321

Part 2. Instrument Information Complete for Each Instrument.

a. Monitor type (circle one)

Opacity SO_2 NO_x O_2 CO_2 T.R.S., (CO)

b. Manufacturer: STI

c. Model No. 8830

d. Automatic Calibration Value 225 ppm

e. Basis for Gas Measurement Data (wet or dry) Dry

f. Conversion Factor (F-Factor, etc.) 8740

INTERNATIONAL PAPER
1944 ADAMS AVENUE • CAMDEN, ARKANSAS 71701

May 03, 1991

CERTIFIED MAIL #P 538 637 281
RETURN RECEIPT REQEUSTED

Mr. Mitchell Stroh
Air Compliance Monitoring Manager
Arkansas Department of Pollution
Control and Ecology
P. O. Box 9583
8001 National Drive
Little Rock, AR 72219

Subject: Camden Facility
Gas Turbine Cogeneration Facility
Permit No. 990-A
Quarterly Operating Report

Dear Mr. Stroh:

The cover letter attached to our Quarterly Emission Report contained an error in paragraph one. Please replace our original letter of transmittal with the attached revised letter.

Louis Walker
Facility Manager

RD:ad
Attach.

cc: Mr. Craig Ratkey-Dallas

INTERNATIONAL PAPER
1944 ADAMS AVENUE • CAMDEN, ARKANSAS 71701

April 30, 1991

CERTIFIED MAIL #P 538 637 281
RETURN RECEIPT REQEUSTED

Mr. Mitchell Stroh
Air Compliance Monitoring Manager
Arkansas Department of Pollution
Control and Ecology
P. O. Box 9583
8001 National Drive
Little Rock, AR 72219

Subject: Camden Facility
Gas Turbine Cogeneration Facility
Permit No. 990-A
Quarterly Operating Report

Dear Mr. Stroh:

The attached information concerning the Camden Facility Gas Turbine Cogeneration Facility is submitted as required in paragraphs 5G and 8 of Specific Conditions of Permit No. 990-A for the first quarter of 1991. Excess CO emissions were computed using 21.2/lbs/hr rather than 27.2 lbs/hr derived from the 119 tons per year limit.

The vendor recommended modifications to reduce emissions and minimize stratification were installed during the repair shut-down beginning April 21, 1991. The system should be back on line by May 1, 1991. Hopefully, these modifications will eliminate excess emissions.

Should you require additional information, please contact Mr. Craig Ratkey of our Dallas Office (214) 934-4059, or Mr. Russell Delezen at Camden, (501) 231-4321, ext. 251.

Louis Walker
Facility Manager

RD:ad
Attach.

cc: Mr. Craig Ratkey-Dallas

QUARTERLY EXCESS EMISSIONS REPORT

PART 1.

a. Quarterly emission reporting period ending: (circle one)

March 31 June 30 September 30 December 31

b. Reporting Year: 1991

c. Reporting Date: April 30, 1991

d. Total plant operating time (min) 129,600

Total violation time (min) 59,980

Total monitor operating time (min) 119,160

Total downtime for monitor (min) 9,660

e. Person Completing Report: Russell Delezen

f. Plant Name: International Paper - Camden Facility

g. Plant Location: Camden, Arkansas

h. Phone Number for 1.g. above (501) 231-4321

Part 2. Instrument Information Complete for Each Instrument.

a. Monitor type (circle one)

Opacity SO_2 NO_x O_2 CO_2 T.R.S., CO

b. Manufacturer: STI

c. Model No. 8844

d. Automatic Calibration Value 225 ppm

e. Basis for Gas Measurement Data (wet or dry) Dry

f. Conversion Factor (F-Factor, etc.) 8740

QUARTERLY EXCESS EMISSIONS REPORT

PART 1.

a. Quarterly emission reporting period ending: (circle one)

March 31 June 30 September 30 December 31

b. Reporting Year: 1991

c. Reporting Date: April 30, 1991

d. Total plant operating time (min) 129,600

Total violation time (min) 14,280

Total monitor operating time (min) 119,880

Total downtime for monitor (min) 8,940

e. Person Completing Report: Russell Delezen-Camden Facility

f. Plant Name: International Paper-Camden Facility

g. Plant Location: Camden, Arkansas

h. Phone Number for 1.g. above (501) 231-4321

Part 2. Instrument Information Complete for Each Instrument.

a. Monitor type (circle one)

Opacity SO_2 NO_x O_2 CO_2 T.R.S., CO

b. Manufacturer: STI

c. Model No. 8830

d. Automatic Calibration Value 235 ppm

e. Basis for Gas Measurement Data (wet or dry) Dry

f. Conversion Factor (F-Factor, etc.) 8740

CAMDEN MILL QUARTERLY OPERATING REPORT

SOURCE	HOURS OPERATED	GAS BURNED	EMISSION NOx	TONS CO
NO. 1 POWER BOILER	39	1984 MCF	0.18	0
NO. 2 POWER BOILER	0	0	0	0
GAS TURBINE	2,147		*	*
WASTE HEAT BOILER	2,147		58.9	13.2

* - GAS TURBINE EMISSIONS ARE INCLUDED IN WASTE HEAT BOILER

NATURAL GAS BURNED, MCF/HR

DATE	GAS TURBINE		WASTE HEAT BOILER	
JANUARY, 1991				
1	6780	283	3742	156
2	6969	290	3502	146
3	6819	284	2731	114
4	7183	299	4121	172
5	7483	312	4072	170
6	7575	316	4044	169
7	7538	314	4050	169
8	7754	323	3223	134
9	7532	314	3794	158
10	7907	329	3502	146
11	7928	330	3536	147
12	7654	319	4227	176
13	7602	317	3637	152
14	7137	297	4209	175
15	7130	297	4387	183
16	7164	299	3546	148
17	7602	317	4341	181
18	7536	314	4758	198
19	7463	311	4444	185
20	7447	310	4277	178
21	7531	314	3868	161
22	7711	321	4463	186
23	3675	153	1609	67
24	7383	308	3768	157
25	7524	314	4214	176
26	7734	322	3700	154
27	7753	323	3059	127
28	7731	322	3450	144
29	7450	310	3516	147
30	6843	285	3514	146
31	7397	308	4333	181
FEBRUARY, 1991				
1	7424	309	4385	183
2	7421	309	4091	170
3	7286	304	4079	170
4	7518	313	3819	159
5	7664	319	4247	177
6	7439	310	4083	170
7	7151	298	4368	182
8	7082	295	3598	150
9	7602	317	3030	126
10	7583	316	3284	137
11	7340	306	3735	156
12	7432	310	3646	152
13	7303	304	4135	172
14	7250	302	4397	183
15	7638	318	2823	118
16	7499	312	3275	136
17	7368	307	3783	158
18	7368	307	3783	158
19	7514	313	3297	137

20	7423	309	3200	133
21	7583	316	4135	172
22	7165	299	4014	167
23	7316	305	4107	171
24	7574	316	3185	133
25	6239	260	3040	127
26	6990	291	3809	159
27	7055	294	2324	97
28	7282	303	3339	139
MARCH, 1991				
1	7214	301	3960	165
2	7163	298	3926	164
3	7309	305	3526	147
4	7170	299	3383	141
5	7058	294	3650	152
6	7059	294	4106	171
7	7572	316	4412	184
8	7492	312	3601	150
9	7369	307	2694	112
10	7161	298	2392	100
11	7417	309	3224	134
12	7239	302	2955	123
13	7236	302	3143	131
14	7541	314	3100	129
15	7563	315	3401	142
16	7501	313	3709	155
17	7405	309	3664	153
18	7274	303	3930	164
19	7545	314	3949	165
20	7173	299	3385	141
21	7023	293	3320	138
22	7355	306	3033	126
23	7576	316	2906	121
24	7648	319	3352	140
25	7694	321	3320	138
26	7704	321	4307	179
27	7655	319	4483	187
28	7509	313	4590	191
29	7722	322	4011	167
30	7593	316	4301	179
31	7242	302	4564	190

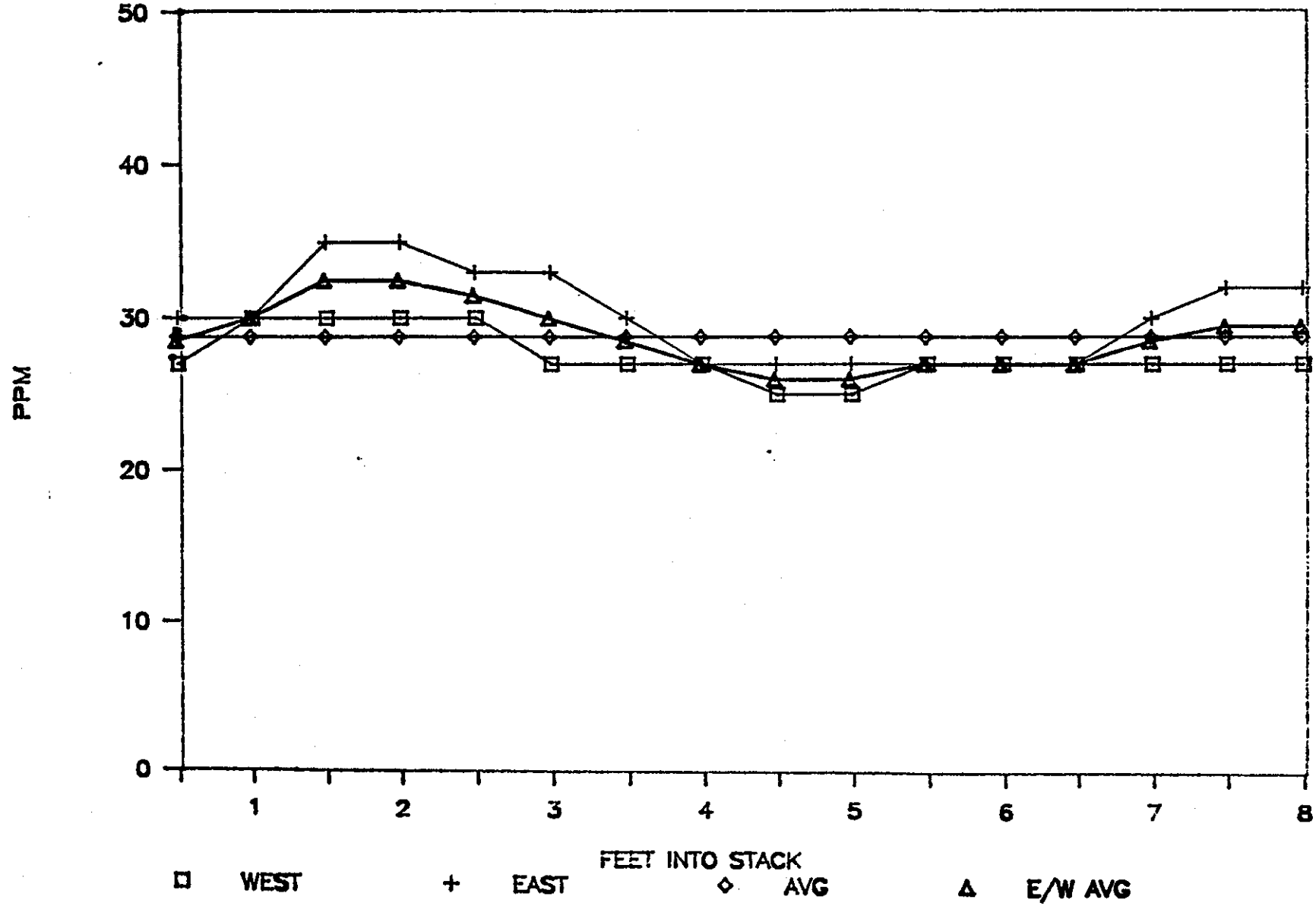
GAS TURBINE--CO CONCENTRATION

APRIL 18 1991, 3:20 PM GAS FLOW-- 151 MCF

EAST PORT	WEST PORT	AVERAGE	FEET IN	
27	30	28.50		28.8
30	30	30.00	1	28.8
30	35	32.50		28.8
30	35	32.50	2	28.8
30	33	31.50		28.8
27	33	30.00	3	28.8
27	30	28.50		28.8
27	27	27.00	4	28.8
25	27	26.00		28.8
25	27	26.00	5	28.8
27	27	27.00		28.8
27	27	27.00	6	28.8
27	27	27.00		28.8
27	30	28.50	7	28.8
27	32	29.50		28.8
27	32	29.50	8	28.8
27.50	30.13	28.81		

CARBON MONOXIDE CONC. — GAS TURBINE

APRIL 18, 1991 — CENTER PORTS



REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NOx EXCESS EMISSIONS

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	(LBS) MAGNITUDE (LBS)	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
991											
/01	06:00	08:00	120	1.7				X			
/01	19:00	20:00	60	0.5				X			
/01	21:00	24:00	180	3.0				X			
/02	91:00	03:00	120	2.5				X			
/02	11:00	17:00	360	20.0				X			
/02	20:00	24:00	240	13.4				X			
/03	01:00	07:00	360	40.3				X			
/03	18:00	22:00	240	25.8				X			
/04	08:00	14:00	360	23.8				X			
/04	15:00	24:00	540	31.0				X			
/05	01:00	24:00	1380	83.3				X			
/06	00:00	23:00	1380	207.7				X			
TOTAL											

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NOx

REASONS FOR EMISSIONS (MINUTES)

TE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE (LBS)	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
91											
07	00:00	07:00	420	51.4				X			
07	08:00	13:00	300	11.4				X			
07	15:00	24:00	540	29.1				X			
08	07:00	07:00	360	30.8				X			
08	08:00	00:00	960	75.8				X			
09	01:00	07:00	360	37.7				X			
09	12:00	00:00	720	88.7				X			
10	00.00	03:00	180	23.2				X			
10	05:00	07:00	120	5.3				X			
10	08:00	00:00	960	84.1				X			
11	00:00	09:00	540	54.5				X			
11	15:00	00:00	540	66.1				X			
TAL			6000	588.1							

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NOx EXCESS EMISSIONS

REASONS FOR EMISSIONS (MINUTES)

E	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE (LBS)	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
	00:00	13:00	780	62.7				X			
	17:00	00:00	420	32.3				X			
	00:00	01:00	60	0.5				X			
	02:00	05:00	180	12.0				X			
	10:00	00:00	840	131.4				X			
	17:00	18:00	60	2.3				X			
	08:00	10:00	120	286.8				X			
	11:00	14:00	180	393.8				X			
	15:00	18:00	180	8.2				X			
	14:00	15:00	60	1,4				X			
	16:00	00:00	480	140.6				X			
TAL			3,360	1,072							

CAMDEN FACILITY EXCESS EMISSIONS

REPORT FOR GAS TURBINE/WASTE HEAT BOILER REASONS FOR EMISSIONS (MINUTES)

NOx

ATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE (LBS)	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
991											
18	00:00	01:00	60	7.7				X			
19	16:00	00:00	480	51.2				X			
20	00:00	03:00	180	22.7				X			
20	04:00	12:00	480	37.6				X			
20	19:00	00:00	300	24.0				X			
21	13:00	00:00	660	586.7				X			
22	00:00	00:00	1440	1756.3				X			
23	00:00	07:00	420	461.0				X			
23	19:00	00:00	300	86.1				X			
24	00:00	07:00	420	166.1				X			
24	08:00	00:00	960	474.8				X			
25	00:00	00:00	1440	159.9				X			
TOTAL			7140	3834.1							

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NOx

EXCESS EMISSIONS

REASONS FOR EMISSIONS (MINUTES)

TE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE (LBS)	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
91											
6	00:00	00:00	1440	163.4				X			
7	00:00	00:00	1440	222.2				X			
8	00:00	00:00	1440	187.1				X			
9	00:00	07:00	420	41.4				X			
9	09:00	11:00	120	9.6				X			
0	03:00	04:00	60	1.2				X			
0	10:00	11:00	60	39.5				X			
0	20:00	00:00	240	28.5				X			
1	00:00	00:00	1440	157.1				X			
OTAL			6660	850							

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NOx EXCESS EMISSIONS

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE (LBS)	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
991											
01	00:00	08:00	480	44.4				X			
01	09:00	24:00	900	115.1				X			
02	00:00	12:00	720	71.6				X			
02	13:00	24:00	660	66.6				X			
03	00:00	24:00	1440	168.8				X			
04	00:00	05:00	300	16.3				X			
04	09:00	24:00	900	84.6				X			
05	00:00	11:00	660	109.4				X			
05	15:00	24:00	540	90.1				X			
TOTAL											

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NOx EXCESS EMISSIONS

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE (LBS)	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
991											
/06	00:00	07:00	420	60.6				X			
/06	09:00	10:00	60	6.3				X			
/06	11:00	16:00	300	29.9				X			
/06	17:00	24:00	420	51.1				X			
/07	00:00	08:00	480	68.0				X			
/07	16:00	18:00	120	23.7				X			
/08	02:00	07:00	300	28.0				X			
/08	15:00	24:00	540	26.1				X			
TOTAL											

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NOx

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE (LBS)	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
.991											
/09	00:00	16:00	960	88.6				X			
/09	17:00	19:00	120	4.4				X			
/09	20:00	21:00	60	4.2				X			
/10	01:00	02:00	60	3.3				X			
/10	04:00	24:00	1200	94.9				X			
/11	00:00	09:00	540	51.1				X			
/11	11:00	13:00	120	9.7				X			
/11	14:00	24:00	600	43.2				X			
/12	00:00	18:00	1080	100.6				X			
/14	21:00	24:00	180	15.9				X			
TOTAL											

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NOx

REASONS FOR EMISSIONS (MINUTES)

ATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE (LBS)	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
91 /15	00:00	18:00	1080	132.5				X			
/15	22:00	24:00	120	4.0				X			
/16	03:00	07:00	240	15.8				X			
/16	08:00	19:00	660	84.9				X			
/16	20:00	22:00	120	6.5				X			
/16	23:00	24:00	60	3.0				X			
/17	00:00	07:00	420	29.9				X			
/17	08:00	17:00	540	35.2				X			
/17	19:00	21:00	120	1.4				X			
/17	19:00	23:00	240	8.8				X			
TOTAL											

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
7/01	00:00	01:00	60	48.7#				X			
7/01	02:00	03:00	60	3.9#				X			
7/01	04:00	09:00	300	79.0#				X			
7/01	11:00	17:00	360	108.0#				X			
7/01	17:00	00:00	360	54.0#				X			
7/02	00:00	03:00	180	45.9#				X			
7/02	04:00	12:00	480	363.6#				X			
7/02	15:00	16:00	60	19.8#				X			
7/02	21:00	00:00	180	58.2#				X			
7/03	00:00	02:00	120	6.4#				X			
7/03	07:00	08:00	60	24.7#				X			
TOTAL			222 0	812.2#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOW
1990											
7/03	12:00	14:00	120	52.6#				X			
7/03	19:00	20:00	60	5.5#				X			
7/03	22:00	23:00	60	12.3#				X			
7/04	07:00	08:00	60	5.1#				X			
7/04	11:00	14:00	180	69.9#				X			
7/04	19:00	22:00	180	61.5#				X			
7/05	03:00	04:00	60	3.5#				X			
7/05	05:00	06:00	60	4.8#				X			
7/5	07:00	10:00	180	52.5#				X			
7/5	17:00	18:00	60	53.2#				X			
7/5	21:00	24:00	180	40.8#				X			
TOTAL			1200	361.7#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
7/06	02:00	03:00	60	0.8#				X			
7/06	06:00	08:00	120	24.4#				X			
7/06	13:00	24:00	660	247.5#				X			
7/07	24:00	03:00	300	104.5#				X			
7/7	09:00	10:00	60	12.7#				X			
7/7	11:00	12:00	60	14.7#				X			
7/7	13:00	14:00	60	4.3#				X			
7/7	16:00	17:00	60	2.4#				X			
7/7	23:00	24:00	60	10.8#				X			
7/8	24:00	04:00	240	51.2#				X			
7/8	21:00	22:00	60	24.8#				X			
TOTAL			1740	498.1#							

[AB]

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
7/09	02:00	04:00	120	30.4#				X			
7/09	18:00	19:00	120	12.8#				X			
7/10	04:00	05:00	60	4.3#				X			
7/10	06:00	08:00	120	22.8#				X			
7/10	18:00	22:00	240	48.0#				X			
7/10	23:00	24:00	60	0.4#				X			
7/11	24:00	03:00	300	37.5#				X			
7/11	12:00	13:00	60	0.7#				X			
7/11	15:00	17:00	120	15.2#				X			
7/11	20:00	21:00	60	10.2#				X			
7/12	07:00	09:00	120	23.0#				X			
TOTAL			1380	205.3#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOW
1990											
7/13	03:00	04:00	60	1.6#				X			
7/13	07:00	08:00	60	1.2#				X			
7/13	15:00	24:00	540	82.8#				X			
7/14	02:00	03:00	60	4.6#				X			
7/14	10:00	19:00	540	89.1#							
7/14	20:00	21:00	60	0.4#				X			
7/15	01:00	03:00	120	4.2#				X			
7/15	08:00	09:00	60	8.3#				X			
7/15	13:00	14:00	60	3.6#				X			
7/15	16:00	17:00	60	0.5#				X			
7/15	21:00	25:00	180	44.4#				X			
TOTAL			1800	240.7#							

TAB

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY
GAS TURBINE/WASTE HEAT BOILER
CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
7/16	02:00	03:00	60	5.2#				X			
7/16	06:00	08:00	120	5.2#				X			
7/16	10:00	12:00	120	16.4#				X			
7/16	13:00	15:00	120	15.8#				X			
7/16	19:00	20:00	60	1.6#				X			
7/16	21:00	23:00	120	5.2#				X			
7/17	01:00	02:00	60	1.0#				X			
7/17	05:00	10:00	300	20.5#				X			
7/17	15:00	19:00	240	34.8#				X			
7/17	23:00	24:00	60	2.5#				X			
7/18	02:00	02:00	60	11.1#				X			
TOTAL			1320	119.3#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOW
1990											
7/21	06:00	09:00	180	50.4#				X			
7/21	16:00	17:00	60	4.0#				X			
7/21	20:00	24:00	240	50.0#				X			
7/22	24:00	01:00	60	7.6#				X			
7/22	02:00	14:00	720	210.0				X			
7/22	16:00	24:00	480	97.6#				X			
7/23	24:00	24:00	1440	451.2#				X			
7/24	24:00	08:00	480	244.8#				X			
7/24	13;00	24:00	660	355.3#				X			
7/25	24:00	10:00	600	294.0#				X			
7/25	11:00	13:00	120	18.4#				X			
TOTAL			5040	1783.3#							

TAI I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
7/25	14:00	15:00	60	7.9#				X			
7/25	16:00	21:00	300	64.5#				X			
7/25	22:00	24:00	120	50.4#				X			
7/26	24:00	10:00	600	180.0#				X			
7/26	13:00	14:00	60	6.8#				X			
7/26	16:00	17:00	60	18.6#				X			
7/26	21:00	24:00	180	102.9#				X			
7/27	24:00	13:00	780	252.2#				X			
7/27	15:00	16:00	60	112.5#				X			
7/27	20:00	21:00	60	12.0#				X			
7/27	23:00	24:00	60	7.0#				X			
TOTAL			2340	814.8#							

TAI I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOW
1990											
7/28	24:00	01:00	60	11.0#				X			
7/28	02:00	03:00	60	25.5#				X			
7/28	04:00	12:00	480	220.8#				X			
7/28	13:00	15:00	120	16.4#				X			
7/28	17:00	23:00	360	78.0#				X			
7/29	24:00	09:00	540	129.6#				X			
7/29	13:00	15:00	120	33.6#				X			
7/29	17:00	24:00	420	278.6#				X			
7/30	24:00	07:00	420	125.3#				X			
7/30	15:00	24:00	540	244.8#				X			
7/31	24:00	22:00	1320	690.8#				X			
TOTAL			4440	1854.4#							

TA I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
7/31	23:00	24:00	60	29.8#				X			
8/01	14:00	15:00	60	12.0#				X			
8/01	18:00	19:00	60	0.5#				X			
8/01	20:00	24:00	240	88.0#				X			
8/02	24:00	01:00	60	23.2#				X			
8/02	03:00	24:00	1260	495.6#				X			
8/03	24:00	04:00	240	36.4#				X			
8/03	05:00	17:00	720	199.2#				X			
8/03	20:00	24:00	240	73.2#				X			
8/04	24:00	09:00	540	104.4#				X			
8/4	12:00	17:00	300	67.5#				X			
TOTAL			3780	1129.8#							

TAI I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOW
1990											
8/04	18:00	19:00	60	3.0#				X			
8/04	20:00	24:00	240	56.4				X			
8/05	24:00	01:00	60	3.0#				X			
8/05	04:00	05:00	60	1.5#				X			
8/05	06:00	24:00	1080	243.0#				X			
8/06	24:00	08:00	480	108.8				X			
8/06	09:00	10:00	60	5.7#				X			
8/06	11:00	12:00	120	7.2#				X			
8/6	14:00	16:00	120	7.6#				X			
8/6	17:00	18;00	60	4.3#				X			
8/06	19:00	20:00	120	11.0#				X			
TOTAL			2460	451.5#							

TA I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOW
1990											
8/07	24:00	14:00	840	170.8#				X			
8/07	15:00	17:00	120	38.6#				X			
8/08	06:00	07:00	60	0.7#				X			
8/08	09:00	12:00	180	9.9#				X			
8/08	19:00	20:00	60	13.3#				X			
8/08	22:00	24:00	120	4.6#				X			
8/09	24:00	01:00	60	1.6#				X			
8/09	03:00	08:00	300	51.0#				X			
8/09	18;00	20:00	120	5.2#				X			
8/10	01:00	03:00	120	9.0				X			
8/10	11:00	12:00	60	0.4#				X			
TOTAL			2040	305.1#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
8/10	14:00	15:00	60	0.6#				X			
8/10	21:00	24:00	180	43.8				X			
8/11	10:00	11:00	60	6.8#				X			
8/11	13:00	15:00	120	10.6#				X			
8/11	19:00	20:00	60	1.7#				X			
8/11	21:00	24:00	180	48.6#				X			
8/12	24:00	05:00	300	30.0#				X			
8/12	06:00	09:00	180	23.4#				X			
8/12	13:00	14:00	60	4.8#				X			
8/12	18:00	20:00	120	3.4#				X			
8/12	21:00	24:00	180	21.3#				X			
TOTAL			1500	195.0#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
8/29	12:00	13:00	60	5.1#				X			
8/29	17:00	18:00	60	1.2#				X			
8/29	19:00	24:00	300	32.0#				X			
8/30	24:00	08:00	480	114.4#				X			
8/30	10:00	13:00	180	22.2#				X			
8/30	14:00	15:00	60	6.6#				X			
8/30	21:00	23:00	120	4.2#				X			
8/31	01:00	13:00	720	176.4#				X			
8/31	14:00	17:00	180	18.0#				X			
8/31	18:00	22:00	240	34.4#				X			
8/31	23:00	24:00	60	4.2#				X			
TOTAL			2460	418.7#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
8/10	03:00	10:00	420	91.0#				X			
8/11	01:00	02:00	60	0.1#				X			
8/11	06:00	07:00	60	16.8#				X			
8/11	08:00	09:00	60	7.9#				X			
8/14	02:00	10:00	480	52.0#				X			
8/14	23:00	24:00	60	13.1#				X			
8/15	24:00	10:00	600	110.0#				X			
8/15	14:00	15:00	60	2.5#				X			
8/15	16:00	17:00	60	0.1#				X			
8/19	12:00	13:00	60	116.8#							X
8/21	14:00	15:00	60	122.9#							X
TOTAL			1980	533.2#							

CAMDEN FACILITY EXCESS EMISSIONS

REPORT FOR GAS TURBINE/WASTE HEAT BOILER

CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	(LBS) MAGNITUDE (LBS)	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1991											
3/06	19:00	23:00	120	7.2				X			
3/06	00:00	10:00	540	86.2				X			
3/09	21:00	22:00	60	1.6				X			
3/10	23:00	24:00	60	1.7				X			
3/11	00:00	01:00	60	0.8				X			
3/12	17:00	18:00	60	2.1				X			
3/18	07:00	08:00	60	1.5				X			
3/19	01:00	17:00	660	63.4				X			
3/19	21:00	24:00	120	22.6				X			
3/20	00:00	07:00	300	68.3							
3/20	16:00	23:00	240	31.7				X			
3/21	05:00	24:00	540	92.0				X			
TOTAL											

CAMDEN FACILITY EXCESS EMISSIONS

REPORT FOR GAS TURBINE/WASTE HEAT BOILER

CARBON MONOXIDE

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	(LBS) MAGNITUDE (LBS)	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1991											
3/22	02:00	16:00	540	101.9				X			
3/23	01:00	10:00	420	44.8				X			
3/23	18:00	22:00	180	13.0				X			
3/24	05:00	09:00	180	15.6				X			
3/25	01:00	14:00	300	19.3				X			
3/26	00:00	09:00	480	186.3				X			
3/26	12:00	24:00	660	164.8				X			
3/27	00:00	16:00	660	223.1				X			
3/28	01:00	11:00	360	47.9				X			
3/28	13:00	24:00	660	301.2				X			
3/29	00:00	09:00	540	285.7				X			
3/31	20:00	21:00	60	0.6				X			
TOTAL			14280	3100.0							

TABLE I

CONTINUOUS MONITORING SYSTEM OPERATION FAILURES

REASON FOR MONITOR DOWN TIME (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL MIN.	INSTRUMENT	MONITOR EQUIPMENT MALFUNCTION	NON-MONITOR EQUIPMENT MALFUNCTION	QUALITY ASSURANCE	OTHER KNOWN MONITOR DOWNTIME	UNKNOWN
1991 1/11	09:00	14:00	300	NOx	X				
1/12	13:00	16:00	240	NOx	X				
1/14	13:00	15:00	120	NOx	X				
1/15	14:00	15:00	60	NOx	X				
1/15	07:00	09:00	120	NOx	X				
1/15	11:00	12:00	60	NOx			X		
1/15	15:00	16:00	60	NOx			X		
1/15	07:00	19:00	720	NOx			X		
1/24	07:00	08:00	60	NOx	X				
1/24	11:00	16:00	240	NOx	X				
2/01	08:00	09:00	60				X		
2/05	12:00	14:00	120	NOx	X				
2/06	08:00	09:00	60	NOx	X				
TOTAL									

TABLE I

CONTINUOUS MONITORING SYSTEM OPERATION FAILURES

REASON FOR MONITOR DOWN TIME (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL MIN.	INSTRUMENT	MONITOR EQUIPMENT MALFUNCTION	NON-MONITOR EQUIPMENT MALFUNCTION	QUALITY ASSURANCE	OTHER KNOWN MONITOR DOWNTIME	UNKNOWN
1991 2/07	08:00	16:00	480	NOx	X				
2/08	11:00	13:00	120	NOx	X				
2/11	09:00	11:00	120	NOx	X				
2/19	04:00	19:00	660	NOx	X				
2/26	09:00	10:00	60	NOx	X		X		
3/03	01:00	24:00	1380	NOx	X				
3/04	00:00	24:00	1440	NOx	X				
3/05	00:00	24:00	1440	NOx	X				
3/06	00:00	17:00	1020	NOx	X				
3/09	19:00	24:00	300	NOx	X				
3/10	00:00	05:00	300	NOx	X				
3/11	07:00	08:00	60	NOx			X		
TOTAL									

TABLE I

CONTINUOUS MONITORING SYSTEM OPERATION FAILURES

REASON FOR MONITOR DOWN TIME (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL MIN.	INSTRUMENT	MONITOR EQUIPMENT MALFUNCTION	NON-MONITOR EQUIPMENT MALFUNCTION	QUALITY ASSURANCE	OTHER KNOWN MONITOR DOWNTIME	UNKNOWN
1991 3/22	10:00	11:00	60	NOx	X				
TOTAL			9,660						

TABLE I

CONTINUOUS MONITORING SYSTEM OPERATION FAILURES

REASON FOR MONITOR DOWN TIME (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL MIN.	INSTRUMENT	MONITOR EQUIPMENT MALFUNCTION	NON-MONITOR EQUIPMENT MALFUNCTION	QUALITY ASSURANCE	OTHER KNOWN MONITOR DOWNTIME	UNKNOWN
1991 1/11	09:00	24:00	900	CO	X				
1/12	00:00	24:00	1440	CO	X				
1/13	00:00	24:00	1440	CO	X				
1/14	00:00	24:00	1440	CO	X				
1/15	00:00	24:00	1440	CO	X				
1/16	00:00	11:00	660	CO	X				
1/16	12:00	13:00	60	CO			X		
1/17	08:00	09:00	60	CO	X				
1/17	11:00	16:00	120	CO	X				
1/21	08:00	09:00	60	CO			X		
1/24	07:00	08:00	60	CO			X		
1/30	11:00	16:00	120	CO			X		
2/01	08:00	09:00	60	CO			X		
TOTAL									

TAB" II

CONTINUOUS MONITORING SYSTEM OPERATION FAILURES

REASON FOR MONITOR DOWN TIME (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL MIN.	INSTRUMENT	MONITOR EQUIPMENT MALFUNCTION	NON-MONITOR EQUIPMENT MALFUNCTION	QUALITY ASSURANCE	OTHER KNOWN MONITOR DOWNTIME	UNKNOWN
1991 2/05	12:00	14:00	120	CO	X				
2/06	08:00	09:00	60	CO	X				
2/07	08:00	15:00	480	CO	X				
2/08	11:00	12:00	60	CO	X				
2/11	09:00	11:00	120	CO	X				
2/19	18:00	19:00	60	CO	X				
2/26	09:00	10:00	60	CO					
3/06	16:00	17:00	60	CO			X		
3/27	10:00	11:00	60	CO			X		
TOTAL			8,940						

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
10/23	22:00	24:00	120	6.4#				X			
10/24	22:00	07:00	360	12.0#				X			
10/24	14:00	21:00	420	17.5#				X			
10/24	22:00	24:00	120	8.4#				X			
10/25	24:00	05:00	300	36.0#				X			
10/25	06:00	07:00	60	5.6#				X			
10/25	08:00	24:00	960	54.4#				X			
10/26	02:00	03:00	60	1.2#				X			
10/26	10:00	13:00	180	7.8#				X			
10/26	14:00	15:00	60	2.2#				X			
10/26	17:00	19:00	120	5.0#				X			
TOTAL			2760	156.5#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
10/27	03:00	04:00	60	0.7#				X			
10/27	08:00	12:00	240	4.8#				X			
10/27	14:00	16:00	120	5.2#				X			
10/27	17:00	18:00	120	4.0#				X			
10/27	20:00	24:00	240	4.0#				X			
10/28	02:00	07:00	300	8.5#				X			
10/28	08:00	12:00	240	12.4#				X			
10/28	13:00	14:00	60	1.0#				X			
10/28	23:00	24:00	60	0.7#				X			
10/29	01:00	03:00	120	8.0#				X			
10/29	04:00	07:00	180	6.6#				X			
TOTAL			1740	55.9							

TABLE I
EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
10/29	08:00	11:00	180	9.9#				X			
10/29	12:00	13:00	60	0.2#				X			
10/29	14:00	22:00	480	30.4#				X			
10/29	23:00	24:00	60	1.6#				X			
10/30	02:00	06:00	240	14.0#				X			
10/30	23:00	24:00	60	1.1#				X			
10/31	24:00	06:00	360	10.2#				X			
11/01	09:00	12:00	180	5.1#				X			
11/02	05:00	06:00	60	2.2#				X			
11/02	16:00	18:00	120	1.2#				X			
11/03	12:00	13:00	60	2.2#				X			
TOTAL			1860	78.1#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
11/04	24:00	07:00	420	16.8#				X			
11/04	08:00	10:00	120	9.8#				X			
11/04	19:00	24:00	300	22.0#				X			
11/05	24:00	03:00	180	29.4#				X			
11/06	13:00	15:00	120	10.4#				X			
11/14	10.00	20:00	600	217.0#				X			
11/15	24:00	07:00	1120	116.2#				X			
11/17	19:00	23:00	240	13.2#				X			
11/18	24:00	19:00	1140	95.0#				X			
11/18	21:00	24:00	180	1.8#				X			
11/19	04:00	10:00	360	27.0#				X			
TOTAL			4080	558.6#							

TABLE I

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NITROGEN OXIDES EXCESS EMISSIONS

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
11/19	11:00	13:00	120	3.2#				X			
11/20	07:00	12:00	300	25.0#				X			
11/21	24:00	05:00	300	19.5#				X			
11/21	13:00	14:00	60	2.9#				X			
11/21	23:00	24:00	60	0.5				X			
11/22	24:00	02:00	120	4.4#				X			
11/22	07:00	08:00	60	0.1#				X			
11/22	09:00	11:00	120	2.6				X			
11/22	13:00	17:00	240	13.6#				X			
11/22	20:00	24:00	240	12.4#				X			
11/23	01:00	03:00	120	5.0#				X			
TOTAL			1740	89.2#							

TABLE I

EXCESS EMISSIONS

CAMDEN FACILITY

REPORT FOR GAS TURBINE/WASTE HEAT BOILER

NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
11/30	03:00	04:00	60	1.8#				X			
11/30	05:00	07:00	120	1.4#				X			
11/30	08:00	17:00	540	30.6#				X			
11/30	19:00	21:00	120	1.8#				X			
11/30	22:00	24:00	120	3.2#				X			
12/01	24:00	07:00	420	35.7#				X			
12/01	09:00	18:00	540	47.7#				X			
12/01	20:00	21:00	60	2.0#				X			
12/01	22:00	23:00	60	0.3#				X			
12/03	03:00	04:00	60	0.3#				X			
12/03	11:00	17:00	360	10.8#				X			
TOTAL			2460	135.6#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
12/03	18:00	19:00	60	2.6#				X			
12/04	14:00	16:00	120	5.6#				X			
12/04	22:00	23:00	60	0.7#				X			
12/05	03:00	04:00	60	0.4#				X			
12/05	05:00	06:00	60	1.1#				X			
12/05	23:00	24:00	60	0.6#				X			
12/06	01:00	02:00	60	1.5#				X			
12/06	06:00	10:00	240	7.6#				X			
12/06	11:00	16:00	300	15.0#				X			
12/06	19:00	24:00	300	19.0#				X			
12/07	24:00	04:00	240	2.4#				X			
TOTAL			1560	56.5#							

TABLE I

EXCESS EMISSIONS

CAMDEN FACILITY

REPORT FOR GAS TURBINE/WASTE HEAT BOILER

NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
11/23	04:00	07:00	180	7.5#				X			
11/23	09:00	11:00	120	4.6#				X			
11/23	12:00	24:00	720	76.8#				X			
11/24	24:00	24:00	1440	139.2				X			
11/25	02:00	13:00	660	63.8#				X			
11/28	01:00	19:00	1080	66.0#				X			
11/28	20:00	21:00	60	0.9#				X			
11/28	22:00	23:00	60	3.4#				X			
11/29	01:00	04:00	180	1.5#				X			
11/29	05:00	16:00	660	33.0#				X			
11/29	20:00	24:00	240	7.2#				X			
TOTAL			5400	404.5#							

TABLE I

EXCESS EMISSIONS

CAMDEN FACILITY

REPORT FOR GAS TURBINE/WASTE HEAT BOILER

NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
12/07	05:00	08:00	180	15.6#				X			
12/07	16:00	24:00	480	26.4#				X			
12/08	24:00	07:00	420	18.9#				X			
12/08	09:00	21:00	120	2.2#				X			
12/08	22:00	24:00	120	1.4#				X			
12/09	03:00	04:00	60	2.7#				X			
12/09	08:00	13:00	300	5.5#				X			
12/09	14:00	18:00	240	9.2#				X			
12/10	15:00	21:00	360	13.8#				X			
12/11	01:00	06:00	300	10.0#				X			
12/11	08:00	13:00	300	6.0#				X			
TOTAL			2880	111.7#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
12/11	14:00	19:00	300	6.0#				X			
12/12	03:00	07:00	240	6.8#				X			
12/12	08:00	12:00	240	4.4#				X			
12/12	15:00	20:00	300	9.0#				X			
12/12	21:00	22:00	60	0.8#				X			
12/12	23:00	24:00	60	1.8#				X			
12/13	01:00	03:00	120	3.4#				X			
12/13	04:00	07:00	180	2.4#				X			
12/13	17:00	24:00	420	13.3#				X			
12/14	02:00	07:00	300	20.5#				X			
12/14	11:00	12:00	60	1.8#				X			
TOTAL			2280	70.2#							

TABLE 7

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
12/14	15:00	20:00	300	4.0#				X			
12/14	23:00	24:00	60	2.7#				X			
12/15	04:00	06:00	120	5.6#				X			
12/15	04:00	07:00	180	6.6#				X			
12/15	08:00	13:00	300	17.0#				X			
12/15	15:00	24:00	540	23.4#				X			
12/16	01:00	12:00	660	52.8#				X			
12/16	13:00	16:00	180	8.7#				X			
12/16	23:00	24;00	60	2.8#				X			
12/17	01:00	07:00	360	21.0#				X			
12/17	19:00	20:00	60	0.7#				X			
TOTAL			2820	145.3#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
12/17	21:00	23:00	120	2.2#				X			
12/18	05:00	09:00	240	2.4#				X			
12/18	10:00	16:00	360	18.0#				X			
12/18	17:00	18:00	60	0.4#				X			
12/19	04:00	05:00	60	4.1#				X			
12/19	11:00	12:00	60	0.3#				X			
12/19	13:00	15:00	120	4.0#				X			
12/19	22:00	24:00	120	2.4#				X			
12/20	03:00	04:00	60	1.8#				X			
12/20	05:00	06:00	60	1.0#				X			
12/20	22:00	24:00	120	3.8#				X			
TOTAL			1380	40.4#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
12/22	03:00	04:00	60	4.9#				X			
12/22	11:00	14;00	180	6.3#				X			
12/22	16:00	17:00	60	2.2#				X			
12/22	22:00	24:00	120	1.6#				X			
12/23	12:00	14:00	120	6.6#				X			
12/23	21:00	24:00	180	86.4#				X			
12/24	24:00	-1:00	60	15.0#				X			
12/24	23:00	24:00	60	9.8#				X			
12/25	24:00	11:00	660	215.6#				X			
12/25	22:00	24:00	120	4.8#				X			
12/26	02:00	03:00	60	0.5#				X			
TOTAL			1680	353.7#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
12/26	04:00	05:00	60	0.6#				X			
12/26	06:00	07:00	60	1.9#				X			
12/26	08:00	16:00	480	16.4#				X			
12/26	18:00	20:00	120	1.2#				X			
12/26	21:00	23:00	120	2.8#				X			
12/27	04:00	07:00	420	21.7				X			
12/27	09:00	10:00	60	2.1#				X			
12/27	11:00	19:00	480	32.8#				X			
12/27	20:00	21:00	60	0.1#				X			
12/28	01:00	15:00	840	17.1#				X			
12/28	17:00	24:00	420	14.0#				X			
TOTAL			3120	110.7#							

TABLE I

EXCESS EMISSIONS

REPORT FOR CAMDEN FACILITY GAS TURBINE/WASTE HEAT BOILER NITROGEN OXIDES

REASONS FOR EMISSIONS (MINUTES)

DATE	TIME FROM	TIME TO	TOTAL TIME (MIN)	MAGNITUDE	START UP/ SHUTDOWN	CLEANING SOOT BLOWING	CONTROL EQUIP. FAILURE	PROCESS PROBLEMS	FUEL PROBLEMS	OTHER KNOWN REASONS	UNKNOWN
1990											
12/29	24:00	04:00	240	9.2#				X			
12/29	06:00	11:00	300	24.0#				X			
12/29	13:00	14:00	60	8.6#				X			
12/30	15:00	24:00	540	50.4#				X			
12/31	24:00	07:00	420	34.3#				X			
12/31	11:00	12:00	60	2.1#				X			
12/31	13:00	14:00	60	1.8#				X			
12/21	16:00	21:00	300	23.5#				X			
TOTAL			1980	153.9							
TOTAL			60120	5713.80#							

RECEIVED
OCT 10 1990
RD

P.O. # _____ PAGE 1 OF 5 (svc. report)

CUSTOMER SERVICE REPORT

REASON FOR VISIT: Quarterly Preventive Maintainence

TYPE OF EQUIPMENT: Dual or Single Stream - NOX, CO, & O_2 Monitors

COMPANY: International Paper Company PLANT: Camden

ADDRESS: P.O. Box 2045

CITY: Camden, Arkansas ZIP: 71701

PHONE: 501 - 231 - 4321

PERSONNEL CONTACTED:

Russell Delezen TITLE: Superintendent Technical & Environmental PHONE EXT: 251

Randy Frierson TITLE: ICS Technician PHONE EXT: 496

NOTES: _____

========== FOR USE BY S.T.I. REP. ==========

S.T.I. REPRESENTATIVE: David Gilbert & Roger Haynes.

DATES : (PORTAL TO PORTAL) FROM: 10-7-90 TO: 10-10-90

COMMENTS: _____

========== FOR CUSTOMER USE ==========

I have reviewed status of equipment serviced. All work has been completed as requested. Payment for services performed should be billed using above P.O. number.

COMMENTS: _____

CUSTOMER SIGNATURE: X Mitchell C. White DATE: 10/10/90

See attached copies of : DAILY REPORTS, PARTS USAGE REPORT, NOTES, ETC.

FILE "SVCREPORT"090887"

APPENDIX E

MANUFACTURERS SPECIFICATIONS

PERFORMANCE SPECIFICATIONS

A. Ratings

The package power plant ratings on the previous page include allowances for excitation power and the shaft-driven equipment normally supplied, as well as the inlet and exhaust pressure drops associated with the air filtration and silencing equipment defined in the "Equipment Description" section of this contract. The ratings do not include the effects of NOx controls that may be required.

B. Performance Data and Curves

Performance curves for both the turbine and generator are included in the "Engineering Data" section of this contract. From these curves it is possible to determine performance at ambient temperatures, percent loads, and barometric conditions differing from those listed in the performance specifications.

C. Guarantee Basis Without Steam Injection

The performance guarantees presented on the preceding pages are based on new and clean condition of the gas turbine. If more than 25 fired hours have elapsed before a performance test is to be conducted, a General Electric representative shall have the right to inspect the unit to assure that the power plant is in new and clean condition. The guarantees are also based on a site test conducted by Buyer in accordance with GEI-41067D, "Modified ASME Test", as described in the Engineering Data section and per the Conditions of Sale within seven (7) days of synchronization.

D. Guarantee Basis with Maximum Steam Injection for Power Augmentation Based on Meeting 42 ppmvd NOx Emissions

The performance guarantee is based on the new and clean conditions of the gas turbine. When operated at a compressor inlet temperature of 80F, a barometric pressure of 14.63 psia, and a steam injection rate of 36720 lb/h at the compressor discharge casing, the power plant is guaranteed to produce 26680 kW at the generator terminals with a heat rate of 11530 Btu/kWh (LHV) at base load on Natural Gas fuel. The gas turbine with steam injection will limit average NOx emissions to 42 ppmvd at 15% O_2 on natural gas fuel across the ambient range. (Note that these values are not adjusted to ISO conditions.) The performance guarantees are based on the calculated amount of steam injection flow to the combustor head end to limit NOx emissions to 42 ppmvd. The amount of steam injection as determined the field compliance test may be slightly different, which will have an effect on the output and heat rate.

The output shown is output at the generator terminals which includes losses due to excitation, shaft driven auxiliaries, and inlet and exhaust pressure drops. The above guarantees are based on the Buyer conducting the performance test described in Paragraph C above.

PERFORMANCE SPECIFICATIONS
FOR GAS TURBINE POWER PLANT

GAS TURBINE-GENERATOR UNIT

Model No.	Type
PG5371PA	Package Power Plant

Spec. No: TBO-6724G
Date: SEPTEMBER, 1988

Operating Conditions: Site [X] ISO [ ] Other [ ]

Barometric Pressure (Psia)	Ambient Temperature (Degrees F)	Average Exhaust Gas Temperature (Degrees F)	Inlet System Pressure Drop (Inches of Water)	Exhaust System Pressure Drop (Inches of Water)
14.63	60	908 (Base)	4	12

PERFORMANCE AT ABOVE CONDITIONS

Output of Generator (kW)	Total Heat Input (10^6 Btu/h) (LHV)	Heat Rate (Btu/kWh) (LHV)	Fuel			No Injection
			Type	LHV	Units	**lb/hr
Base 25580	308.2	12050	N. Gas	21515	Btu/lb	

* Heat rate including all losses to the generator terminals will not be greater than this value.
/ Guaranteed point (under new and clean conditions).

PERFORMANCE SPECIFICATIONS
FOR GAS TURBINE POWER PLANT

GAS TURBINE-GENERATOR UNIT

Spec. No: TBO-6742G
Date: November, 1988

Model No.	Type
-- PG5371PA	Package-Power Plant

Operating Conditions: Site [X] ISO [ ] Other [ ]

Barometric Pressure (Psia)	Ambient Temperature (Degrees F)	Average Exhaust Gas Temperature (Degrees F)	Inlet System Pressure Drop (Inches of Water)	Exhaust System Pressure Drop (Inches of Water)
14.63	80	909	4	12

Relative Humidity = 72%

PERFORMANCE AT ABOVE CONDITIONS

Output of Generator (kW)	Total Heat Input (10^6 Btu/h) (LHV)	Heat Rate (Btu/kWh) (LHV)	Fuel			Steam Injection
			Type	LHV	Units	**lb/hr
26680 (Base)	307.6	11530	N Gas	21515	BTU/LB	36720
29060 (Peak)	330.4	11370	N Gas	21515	BTU/LB	42800

Guaranteed point (under new and clean conditions).
* Steam flow rate to provide power augmentation including NOx control for 42 ppmvd @ 15% O_2

SYNCHRONOUS GENERATOR
Performance Rating at 40F, 0 Ft.

Design No. D185T40

	kVA	Power Factor	kW	rpm	No. Poles	Phase	Freq. (Hz)	Volts	Amperes	Connection	Cooling	Short Circuit Ratio
Base	32500	0.90	29250	3600	2	3	60	13800	1360	Wye	40C	0.56
Peak	35000	0.90	31500	3600	2	3	60	13800	1464	Wye	40C	--

The generator stator insulation will be class F and the rotor insulation will be class F.

TEMPERATURE RATING (BASE LOAD)

Ventilation (Cu Ft.Air per minute)	Hours Run at Rating Until Temp. Stabilizes	Total Temp. (Deg. C) not to Exceed: Armature Coils By Temp. Detector	Armature Coils By Thermometer	Collector By Thermometer	Field Coils By Resistance
846		125	--	125	145

DIELECTRIC TESTS

Between Coils and Frame AC Voltage for 1 Minute: Armature	Field
28600	2500

EXCITATION

Maximum Required kW	Volts
62	250

The rating and dielectric tests are in accordance with ANSI Standards.

GENERATOR REACTANCES (BASE LOAD)

X_{di}	X_{di}'	X_{dv}'	X_{dv}''	X_{2v}	X_{0i}
1.917	0.217	0.217	0.156	0.148	0.086

*Estimated steam injection to limit NOx to 42 ppmvd @ 15% O_2

perfmisc/14

Base Duct Burner - Coen Company

DUCT BURNER - COEN COMPANY

* Rev. 1 (11/1/88)
** Rev. 2 (12/9/88)

The company proposes to furnish a Coen Company duct burner comprised of the following:

I. Duct Burner Assembly:

Burner consists of twelve (12) horizontal gas burner elements with a maximum total design heat release of 238 million BTU/hr (HHV). The burner elements are manufactured using type 304 stainless steel 2" Schedule 40 manifold pipes and cast type 309 stainless steel flame stabilizers. The elements are then mounted in a 1'-4" deep rigid steel frame. The frame will bel lined with 6" ceramic fiber insulation covered with 12 gauge type 310 stainless steel. The frame has a 4" mating flange for welding to main ductwork. The clear inside
** dimensions of the burner are 8'-3" wide x 22'-6" high. The frame will be primed with Carboline Carbozinc 11. The following equipment will be part of the burner assembly:

A. Twelve (12) Coen Fyr-Lyter spark ignited gas pilots. The pilots are the interruptible type each cast type 309 stainless steel pilot heads.

B. Twelve (12) scanner mountings (capable of adjusting the scanners position).

** C. Twelve (12) pilot ignition transformers mounted in a Nema 4X electrical enclosure.

II, III - Deleted.

IV. Design Criteria

A. Design turbine exhaust flow: 990,000 lbs/hr. at 897 Deg. F.

B. Maximum downstream firing temperature: 1562 Deg. F.

C. Maximum burner heat release: 238 mm BTU/hr. (HHV)

D. Minimum expected turbine exhaust gas oxygen content: 14.5 % by volume.

E. Design duct pressure: 10" H2O

F. Fuel: Natural gas, 910 BTU/SCF (Net LHV), 0.6 S.G., 12.0 PSIG at the burner.

G. Maximum burner pressure drop: 0.15" H2O.

H. Burner piping module and flame safeguard system to be supplied by others.

I. Installation: Outdoors

J. Electrical classification: Non-hazardous, Nema 4

K. Maximum turbine exhaust gas flow velocity variation ±15% of average free stream velocity. This velocity is calculated based on duct size immediately upstream of burner. Flow distribution grid, if required, will be supplied by others.

L. Burner firing rate turndown: 10 to 1

M. Jobsite elevation: less than 1000 feet above sea level

N. Any equipment required for process operation and not specifically listed above will be supplied by others.

O. Approximate weights: Burner Assembly - 9,000 lbs.

V. Exceptions and Clarifications to the Specifications

Based on the International Paper Specifications received, Coen would like to make the following comments:

A. The system is designed per NFPA 85A for single burner operation. The individual elements ignition and shutdown is not included in the proposal at this time.

B. The above proposal includes SSPC SP-10 surface preparation and Carbozinc 11 primer for duct burner. No intermediate or finish coat are included in this proposal at this time.

C. Service engineering and installation supervision are not included in the quotation at this time. They are available at a per diem basis.

D. Service, engineering, and installation supervision are not included in the quotation at this time. They are available at a per diem basis.

Special Warranty

In addition to the warranty statements contained in the attached Coen Company Terms & Conditions of Sale, the following Special Warranty is offered on the duct burner:

For a period of five (5) years from date of shipment, Coen warrants that all burner components inside the duct (exclusive of pilot electrodes and lining) will function as intended, provided that the burner is operated within the conditions stated in Design Criteria. Should a failure occur, Coen will provide replacement parts and labor to repair the Coen burner at the jobsite at no charge. Coen's liability and Purchaser's remedies are otherwise limited as stated in Coen Company Terms and Conditions of Sale.

COEN Company, Inc.

PROJECT: INTERNATIONAL PAPER, Camden Mill, Arkansas
Coen Disk: Red #5, PAPR-Z2
TURBINE EXHAUST GAS FLOW (LBS/HR): 990000

TURBINE EXHAUST GAS TEMPERATURE: 897 Degrees F.

TURBINE EXHAUST GAS COMPOSITION:

	% WT.	LBS/HR	Vol. %	Vol.% Dry
Oxygen O2	16.9200	167508	15.002	16.217
Carbon Dioxide CO2	3.8800	38412	2.501	2.704
Water Vapor H2O	4.7600	47124	7.496	0
Nitrogen N2	73.1700	724383	74.099	80.104
Argon Ar	1.2700	12573	0.902	0.975
Carbon Monoxide CO	0.0000	0	0.000	0.000
Nitrogen Oxides NOx	0.0000	0	0.000	0.000
Hydrocarbons CH4	0.0000	0	0.000	0.000
Hydrocarbons C2H6	0.0000	0	0.000	0.000
Sulfur Dioxide SO2	0.0000	0	0.000	0.000
Particulate	0.0000	0	0.000	0.000
TOTAL	100.000	990000	100.000	100.000

CO - PPMV Dry, Reference 15% Oxygen:	0.00
NOx - PPMV Dry, Reference 15% Oxygen:	0.00
CH4 - PPMV Dry, Reference 15% Oxygen:	0.00
C2H6 - PPMV Dry, Reference 15% Oxygen:	0.00
SO2 - PPMV Dry, Reference 15% Oxygen:	0.00

Exhaust Gas Molecular Weight: 28.372

Fuel: Natural Gas

Heating Value: 22434 BTU/LB (HHV)
20229 BTU/LB (LHV)

Duct Burner Heat Input: 222.911 Million BTU/HR (Gross HHV)
201.000 Million BTU/HR (Net LHV)

Fuel Gas Elemental Composition:

	WEIGHT %	LBS/HR
CARBON	72.073%	7161.340
HYDROGEN	23.494%	2334.394
OXYGEN	3.688%	366.419
SULFUR	0.000%	0.000
NITROGEN	0.745%	74.030
ASH	0.000%	0.000
TOTAL	100.000%	9936.183

Emissions Added by the Duct Burner (LB/Million BTU HHV):

NOx as NO2:	0.100
Carbon Monoxide:	0.064
UBHC as CH4:	0.032
UBHC as C2H6:	0.000
Particulate:	0.000

ADDITIONAL AIR SOURCES:

Flame Scanner Cooling Air:	180 LBS/HR
Augmenting Combustion Air:	0 LBS/HR
Atomizing Air:	0 LBS/HR
Total	180

COEN Company, Inc.

COMBUSTION PRODUCTS DOWNSTREAM OF THE DUCT BURNER

Downstream Firing Temperature: 1562 Degrees F.

COMBUSTION PRODUCTS (LBS/HR)

	Upstream	Fuel	Air	Total
Oxygen O2	167508	-37217.8	41.670	130331.8
Carbon Dioxide CO2	38412	26210.50	0	64622.50
Water Vapor H2O	47124	20869.47	0	67993.47
Nitrogen N2	724383	74.030	138.330	724595.3
Argon Ar	12573	0	0	12573
Carbon Monoxide CO	0.000	14.266	0	14.266
Nitrogen Oxides NOx	0.000	22.291	0	22.291
Hydrocarbons CH4	0.000	7.133	0	7.133
Hydrocarbons C2H6	0.000	0.000	0	0.000
Sulfur Dioxide SO2	0.000	0.000	0	0.000
Particulate	0.000	0.000	0	0.000
TOTAL	990000	9979.873	180.000	1000159.

COMBUSTION PRODUCTS - VOLUME BASIS

	Moles/HR	Vol. %	Vol. % Dry
Oxygen O2	4072.870	11.473	12.837
Carbon Dioxide CO2	1468.360	4.136	4.628
Water Vapor H2O	3773.223	10.629	0
Nitrogen N2	25869.16	72.871	81.538
Argon Ar	314.734	0.887	0.992
Carbon Monoxide CO	0.809	0.001	0.002
Nitrogen Oxides NOx	0.485	0.001	0.002
Hydrocarbons CH4	0.445	0.001	0.001
Hydrocarbons C2H6	0.000	0.000	0.000
Sulfur Dioxide SO2	0.000	0.000	0.000
Particulate	0.000	0.000	0.000
TOTAL	35499.79	100.000	100.000

CO - PPMV Dry, Reference 15% Oxygen:	11.80
NOx - PPMV Dry, Reference 15% Oxygen:	11.23
CH4 - PPMV Dry, Reference 15% Oxygen:	10.30
C2H6 - PPMV Dry, Reference 15% Oxygen:	0.00
SO2 - PPMV Dry, Reference 15% Oxygen:	0.00

Exhaust Gas Molecular Weight: 28.178

COEN Company, Incorporated
1510 Rollins Road; Burlingame, CA 94010
(415) 697-0440
Automatic Telefax Number (415) 579-3255

STANDARD GENERAL PERFORMANCE FORM

* Rev. 1 (11/1/88)
** Rev. 2 (12/9/88)

CONDITIONS

The performance data are based on the conditions as stated in Paragraphs 1 to 8 inclusive submitted herewith and made a part of this proposal.

1. The general arrangement of equipment furnished by the COMPANY, and the general design and arrangement of related equipment furnished by Others, shall be not less favorable than indicated below:

   The equipment shall have been erected in accordance with the COMPANY'S plans and specifications, properly maintained and operated by the PURCHASER, and shall be in operating condition satisfactory to the COMPANY. The heat absorbing surfaces shall be clean inside and out.

* 2. Balanced Draft - Deleted

* 3. Ambient air conditions:

Temperature of air, Degrees F	80
Barometric pressure, inches Hg	29.921
Weight of water per pound of air-pound	0.013

TESTS

** 4. Performance tests (if required) shall be run within ninety (90) days
** after boiler and turbine start-up, it being understood that the COMPANY may require preliminary tests. Tests shall be conducted only on one representative unit mutually agreed upon by the PURCHASER and the COMPANY. The PURCHASER, at his own expense, shall make all preparations, furnish all operating and testing personnel and incur all expenses connected with such tests, and shall give to the COMPANY at least fifteen (15) days notice of the date or dates on which tests will be made.

* Rev. 1 (11/1/88)

STANDARD GENERAL PERFORMANCE FORM (CONT'D.)

TESTS (CONT'D.)

* 4. The COMPANY'S representative shall have reasonable access to the records at all times, and the test shall be conducted in a manner to satisfy the COMPANY that the specified performance conditions are being maintained. A complete copy of test data and results shall be furnished by the COMPANY.

The equipment shall be considered as accepted if tests show that the guarantees if made have been fulfilled, or if the PURCHASER shall fail to have said equipment tested within period mentioned. In case of failure to meet performance guarantees, the COMPANY reserves the right to change or replace the equipment furnished so that guaranteed performance will be obtained.

Performance tests (if required) shall be mutually agreed upon and in conjunction with the maximum allowable tolerances for economizer exit gas temperature as established by ASME Code PTC 4.4.

Under no conditions shall the manufacturer's margin be used in a punitive manner against the manufacturer in any acceptance testing or analysis thereof.

If local union rules require standby labor during these tests it shall be furnished by the PURCHASER at no charge to the COMPANY.

MULTI-PRESSURE HEAT RECOVERY STEAM GENERATOR PERFORMANCE

Rev. 1 (11/1/88)

Energy Division, Zurn Industries, Inc.

Customer: INTERNATIONAL PAPER CO.
File Name: PROP.890122.IU
Description: INITIAL-FIRED TO 300000

Run Date: 10/17/88 - 16:55
Turbines Oper.: 1
Trains/Turb.: 1

FLOW CONDITIONS, (lb/hr):

TURBINE GAS FLOW (per train)	990000.
COMBINED GAS FLOW	999638.
FUEL FLOW	9638.
Pressure level	High
FINAL STEAM FLOW (per train)	300000.
GENERATED STEAM FLOW	300000.
INT-ATTEMP. WATER FLOW	0.
BLOWDOWN FLOW	3030.
FEEDWATER FLOW	303030.

PRESSURE CONDITIONS, (psig):

FINAL OPERATING PRESSURE	425.
BOILER OPERATING PRESSURE	537.

FLUE GAS ANALYSIS:

Flue Gas Constituents		Exhaust Gas % by Weight	Exhaust Gas % by Volume	Exhaust & Firing Final % by Wgt.
Moisture,	H2O	4.76	7.50	6.74
Nitrogen,	N2	73.17	74.10	72.47
Carbon Dioxide,	CO2	3.88	2.50	6.39
Oxygen,	O2	16.92	15.00	13.14
Sulfur Dioxide,	SO2	0.00	0.00	0.00
Argon,	Ar	1.27	0.90	1.26

SUPPLEMENTAL FIRING:

SUPPLEMENTAL FIRING FUEL TYPE: gaseous
FUEL HEATING VALUE, (low/high): 20212./ 22417. BTU/lb
DESIRED STEAM FLOW, (lb/hr): 300000.

Fuel Constituents	% by Volume
Nitrogen, N2	0.45
Carbon Dioxide, CO2	1.95
Methane, CH4	95.87
Ethane, C2H6	1.51
Propane, C3H8	0.19
N-Butane, C4H10	0.02
IsoButane, C4H10	0.01

MULTI-PRESSURE HEAT RECOVERY
STEAM GENERATOR PERFORMANCE

Energy Division, Zurn Industries, Inc.

Customer: INTERNATIONAL PAPER CO.
File Name: PROP.890122.IU
Description: INITIAL-FIRED TO 300000

Run Date: 10/17/88
Turbines Oper.: 1
Trains/Turb.: 1

THERMAL OPERATING CONDITIONS:

Equipment	GAS SIDE Temp. Entering	GAS SIDE Temp. Exiting	WATER/STEAM SIDE Temp. Entering	WATER/STEAM SIDE Temp. Exiting
HP SEC. SHTR.	935.	897.	675.	731.
GRID BURNER	897.	1562.		
HP INT.ATTEMP			0./ 675.	675.
HP PRIM.SHTR.	1556.	1414.	478.	675.
HP EVAPORATOR	1414.	519.	402.	478.
HP PRIM.ECON.	519.	311.	230.	402.

STANDARD GENERAL PERFORMANCE FORM

Customer: INTERNATIONAL PAPER CO. Location: CAMDEN, ARKANSAS
Description: INITIAL-FIRED TO 300000 G.O./Inq. 890122

5. PREDICTED OPERATING PERFORMANCE DATA:

H.P. Steam Output (per gas turbine)...	lb/hr	300000.
H.P. Steam Blowdown 1.00 %.....	lb/hr	3030.
H.P. Interstage Attemperation Flow....	lb/hr	0.
Press. at H.P. Shtr. NRV Outlet.....	psig	425.
Press. at H.P. Evaporator Outlet.....	psig	537.
Steam Temp. at H.P. Sec. Shtr. Outlet.	deg F	731.
Steam Temp. at H.P. Prim.Shtr. Outlet.	deg F	675.
Steam Temp. at H.P. Evap. Outlet.....	deg F	478.
Water Temp. entering H.P. Prim. Econ..	deg F	230.
Water Temp. entering H.P. Evaporator..	deg F	402.
Press. Drop Thru H.P. Prim. Shtr.....	psi	47.
Press. Drop Thru H.P. Sec. Shtr.....	psi	49.
Press. Drop Thru H.P. Prim. Econ.....	psi	13.
Gas Temp. entering Burner.....	deg F	897.
Gas Temp. exiting Burner.....	deg F	1562.
Gas Temp. entering H.P. Sec. Shtr.....	deg F	935.
Gas Temp. entering H.P. Prim. Shtr....	deg F	1556.
Gas Temp. entering H.P. Evaporator....	deg F	1414.
Gas Temp. entering H.P. Prim. Econ....	deg F	519.
Gas Temp. leaving System.....	deg F	311.
Draft Loss Through Burner.....	in WC	0.30
Draft Loss Through H.P. Prim. Shtr....	in WC	0.65
Draft Loss Through H.P. Sec. Shtr.....	in WC	0.75
Draft Loss Through H.P. Evaporator....	in WC	5.89
Draft Loss Through H.P. Prim. Econ....	in WC	2.30
Draft Loss Through Ducts/Dampers.....	in WC	0.50
Total Draft Loss.....	in WC	10.39
Turbine Gas Flow (per turbine).....	lb/hr	990000.
Fuel Flow (per gas turbine).....	lb/hr	9638.
Number of Gas Turbines Operating.....		1
Number of System Trains per Turbine...		1

6. HEAT LOSSES - %

System Radiation	0.50
Unaccounted for and/or Manufacturer's Margin	0.50

GENERAL

7. It is recognized that the performance of the equipment covered in this proposal cannot be exactly predicted for every possible operating condition. In consequence, any predicted performance data submitted are intended to show probable operating results which may be closely approximated but which cannot be guaranteed except as expressly stated in the guarantee clause in this proposal.

8. Any performance curves submitted are for the PURCHASER'S convenience and the performance indicated thereon is not offered by the COMPANY, nor to be construed by the PURCHASER, as a proposal of contract obligation.

MULTI-PRESSURE HEAT RECOVERY STEAM GENERATOR PERFORMANCE

Energy Division, Zurn Industries, Inc.

Customer: INTERNATIONAL PAPER CO.
File Name: PROP.890122.IU
Description: INITIAL-UNFIRED

Run Date: 10/18/88 - 10:55
Turbines Oper.: 1
Trains/Turb.: 1

FLOW CONDITIONS, (lb/hr):

TURBINE GAS FLOW (per train)	990000.
Pressure level	High
FINAL STEAM FLOW (per train)	127833.
GENERATED STEAM FLOW	127833.
INT-ATTEMP. WATER FLOW	0.
BLOWDOWN FLOW	1291.
FEEDWATER FLOW	129125.

PRESSURE CONDITIONS, (psig):

FINAL OPERATING PRESSURE	425.
BOILER OPERATING PRESSURE	456.

FLUE GAS ANALYSIS:

Flue Gas Constituents		Exhaust Gas % by Weight	Exhaust Gas % by Volume	Exhaust Gas Final % by Wgt.
Moisture,	H2O	4.76	7.50	4.76
Nitrogen,	N2	73.17	74.10	73.17
Carbon Dioxide,	CO2	3.88	2.50	3.88
Oxygen,	O2	16.92	15.00	16.92
Sulfur Dioxide,	SO2	0.00	0.00	0.00
Argon,	Ar	1.27	0.90	1.27

THERMAL OPERATING CONDITIONS:

	GAS SIDE		WATER/STEAM SIDE	
Equipment	Temp. Entering	Temp. Exiting	Temp. Entering	Temp. Exiting
HP SEC. SHTR.	935.	898.	595.	729.
GRID BURNER	898.	898.		
HP INT.ATTEMP			0./ 595.	595.
HP PRIM.SHTR.	898.	853.	461.	595.
HP EVAPORATOR	853.	477.	458.	461.
+ HP PRIM.ECON.	477.	354.	230.	458.

STANDARD GENERAL PERFORMANCE FORM

Customer: INTERNATIONAL PAPER CO. Location: CAMDEN, ARKANSAS
Description: INITIAL-UNFIRED G.O./Inq. 890122

5. PREDICTED OPERATING PERFORMANCE DATA:

H.P. Steam Output (per gas turbine)...	lb/hr	127833.
H.P. Steam Blowdown 1.00 %.....	lb/hr	1291.
H.P. Interstage Attemperation Flow....	lb/hr	0.
Press. at H.P. Shtr. NRV Outlet.....	psig	425.
Press. at H.P. Evaporator Outlet.....	psig	456.
Steam Temp. at H.P. Sec. Shtr. Outlet.	deg F	729.
Steam Temp. at H.P. Prim.Shtr. Outlet.	deg F	595.
Steam Temp. at H.P. Evap. Outlet.....	deg F	461.
Water Temp. entering H.P. Prim. Econ..	deg F	230.
Water Temp. entering H.P. Evaporator..	deg F	458.
Press. Drop Thru H.P. Prim. Shtr.....	psi	9.
Press. Drop Thru H.P. Sec. Shtr.....	psi	9.
Press. Drop Thru H.P. Prim. Econ.....	psi	5.
Gas Temp. entering Burner.....	deg F	898.
Gas Temp. exiting Burner.....	deg F	
Gas Temp. entering H.P. Sec. Shtr.....	deg F	935.
Gas Temp. entering H.P. Prim. Shtr....	deg F	898.
Gas Temp. entering H.P. Evaporator....	deg F	853.
Gas Temp. entering H.P. Prim. Econ....	deg F	477.
Gas Temp. leaving System.....	deg F	354.
Draft Loss Through Burner.....	in WC	0.30
Draft Loss Through H.P. Prim. Shtr....	in WC	0.40
Draft Loss Through H.P. Sec. Shtr.....	in WC	0.75
Draft Loss Through H.P. Evaporator....	in WC	4.45
Draft Loss Through H.P. Prim. Econ....	in WC	2.26
Draft Loss Through Ducts/Dampers.....	in WC	0.50
Total Draft Loss.....	in WC	8.66
Turbine Gas Flow (per turbine).....	lb/hr	990000.
Fuel Flow (per gas turbine).....	lb/hr	
Number of Gas Turbines Operating.....		1
Number of System Trains per Turbine...		1

6. HEAT LOSSES - %

System Radiation	0.50
Unaccounted for and/or Manufacturer's Margin	0.50

GENERAL

7. It is recognized that the performance of the equipment covered in this proposal cannot be exactly predicted for every possible operating condition. In consequence, any predicted performance data submitted are intended to show probable operating results which may be closely approximated but which cannot be guaranteed except as expressly stated in the guarantee clause in this proposal.

8. Any performance curves submitted are for the PURCHASER'S convenience and the performance indicated thereon is not offered by the COMPANY, nor to be construed by the PURCHASER, as a proposal of contract obligation.

MULTI-PRESSURE HEAT RECOVERY STEAM GENERATOR PERFORMANCE

Energy Division, Zurn Industries, Inc.

Customer: INTERNATIONAL PAPER CO.
File Name: PROP.890122.IU
Description: INITIAL-FIRED TO 180000

Run Date: 10/17/88 - 16:52
Turbines Oper.: 1
Trains/Turb.: 1

FLOW CONDITIONS, (lb/hr):

TURBINE GAS FLOW (per train)	990000.
COMBINED GAS FLOW	992811.
FUEL FLOW	2811.

Pressure level	High
FINAL STEAM FLOW (per train)	180000.
GENERATED STEAM FLOW	180000.
INT-ATTEMP. WATER FLOW	0.
BLOWDOWN FLOW	1818.
FEEDWATER FLOW	181818.

PRESSURE CONDITIONS, (psig):

FINAL OPERATING PRESSURE	425.
BOILER OPERATING PRESSURE	475.

FLUE GAS ANALYSIS:

Flue Gas Constituents		Exhaust Gas % by Weight	Exhaust Gas % by Volume	Exhaust & Firing Final % by Wgt.
Moisture,	H2O	4.76	7.50	5.34
Nitrogen,	N2	73.17	74.10	72.96
Carbon Dioxide,	CO2	3.88	2.50	4.62
Oxygen,	O2	16.92	15.00	15.81
Sulfur Dioxide,	SO2	0.00	0.00	0.00
Argon,	Ar	1.27	0.90	1.27

SUPPLEMENTAL FIRING:

SUPPLEMENTAL FIRING FUEL TYPE:	gaseous
FUEL HEATING VALUE, (low/high):	20212./ 22417. BTU/lb
DESIRED STEAM FLOW, (lb/hr):	180000.

Fuel Constituents	% by Volume
Nitrogen, N2	0.45
Carbon Dioxide, CO2	1.95
Methane, CH4	95.87
Ethane, C2H6	1.51
Propane, C3H8	0.19
N-Butane, C4H10	0.02
IsoButane, C4H10	0.01

MULTI-PRESSURE HEAT RECOVERY
STEAM GENERATOR PERFORMANCE

Energy Division, Zurn Industries, Inc.

Customer: INTERNATIONAL PAPER CO.
File Name: PROP.890122.IU
Description: INITIAL-FIRED TO 180000

Run Date: 10/17/89
Turbines Oper.: 1
Trains/Turb.: 1

THERMAL OPERATING CONDITIONS:

Equipment	GAS SIDE Temp. Entering	GAS SIDE Temp. Exiting	WATER/STEAM SIDE Temp. Entering	WATER/STEAM SIDE Temp. Exiting
HP SEC. SHTR.	935.	897.	625.	725.
GRID BURNER	897.	1097.		
HP INT.ATTEMP			0./ 625.	625.
HP PRIM.SHTR.	1096.	1023.	465.	625.
HP EVAPORATOR	1023.	489.	439.	465.
HP PRIM.ECON.	489.	332.	230.	439.

STANDARD GENERAL PERFORMANCE FORM

Customer: INTERNATIONAL PAPER CO. Location: CAMDEN, ARKANSAS
Description: INITIAL-FIRED TO 180000 G.O./Inq. 890122

5. PREDICTED OPERATING PERFORMANCE DATA:

H.P. Steam Output (per gas turbine)...	lb/hr	180000.
H.P. Steam Blowdown 1.00 %.....	lb/hr	1818.
H.P. Interstage Attemperation Flow....	lb/hr	0.
Press. at H.P. Shtr. NRV Outlet.....	psig	425.
Press. at H.P. Evaporator Outlet.....	psig	475.
Steam Temp. at H.P. Sec. Shtr. Outlet.	deg F	725.
Steam Temp. at H.P. Prim.Shtr. Outlet.	deg F	625.
Steam Temp. at H.P. Evap. Outlet.....	deg F	465.
Water Temp. entering H.P. Prim. Econ..	deg F	230.
Water Temp. entering H.P. Evaporator..	deg F	439.
Press. Drop Thru H.P. Prim. Shtr.....	psi	18.
Press. Drop Thru H.P. Sec. Shtr.....	psi	18.
Press. Drop Thru H.P. Prim. Econ.....	psi	5.
Gas Temp. entering Burner.....	deg F	897.
Gas Temp. exiting Burner.....	deg F	1097.
Gas Temp. entering H.P. Sec. Shtr.....	deg F	935.
Gas Temp. entering H.P. Prim. Shtr....	deg F	1096.
Gas Temp. entering H.P. Evaporator....	deg F	1023.
Gas Temp. entering H.P. Prim. Econ....	deg F	489.
Gas Temp. leaving System.....	deg F	332.
Draft Loss Through Burner.....	in WC	0.30
Draft Loss Through H.P. Prim. Shtr....	in WC	0.47
Draft Loss Through H.P. Sec. Shtr.....	in WC	0.75
Draft Loss Through H.P. Evaporator....	in WC	4.87
Draft Loss Through H.P. Prim. Econ....	in WC	2.26
Draft Loss Through Ducts/Dampers.....	in WC	0.50
Total Draft Loss.....	in WC	9.15
Turbine Gas Flow (per turbine).....	lb/hr	990000.
Fuel Flow (per gas turbine).....	lb/hr	2811.
Number of Gas Turbines Operating.....		1
Number of System Trains per Turbine...		1

6. HEAT LOSSES - %

System Radiation	0.50
Unaccounted for and/or Manufacturer's Margin	0.50

GENERAL

7. It is recognized that the performance of the equipment covered in this proposal cannot be exactly predicted for every possible operating condition. In consequence, any predicted performance data submitted are intended to show probable operating results which may be closely approximated but which cannot be guaranteed except as expressly stated in the guarantee clause in this proposal.

8. Any performance curves submitted are for the PURCHASER'S convenience and the performance indicated thereon is not offered by the COMPANY, nor to be construed by the PURCHASER, as a proposal of contract obligation.

PERFORMANCE GUARANTEES (FIRED INITIAL) - ALTERNATE 2 (Revised 10/21/88)

Subject to conditions specified in the preceding standard General Performance Forms, the Seller offers the following guarantees;

A. Steam flow will be 300,000 lbs/hr. (MCR) when operating pressure is 425 PSIG at the superheater outlet with a continuous blowdown rate of 1% with treated feedwater entering the economizer at 230 Deg. F. Feedwater per analysis data dated 5/13/86 from I.P. (not demineralized).

B. Average temperature of steam leaving superheater will not be less than 725 Deg. F. (±10 Deg. F.) controlled while using the mud drum attemperator and for steam flows from unfired through 300,000 PPH.

C. Pressure drop, gas side, from inlet duct to stack outlet will not exceed 11.0" W.G. at MCR conditions.

D. Average total solids in the steam will not exceed 1.0 PPM providing the allowable concentrations in the boiler water shall not exceed:

	Operating Pressure (PSIG)	Total Solids (PPM)	Total Alkalinity (PPM)	Suspended Solids (PPM)
Initial	531	2500	500	8
Future	1079	1000	200	1

E. Fuel Efficiency at MCR - Seller represents that the heat input to the duct burner will not exceed 216.1 million BTU per hour (HHV) plus an allowable tolerance of 5% based on I.P.'s meter readings and a representative sample of fuel at moment of test for HHV determination, as agreed to mutually.

F. The sensible heat gas flow at the initial fired case for 300,000 lbs/hr. steam flow, 425 PSIG, 725 Deg. F. The gas turbine exhaust flow at 990,000 #/hr. at 935 Deg. F. with a mean specific heat of (Cp) 0.279 BTU/lb/Deg. F. based on the specification fuel analysis and ASME PTC 4.4 flue gas sensible heat enthalpies. This sensible heat is supplemented with a grid burner heat input of 216 MM BTU/hr. or 49% of the total heat input.

Based on ASME Power Test Code 4.4, Thermal Effectiveness Method, Table 7.1.3, and the boiler manufacturer's overall tolerance, the guaranteed stack temperature is 311 Deg. F. ±20 Deg. F. per above feedwater flow conditions.

G. An expected 10% steam capacity over design capacity (MCR) is possible without detriment to original equipment. Design capacity (MCR) guarantee is 300,000 PPH steam.

The above guarantees are based upon the following:

1. Turbine exhaust is provided at 990,000 lbs per hour, 935 Deg. F, and constituents of 74.10 N_2, 15 O_2, 2.5 CO_2, 7.5 H_2O, and .90 Ar expressed as a percentage by volume.

2. Natural gas fuel will have the following constituents: .45 N_2, 1.95 CO_2, 95.87 CH_4, 1.51 C_2H_6, 0.19 C_3H_8, 0.02 C_4H_{10}, and 0.01 C_4H_{10} expressed as a percentage by volume with an overall higher heating value of 22,417 BTU/lb.

APPENDIX F

REFERENCES

GE Industrial
& Power Systems

No_X Control For Gas Turbines: Regulations And Technology

Marvin M. Schorr
Senior Environmental Engineer

For Presentation at the Association of Energy Engineers
World Energy Engineering Congress
October 11, 1990

Power Systems Engineering Department
GE Industrial & Power Systems
One River Road
Schenectady, New York 12345

ACA SEMINAR CONTROLLING GAS TURBINE EMISSIONS

BACT FOR GAS TURBINE COGENERATION

By

William E. Steiner
Woodward-Clyde Consultants
Oakland, California

Presented By

Perry H. Fontana
Woodward-Clyde Consultants
Santa Barbara, California

March 1989

89-75.3

NOx BACT FOR GAS TURBINES IN CALIFORNIA

WILLIAM E. STEINER AND JOHN L.M. KOEHLER, Sc.D

WOODWARD-CLYDE CONSULTANTS
OAKLAND, CALIFORNIA

AIR & WASTE MANAGEMENT
ASSOCIATION

SINCE 1907

For Presentation at the
82nd Annual Meeting & Exhibition
Anaheim, California
June 25-30, 1989

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Perumal Mohan

Small Combustion Turbine Permitting Manual

Prepared by:

Solar Turbines Incorporated
San Diego, California

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CATERPILLAR®

Solar® Turbines

Solar Turbines Incorporated
P.O. Box 85376
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PSD PERMIT APPLICATION TO MODIFY EXISTING STATE AIR PERMIT 990-A
VOLUME II OF III

INTERNATIONAL PAPER
CAMDEN MILL
OUACHITA COUNTY, ARKANSAS

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JAN 29 1992
OT-AW

Prepared for
International Paper
Dallas, Texas

December 1991

WCC File 91B531C

Woodward-Clyde Consultants

Consulting Engineers, Geologists, and Environmental Scientists
2822 O'Neal Lane, Baton Rouge, LA 70896

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APPENDIX G

MODELING PROTOCOL

2822 O'Neal Lane
Post Office Box 66317
Baton Rouge, Louisiana 70896
(504) 751-1873
FAX (504) 753-3616

Woodward-Clyde Consultants

August 28, 1991

Mr. David Morrow
Permit Engineer
Arkansas Department of Pollution Control
and Ecology
8001 National Drive
Post Office Box 9583
Little Rock, Arkansas 72209

Re: Modeling Protocol
International Paper Company, PSD Application
Camden, Quachita County, Arkansas
File 91B531C-3

Dear Mr. Morrow:

Woodward-Clyde Consultants (WCC) is pleased to submit the attached air dispersion modeling protocol for International Paper Company's Prevention of Significant Deterioration (PSD) permit application, Camden, Arkansas mill. The pollutants to be addressed for this application are carbon monoxide (CO) and oxides of nitrogen (NOx).

Please feel free to contact us at (504) 751-1873 with any questions and to advise us of any changes you may desire in the attached protocol.

Very truly yours,

Doug Walters

Doug Walters
Project Scientist

Bharat Contractor, P. E.
Project Manager

DW:wv
Enclosure

cc: Mr. Russel Delezan, IPC
531-ADMP.LTR IP1

PROPOSED MODELING FOR IMPACTS OF MODIFICATION ANALYSIS (SCREENING) INTERNATIONAL PAPER COMPANY CAMDEN, ARKANSAS MILL

(ONE WEEK COMPLETION SCHEDULE)

I. MODELS TO BE USED FOR FLAT OR GENTLY ROLLING TERRAIN RECEPTORS (BELOW STACK HEIGHT)

A. Oxides of Nitrogen (NOx):

The ISCLT Model will be run in the rural and regulatory modes for annual concentrations.

B. Carbon Monoxide (CO):

The ISCST Model will be run in the rural and regulatory modes for 1-hour and 8-hour concentrations.

Note that the Auer Method will be used to document justification of use of the rural mode and this documentation will be provided with the application.

II. MODEL TO BE USED FOR COMPLEX TERRAIN (RECEPTORS ABOVE STACK HEIGHT)

The COMPLEX I Model will be used for both pollutants in the rural and regulatory modes.

III. DOWNWASH, BUILDING WAKE EFFECTS, AND CAVITY ANALYSES

Both the Huber-Snyder and the Schulman-Scire downwash algorithms will be employed in the ISCST and ISCLT Models. The SCREEN Model will be used to evaluate any cavity effects on ambient air.

IV. RECEPTOR GRIDS

A cartesian coordinate system will be used in all analyses. Receptors will be located at 100-meter intervals along the public access restriction to the mill. Additional receptors will be placed from the public access restriction at 100 meter spacing to a distance of 1 kilometer (km). Other receptors will be placed at distances of 2, 3, 4, etc. km from the public access restriction until ambient significance is no longer impeached for the pollutant in question.

For the COMPLEX I Modeling, a subset of the above receptors will be used which will include all receptors above stack height. The worst case concentration will be used to determine significant impact among the use of the two ISC Models and the COMPLEX I Model.

V. METEOROLOGICAL DATA

The ISCST and COMPLEX I Models will utilize five consecutive years of binary data constructed from Shreveport, Louisiana, National Weather Service (NWS) Station surface observations and Longview, Texas NWS Station upper air radiosonde observations. The years of meteorological data proposed for modeling are 1981 through 1985.

The ISCLT Model will use five consecutive separate years of joint frequency distribution stability array (STAR) data for the same years (1981 through 1985) as the binary data.

Note: If any preconstruction monitoring is indicated due to the above analyses, a minimum of 4 months of ambient data for the pollutant in question may be required by the ADPCE before any refined modeling analysis may be completed.

RETRIEVAL OF MAJOR/MINOR, AREA, AND MOBILE SOURCES INVENTORY FROM THE ADPCE

(ONE WEEK COMPLETION SCHEDULE)

Once any impact areas for CO are identified from the previous screening analysis, a retrieval of other major and minor sources will be required from the ADPCE. This retrieval will include the maximum radius of impact plus 50 km which defines the radius of the circle within which other sources of CO are to be considered. These sources will be used in any refined modeling which may be required for National Ambient Air Quality Standards (NAAQS) analysis.

If any impact areas for NOx are identified from the screening modeling, a retrieval of the inventory of other major, minor area and mobile sources will be required from the ADPCE. This retrieval will be similar to the CO retrieval except that other sources of NOx (annual allowable emissions) are to be considered. These sources will be used in any refined modeling which may be required for NAAQS analysis. In addition, if any complete PSD application for NOx has been submitted to the ADPCE which has a significant NOx impact on Quachita County or a complete PSD application for NOx for a source located in Quachita County has been submitted to the ADPCE since February 8, 1988 a baseline retrieval of the inventory of actual emissions of major, minor, area and mobile sources for the minor source baseline date will be required from the ADPCE as well as current actual emissions from the same sources.

The 20D criteria will be used to determine if sources outside of the impact area need be included. For long term analyses, if D is the distance (km) from the area of impact boundary, the absolute value of emissions from sources less than 20D tons per year need not be included in refined modeling. For short term analyses, D is the distance (km) from the applicant's source.

MEETING WITH THE ADPCE TO DISCUSS REFINED COMPLEX I MODELING PROTOCOL

(SCHEDULE CONTINGENT ON ADPCE)

In the event that ambient significance is indicated at any receptor for any pollutant at any receptor above stack height, a meeting will be required with the ADPCE (contingent of ADPCE availability for such a meeting) to discuss the protocol for modeling multiple stacks in complex terrain.

REFINED MODELING ANALYSIS

(THREE WEEKS COMPLETION SCHEDULE FROM AGREEMENT ON COMPLEX MODELING PROTOCOL)

A. Refined NAAQS analysis will be performed, if necessary, for CO using the ISCST and COMPLEX I Models with appropriate receptor spacing and all other inputs as previously discussed.

B. Refined NAAQS and Class II increment analyses will be performed, if necessary, for NOx using the ISCST and COMPLEX I Models with appropriate receptor spacing and all other inputs as previously discussed. If the NAAQS or allowable increments are exceeded, the ozone limiting method may be applied, if appropriate.

2822 O'Neal Lane
Post Office Box 66317
Baton Rouge, Louisiana 70896
(504) 751-1873
FAX (504) 753-3616

Woodward-Clyde Consultants

November 6, 1991

Mr. David Morrow
Permit Engineer
Arkansas Department of Pollution Control and Geology
8001 National Drive
Post Office Box 9583
Little Rock, Arkansas 72209

Re: Completion of Modeling Protocol
International Paper Company, PSD Application
Camdem, Ouachita County, Arkansas
WCC File 91B531C-5

Dear Mr. Morrow:

WCC has completed air dispersion modeling for impacts of modification analysis for the pending IPC-Camden PSD air permit application in accordance with our August 28, 1991 protocol (Items I through V).

The pollutants modeled were carbon monoxide (CO) and oxides of nitrogen (NOx). Enclosed is the modeling for both pollutants. The modeling analysis utilized the ISCLT and COMPLEX I models for NOx and the ISCST and COMPLEX I models for CO.

Downwash, building wake effects, cavity analysis, receptor grids and meteorological data (as noted in items III, IV and V of the attached protocol) were utilized.

The attached modeling shows no significant impact for NOx or CO (see Tables I, II and III). As a result of this, there was no need for a retrieval of other major and minor sources from the ADPCE emissions inventory. No refined modeling of either the NOx or CO emissions should be necessary.

Please contact us at (504) 751-1873 if you have any questions regarding this letter or the enclosed modeling input/output.

Sincerely,

For Doug Walters
Project Scientist

Anthony L. Jones

Anthony L. Jones, E. I. T.
Project Engineer

WSW:kdl
Attachment

cc: Mr. Russell Delezan, IPC, Dallas
Mr. Craig M. Ratkey, IPC, Camden

91B531C-5/MORROW.LTR IP1

TABLE I

RESULTS OF ISC MODELING RUNS

Pollutant	Time Period	Model	Maximum Concentration ($\mu g/m^3$)	Significance Level ($\mu g/m^3$)
CO	1 hour	ISCST	37.20	2000
	8 hour	ISCST	11.69	500
NOx	Annual	ISCLT	0.54	1

TABLE II

RESULTS OF COMPLEX I MODELING RUNS

Pollutant	Time Period	Maximum Concentration ($\mu g/m^3$)	Significance Level ($\mu g/m^3$)
CO	1 hour	6.38	2000
	8 hour	2.38	500
NOx	Annual	0.12	1

TABLE III

APPLICABLE RESULTS

Pollutant	Time Period	Model	Maximum Concentration ($\mu g/m^3$)	Significance Level ($\mu g/m^3$)
CO	1 hour	ISCST	37.20	2000
	8 hour	ISCST	11.69	500
NOx	Annual	ISCLT	0.54	1

APPENDIX H

MODELING OUTPUT

SECTION H.1

1981 MODELING OUTPUT FOR NOx ISCLT

ISCLT - VERSION DATED 90008
BOWMAN ENVIRONMENTAL ENGINEERING VERSION 6.95

SESSION INFORMATION

INPUT DATA FILE NAME : ISCNOXB1.DTA
OUTPUT LIST FILE NAME : ISCNOXB1.LST

- ISCLT INPUT DATA -

NUMBER OF SOURCES = 1
NUMBER OF X AXIS GRID SYSTEM POINTS = 0
NUMBER OF Y AXIS GRID SYSTEM POINTS = 0
NUMBER OF SPECIAL POINTS = 749
NUMBER OF SEASONS = 1
NUMBER OF WIND SPEED CLASSES = 6
NUMBER OF STABILITY CLASSES = 6
NUMBER OF WIND DIRECTION CLASSES = 16
FILE NUMBER OF DATA FILE USED FOR REPORTS = 1
THE PROGRAM IS RUN IN RURAL MODE
CONCENTRATION (DEPOSITION) UNITS CONVERSION FACTOR =0.10000000E+07
ACCELERATION OF GRAVITY (METERS/SEC**2) = 9.800
HEIGHT OF MEASUREMENT OF WIND SPEED (METERS) = 10.000
CORRECTION ANGLE FOR GRID SYSTEM VERSUS DIRECTION DATA NORTH (DEGREES) = 0.000
DECAY COEFFICIENT =0.00000000E+00
PROGRAM OPTION SWITCHES = 1, 1, 1, 1, 0, 3, 2, 2, 3, 2, 2, 0, 0, 0, 0, 0, 0, 1, 0, 1, 0, 0, 1, 1, 0,
ALL SOURCES ARE USED TO FORM SOURCE COMBINATION 1

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516276.8	3711378.0	34.439460	516411.0	3712159.0	34.439460	516679.3	3711159.0	34.439460
516679.3	3711378.0	34.439460	517079.3	3711378.0	34.439460	517079.3	3711549.0	34.439460
517530.5	3711488.0	34.439460	517530.5	3711317.0	34.439460	518743.9	3711171.0	34.439460
518743.9	3711573.0	34.439460	519914.6	3711573.0	34.439460	519914.6	3711171.0	34.439460
520304.8	3711171.0	34.439460	520304.8	3711024.0	34.439460	520707.2	3711024.0	34.439460
520817.0	3711628.0	34.439460	520402.3	3712176.0	34.439460	518707.2	3712176.0	34.439460
518707.2	3712030.0	34.439460	518280.4	3712030.0	34.439460	518280.4	3712250.0	34.439460
518060.9	3712335.0	34.439460	518060.9	3712878.0	34.439460	517426.8	3712878.0	34.439460
517426.8	3713079.0	34.439460	516993.9	3713079.0	34.439460	516993.9	3713280.0	34.439460
516603.7	3713280.0	34.439460	516603.7	3712884.0	34.439460	516372.0	3712884.0	34.439460
516372.0	3712798.0	34.439460	516256.2	3712774.0	34.439460	516276.8	3711378.0	34.439460
516264.6	3712122.0	34.439460	516264.6	3711598.0	34.439460	516008.5	3712006.0	34.439460
516008.5	3712122.0	34.439460	516115.2	3712189.0	34.439460	516179.3	3712061.0	34.439460
516179.3	3712122.0	34.439460	516264.6	3712122.0	34.439460	515277.0	3711278.0	39.621080
515377.0	3711278.0	39.621080	515477.0	3711278.0	39.621080	515577.0	3711278.0	39.621080
515677.0	3711278.0	39.621080	515777.0	3711278.0	39.621080	515877.0	3711278.0	39.621080
515977.0	3711278.0	39.621080	516077.0	3711278.0	39.621080	516177.0	3711278.0	39.621080
516277.0	3711278.0	36.579170	516377.0	3711278.0	39.621080	516477.0	3711278.0	39.621080
516577.0	3711278.0	39.621080	516677.0	3711278.0	33.531160	516777.0	3711278.0	33.531160
516877.0	3711278.0	30.480100	516977.0	3711278.0	30.480100	517077.0	3711278.0	33.531160
517177.0	3711278.0	33.531160	515277.0	3711178.0	39.621080	515377.0	3711178.0	42.669090
515477.0	3711178.0	39.621080	515577.0	3711178.0	39.621080	515677.0	3711178.0	42.669090
515777.0	3711178.0	42.669090	515877.0	3711178.0	42.669090	515977.0	3711178.0	39.621080
516077.0	3711178.0	39.621080	516177.0	3711178.0	36.579170	516277.0	3711178.0	36.579170
516377.0	3711178.0	36.579170	516477.0	3711178.0	36.579170	516577.0	3711178.0	36.579170
516677.0	3711178.0	33.531160	516777.0	3711178.0	33.531160	516877.0	3711178.0	33.531160
516977.0	3711178.0	33.531160	517077.0	3711178.0	33.531160	517177.0	3711178.0	33.531160
515277.0	3711078.0	45.720150	515377.0	3711078.0	42.669090	515477.0	3711078.0	36.579170
515577.0	3711078.0	42.669090	515677.0	3711078.0	45.720150	515777.0	3711078.0	45.720150
515877.0	3711078.0	45.720150	515977.0	3711078.0	42.669090	516077.0	3711078.0	39.621080
516177.0	3711078.0	39.621080	516277.0	3711078.0	36.579170	516377.0	3711078.0	36.579170
516477.0	3711078.0	36.579170	516577.0	3711078.0	39.621080	516677.0	3711078.0	33.531160
516777.0	3711078.0	33.531160	516877.0	3711078.0	33.531160	516977.0	3711078.0	36.579170
517077.0	3711078.0	33.531160	517177.0	3711078.0	33.531160	515277.0	3710978.0	45.720150
515377.0	3710978.0	42.669090	515477.0	3710978.0	36.579170	515577.0	3710978.0	42.669090
515677.0	3710978.0	45.720150	515777.0	3710978.0	48.771210	515877.0	3710978.0	45.720150
515977.0	3710978.0	45.720150	516077.0	3710978.0	45.720150	516177.0	3710978.0	42.669090
516277.0	3710978.0	42.669090	516377.0	3710978.0	39.621080	516477.0	3710978.0	36.579170
516577.0	3710978.0	36.579170	516677.0	3710978.0	39.621080	516777.0	3710978.0	36.579170
516877.0	3710978.0	36.579170	516977.0	3710978.0	36.579170	517077.0	3710978.0	36.579170
517177.0	3710978.0	33.531160	515277.0	3710878.0	45.720150	515377.0	3710878.0	39.621080
515477.0	3710878.0	39.621080	515577.0	3710878.0	42.669090	515677.0	3710878.0	48.771210
515777.0	3710878.0	51.819210	515877.0	3710878.0	48.771210	515977.0	3710878.0	48.771210
516077.0	3710878.0	51.819210	516177.0	3710878.0	45.720150	516277.0	3710878.0	42.669090
516377.0	3710878.0	39.621080	516477.0	3710878.0	39.621080	516577.0	3710878.0	42.669090

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516677.0	3710878.0	45.720150	516777.0	3710878.0	45.720150	516877.0	3710878.0	39.621080
516977.0	3710878.0	39.621080	517077.0	3710878.0	36.579170	517177.0	3710878.0	36.579170
515277.0	3710778.0	45.720150	515377.0	3710778.0	39.621080	515477.0	3710778.0	45.720150
515577.0	3710778.0	42.669090	515677.0	3710778.0	48.771210	515777.0	3710778.0	54.861130
515877.0	3710778.0	51.819210	515977.0	3710778.0	51.819210	516077.0	3710778.0	54.861130
516177.0	3710778.0	45.720150	516277.0	3710778.0	45.720150	516377.0	3710778.0	42.669090
516477.0	3710778.0	45.720150	516577.0	3710778.0	45.720150	516677.0	3710778.0	51.819210
516777.0	3710778.0	51.819210	516877.0	3710778.0	48.771210	516977.0	3710778.0	48.771210
517077.0	3710778.0	45.720150	517177.0	3710778.0	36.579170	515277.0	3710678.0	42.669090
515377.0	3710678.0	42.669090	515477.0	3710678.0	45.720150	515577.0	3710678.0	45.720150
515677.0	3710678.0	45.720150	515777.0	3710678.0	48.771210	515877.0	3710678.0	51.819210
515977.0	3710678.0	54.861130	516077.0	3710678.0	54.861130	516177.0	3710678.0	48.771210
516277.0	3710678.0	45.720150	516377.0	3710678.0	45.720150	516477.0	3710678.0	45.720150
516577.0	3710678.0	48.771210	516677.0	3710678.0	51.819210	516777.0	3710678.0	51.819210
516877.0	3710678.0	48.771210	516977.0	3710678.0	45.720150	517077.0	3710678.0	42.669090
517177.0	3710678.0	36.579170	515277.0	3710578.0	45.720150	515377.0	3710578.0	45.720150
515477.0	3710578.0	51.819210	515577.0	3710578.0	51.819210	515677.0	3710578.0	48.771210
515777.0	3710578.0	54.861130	515877.0	3710578.0	54.861130	515977.0	3710578.0	54.861130
516077.0	3710578.0	51.819210	516177.0	3710578.0	51.819210	516277.0	3710578.0	48.771210
516377.0	3710578.0	51.819210	516477.0	3710578.0	51.819210	516577.0	3710578.0	51.819210
516677.0	3710578.0	51.819210	516777.0	3710578.0	45.720150	516877.0	3710578.0	45.720150
516977.0	3710578.0	39.621080	517077.0	3710578.0	39.621080	517177.0	3710578.0	36.579170
515277.0	3710478.0	45.720150	515377.0	3710478.0	51.819210	515477.0	3710478.0	54.861130
515577.0	3710478.0	54.861130	515677.0	3710478.0	51.819210	515777.0	3710478.0	54.861130
515877.0	3710478.0	57.909140	515977.0	3710478.0	57.909140	516077.0	3710478.0	54.861130
516177.0	3710478.0	54.861130	516277.0	3710478.0	51.819210	516377.0	3710478.0	51.819210
516477.0	3710478.0	51.819210	516577.0	3710478.0	51.819210	516677.0	3710478.0	51.819210
516777.0	3710478.0	48.771210	516877.0	3710478.0	45.720150	516977.0	3710478.0	45.720150
517077.0	3710478.0	39.621080	517177.0	3710478.0	36.579170	515277.0	3710378.0	45.720150
515377.0	3710378.0	48.771210	515477.0	3710378.0	51.819210	515577.0	3710378.0	54.861130
515677.0	3710378.0	57.909140	515777.0	3710378.0	57.909140	515877.0	3710378.0	57.909140
515977.0	3710378.0	57.909140	516077.0	3710378.0	51.819210	516177.0	3710378.0	51.819210
516277.0	3710378.0	48.771210	516377.0	3710378.0	48.771210	516477.0	3710378.0	45.720150
516577.0	3710378.0	48.771210	516677.0	3710378.0	48.771210	516777.0	3710378.0	48.771210
516877.0	3710378.0	51.819210	516977.0	3710378.0	45.720150	517077.0	3710378.0	39.621080
517177.0	3710378.0	36.579170	515277.0	3712276.0	30.480100	515377.0	3712276.0	30.480100
515477.0	3712276.0	30.480100	515577.0	3712276.0	30.480100	515677.0	3712276.0	33.531160
515777.0	3712276.0	30.480100	515877.0	3712276.0	30.480100	515977.0	3712276.0	30.480100
516077.0	3712276.0	30.480100	516177.0	3712276.0	33.531160	516277.0	3712276.0	33.531160
516377.0	3712276.0	30.480100	516477.0	3712276.0	30.480100	516577.0	3712276.0	30.480100
516677.0	3712276.0	30.480100	516777.0	3712276.0	27.429040	516877.0	3712276.0	33.531160
516977.0	3712276.0	30.480100	517077.0	3712276.0	27.429040	517177.0	3712276.0	27.429040
515277.0	3712376.0	30.480100	515377.0	3712376.0	30.480100	515477.0	3712376.0	30.480100
515577.0	3712376.0	30.480100	515677.0	3712376.0	33.531160	515777.0	3712376.0	33.531160
515877.0	3712376.0	33.531160	515977.0	3712376.0	36.579170	516077.0	3712376.0	36.579170

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516177.0	3712376.0	36.579170	516277.0	3712376.0	33.531160	516377.0	3712376.0	30.480100
516477.0	3712376.0	30.480100	516577.0	3712376.0	30.480100	516677.0	3712376.0	27.429040
516777.0	3712376.0	27.429040	516877.0	3712376.0	27.429040	516977.0	3712376.0	27.429040
517077.0	3712376.0	27.429040	517177.0	3712376.0	30.480100	515277.0	3712476.0	33.531160
515377.0	3712476.0	33.531160	515477.0	3712476.0	30.480100	515577.0	3712476.0	30.480100
515677.0	3712476.0	33.531160	515777.0	3712476.0	33.531160	515877.0	3712476.0	33.531160
515977.0	3712476.0	33.531160	516077.0	3712476.0	36.579170	516177.0	3712476.0	36.579170
516277.0	3712476.0	33.531160	516377.0	3712476.0	30.480100	516477.0	3712476.0	30.480100
516577.0	3712476.0	30.480100	516677.0	3712476.0	30.480100	516777.0	3712476.0	27.429040
516877.0	3712476.0	27.429040	516977.0	3712476.0	24.381030	517077.0	3712476.0	27.429040
517177.0	3712476.0	27.429040	515277.0	3712576.0	33.531160	515377.0	3712576.0	33.531160
515477.0	3712576.0	30.480100	515577.0	3712576.0	30.480100	515677.0	3712576.0	33.531160
515777.0	3712576.0	33.531160	515877.0	3712576.0	33.531160	515977.0	3712576.0	33.531160
516077.0	3712576.0	36.579170	516177.0	3712576.0	33.531160	516277.0	3712576.0	33.531160
516377.0	3712576.0	30.480100	516477.0	3712576.0	30.480100	516577.0	3712576.0	30.480100
516677.0	3712576.0	30.480100	516777.0	3712576.0	27.429040	516877.0	3712576.0	27.429040
516977.0	3712576.0	27.429040	517077.0	3712576.0	24.381030	517177.0	3712576.0	27.429040
515277.0	3712676.0	30.480100	515377.0	3712676.0	30.480100	515477.0	3712676.0	33.531160
515577.0	3712676.0	33.531160	515677.0	3712676.0	33.531160	515777.0	3712676.0	33.531160
515877.0	3712676.0	33.531160	515977.0	3712676.0	33.531160	516077.0	3712676.0	33.531160
516177.0	3712676.0	36.579170	516277.0	3712676.0	33.531160	516377.0	3712676.0	30.480100
516477.0	3712676.0	30.480100	516577.0	3712676.0	30.480100	516677.0	3712676.0	30.480100
516777.0	3712676.0	27.429040	516877.0	3712676.0	24.381030	516977.0	3712676.0	27.429040
517077.0	3712676.0	27.429040	517177.0	3712676.0	27.429040	515277.0	3712776.0	27.429040
515377.0	3712776.0	27.429040	515477.0	3712776.0	27.429040	515577.0	3712776.0	33.531160
515677.0	3712776.0	33.531160	515777.0	3712776.0	27.429040	515877.0	3712776.0	33.531160
515977.0	3712776.0	33.531160	516077.0	3712776.0	33.531160	516177.0	3712776.0	33.531160
516277.0	3712776.0	30.480100	516377.0	3712776.0	30.480100	516477.0	3712776.0	27.429040
516577.0	3712776.0	27.429040	516677.0	3712776.0	27.429040	516777.0	3712776.0	27.429040
516877.0	3712776.0	27.429040	516977.0	3712776.0	27.429040	517077.0	3712776.0	30.480100
517177.0	3712776.0	30.480100	515277.0	3712876.0	27.429040	515377.0	3712876.0	27.429040
515477.0	3712876.0	27.429040	515577.0	3712876.0	27.429040	515677.0	3712876.0	33.531160
515777.0	3712876.0	27.429040	515877.0	3712876.0	30.480100	515977.0	3712876.0	30.480100
516077.0	3712876.0	33.531160	516177.0	3712876.0	30.480100	516277.0	3712876.0	27.429040
516377.0	3712876.0	27.429040	516477.0	3712876.0	27.429040	516577.0	3712876.0	27.429040
516677.0	3712876.0	27.429040	516777.0	3712876.0	30.480100	516877.0	3712876.0	30.480100
516977.0	3712876.0	27.429040	517077.0	3712876.0	30.480100	517177.0	3712876.0	30.480100
515277.0	3712976.0	27.429040	515377.0	3712976.0	27.429040	515477.0	3712976.0	27.429040
515577.0	3712976.0	27.429040	515677.0	3712976.0	27.429040	515777.0	3712976.0	27.429040
515877.0	3712976.0	33.531160	515977.0	3712976.0	33.531160	516077.0	3712976.0	33.531160
516177.0	3712976.0	33.531160	516277.0	3712976.0	27.429040	516377.0	3712976.0	27.429040
516477.0	3712976.0	27.429040	516577.0	3712976.0	27.429040	516677.0	3712976.0	27.429040
516777.0	3712976.0	30.480100	516877.0	3712976.0	30.480100	516977.0	3712976.0	30.480100
517077.0	3712976.0	27.429040	517177.0	3712976.0	27.429040	515277.0	3713076.0	27.429040
515377.0	3713076.0	27.429040	515477.0	3713076.0	27.429040	515577.0	3713076.0	27.429040

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
515677.0	3713076.0	27.429040	515777.0	3713076.0	27.429040	515877.0	3713076.0	27.429040
515977.0	3713076.0	27.429040	516077.0	3713076.0	27.429040	516177.0	3713076.0	27.429040
516277.0	3713076.0	27.429040	516377.0	3713076.0	24.381030	516477.0	3713076.0	27.429040
516577.0	3713076.0	27.429040	516677.0	3713076.0	30.480100	516777.0	3713076.0	33.531160
516877.0	3713076.0	30.480100	516977.0	3713076.0	30.480100	517077.0	3713076.0	30.480100
517177.0	3713076.0	30.480100	515277.0	3713176.0	27.429040	515377.0	3713176.0	27.429040
515477.0	3713176.0	27.429040	515577.0	3713176.0	27.429040	515677.0	3713176.0	27.429040
515777.0	3713176.0	30.480100	515877.0	3713176.0	30.480100	515977.0	3713176.0	27.429040
516077.0	3713176.0	30.480100	516177.0	3713176.0	27.429040	516277.0	3713176.0	27.429040
516377.0	3713176.0	27.429040	516477.0	3713176.0	27.429040	516577.0	3713176.0	27.429040
516677.0	3713176.0	27.429040	516777.0	3713176.0	30.480100	516877.0	3713176.0	33.531160
516977.0	3713176.0	27.429040	517077.0	3713176.0	30.480100	517177.0	3713176.0	42.669090
515277.0	3712176.0	33.531160	515377.0	3712176.0	30.480100	515477.0	3712176.0	33.531160
515577.0	3712176.0	30.480100	515677.0	3712176.0	30.480100	515777.0	3712176.0	30.480100
515877.0	3712176.0	30.480100	515977.0	3712176.0	30.480100	516077.0	3712176.0	33.531160
516177.0	3712176.0	33.531160	515277.0	3712076.0	30.480100	515377.0	3712076.0	30.480100
515477.0	3712076.0	33.531160	515577.0	3712076.0	30.480100	515677.0	3712076.0	33.531160
515777.0	3712076.0	33.531160	515877.0	3712076.0	33.531160	515977.0	3712076.0	33.531160
516077.0	3712076.0	30.480100	516177.0	3712076.0	33.531160	515277.0	3711976.0	33.531160
515377.0	3711976.0	33.531160	515477.0	3711976.0	30.480100	515577.0	3711976.0	30.480100
515677.0	3711976.0	33.531160	515777.0	3711976.0	33.531160	515877.0	3711976.0	33.531160
515977.0	3711976.0	33.531160	516077.0	3711976.0	33.531160	516177.0	3711976.0	30.480100
515277.0	3711876.0	36.579170	515377.0	3711876.0	30.480100	515477.0	3711876.0	33.531160
515577.0	3711876.0	33.531160	515677.0	3711876.0	33.531160	515777.0	3711876.0	33.531160
515877.0	3711876.0	33.531160	515977.0	3711876.0	33.531160	516077.0	3711876.0	33.531160
516177.0	3711876.0	33.531160	515277.0	3711776.0	36.579170	515377.0	3711776.0	33.531160
515477.0	3711776.0	33.531160	515577.0	3711776.0	33.531160	515677.0	3711776.0	33.531160
515777.0	3711776.0	33.531160	515877.0	3711776.0	33.531160	515977.0	3711776.0	33.531160
516077.0	3711776.0	33.531160	516177.0	3711776.0	33.531160	515277.0	3711676.0	39.621080
515377.0	3711676.0	36.579170	515477.0	3711676.0	36.579170	515577.0	3711676.0	36.579170
515677.0	3711676.0	36.579170	515777.0	3711676.0	33.531160	515877.0	3711676.0	33.531160
515977.0	3711676.0	33.531160	516077.0	3711676.0	33.531160	516177.0	3711676.0	36.579170
515277.0	3711576.0	39.621080	515377.0	3711576.0	39.621080	515477.0	3711576.0	39.621080
515577.0	3711576.0	39.621080	515677.0	3711576.0	36.579170	515777.0	3711576.0	33.531160
515877.0	3711576.0	36.579170	515977.0	3711576.0	36.579170	516077.0	3711576.0	36.579170
516177.0	3711576.0	39.621080	515277.0	3711476.0	39.621080	515377.0	3711476.0	39.621080
515477.0	3711476.0	39.621080	515577.0	3711476.0	36.579170	515677.0	3711476.0	36.579170
515777.0	3711476.0	39.621080	515877.0	3711476.0	39.621080	515977.0	3711476.0	39.621080
516077.0	3711476.0	39.621080	516177.0	3711476.0	39.621080	511277.0	3709378.0	64.011250
512277.0	3709378.0	60.960200	513277.0	3709378.0	73.149190	514277.0	3709378.0	64.011250
515277.0	3709378.0	57.909140	516277.0	3709378.0	45.720150	517277.0	3709378.0	42.669090
518277.0	3709378.0	60.960200	519277.0	3709378.0	30.480100	520277.0	3709378.0	30.480100
521277.0	3709378.0	30.480100	522277.0	3709378.0	27.429040	511277.0	3708378.0	67.059270
512277.0	3708378.0	48.771210	513277.0	3708378.0	76.200250	514277.0	3708378.0	70.101180
515277.0	3708378.0	48.771210	516277.0	3708378.0	36.579170	517277.0	3708378.0	64.011250

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
518277.0	3708378.0	48.771210	519277.0	3708378.0	30.480100	520277.0	3708378.0	30.480100
521277.0	3708378.0	27.429040	522277.0	3708378.0	27.429040	511277.0	3707378.0	54.861130
512277.0	3707378.0	67.059270	513277.0	3707378.0	64.011250	514277.0	3707378.0	54.861130
515277.0	3707378.0	60.960200	516277.0	3707378.0	48.771210	517277.0	3707378.0	67.059270
518277.0	3707378.0	48.771210	519277.0	3707378.0	33.531160	520277.0	3707378.0	27.429040
521277.0	3707378.0	27.429040	522277.0	3707378.0	27.429040	511277.0	3706378.0	73.149190
512277.0	3706378.0	73.149190	513277.0	3706378.0	64.011250	514277.0	3706378.0	64.011250
515277.0	3706378.0	67.059270	516277.0	3706378.0	48.771210	517277.0	3706378.0	48.771210
518277.0	3706378.0	54.861130	519277.0	3706378.0	36.579170	520277.0	3706378.0	30.480100
521277.0	3706378.0	30.480100	522277.0	3706378.0	27.429040	523277.0	3706378.0	27.429040
522402.0	3710378.0	27.429040	522402.0	3711378.0	30.480100	522402.0	3712378.0	30.480100
511277.0	3714176.0	36.579170	512277.0	3714176.0	36.579170	513277.0	3714176.0	33.531160
514277.0	3714176.0	30.480100	515277.0	3714176.0	48.771210	516277.0	3714176.0	48.771210
517277.0	3714176.0	70.101180	518277.0	3714176.0	33.531160	519277.0	3714176.0	27.429040
520277.0	3714176.0	30.480100	521277.0	3714176.0	30.480100	522277.0	3714176.0	30.480100
511277.0	3715176.0	45.720150	512277.0	3715176.0	60.960200	513277.0	3715176.0	39.621080
514277.0	3715176.0	51.819210	515277.0	3715176.0	54.861130	516277.0	3715176.0	39.621080
517277.0	3715176.0	30.480100	518277.0	3715176.0	30.480100	519277.0	3715176.0	27.429040
520277.0	3715176.0	24.381030	521277.0	3715176.0	30.480100	522277.0	3715176.0	30.480100
511277.0	3716176.0	60.960200	512277.0	3716176.0	39.621080	513277.0	3716176.0	51.819210
514277.0	3716176.0	60.960200	515277.0	3716176.0	70.101180	516277.0	3716176.0	24.381030
517277.0	3716176.0	30.480100	518277.0	3716176.0	30.480100	519277.0	3716176.0	30.480100
520277.0	3716176.0	33.531160	521277.0	3716176.0	27.429040	522277.0	3716176.0	27.429040
511277.0	3717176.0	48.771210	512277.0	3717176.0	54.861130	513277.0	3717176.0	60.960200
514277.0	3717176.0	60.960200	515277.0	3717176.0	42.669090	516277.0	3717176.0	30.480100
517277.0	3717176.0	30.480100	518277.0	3717176.0	33.531160	519277.0	3717176.0	36.579170
520277.0	3717176.0	30.480100	521277.0	3717176.0	27.429040	522277.0	3717176.0	27.429040
511277.0	3713176.0	42.669090	512277.0	3713176.0	36.579170	513277.0	3713176.0	36.579170
514277.0	3713176.0	36.579170	511277.0	3712176.0	36.579170	512277.0	3712176.0	39.621080
513277.0	3712176.0	39.621080	514277.0	3712176.0	33.531160	511277.0	3711176.0	48.771210
512277.0	3711176.0	64.011250	513277.0	3711176.0	39.621080	514277.0	3711176.0	45.720150
511277.0	3709378.0	64.011250	512277.0	3709378.0	60.960200	513277.0	3709378.0	73.149190
514277.0	3709378.0	64.011250	515277.0	3709378.0	57.909140	516277.0	3709378.0	45.720150
517277.0	3709378.0	42.669090	518277.0	3709378.0	60.960200	519277.0	3709378.0	30.480100
520277.0	3709378.0	30.480100	521277.0	3709378.0	30.480100	522277.0	3709378.0	27.429040
511277.0	3708378.0	67.059270	512277.0	3708378.0	48.771210	513277.0	3708378.0	76.200250
514277.0	3708378.0	70.101180	515277.0	3708378.0	48.771210	516277.0	3708378.0	36.579170
517277.0	3708378.0	64.011250	518277.0	3708378.0	48.771210	519277.0	3708378.0	30.480100
520277.0	3708378.0	30.480100	521277.0	3708378.0	27.429040	522277.0	3708378.0	27.429040
511277.0	3707378.0	54.861130	512277.0	3707378.0	67.059270	513277.0	3707378.0	64.011250
514277.0	3707378.0	54.861130	515277.0	3707378.0	60.960200	516277.0	3707378.0	48.771210
517277.0	3707378.0	67.059270	518277.0	3707378.0	48.771210	519277.0	3707378.0	33.531160
520277.0	3707378.0	27.429040	521277.0	3707378.0	27.429040	522277.0	3707378.0	27.429040
511277.0	3706378.0	73.149190	512277.0	3706378.0	73.149190	513277.0	3706378.0	64.011250
514277.0	3706378.0	64.011250	515277.0	3706378.0	67.059270	516277.0	3706378.0	48.771210

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
517277.0	3706378.0	48.771210	518277.0	3706378.0	54.861130	519277.0	3706378.0	36.579170
520277.0	3706378.0	30.480100	521277.0	3706378.0	30.480100	522277.0	3706378.0	27.429040
523277.0	3706378.0	27.429040	522402.0	3710378.0	27.429040	522402.0	3711378.0	30.480100
522402.0	3712378.0	30.480100	511277.0	3714176.0	36.579170	512277.0	3714176.0	36.579170
513277.0	3714176.0	33.531160	514277.0	3714176.0	30.480100	515277.0	3714176.0	48.771210
516277.0	3714176.0	48.771210	517277.0	3714176.0	70.101180	518277.0	3714176.0	33.531160
519277.0	3714176.0	27.429040	520277.0	3714176.0	30.480100	521277.0	3714176.0	30.480100
522277.0	3714176.0	30.480100	511277.0	3715176.0	45.720150	512277.0	3715176.0	60.960200
513277.0	3715176.0	39.621080	514277.0	3715176.0	51.819210	515277.0	3715176.0	54.861130
516277.0	3715176.0	39.621080	517277.0	3715176.0	30.480100	518277.0	3715176.0	30.480100
519277.0	3715176.0	27.429040	520277.0	3715176.0	24.381030	521277.0	3715176.0	30.480100
522277.0	3715176.0	30.480100	511277.0	3716176.0	60.960200	512277.0	3716176.0	39.621080
513277.0	3716176.0	51.819210	514277.0	3716176.0	60.960200	515277.0	3716176.0	70.101180
516277.0	3716176.0	24.381030	517277.0	3716176.0	30.480100	518277.0	3716176.0	30.480100
519277.0	3716176.0	30.480100	520277.0	3716176.0	33.531160	521277.0	3716176.0	27.429040
522277.0	3716176.0	27.429040	511277.0	3717176.0	48.771210	512277.0	3717176.0	54.861130
513277.0	3717176.0	60.960200	514277.0	3717176.0	60.960200	515277.0	3717176.0	42.669090
516277.0	3717176.0	30.480100	517277.0	3717176.0	30.480100	518277.0	3717176.0	33.531160
519277.0	3717176.0	36.579170	520277.0	3717176.0	30.480100	521277.0	3717176.0	27.429040
522277.0	3717176.0	27.429040	511277.0	3713176.0	42.669090	512277.0	3713176.0	36.579170
513277.0	3713176.0	36.579170	514277.0	3713176.0	36.579170	511277.0	3712176.0	36.579170
512277.0	3712176.0	39.621080	513277.0	3712176.0	39.621080	514277.0	3712176.0	33.531160
511277.0	3711176.0	48.771210	512277.0	3711176.0	64.011250	513277.0	3711176.0	39.621080
514277.0	3711176.0	45.720150	516500.0	3708100.0	67.668870	518100.0	3709350.0	79.251300
514500.0	3708800.0	80.470510	517300.0	3714400.0	76.200250			

- ISCLT INPUT DATA (CONT.) -

- AMBIENT AIR TEMPERATURE (DEGREES KELVIN) -

	STABILITY CATEGORY 1	STABILITY CATEGORY 2	STABILITY CATEGORY 3	STABILITY CATEGORY 4	STABILITY CATEGORY 5	STABILITY CATEGORY 6
SEASON 1	293.0000	293.0000	293.0000	293.0000	293.0000	293.0000

- MIXING LAYER HEIGHT (METERS) -

SEASON 1

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 2	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 3	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 4	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 5	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 6	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 1

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00013001	0.00080009	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00000000	0.00011001	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00001000	0.00046005	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00000000	0.00011001	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00001000	0.00034004	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00000000	0.00011001	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.00012001	0.00034004	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.00000000	0.00023003	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.00024003	0.00068007	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00002000	0.00103011	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00024003	0.00057006	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00000000	0.00023003	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.00013001	0.00068007	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00012001	0.00011001	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00035004	0.00034004	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00000000	0.00011001	0.00000000	0.00000000	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 2

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00079009	0.00331036	0.00126014	0.00000000	0.00000000	0.00000000
22.500	0.00021002	0.00160018	0.00091010	0.00000000	0.00000000	0.00000000
45.000	0.00058006	0.00171019	0.00091010	0.00000000	0.00000000	0.00000000
67.500	0.00007001	0.00114013	0.00114013	0.00000000	0.00000000	0.00000000
90.000	0.00063007	0.00251028	0.00114013	0.00000000	0.00000000	0.00000000
112.500	0.00118013	0.00171019	0.00205023	0.00000000	0.00000000	0.00000000
135.000	0.00102011	0.00308034	0.00137015	0.00000000	0.00000000	0.00000000
157.500	0.00033004	0.00148016	0.00080009	0.00000000	0.00000000	0.00000000
180.000	0.00151017	0.00525058	0.00274030	0.00000000	0.00000000	0.00000000
202.500	0.00047005	0.00194021	0.00240026	0.00000000	0.00000000	0.00000000
225.000	0.00077008	0.00297033	0.00297033	0.00000000	0.00000000	0.00000000
247.500	0.00119013	0.00388043	0.00297033	0.00000000	0.00000000	0.00000000
270.000	0.00131014	0.00183020	0.00137015	0.00000000	0.00000000	0.00000000
292.500	0.00004000	0.00068007	0.00068007	0.00000000	0.00000000	0.00000000
315.000	0.00024003	0.00205023	0.00103011	0.00000000	0.00000000	0.00000000
337.500	0.00106012	0.00171019	0.00183020	0.00000000	0.00000000	0.00000000

SEASON 1

STABILITY CATEGORY 3

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00041005	0.00342038	0.00856094	0.00046005	0.00000000	0.00000000
22.500	0.00013001	0.00148016	0.00365040	0.00034004	0.00000000	0.00000000
45.000	0.00037004	0.00148016	0.00320035	0.00011001	0.00000000	0.00000000
67.500	0.00037004	0.00148016	0.00365040	0.00000000	0.00000000	0.00000000
90.000	0.00070008	0.00240026	0.00514056	0.00023003	0.00000000	0.00000000
112.500	0.00061007	0.00285031	0.00434048	0.00046005	0.00000000	0.00000000
135.000	0.00040004	0.00331036	0.00457050	0.00046005	0.00000000	0.00000000
157.500	0.00040004	0.00331036	0.00514056	0.00126014	0.00000000	0.00000000
180.000	0.00081009	0.00525058	0.01450159	0.00274030	0.00023003	0.00000000
202.500	0.00029003	0.00194021	0.00525058	0.00080009	0.00000000	0.00000000
225.000	0.00016002	0.00194021	0.00400044	0.00023003	0.00000000	0.00000000
247.500	0.00042005	0.00354039	0.00468051	0.00057006	0.00000000	0.00000000
270.000	0.00041005	0.00194021	0.00297033	0.00034004	0.00000000	0.00000000
292.500	0.00035004	0.00126014	0.00103011	0.00034004	0.00000000	0.00000000
315.000	0.00019002	0.00228025	0.00297033	0.00080009	0.00000000	0.00000000
337.500	0.00023003	0.00126014	0.00365040	0.00023003	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 4

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00102011	0.00753083	0.01861205	0.00947104	0.00023003	0.00011001
22.500	0.00081009	0.00297033	0.00993109	0.00365040	0.00000000	0.00011001
45.000	0.00064007	0.00377041	0.01142126	0.00285031	0.00000000	0.00000000
67.500	0.00096011	0.00445049	0.01256138	0.00445049	0.00000000	0.00000000
90.000	0.00088010	0.00491054	0.01473162	0.00274030	0.00000000	0.00000000
112.500	0.00127014	0.00628069	0.01073118	0.00365040	0.00000000	0.00000000
135.000	0.00283031	0.01050115	0.02123233	0.00719079	0.00023003	0.00000000
157.500	0.00140015	0.00753083	0.01324146	0.00559061	0.00034004	0.00011001
180.000	0.00217024	0.01142126	0.03870425	0.02614287	0.00228025	0.00068007
202.500	0.00091010	0.00400044	0.00936103	0.00811089	0.00023003	0.00000000
225.000	0.00094010	0.00308034	0.00856094	0.00548060	0.00046005	0.00023003
247.500	0.00088010	0.00491054	0.00422046	0.00400044	0.00000000	0.00000000
270.000	0.00058006	0.00445049	0.00297033	0.00365040	0.00057006	0.00011001
292.500	0.00082009	0.00308034	0.00457050	0.00457050	0.00240026	0.00023003
315.000	0.00098011	0.00342038	0.00674074	0.01267139	0.00285031	0.00034004
337.500	0.00029003	0.00160018	0.00753083	0.00708078	0.00068007	0.00000000

SEASON 1

STABILITY CATEGORY 5

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00000000	0.00365040	0.00628069	0.00000000	0.00000000	0.00000000
22.500	0.00000000	0.00080009	0.00183020	0.00000000	0.00000000	0.00000000
45.000	0.00000000	0.00091010	0.00194021	0.00000000	0.00000000	0.00000000
67.500	0.00000000	0.00183020	0.00422046	0.00000000	0.00000000	0.00000000
90.000	0.00000000	0.00525058	0.00263029	0.00000000	0.00000000	0.00000000
112.500	0.00000000	0.00491054	0.00057006	0.00000000	0.00000000	0.00000000
135.000	0.00000000	0.01142126	0.00194021	0.00000000	0.00000000	0.00000000
157.500	0.00000000	0.00788087	0.00285031	0.00000000	0.00000000	0.00000000
180.000	0.00000000	0.01553171	0.01073118	0.00000000	0.00000000	0.00000000
202.500	0.00000000	0.00445049	0.00377041	0.00000000	0.00000000	0.00000000
225.000	0.00000000	0.00445049	0.00308034	0.00000000	0.00000000	0.00000000
247.500	0.00000000	0.00274030	0.00205023	0.00000000	0.00000000	0.00000000
270.000	0.00000000	0.00365040	0.00240026	0.00000000	0.00000000	0.00000000
292.500	0.00000000	0.00160018	0.00445049	0.00000000	0.00000000	0.00000000
315.000	0.00000000	0.00171019	0.00594065	0.00000000	0.00000000	0.00000000
337.500	0.00000000	0.00091010	0.00194021	0.00000000	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 6

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00746082	0.00753083	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00374041	0.00297033	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00307034	0.00285031	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00348038	0.00342038	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00524058	0.00502055	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00605066	0.00342038	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.01317145	0.00696076	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.01043115	0.00674074	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.01803198	0.01553171	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00936103	0.00742082	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00973107	0.00902099	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.01419156	0.00890098	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.02072228	0.01164128	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00617068	0.00468051	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00446049	0.00422046	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00111012	0.00126014	0.00000000	0.00000000	0.00000000	0.00000000

- VERTICAL POTENTIAL TEMPERATURE GRADIENT (DEGREES KELVIN/METER) -

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 2	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 3	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 4	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 5	0.200000E-01	0.200000E-01	0.200000E-01	0.200000E-01	0.200000E-01	0.200000E-01
STABILITY CATEGORY 6	0.350000E-01	0.350000E-01	0.350000E-01	0.350000E-01	0.350000E-01	0.350000E-01

- WIND PROFILE POWER LAW EXPONENTS -

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01
STABILITY CATEGORY 2	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01
STABILITY CATEGORY 3	0.100000E+00	0.100000E+00	0.100000E+00	0.100000E+00	0.100000E+00	0.100000E+00
STABILITY CATEGORY 4	0.150000E+00	0.150000E+00	0.150000E+00	0.150000E+00	0.150000E+00	0.150000E+00
STABILITY CATEGORY 5	0.350000E+00	0.350000E+00	0.350000E+00	0.350000E+00	0.350000E+00	0.350000E+00
STABILITY CATEGORY 6	0.550000E+00	0.550000E+00	0.550000E+00	0.550000E+00	0.550000E+00	0.550000E+00

NOTE THAT BUILDING DIMENSIONS ON CARD GROUP 17 FOR SOURCE NO. 1 DO NOT MEET THE SCHULMAN-SCIRE CRITERIA.
THEREFORE, DIRECTION SPECIFIC BUILDING DIMENSIONS WILL BE READ, BUT NOT USED BY THE MODEL.

- SOURCE INPUT DATA -

C T A A R P D E	SOURCE NUMBER	SOURCE TYPE	X COORDINATE (M)	Y COORDINATE (M)	EMISSION HEIGHT (M)	BASE ELEV- ATION (M)	- SOURCE DETAILS DEPENDING ON TYPE -
X	1	STACK	516322.70	3711890.00	22.86	34.44	GAS EXIT TEMP (DEG K)= 427.59, GAS EXIT VEL. (M/SEC)= 16.61, STACK DIAMETER (M)= 3.423, HEIGHT OF ASSO. BLDG. (M)= 13.60, WIDTH OF ASSO. BLDG. (M)= 105.82, WAKE EFFECTS FLAG = 0

- SOURCE STRENGTHS (GRAMS PER SEC) -

SEASON 1	SEASON 2	SEASON 3	SEASON 4
1.04300E+01			

WARNING - HW/HB > 5 FOR SOURCE 1 PROG. USES LATERAL VIRTUAL DIST. FOR UPPER BOUND OF CONCENTRATION (DEPOSITION). IF LOWER BOUND IS DESIRED SET WAKE EFFECTS FLAG (WAKE) = 1 AND RERUN

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
516276.8	3711378.0	0.042827	516411.0	3712159.0	0.113490	516679.3	3711159.0	0.049513
516679.3	3711378.0	0.058322	517079.3	3711378.0	0.058823	517079.3	3711549.0	0.040120
517530.5	3711488.0	0.054503	517530.5	3711317.0	0.058244	518743.9	3711171.0	0.071395
518743.9	3711573.0	0.082352	519914.6	3711573.0	0.086079	519914.6	3711171.0	0.077863
520304.8	3711171.0	0.078509	520304.8	3711024.0	0.075962	520707.2	3711024.0	0.076266
520817.0	3711628.0	0.086275	520402.3	3712176.0	0.093257	518707.2	3712176.0	0.100008
518707.2	3712030.0	0.096141	518280.4	3712030.0	0.094295	518280.4	3712250.0	0.103103
518060.9	3712335.0	0.107105	518060.9	3712878.0	0.119862	517426.8	3712878.0	0.111406
517426.8	3713079.0	0.114699	516993.9	3713079.0	0.108560	516993.9	3713280.0	0.115139
516603.7	3713280.0	0.197442	516603.7	3712884.0	0.131194	516372.0	3712884.0	0.204547
516372.0	3712798.0	0.184601	516256.2	3712774.0	0.168036	516276.8	3711378.0	0.042827
516264.6	3712122.0	0.176578	516264.6	3711598.0	0.053701	516008.5	3712006.0	0.027923
516008.5	3712122.0	0.037884	516115.2	3712189.0	0.051398	516179.3	3712061.0	0.082263
516179.3	3712122.0	0.068851	516264.6	3712122.0	0.176578	515277.0	3711278.0	0.063336
515377.0	3711278.0	0.059228	515477.0	3711278.0	0.055365	515577.0	3711278.0	0.051819
515677.0	3711278.0	0.048963	515777.0	3711278.0	0.041871	515877.0	3711278.0	0.035068
515977.0	3711278.0	0.033549	516077.0	3711278.0	0.033709	516177.0	3711278.0	0.048743
516277.0	3711278.0	0.056770	516377.0	3711278.0	0.070452	516477.0	3711278.0	0.059413
516577.0	3711278.0	0.052245	516677.0	3711278.0	0.050475	516777.0	3711278.0	0.055791
516877.0	3711278.0	0.059401	516977.0	3711278.0	0.064261	517077.0	3711278.0	0.069714
517177.0	3711278.0	0.067125	515277.0	3711178.0	0.064312	515377.0	3711178.0	0.067414
515477.0	3711178.0	0.057952	515577.0	3711178.0	0.055551	515677.0	3711178.0	0.057662
515777.0	3711178.0	0.053107	515877.0	3711178.0	0.047203	515977.0	3711178.0	0.038091
516077.0	3711178.0	0.041800	516177.0	3711178.0	0.047435	516277.0	3711178.0	0.062803
516377.0	3711178.0	0.064513	516477.0	3711178.0	0.053638	516577.0	3711178.0	0.047827
516677.0	3711178.0	0.046593	516777.0	3711178.0	0.056570	516877.0	3711178.0	0.066815
516977.0	3711178.0	0.078069	517077.0	3711178.0	0.082831	517177.0	3711178.0	0.079166
515277.0	3711078.0	0.079714	515377.0	3711078.0	0.069373	515477.0	3711078.0	0.055665
515577.0	3711078.0	0.063821	515677.0	3711078.0	0.067242	515777.0	3711078.0	0.064108
515877.0	3711078.0	0.061714	515977.0	3711078.0	0.053152	516077.0	3711078.0	0.055972
516177.0	3711078.0	0.070378	516277.0	3711078.0	0.078029	516377.0	3711078.0	0.078861
516477.0	3711078.0	0.067617	516577.0	3711078.0	0.067484	516677.0	3711078.0	0.051940
516777.0	3711078.0	0.059432	516877.0	3711078.0	0.068382	516977.0	3711078.0	0.087015
517077.0	3711078.0	0.087488	517177.0	3711078.0	0.091102	515277.0	3710978.0	0.080981
515377.0	3710978.0	0.071634	515477.0	3710978.0	0.057703	515577.0	3710978.0	0.066087
515677.0	3710978.0	0.070531	515777.0	3710978.0	0.076866	515877.0	3710978.0	0.067451
515977.0	3710978.0	0.071787	516077.0	3710978.0	0.088926	516177.0	3710978.0	0.097036
516277.0	3710978.0	0.118095	516377.0	3710978.0	0.105424	516477.0	3710978.0	0.081752
516577.0	3710978.0	0.072072	516677.0	3710978.0	0.072440	516777.0	3710978.0	0.069685
516877.0	3710978.0	0.077937	516977.0	3710978.0	0.086907	517077.0	3710978.0	0.096160
517177.0	3710978.0	0.095153	515277.0	3710878.0	0.082492	515377.0	3710878.0	0.067230
515477.0	3710878.0	0.064835	515577.0	3710878.0	0.068767	515677.0	3710878.0	0.082325
515777.0	3710878.0	0.091158	515877.0	3710878.0	0.081375	515977.0	3710878.0	0.094357
516077.0	3710878.0	0.130497	516177.0	3710878.0	0.123096	516277.0	3710878.0	0.130206

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
516377.0	3710878.0	0.116823	516477.0	3710878.0	0.102843	516577.0	3710878.0	0.101423
516677.0	3710878.0	0.100690	516777.0	3710878.0	0.097485	516877.0	3710878.0	0.087842
516977.0	3710878.0	0.096430	517077.0	3710878.0	0.095420	517177.0	3710878.0	0.103635
515277.0	3710778.0	0.083684	515377.0	3710778.0	0.068747	515477.0	3710778.0	0.080074
515577.0	3710778.0	0.071611	515677.0	3710778.0	0.086007	515777.0	3710778.0	0.106931
515877.0	3710778.0	0.099086	515977.0	3710778.0	0.119617	516077.0	3710778.0	0.162478
516177.0	3710778.0	0.134548	516277.0	3710778.0	0.157323	516377.0	3710778.0	0.141118
516477.0	3710778.0	0.139901	516577.0	3710778.0	0.124119	516677.0	3710778.0	0.136386
516777.0	3710778.0	0.121062	516877.0	3710778.0	0.118658	516977.0	3710778.0	0.129460
517077.0	3710778.0	0.127015	517177.0	3710778.0	0.102371	515277.0	3710678.0	0.077914
515377.0	3710678.0	0.076507	515477.0	3710678.0	0.082326	515577.0	3710678.0	0.081534
515677.0	3710678.0	0.081202	515777.0	3710678.0	0.089931	515877.0	3710678.0	0.110693
515977.0	3710678.0	0.147733	516077.0	3710678.0	0.174919	516177.0	3710678.0	0.161967
516277.0	3710678.0	0.167083	516377.0	3710678.0	0.167451	516477.0	3710678.0	0.149914
516577.0	3710678.0	0.148762	516677.0	3710678.0	0.146879	516777.0	3710678.0	0.130681
516877.0	3710678.0	0.117881	516977.0	3710678.0	0.115946	517077.0	3710678.0	0.113579
517177.0	3710678.0	0.101390	515277.0	3710578.0	0.086034	515377.0	3710578.0	0.085143
515477.0	3710578.0	0.101693	515577.0	3710578.0	0.101683	515677.0	3710578.0	0.092668
515777.0	3710578.0	0.114503	515877.0	3710578.0	0.135279	515977.0	3710578.0	0.159325
516077.0	3710578.0	0.166128	516177.0	3710578.0	0.191586	516277.0	3710578.0	0.195540
516377.0	3710578.0	0.218417	516477.0	3710578.0	0.196149	516577.0	3710578.0	0.175328
516677.0	3710578.0	0.156386	516777.0	3710578.0	0.116410	516877.0	3710578.0	0.107710
516977.0	3710578.0	0.097065	517077.0	3710578.0	0.103082	517177.0	3710578.0	0.100555
515277.0	3710478.0	0.087241	515377.0	3710478.0	0.103622	515477.0	3710478.0	0.114052
515577.0	3710478.0	0.114654	515677.0	3710478.0	0.104933	515777.0	3710478.0	0.124438
515877.0	3710478.0	0.159002	515977.0	3710478.0	0.185356	516077.0	3710478.0	0.195653
516177.0	3710478.0	0.223339	516277.0	3710478.0	0.225912	516377.0	3710478.0	0.225834
516477.0	3710478.0	0.204256	516577.0	3710478.0	0.183820	516677.0	3710478.0	0.164905
516777.0	3710478.0	0.135042	516877.0	3710478.0	0.112469	516977.0	3710478.0	0.113803
517077.0	3710478.0	0.102453	517177.0	3710478.0	0.099767	515277.0	3710378.0	0.088382
515377.0	3710378.0	0.096071	515477.0	3710378.0	0.105349	515577.0	3710378.0	0.116595
515677.0	3710378.0	0.127709	515777.0	3710378.0	0.145381	515877.0	3710378.0	0.168983
515977.0	3710378.0	0.194790	516077.0	3710378.0	0.183761	516177.0	3710378.0	0.207561
516277.0	3710378.0	0.209627	516377.0	3710378.0	0.209635	516477.0	3710378.0	0.173638
516577.0	3710378.0	0.173558	516677.0	3710378.0	0.157126	516777.0	3710378.0	0.142075
516877.0	3710378.0	0.139593	516977.0	3710378.0	0.112641	517077.0	3710378.0	0.101752
517177.0	3710378.0	0.098957	515277.0	3712276.0	0.063268	515377.0	3712276.0	0.058710
515477.0	3712276.0	0.052989	515577.0	3712276.0	0.044417	515677.0	3712276.0	0.040527
515777.0	3712276.0	0.032159	515877.0	3712276.0	0.029918	515977.0	3712276.0	0.029419
516077.0	3712276.0	0.031140	516177.0	3712276.0	0.056325	516277.0	3712276.0	0.146056
516377.0	3712276.0	0.104341	516477.0	3712276.0	0.038921	516577.0	3712276.0	0.030152
516677.0	3712276.0	0.029125	516777.0	3712276.0	0.028247	516877.0	3712276.0	0.046425
516977.0	3712276.0	0.047792	517077.0	3712276.0	0.055027	517177.0	3712276.0	0.065935
515277.0	3712376.0	0.067363	515377.0	3712376.0	0.063191	515477.0	3712376.0	0.058682

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
515577.0	3712376.0	0.053533	515677.0	3712376.0	0.051746	515777.0	3712376.0	0.046253
515877.0	3712376.0	0.044834	515977.0	3712376.0	0.048449	516077.0	3712376.0	0.048985
516177.0	3712376.0	0.087719	516277.0	3712376.0	0.130510	516377.0	3712376.0	0.099085
516477.0	3712376.0	0.055098	516577.0	3712376.0	0.037857	516677.0	3712376.0	0.033312
516777.0	3712376.0	0.040387	516877.0	3712376.0	0.045136	516977.0	3712376.0	0.052747
517077.0	3712376.0	0.062450	517177.0	3712376.0	0.075286	515277.0	3712476.0	0.078916
515377.0	3712476.0	0.075962	515477.0	3712476.0	0.065935	515577.0	3712476.0	0.062747
515677.0	3712476.0	0.066433	515777.0	3712476.0	0.057325	515877.0	3712476.0	0.046089
515977.0	3712476.0	0.044056	516077.0	3712476.0	0.050995	516177.0	3712476.0	0.098930
516277.0	3712476.0	0.129089	516377.0	3712476.0	0.104489	516477.0	3712476.0	0.072824
516577.0	3712476.0	0.052737	516677.0	3712476.0	0.052850	516777.0	3712476.0	0.048495
516877.0	3712476.0	0.057272	516977.0	3712476.0	0.059229	517077.0	3712476.0	0.068959
517177.0	3712476.0	0.073881	515277.0	3712576.0	0.085730	515377.0	3712576.0	0.083830
515477.0	3712576.0	0.074132	515577.0	3712576.0	0.072415	515677.0	3712576.0	0.075551
515777.0	3712576.0	0.064433	515877.0	3712576.0	0.053479	515977.0	3712576.0	0.047063
516077.0	3712576.0	0.067282	516177.0	3712576.0	0.096906	516277.0	3712576.0	0.139651
516377.0	3712576.0	0.118833	516477.0	3712576.0	0.091544	516577.0	3712576.0	0.067529
516677.0	3712576.0	0.062336	516777.0	3712576.0	0.059543	516877.0	3712576.0	0.065929
516977.0	3712576.0	0.072157	517077.0	3712576.0	0.070260	517177.0	3712576.0	0.078746
515277.0	3712676.0	0.085370	515377.0	3712676.0	0.084115	515477.0	3712676.0	0.091825
515577.0	3712676.0	0.087646	515677.0	3712676.0	0.078254	515777.0	3712676.0	0.069484
515877.0	3712676.0	0.061994	515977.0	3712676.0	0.056154	516077.0	3712676.0	0.075756
516177.0	3712676.0	0.124532	516277.0	3712676.0	0.145040	516377.0	3712676.0	0.127031
516477.0	3712676.0	0.103124	516577.0	3712676.0	0.084264	516677.0	3712676.0	0.074163
516777.0	3712676.0	0.069262	516877.0	3712676.0	0.066656	516977.0	3712676.0	0.076191
517077.0	3712676.0	0.080977	517177.0	3712676.0	0.083747	515277.0	3712776.0	0.085245
515377.0	3712776.0	0.084534	515477.0	3712776.0	0.080954	515577.0	3712776.0	0.089381
515677.0	3712776.0	0.081184	515777.0	3712776.0	0.059510	515877.0	3712776.0	0.068144
515977.0	3712776.0	0.070103	516077.0	3712776.0	0.098563	516177.0	3712776.0	0.132514
516277.0	3712776.0	0.150887	516377.0	3712776.0	0.151635	516477.0	3712776.0	0.112326
516577.0	3712776.0	0.092985	516677.0	3712776.0	0.077580	516777.0	3712776.0	0.075818
516877.0	3712776.0	0.077312	516977.0	3712776.0	0.080052	517077.0	3712776.0	0.090102
517177.0	3712776.0	0.094143	515277.0	3712876.0	0.092472	515377.0	3712876.0	0.089498
515477.0	3712876.0	0.082251	515577.0	3712876.0	0.075333	515677.0	3712876.0	0.084480
515777.0	3712876.0	0.063658	515877.0	3712876.0	0.066134	515977.0	3712876.0	0.079617
516077.0	3712876.0	0.120024	516177.0	3712876.0	0.138596	516277.0	3712876.0	0.155046
516377.0	3712876.0	0.155563	516477.0	3712876.0	0.130826	516577.0	3712876.0	0.108801
516677.0	3712876.0	0.090175	516777.0	3712876.0	0.088303	516877.0	3712876.0	0.088782
516977.0	3712876.0	0.083819	517077.0	3712876.0	0.092980	517177.0	3712876.0	0.096003
515277.0	3712976.0	0.096899	515377.0	3712976.0	0.090288	515477.0	3712976.0	0.083845
515577.0	3712976.0	0.077792	515677.0	3712976.0	0.072388	515777.0	3712976.0	0.067905
515877.0	3712976.0	0.080422	515977.0	3712976.0	0.108048	516077.0	3712976.0	0.140318
516177.0	3712976.0	0.176485	516277.0	3712976.0	0.174122	516377.0	3712976.0	0.174202
516477.0	3712976.0	0.148156	516577.0	3712976.0	0.124311	516677.0	3712976.0	0.103407

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
516777.0	3712976.0	0.093620	516877.0	3712976.0	0.093423	516977.0	3712976.0	0.094277
517077.0	3712976.0	0.089181	517177.0	3712976.0	0.091378	515277.0	3713076.0	0.097209
515377.0	3713076.0	0.091298	515477.0	3713076.0	0.085618	515577.0	3713076.0	0.080370
515677.0	3713076.0	0.075780	515777.0	3713076.0	0.072081	515877.0	3713076.0	0.080051
515977.0	3713076.0	0.103589	516077.0	3713076.0	0.130476	516177.0	3713076.0	0.160134
516277.0	3713076.0	0.191695	516377.0	3713076.0	0.174163	516477.0	3713076.0	0.164529
516577.0	3713076.0	0.139468	516677.0	3713076.0	0.127529	516777.0	3713076.0	0.114578
516877.0	3713076.0	0.097706	516977.0	3713076.0	0.097895	517077.0	3713076.0	0.098788
517177.0	3713076.0	0.100177	515277.0	3713176.0	0.097699	515377.0	3713176.0	0.092444
515477.0	3713176.0	0.087467	515577.0	3713176.0	0.082946	515677.0	3713176.0	0.079077
515777.0	3713176.0	0.083264	515877.0	3713176.0	0.103707	515977.0	3713176.0	0.119122
516077.0	3713176.0	0.161062	516177.0	3713176.0	0.176388	516277.0	3713176.0	0.207767
516377.0	3713176.0	0.207178	516477.0	3713176.0	0.179844	516577.0	3713176.0	0.154005
516677.0	3713176.0	0.130286	516777.0	3713176.0	0.118198	516877.0	3713176.0	0.109845
516977.0	3713176.0	0.094162	517077.0	3713176.0	0.101540	517177.0	3713176.0	0.141006
515277.0	3712176.0	0.065222	515377.0	3712176.0	0.054261	515477.0	3712176.0	0.053043
515577.0	3712176.0	0.037957	515677.0	3712176.0	0.028815	515777.0	3712176.0	0.024266
515877.0	3712176.0	0.022327	515977.0	3712176.0	0.025876	516077.0	3712176.0	0.044270
516177.0	3712176.0	0.054570	515277.0	3712076.0	0.057419	515377.0	3712076.0	0.051354
515477.0	3712076.0	0.047797	515577.0	3712076.0	0.032212	515677.0	3712076.0	0.029020
515777.0	3712076.0	0.022894	515877.0	3712076.0	0.021308	515977.0	3712076.0	0.027787
516077.0	3712076.0	0.031276	516177.0	3712076.0	0.069358	515277.0	3711976.0	0.062304
515377.0	3711976.0	0.055609	515477.0	3711976.0	0.041068	515577.0	3711976.0	0.029828
515677.0	3711976.0	0.025896	515777.0	3711976.0	0.019408	515877.0	3711976.0	0.018036
515977.0	3711976.0	0.022059	516077.0	3711976.0	0.031678	516177.0	3711976.0	0.044784
515277.0	3711876.0	0.068850	515377.0	3711876.0	0.050332	515477.0	3711876.0	0.046001
515577.0	3711876.0	0.033804	515677.0	3711876.0	0.025263	515777.0	3711876.0	0.018000
515877.0	3711876.0	0.015647	515977.0	3711876.0	0.018478	516077.0	3711876.0	0.025977
516177.0	3711876.0	0.051777	515277.0	3711776.0	0.063549	515377.0	3711776.0	0.050724
515477.0	3711776.0	0.041353	515577.0	3711776.0	0.030146	515677.0	3711776.0	0.023350
515777.0	3711776.0	0.017703	515877.0	3711776.0	0.016703	515977.0	3711776.0	0.020475
516077.0	3711776.0	0.028723	516177.0	3711776.0	0.037752	515277.0	3711676.0	0.066531
515377.0	3711676.0	0.053013	515477.0	3711676.0	0.044444	515577.0	3711676.0	0.033698
515677.0	3711676.0	0.028071	515777.0	3711676.0	0.018973	515877.0	3711676.0	0.016759
515977.0	3711676.0	0.016908	516077.0	3711676.0	0.018211	516177.0	3711676.0	0.039213
515277.0	3711576.0	0.064008	515377.0	3711576.0	0.057767	515477.0	3711576.0	0.050728
515577.0	3711576.0	0.041205	515677.0	3711576.0	0.027609	515777.0	3711576.0	0.020212
515877.0	3711576.0	0.020262	515977.0	3711576.0	0.018027	516077.0	3711576.0	0.021887
516177.0	3711576.0	0.043246	515277.0	3711476.0	0.063077	515377.0	3711476.0	0.057611
515477.0	3711476.0	0.051680	515577.0	3711476.0	0.038709	515677.0	3711476.0	0.031136
515777.0	3711476.0	0.032283	515877.0	3711476.0	0.027692	515977.0	3711476.0	0.024714
516077.0	3711476.0	0.027884	516177.0	3711476.0	0.040459	511277.0	3709378.0	0.107995
512277.0	3709378.0	0.111240	513277.0	3709378.0	0.111918	514277.0	3709378.0	0.114236
515277.0	3709378.0	0.123241	516277.0	3709378.0	0.212061	517277.0	3709378.0	0.107399

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
518277.0	3709378.0	0.177428	519277.0	3709378.0	0.094497	520277.0	3709378.0	0.074167
521277.0	3709378.0	0.061620	522277.0	3709378.0	0.050125	511277.0	3708378.0	0.094086
512277.0	3708378.0	0.080225	513277.0	3708378.0	0.098238	514277.0	3708378.0	0.104660
515277.0	3708378.0	0.122284	516277.0	3708378.0	0.164164	517277.0	3708378.0	0.161331
518277.0	3708378.0	0.108536	519277.0	3708378.0	0.090583	520277.0	3708378.0	0.086480
521277.0	3708378.0	0.067681	522277.0	3708378.0	0.057976	511277.0	3707378.0	0.078835
512277.0	3707378.0	0.085042	513277.0	3707378.0	0.090027	514277.0	3707378.0	0.090507
515277.0	3707378.0	0.156068	516277.0	3707378.0	0.196830	517277.0	3707378.0	0.161915
518277.0	3707378.0	0.082833	519277.0	3707378.0	0.077339	520277.0	3707378.0	0.077150
521277.0	3707378.0	0.074024	522277.0	3707378.0	0.063516	511277.0	3706378.0	0.074430
512277.0	3706378.0	0.078599	513277.0	3706378.0	0.082712	514277.0	3706378.0	0.097735
515277.0	3706378.0	0.153315	516277.0	3706378.0	0.179199	517277.0	3706378.0	0.132622
518277.0	3706378.0	0.092596	519277.0	3706378.0	0.066112	520277.0	3706378.0	0.067751
521277.0	3706378.0	0.072692	522277.0	3706378.0	0.066810	523277.0	3706378.0	0.058775
522402.0	3710378.0	0.056990	522402.0	3711378.0	0.071878	522402.0	3712378.0	0.077296
511277.0	3714176.0	0.089909	512277.0	3714176.0	0.109663	513277.0	3714176.0	0.126713
514277.0	3714176.0	0.133185	515277.0	3714176.0	0.185261	516277.0	3714176.0	0.508077
517277.0	3714176.0	0.235441	518277.0	3714176.0	0.111735	519277.0	3714176.0	0.091607
520277.0	3714176.0	0.090117	521277.0	3714176.0	0.083485	522277.0	3714176.0	0.077731
511277.0	3715176.0	0.135499	512277.0	3715176.0	0.220031	513277.0	3715176.0	0.165647
514277.0	3715176.0	0.208560	515277.0	3715176.0	0.288594	516277.0	3715176.0	0.390314
517277.0	3715176.0	0.164696	518277.0	3715176.0	0.101263	519277.0	3715176.0	0.087889
520277.0	3715176.0	0.076828	521277.0	3715176.0	0.081349	522277.0	3715176.0	0.076447
511277.0	3716176.0	0.202857	512277.0	3716176.0	0.156180	513277.0	3716176.0	0.197610
514277.0	3716176.0	0.213177	515277.0	3716176.0	0.343286	516277.0	3716176.0	0.267850
517277.0	3716176.0	0.188885	518277.0	3716176.0	0.097746	519277.0	3716176.0	0.090461
520277.0	3716176.0	0.091039	521277.0	3716176.0	0.074892	522277.0	3716176.0	0.070404
511277.0	3717176.0	0.176530	512277.0	3717176.0	0.196591	513277.0	3717176.0	0.199822
514277.0	3717176.0	0.208580	515277.0	3717176.0	0.249797	516277.0	3717176.0	0.284670
517277.0	3717176.0	0.197259	518277.0	3717176.0	0.117365	519277.0	3717176.0	0.099663
520277.0	3717176.0	0.082336	521277.0	3717176.0	0.073397	522277.0	3717176.0	0.069315
511277.0	3713176.0	0.101560	512277.0	3713176.0	0.095140	513277.0	3713176.0	0.101475
514277.0	3713176.0	0.123514	511277.0	3712176.0	0.096293	512277.0	3712176.0	0.109248
513277.0	3712176.0	0.114260	514277.0	3712176.0	0.096446	511277.0	3711176.0	0.115758
512277.0	3711176.0	0.150510	513277.0	3711176.0	0.099883	514277.0	3711176.0	0.108515
511277.0	3709378.0	0.107995	512277.0	3709378.0	0.111240	513277.0	3709378.0	0.111918
514277.0	3709378.0	0.114236	515277.0	3709378.0	0.123241	516277.0	3709378.0	0.212061
517277.0	3709378.0	0.107399	518277.0	3709378.0	0.177428	519277.0	3709378.0	0.094497
520277.0	3709378.0	0.074167	521277.0	3709378.0	0.061620	522277.0	3709378.0	0.050125
511277.0	3708378.0	0.094086	512277.0	3708378.0	0.080225	513277.0	3708378.0	0.098238
514277.0	3708378.0	0.104660	515277.0	3708378.0	0.122284	516277.0	3708378.0	0.164164
517277.0	3708378.0	0.161331	518277.0	3708378.0	0.108536	519277.0	3708378.0	0.090583
520277.0	3708378.0	0.086480	521277.0	3708378.0	0.067681	522277.0	3708378.0	0.057976
511277.0	3707378.0	0.078835	512277.0	3707378.0	0.085042	513277.0	3707378.0	0.090027

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
514277.0	3707378.0	0.090507	515277.0	3707378.0	0.156068	516277.0	3707378.0	0.196830
517277.0	3707378.0	0.161915	518277.0	3707378.0	0.082833	519277.0	3707378.0	0.077339
520277.0	3707378.0	0.077150	521277.0	3707378.0	0.074024	522277.0	3707378.0	0.063516
511277.0	3706378.0	0.074430	512277.0	3706378.0	0.078599	513277.0	3706378.0	0.082712
514277.0	3706378.0	0.097735	515277.0	3706378.0	0.153315	516277.0	3706378.0	0.179199
517277.0	3706378.0	0.132622	518277.0	3706378.0	0.092596	519277.0	3706378.0	0.066112
520277.0	3706378.0	0.067751	521277.0	3706378.0	0.072692	522277.0	3706378.0	0.066810
523277.0	3706378.0	0.058775	522402.0	3710378.0	0.056990	522402.0	3711378.0	0.071878
522402.0	3712378.0	0.077296	511277.0	3714176.0	0.089909	512277.0	3714176.0	0.109663
513277.0	3714176.0	0.126713	514277.0	3714176.0	0.133185	515277.0	3714176.0	0.185261
516277.0	3714176.0	0.508077	517277.0	3714176.0	0.235441	518277.0	3714176.0	0.111735
519277.0	3714176.0	0.091607	520277.0	3714176.0	0.090117	521277.0	3714176.0	0.083485
522277.0	3714176.0	0.077731	511277.0	3715176.0	0.135499	512277.0	3715176.0	0.220031
513277.0	3715176.0	0.165647	514277.0	3715176.0	0.208560	515277.0	3715176.0	0.288594
516277.0	3715176.0	0.390314	517277.0	3715176.0	0.164696	518277.0	3715176.0	0.101263
519277.0	3715176.0	0.087889	520277.0	3715176.0	0.076828	521277.0	3715176.0	0.081349
522277.0	3715176.0	0.076447	511277.0	3716176.0	0.202857	512277.0	3716176.0	0.156180
513277.0	3716176.0	0.197610	514277.0	3716176.0	0.213177	515277.0	3716176.0	0.343286
516277.0	3716176.0	0.267850	517277.0	3716176.0	0.188885	518277.0	3716176.0	0.097746
519277.0	3716176.0	0.090461	520277.0	3716176.0	0.091039	521277.0	3716176.0	0.074892
522277.0	3716176.0	0.070404	511277.0	3717176.0	0.176530	512277.0	3717176.0	0.196591
513277.0	3717176.0	0.199822	514277.0	3717176.0	0.208580	515277.0	3717176.0	0.249797
516277.0	3717176.0	0.284670	517277.0	3717176.0	0.197259	518277.0	3717176.0	0.117365
519277.0	3717176.0	0.099663	520277.0	3717176.0	0.082336	521277.0	3717176.0	0.073397
522277.0	3717176.0	0.069315	511277.0	3713176.0	0.101560	512277.0	3713176.0	0.095140
513277.0	3713176.0	0.101475	514277.0	3713176.0	0.123514	511277.0	3712176.0	0.096293
512277.0	3712176.0	0.109248	513277.0	3712176.0	0.114260	514277.0	3712176.0	0.096446
511277.0	3711176.0	0.115758	512277.0	3711176.0	0.150510	513277.0	3711176.0	0.099883
514277.0	3711176.0	0.108515	516500.0	3708100.0	0.244067	518100.0	3709350.0	0.168637
514500.0	3708800.0	0.110344	517300.0	3714400.0	0.253038			

- PROGRAM DETERMINED MAXIMUM 10 VALUES -

X COORDINATE (METERS)	Y COORDINATE (METERS)	CONCENTRATION
516277.00	3714176.00	0.508077
516277.00	3714176.00	0.508077
516277.00	3715176.00	0.390314
516277.00	3715176.00	0.390314
515277.00	3716176.00	0.343286
515277.00	3716176.00	0.343286

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- PROGRAM DETERMINED MAXIMUM 10 VALUES -

X COORDINATE (METERS)	Y COORDINATE (METERS)	CONCENTRATION
515277.00	3715176.00	0.288594
515277.00	3715176.00	0.288594
516277.00	3717176.00	0.284670
516277.00	3717176.00	0.284670

********** END OF ISCLT PROGRAM, 1 SOURCES PROCESSED **********

SECTION H.2

1982 MODELING OUTPUT FOR NOx ISCLT

ISCLT - VERSION DATED 90008
BOWMAN ENVIRONMENTAL ENGINEERING VERSION 6.95

SESSION INFORMATION

INPUT DATA FILE NAME : ISCNOX82.DTA
OUTPUT LIST FILE NAME : ISCNOX82.LST

- ISCLT INPUT DATA -

NUMBER OF SOURCES = 1
NUMBER OF X AXIS GRID SYSTEM POINTS = 0
NUMBER OF Y AXIS GRID SYSTEM POINTS = 0
NUMBER OF SPECIAL POINTS = 749
NUMBER OF SEASONS = 1
NUMBER OF WIND SPEED CLASSES = 6
NUMBER OF STABILITY CLASSES = 6
NUMBER OF WIND DIRECTION CLASSES = 16
FILE NUMBER OF DATA FILE USED FOR REPORTS = 1
THE PROGRAM IS RUN IN RURAL MODE
CONCENTRATION (DEPOSITION) UNITS CONVERSION FACTOR =0.10000000E+07
ACCELERATION OF GRAVITY (METERS/SEC**2) = 9.800
HEIGHT OF MEASUREMENT OF WIND SPEED (METERS) = 10.000
CORRECTION ANGLE FOR GRID SYSTEM VERSUS DIRECTION DATA NORTH (DEGREES) = 0.000
DECAY COEFFICIENT =0.00000000E+00
PROGRAM OPTION SWITCHES = 1, 1, 1, 1, 0, 3, 2, 2, 3, 2, 2, 0, 0, 0, 0, 0, 0, 1, 0, 1, 0, 0, 1, 1, 0,
ALL SOURCES ARE USED TO FORM SOURCE COMBINATION 1

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516276.8	3711378.0	34.439460	516411.0	3712159.0	34.439460	516679.3	3711159.0	34.439460
516679.3	3711378.0	34.439460	517079.3	3711378.0	34.439460	517079.3	3711549.0	34.439460
517530.5	3711488.0	34.439460	517530.5	3711317.0	34.439460	518743.9	3711171.0	34.439460
518743.9	3711573.0	34.439460	519914.6	3711573.0	34.439460	519914.6	3711171.0	34.439460
520304.8	3711171.0	34.439460	520304.8	3711024.0	34.439460	520707.2	3711024.0	34.439460
520817.0	3711628.0	34.439460	520402.3	3712176.0	34.439460	518707.2	3712176.0	34.439460
518707.2	3712030.0	34.439460	518280.4	3712030.0	34.439460	518280.4	3712250.0	34.439460
518060.9	3712335.0	34.439460	518060.9	3712878.0	34.439460	517426.8	3712878.0	34.439460
517426.8	3713079.0	34.439460	516993.9	3713079.0	34.439460	516993.9	3713280.0	34.439460
516603.7	3713280.0	34.439460	516603.7	3712884.0	34.439460	516372.0	3712884.0	34.439460
516372.0	3712798.0	34.439460	516256.2	3712774.0	34.439460	516276.8	3711378.0	34.439460
516264.6	3712122.0	34.439460	516264.6	3711598.0	34.439460	516008.5	3712006.0	34.439460
516008.5	3712122.0	34.439460	516115.2	3712189.0	34.439460	516179.3	3712061.0	34.439460
516179.3	3712122.0	34.439460	516264.6	3712122.0	34.439460	515277.0	3711278.0	39.621080
515377.0	3711278.0	39.621080	515477.0	3711278.0	39.621080	515577.0	3711278.0	39.621080
515677.0	3711278.0	39.621080	515777.0	3711278.0	39.621080	515877.0	3711278.0	39.621080
515977.0	3711278.0	39.621080	516077.0	3711278.0	39.621080	516177.0	3711278.0	39.621080
516277.0	3711278.0	36.579170	516377.0	3711278.0	39.621080	516477.0	3711278.0	39.621080
516577.0	3711278.0	39.621080	516677.0	3711278.0	33.531160	516777.0	3711278.0	33.531160
516877.0	3711278.0	30.480100	516977.0	3711278.0	30.480100	517077.0	3711278.0	33.531160
517177.0	3711278.0	33.531160	515277.0	3711178.0	39.621080	515377.0	3711178.0	42.669090
515477.0	3711178.0	39.621080	515577.0	3711178.0	39.621080	515677.0	3711178.0	42.669090
515777.0	3711178.0	42.669090	515877.0	3711178.0	42.669090	515977.0	3711178.0	39.621080
516077.0	3711178.0	39.621080	516177.0	3711178.0	36.579170	516277.0	3711178.0	36.579170
516377.0	3711178.0	36.579170	516477.0	3711178.0	36.579170	516577.0	3711178.0	36.579170
516677.0	3711178.0	33.531160	516777.0	3711178.0	33.531160	516877.0	3711178.0	33.531160
516977.0	3711178.0	33.531160	517077.0	3711178.0	33.531160	517177.0	3711178.0	33.531160
515277.0	3711078.0	45.720150	515377.0	3711078.0	42.669090	515477.0	3711078.0	36.579170
515577.0	3711078.0	42.669090	515677.0	3711078.0	45.720150	515777.0	3711078.0	45.720150
515877.0	3711078.0	45.720150	515977.0	3711078.0	42.669090	516077.0	3711078.0	39.621080
516177.0	3711078.0	39.621080	516277.0	3711078.0	36.579170	516377.0	3711078.0	36.579170
516477.0	3711078.0	36.579170	516577.0	3711078.0	39.621080	516677.0	3711078.0	33.531160
516777.0	3711078.0	33.531160	516877.0	3711078.0	33.531160	516977.0	3711078.0	36.579170
517077.0	3711078.0	33.531160	517177.0	3711078.0	33.531160	515277.0	3710978.0	45.720150
515377.0	3710978.0	42.669090	515477.0	3710978.0	36.579170	515577.0	3710978.0	42.669090
515677.0	3710978.0	45.720150	515777.0	3710978.0	48.771210	515877.0	3710978.0	45.720150
515977.0	3710978.0	45.720150	516077.0	3710978.0	45.720150	516177.0	3710978.0	42.669090
516277.0	3710978.0	42.669090	516377.0	3710978.0	39.621080	516477.0	3710978.0	36.579170
516577.0	3710978.0	36.579170	516677.0	3710978.0	39.621080	516777.0	3710978.0	36.579170
516877.0	3710978.0	36.579170	516977.0	3710978.0	36.579170	517077.0	3710978.0	36.579170
517177.0	3710978.0	33.531160	515277.0	3710878.0	45.720150	515377.0	3710878.0	39.621080
515477.0	3710878.0	39.621080	515577.0	3710878.0	42.669090	515677.0	3710878.0	48.771210
515777.0	3710878.0	51.819210	515877.0	3710878.0	48.771210	515977.0	3710878.0	48.771210
516077.0	3710878.0	51.819210	516177.0	3710878.0	45.720150	516277.0	3710878.0	42.669090
516377.0	3710878.0	39.621080	516477.0	3710878.0	39.621080	516577.0	3710878.0	42.669090

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516677.0	3710878.0	45.720150	516777.0	3710878.0	45.720150	516877.0	3710878.0	39.621080
516977.0	3710878.0	39.621080	517077.0	3710878.0	36.579170	517177.0	3710878.0	36.579170
515277.0	3710778.0	45.720150	515377.0	3710778.0	39.621080	515477.0	3710778.0	45.720150
515577.0	3710778.0	42.669090	515677.0	3710778.0	48.771210	515777.0	3710778.0	54.861130
515877.0	3710778.0	51.819210	515977.0	3710778.0	51.819210	516077.0	3710778.0	54.861130
516177.0	3710778.0	45.720150	516277.0	3710778.0	45.720150	516377.0	3710778.0	42.669090
516477.0	3710778.0	45.720150	516577.0	3710778.0	45.720150	516677.0	3710778.0	51.819210
516777.0	3710778.0	51.819210	516877.0	3710778.0	48.771210	516977.0	3710778.0	48.771210
517077.0	3710778.0	45.720150	517177.0	3710778.0	36.579170	515277.0	3710678.0	42.669090
515377.0	3710678.0	42.669090	515477.0	3710678.0	45.720150	515577.0	3710678.0	45.720150
515677.0	3710678.0	45.720150	515777.0	3710678.0	48.771210	515877.0	3710678.0	51.819210
515977.0	3710678.0	54.861130	516077.0	3710678.0	54.861130	516177.0	3710678.0	48.771210
516277.0	3710678.0	45.720150	516377.0	3710678.0	45.720150	516477.0	3710678.0	45.720150
516577.0	3710678.0	48.771210	516677.0	3710678.0	51.819210	516777.0	3710678.0	51.819210
516877.0	3710678.0	48.771210	516977.0	3710678.0	45.720150	517077.0	3710678.0	42.669090
517177.0	3710678.0	36.579170	515277.0	3710578.0	45.720150	515377.0	3710578.0	45.720150
515477.0	3710578.0	51.819210	515577.0	3710578.0	51.819210	515677.0	3710578.0	48.771210
515777.0	3710578.0	54.861130	515877.0	3710578.0	54.861130	515977.0	3710578.0	54.861130
516077.0	3710578.0	51.819210	516177.0	3710578.0	51.819210	516277.0	3710578.0	48.771210
516377.0	3710578.0	51.819210	516477.0	3710578.0	51.819210	516577.0	3710578.0	51.819210
516677.0	3710578.0	51.819210	516777.0	3710578.0	45.720150	516877.0	3710578.0	45.720150
516977.0	3710578.0	39.621080	517077.0	3710578.0	39.621080	517177.0	3710578.0	36.579170
515277.0	3710478.0	45.720150	515377.0	3710478.0	51.819210	515477.0	3710478.0	54.861130
515577.0	3710478.0	54.861130	515677.0	3710478.0	51.819210	515777.0	3710478.0	54.861130
515877.0	3710478.0	57.909140	515977.0	3710478.0	57.909140	516077.0	3710478.0	54.861130
516177.0	3710478.0	54.861130	516277.0	3710478.0	51.819210	516377.0	3710478.0	51.819210
516477.0	3710478.0	51.819210	516577.0	3710478.0	51.819210	516677.0	3710478.0	51.819210
516777.0	3710478.0	48.771210	516877.0	3710478.0	45.720150	516977.0	3710478.0	45.720150
517077.0	3710478.0	39.621080	517177.0	3710478.0	36.579170	515277.0	3710378.0	45.720150
515377.0	3710378.0	48.771210	515477.0	3710378.0	51.819210	515577.0	3710378.0	54.861130
515677.0	3710378.0	57.909140	515777.0	3710378.0	57.909140	515877.0	3710378.0	57.909140
515977.0	3710378.0	57.909140	516077.0	3710378.0	51.819210	516177.0	3710378.0	51.819210
516277.0	3710378.0	48.771210	516377.0	3710378.0	48.771210	516477.0	3710378.0	45.720150
516577.0	3710378.0	48.771210	516677.0	3710378.0	48.771210	516777.0	3710378.0	48.771210
516877.0	3710378.0	51.819210	516977.0	3710378.0	45.720150	517077.0	3710378.0	39.621080
517177.0	3710378.0	36.579170	515277.0	3712276.0	30.480100	515377.0	3712276.0	30.480100
515477.0	3712276.0	30.480100	515577.0	3712276.0	30.480100	515677.0	3712276.0	33.531160
515777.0	3712276.0	30.480100	515877.0	3712276.0	30.480100	515977.0	3712276.0	30.480100
516077.0	3712276.0	30.480100	516177.0	3712276.0	33.531160	516277.0	3712276.0	33.531160
516377.0	3712276.0	30.480100	516477.0	3712276.0	30.480100	516577.0	3712276.0	30.480100
516677.0	3712276.0	30.480100	516777.0	3712276.0	27.429040	516877.0	3712276.0	33.531160
516977.0	3712276.0	30.480100	517077.0	3712276.0	27.429040	517177.0	3712276.0	27.429040
515277.0	3712376.0	30.480100	515377.0	3712376.0	30.480100	515477.0	3712376.0	30.480100
515577.0	3712376.0	30.480100	515677.0	3712376.0	33.531160	515777.0	3712376.0	33.531160
515877.0	3712376.0	33.531160	515977.0	3712376.0	36.579170	516077.0	3712376.0	36.579170

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516177.0	3712376.0	36.579170	516277.0	3712376.0	33.531160	516377.0	3712376.0	30.480100
516477.0	3712376.0	30.480100	516577.0	3712376.0	30.480100	516677.0	3712376.0	27.429040
516777.0	3712376.0	27.429040	516877.0	3712376.0	27.429040	516977.0	3712376.0	27.429040
517077.0	3712376.0	27.429040	517177.0	3712376.0	30.480100	515277.0	3712476.0	33.531160
515377.0	3712476.0	33.531160	515477.0	3712476.0	30.480100	515577.0	3712476.0	30.480100
515677.0	3712476.0	33.531160	515777.0	3712476.0	33.531160	515877.0	3712476.0	33.531160
515977.0	3712476.0	33.531160	516077.0	3712476.0	36.579170	516177.0	3712476.0	36.579170
516277.0	3712476.0	33.531160	516377.0	3712476.0	30.480100	516477.0	3712476.0	30.480100
516577.0	3712476.0	30.480100	516677.0	3712476.0	30.480100	516777.0	3712476.0	27.429040
516877.0	3712476.0	27.429040	516977.0	3712476.0	24.381030	517077.0	3712476.0	27.429040
517177.0	3712476.0	27.429040	515277.0	3712576.0	33.531160	515377.0	3712576.0	33.531160
515477.0	3712576.0	30.480100	515577.0	3712576.0	30.480100	515677.0	3712576.0	33.531160
515777.0	3712576.0	33.531160	515877.0	3712576.0	33.531160	515977.0	3712576.0	33.531160
516077.0	3712576.0	36.579170	516177.0	3712576.0	33.531160	516277.0	3712576.0	33.531160
516377.0	3712576.0	30.480100	516477.0	3712576.0	30.480100	516577.0	3712576.0	30.480100
516677.0	3712576.0	30.480100	516777.0	3712576.0	27.429040	516877.0	3712576.0	27.429040
516977.0	3712576.0	27.429040	517077.0	3712576.0	24.381030	517177.0	3712576.0	27.429040
515277.0	3712676.0	30.480100	515377.0	3712676.0	30.480100	515477.0	3712676.0	33.531160
515577.0	3712676.0	33.531160	515677.0	3712676.0	33.531160	515777.0	3712676.0	33.531160
515877.0	3712676.0	33.531160	515977.0	3712676.0	33.531160	516077.0	3712676.0	33.531160
516177.0	3712676.0	36.579170	516277.0	3712676.0	33.531160	516377.0	3712676.0	30.480100
516477.0	3712676.0	30.480100	516577.0	3712676.0	30.480100	516677.0	3712676.0	30.480100
516777.0	3712676.0	27.429040	516877.0	3712676.0	24.381030	516977.0	3712676.0	27.429040
517077.0	3712676.0	27.429040	517177.0	3712676.0	27.429040	515277.0	3712776.0	27.429040
515377.0	3712776.0	27.429040	515477.0	3712776.0	27.429040	515577.0	3712776.0	33.531160
515677.0	3712776.0	33.531160	515777.0	3712776.0	27.429040	515877.0	3712776.0	33.531160
515977.0	3712776.0	33.531160	516077.0	3712776.0	33.531160	516177.0	3712776.0	33.531160
516277.0	3712776.0	30.480100	516377.0	3712776.0	30.480100	516477.0	3712776.0	27.429040
516577.0	3712776.0	27.429040	516677.0	3712776.0	27.429040	516777.0	3712776.0	27.429040
516877.0	3712776.0	27.429040	516977.0	3712776.0	27.429040	517077.0	3712776.0	30.480100
517177.0	3712776.0	30.480100	515277.0	3712876.0	27.429040	515377.0	3712876.0	27.429040
515477.0	3712876.0	27.429040	515577.0	3712876.0	27.429040	515677.0	3712876.0	33.531160
515777.0	3712876.0	27.429040	515877.0	3712876.0	30.480100	515977.0	3712876.0	30.480100
516077.0	3712876.0	33.531160	516177.0	3712876.0	30.480100	516277.0	3712876.0	27.429040
516377.0	3712876.0	27.429040	516477.0	3712876.0	27.429040	516577.0	3712876.0	27.429040
516677.0	3712876.0	27.429040	516777.0	3712876.0	30.480100	516877.0	3712876.0	30.480100
516977.0	3712876.0	27.429040	517077.0	3712876.0	30.480100	517177.0	3712876.0	30.480100
515277.0	3712976.0	27.429040	515377.0	3712976.0	27.429040	515477.0	3712976.0	27.429040
515577.0	3712976.0	27.429040	515677.0	3712976.0	27.429040	515777.0	3712976.0	27.429040
515877.0	3712976.0	33.531160	515977.0	3712976.0	33.531160	516077.0	3712976.0	33.531160
516177.0	3712976.0	33.531160	516277.0	3712976.0	27.429040	516377.0	3712976.0	27.429040
516477.0	3712976.0	27.429040	516577.0	3712976.0	27.429040	516677.0	3712976.0	27.429040
516777.0	3712976.0	30.480100	516877.0	3712976.0	30.480100	516977.0	3712976.0	30.480100
517077.0	3712976.0	27.429040	517177.0	3712976.0	27.429040	515277.0	3713076.0	27.429040
515377.0	3713076.0	27.429040	515477.0	3713076.0	27.429040	515577.0	3713076.0	27.429040

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
515677.0	3713076.0	27.429040	515777.0	3713076.0	27.429040	515877.0	3713076.0	27.429040
515977.0	3713076.0	27.429040	516077.0	3713076.0	27.429040	516177.0	3713076.0	27.429040
516277.0	3713076.0	27.429040	516377.0	3713076.0	24.381030	516477.0	3713076.0	27.429040
516577.0	3713076.0	27.429040	516677.0	3713076.0	30.480100	516777.0	3713076.0	33.531160
516877.0	3713076.0	30.480100	516977.0	3713076.0	30.480100	517077.0	3713076.0	30.480100
517177.0	3713076.0	30.480100	515277.0	3713176.0	27.429040	515377.0	3713176.0	27.429040
515477.0	3713176.0	27.429040	515577.0	3713176.0	27.429040	515677.0	3713176.0	27.429040
515777.0	3713176.0	30.480100	515877.0	3713176.0	30.480100	515977.0	3713176.0	27.429040
516077.0	3713176.0	30.480100	516177.0	3713176.0	27.429040	516277.0	3713176.0	27.429040
516377.0	3713176.0	27.429040	516477.0	3713176.0	27.429040	516577.0	3713176.0	27.429040
516677.0	3713176.0	27.429040	516777.0	3713176.0	30.480100	516877.0	3713176.0	33.531160
516977.0	3713176.0	27.429040	517077.0	3713176.0	30.480100	517177.0	3713176.0	42.669090
515277.0	3712176.0	33.531160	515377.0	3712176.0	30.480100	515477.0	3712176.0	33.531160
515577.0	3712176.0	30.480100	515677.0	3712176.0	30.480100	515777.0	3712176.0	30.480100
515877.0	3712176.0	30.480100	515977.0	3712176.0	30.480100	516077.0	3712176.0	33.531160
516177.0	3712176.0	33.531160	515277.0	3712076.0	30.480100	515377.0	3712076.0	30.480100
515477.0	3712076.0	33.531160	515577.0	3712076.0	30.480100	515677.0	3712076.0	33.531160
515777.0	3712076.0	33.531160	515877.0	3712076.0	33.531160	515977.0	3712076.0	33.531160
516077.0	3712076.0	30.480100	516177.0	3712076.0	33.531160	515277.0	3711976.0	33.531160
515377.0	3711976.0	33.531160	515477.0	3711976.0	30.480100	515577.0	3711976.0	30.480100
515677.0	3711976.0	33.531160	515777.0	3711976.0	33.531160	515877.0	3711976.0	33.531160
515977.0	3711976.0	33.531160	516077.0	3711976.0	33.531160	516177.0	3711976.0	30.480100
515277.0	3711876.0	36.579170	515377.0	3711876.0	30.480100	515477.0	3711876.0	33.531160
515577.0	3711876.0	33.531160	515677.0	3711876.0	33.531160	515777.0	3711876.0	33.531160
515877.0	3711876.0	33.531160	515977.0	3711876.0	33.531160	516077.0	3711876.0	33.531160
516177.0	3711876.0	33.531160	515277.0	3711776.0	36.579170	515377.0	3711776.0	33.531160
515477.0	3711776.0	33.531160	515577.0	3711776.0	33.531160	515677.0	3711776.0	33.531160
515777.0	3711776.0	33.531160	515877.0	3711776.0	33.531160	515977.0	3711776.0	33.531160
516077.0	3711776.0	33.531160	516177.0	3711776.0	33.531160	515277.0	3711676.0	39.621080
515377.0	3711676.0	36.579170	515477.0	3711676.0	36.579170	515577.0	3711676.0	36.579170
515677.0	3711676.0	36.579170	515777.0	3711676.0	33.531160	515877.0	3711676.0	33.531160
515977.0	3711676.0	33.531160	516077.0	3711676.0	33.531160	516177.0	3711676.0	36.579170
515277.0	3711576.0	39.621080	515377.0	3711576.0	39.621080	515477.0	3711576.0	39.621080
515577.0	3711576.0	39.621080	515677.0	3711576.0	36.579170	515777.0	3711576.0	33.531160
515877.0	3711576.0	36.579170	515977.0	3711576.0	36.579170	516077.0	3711576.0	36.579170
516177.0	3711576.0	39.621080	515277.0	3711476.0	39.621080	515377.0	3711476.0	39.621080
515477.0	3711476.0	39.621080	515577.0	3711476.0	36.579170	515677.0	3711476.0	36.579170
515777.0	3711476.0	39.621080	515877.0	3711476.0	39.621080	515977.0	3711476.0	39.621080
516077.0	3711476.0	39.621080	516177.0	3711476.0	39.621080	511277.0	3709378.0	64.011250
512277.0	3709378.0	60.960200	513277.0	3709378.0	73.149190	514277.0	3709378.0	64.011250
515277.0	3709378.0	57.909140	516277.0	3709378.0	45.720150	517277.0	3709378.0	42.669090
518277.0	3709378.0	60.960200	519277.0	3709378.0	30.480100	520277.0	3709378.0	30.480100
521277.0	3709378.0	30.480100	522277.0	3709378.0	27.429040	511277.0	3708378.0	67.059270
512277.0	3708378.0	48.771210	513277.0	3708378.0	76.200250	514277.0	3708378.0	70.101180
515277.0	3708378.0	48.771210	516277.0	3708378.0	36.579170	517277.0	3708378.0	64.011250

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
518277.0	3708378.0	48.771210	519277.0	3708378.0	30.480100	520277.0	3708378.0	30.480100
521277.0	3708378.0	27.429040	522277.0	3708378.0	27.429040	511277.0	3707378.0	54.861130
512277.0	3707378.0	67.059270	513277.0	3707378.0	64.011250	514277.0	3707378.0	54.861130
515277.0	3707378.0	60.960200	516277.0	3707378.0	48.771210	517277.0	3707378.0	67.059270
518277.0	3707378.0	48.771210	519277.0	3707378.0	33.531160	520277.0	3707378.0	27.429040
521277.0	3707378.0	27.429040	522277.0	3707378.0	27.429040	511277.0	3706378.0	73.149190
512277.0	3706378.0	73.149190	513277.0	3706378.0	64.011250	514277.0	3706378.0	64.011250
515277.0	3706378.0	67.059270	516277.0	3706378.0	48.771210	517277.0	3706378.0	48.771210
518277.0	3706378.0	54.861130	519277.0	3706378.0	36.579170	520277.0	3706378.0	30.480100
521277.0	3706378.0	30.480100	522277.0	3706378.0	27.429040	523277.0	3706378.0	27.429040
522402.0	3710378.0	27.429040	522402.0	3711378.0	30.480100	522402.0	3712378.0	30.480100
511277.0	3714176.0	36.579170	512277.0	3714176.0	36.579170	513277.0	3714176.0	33.531160
514277.0	3714176.0	30.480100	515277.0	3714176.0	48.771210	516277.0	3714176.0	48.771210
517277.0	3714176.0	70.101180	518277.0	3714176.0	33.531160	519277.0	3714176.0	27.429040
520277.0	3714176.0	30.480100	521277.0	3714176.0	30.480100	522277.0	3714176.0	30.480100
511277.0	3715176.0	45.720150	512277.0	3715176.0	60.960200	513277.0	3715176.0	39.621080
514277.0	3715176.0	51.819210	515277.0	3715176.0	54.861130	516277.0	3715176.0	39.621080
517277.0	3715176.0	30.480100	518277.0	3715176.0	30.480100	519277.0	3715176.0	27.429040
520277.0	3715176.0	24.381030	521277.0	3715176.0	30.480100	522277.0	3715176.0	30.480100
511277.0	3716176.0	60.960200	512277.0	3716176.0	39.621080	513277.0	3716176.0	51.819210
514277.0	3716176.0	60.960200	515277.0	3716176.0	70.101180	516277.0	3716176.0	24.381030
517277.0	3716176.0	30.480100	518277.0	3716176.0	30.480100	519277.0	3716176.0	30.480100
520277.0	3716176.0	33.531160	521277.0	3716176.0	27.429040	522277.0	3716176.0	27.429040
511277.0	3717176.0	48.771210	512277.0	3717176.0	54.861130	513277.0	3717176.0	60.960200
514277.0	3717176.0	60.960200	515277.0	3717176.0	42.669090	516277.0	3717176.0	30.480100
517277.0	3717176.0	30.480100	518277.0	3717176.0	33.531160	519277.0	3717176.0	36.579170
520277.0	3717176.0	30.480100	521277.0	3717176.0	27.429040	522277.0	3717176.0	27.429040
511277.0	3713176.0	42.669090	512277.0	3713176.0	36.579170	513277.0	3713176.0	36.579170
514277.0	3713176.0	36.579170	511277.0	3712176.0	36.579170	512277.0	3712176.0	39.621080
513277.0	3712176.0	39.621080	514277.0	3712176.0	33.531160	511277.0	3711176.0	48.771210
512277.0	3711176.0	64.011250	513277.0	3711176.0	39.621080	514277.0	3711176.0	45.720150
511277.0	3709378.0	64.011250	512277.0	3709378.0	60.960200	513277.0	3709378.0	73.149190
514277.0	3709378.0	64.011250	515277.0	3709378.0	57.909140	516277.0	3709378.0	45.720150
517277.0	3709378.0	42.669090	518277.0	3709378.0	60.960200	519277.0	3709378.0	30.480100
520277.0	3709378.0	30.480100	521277.0	3709378.0	30.480100	522277.0	3709378.0	27.429040
511277.0	3708378.0	67.059270	512277.0	3708378.0	48.771210	513277.0	3708378.0	76.200250
514277.0	3708378.0	70.101180	515277.0	3708378.0	48.771210	516277.0	3708378.0	36.579170
517277.0	3708378.0	64.011250	518277.0	3708378.0	48.771210	519277.0	3708378.0	30.480100
520277.0	3708378.0	30.480100	521277.0	3708378.0	27.429040	522277.0	3708378.0	27.429040
511277.0	3707378.0	54.861130	512277.0	3707378.0	67.059270	513277.0	3707378.0	64.011250
514277.0	3707378.0	54.861130	515277.0	3707378.0	60.960200	516277.0	3707378.0	48.771210
517277.0	3707378.0	67.059270	518277.0	3707378.0	48.771210	519277.0	3707378.0	33.531160
520277.0	3707378.0	27.429040	521277.0	3707378.0	27.429040	522277.0	3707378.0	27.429040
511277.0	3706378.0	73.149190	512277.0	3706378.0	73.149190	513277.0	3706378.0	64.011250
514277.0	3706378.0	64.011250	515277.0	3706378.0	67.059270	516277.0	3706378.0	48.771210

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
517277.0	3706378.0	48.771210	518277.0	3706378.0	54.861130	519277.0	3706378.0	36.579170
520277.0	3706378.0	30.480100	521277.0	3706378.0	30.480100	522277.0	3706378.0	27.429040
523277.0	3706378.0	27.429040	522402.0	3710378.0	27.429040	522402.0	3711378.0	30.480100
522402.0	3712378.0	30.480100	511277.0	3714176.0	36.579170	512277.0	3714176.0	36.579170
513277.0	3714176.0	33.531160	514277.0	3714176.0	30.480100	515277.0	3714176.0	48.771210
516277.0	3714176.0	48.771210	517277.0	3714176.0	70.101180	518277.0	3714176.0	33.531160
519277.0	3714176.0	27.429040	520277.0	3714176.0	30.480100	521277.0	3714176.0	30.480100
522277.0	3714176.0	30.480100	511277.0	3715176.0	45.720150	512277.0	3715176.0	60.960200
513277.0	3715176.0	39.621080	514277.0	3715176.0	51.819210	515277.0	3715176.0	54.861130
516277.0	3715176.0	39.621080	517277.0	3715176.0	30.480100	518277.0	3715176.0	30.480100
519277.0	3715176.0	27.429040	520277.0	3715176.0	24.381030	521277.0	3715176.0	30.480100
522277.0	3715176.0	30.480100	511277.0	3716176.0	60.960200	512277.0	3716176.0	39.621080
513277.0	3716176.0	51.819210	514277.0	3716176.0	60.960200	515277.0	3716176.0	70.101180
516277.0	3716176.0	24.381030	517277.0	3716176.0	30.480100	518277.0	3716176.0	30.480100
519277.0	3716176.0	30.480100	520277.0	3716176.0	33.531160	521277.0	3716176.0	27.429040
522277.0	3716176.0	27.429040	511277.0	3717176.0	48.771210	512277.0	3717176.0	54.861130
513277.0	3717176.0	60.960200	514277.0	3717176.0	60.960200	515277.0	3717176.0	42.669090
516277.0	3717176.0	30.480100	517277.0	3717176.0	30.480100	518277.0	3717176.0	33.531160
519277.0	3717176.0	36.579170	520277.0	3717176.0	30.480100	521277.0	3717176.0	27.429040
522277.0	3717176.0	27.429040	511277.0	3713176.0	42.669090	512277.0	3713176.0	36.579170
513277.0	3713176.0	36.579170	514277.0	3713176.0	36.579170	511277.0	3712176.0	36.579170
512277.0	3712176.0	39.621080	513277.0	3712176.0	39.621080	514277.0	3712176.0	33.531160
511277.0	3711176.0	48.771210	512277.0	3711176.0	64.011250	513277.0	3711176.0	39.621080
514277.0	3711176.0	45.720150	516500.0	3708100.0	67.668870	518100.0	3709350.0	79.251300
514500.0	3708800.0	80.470510	517300.0	3714400.0	76.200250			

- ISCLT INPUT DATA (CONT.) -

- AMBIENT AIR TEMPERATURE (DEGREES KELVIN) -

	STABILITY CATEGORY 1	STABILITY CATEGORY 2	STABILITY CATEGORY 3	STABILITY CATEGORY 4	STABILITY CATEGORY 5	STABILITY CATEGORY 6
SEASON 1	293.0000	293.0000	293.0000	293.0000	293.0000	293.0000

- MIXING LAYER HEIGHT (METERS) -

SEASON 1

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 2	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 3	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 4	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 5	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 6	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 1

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00005000	0.00023001	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00008000	0.00034002	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00005000	0.00023001	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00011001	0.00046002	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00011001	0.00046002	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.00016001	0.00068003	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.00017001	0.00011001	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.00022001	0.00034002	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00008000	0.00034002	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00008000	0.00034002	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00031002	0.00011001	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.00020001	0.00023001	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00005000	0.00023001	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00008000	0.00034002	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00005000	0.00023001	0.00000000	0.00000000	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 2

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00090004	0.00251013	0.00217011	0.00000000	0.00000000	0.00000000
22.500	0.00014001	0.00091005	0.00103005	0.00000000	0.00000000	0.00000000
45.000	0.00034002	0.00137007	0.00171009	0.00000000	0.00000000	0.00000000
67.500	0.00040002	0.00091005	0.00103005	0.00000000	0.00000000	0.00000000
90.000	0.00088004	0.00148007	0.00103005	0.00000000	0.00000000	0.00000000
112.500	0.00109005	0.00114006	0.00057003	0.00000000	0.00000000	0.00000000
135.000	0.00114006	0.00240012	0.00160008	0.00000000	0.00000000	0.00000000
157.500	0.00077004	0.00080004	0.00091005	0.00000000	0.00000000	0.00000000
180.000	0.00081004	0.00194010	0.00285014	0.00000000	0.00000000	0.00000000
202.500	0.00025001	0.00080004	0.00171009	0.00000000	0.00000000	0.00000000
225.000	0.00050002	0.00160008	0.00126006	0.00000000	0.00000000	0.00000000
247.500	0.00079004	0.00091005	0.00308015	0.00000000	0.00000000	0.00000000
270.000	0.00103005	0.00160008	0.00068003	0.00000000	0.00000000	0.00000000
292.500	0.00088004	0.00148007	0.00068003	0.00000000	0.00000000	0.00000000
315.000	0.00053003	0.00183009	0.00080004	0.00000000	0.00000000	0.00000000
337.500	0.00028001	0.00103005	0.00046002	0.00000000	0.00000000	0.00000000

SEASON 1

STABILITY CATEGORY 3

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00032002	0.00240012	0.00799040	0.00080004	0.00000000	0.00000000
22.500	0.00011001	0.00080004	0.00502025	0.00034002	0.00000000	0.00000000
45.000	0.00033002	0.00148007	0.00434022	0.00068003	0.00011001	0.00000000
67.500	0.00022001	0.00068003	0.00388019	0.00011001	0.00000000	0.00000000
90.000	0.00039002	0.00194010	0.00605030	0.00023001	0.00000000	0.00000000
112.500	0.00021001	0.00160008	0.00320016	0.00011001	0.00000000	0.00000000
135.000	0.00065003	0.00297015	0.00491025	0.00034002	0.00000000	0.00000000
157.500	0.00045002	0.00240012	0.00685034	0.00148007	0.00000000	0.00000000
180.000	0.00081004	0.00320016	0.01336067	0.00228011	0.00023001	0.00000000
202.500	0.00023001	0.00171009	0.00594030	0.00137007	0.00011001	0.00000000
225.000	0.00047002	0.00160008	0.00559028	0.00114006	0.00000000	0.00000000
247.500	0.00045002	0.00240012	0.00628031	0.00114006	0.00000000	0.00000000
270.000	0.00030002	0.00126006	0.00297015	0.00080004	0.00000000	0.00000000
292.500	0.00014001	0.00103005	0.00251013	0.00023001	0.00000000	0.00000000
315.000	0.00015001	0.00114006	0.00263013	0.00034002	0.00000000	0.00000000
337.500	0.00040002	0.00205010	0.00388019	0.00011001	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 4

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00136007	0.00639032	0.02226111	0.02249112	0.00091005	0.00000000
22.500	0.00133007	0.00422021	0.01062053	0.00765038	0.00000000	0.00000000
45.000	0.00051003	0.00388019	0.01073054	0.00582029	0.00000000	0.00000000
67.500	0.00120006	0.00422021	0.01279064	0.00582029	0.00000000	0.00000000
90.000	0.00215011	0.00457023	0.01027051	0.00342017	0.00011001	0.00000000
112.500	0.00190009	0.00559028	0.00868043	0.00263013	0.00000000	0.00000000
135.000	0.00377019	0.01005050	0.01495075	0.00616031	0.00023001	0.00000000
157.500	0.00194010	0.00890044	0.02260113	0.01142057	0.00046002	0.00000000
180.000	0.00218011	0.01073054	0.03973199	0.03813190	0.00251013	0.00011001
202.500	0.00053003	0.00205010	0.01142057	0.01096055	0.00046002	0.00000000
225.000	0.00059003	0.00251013	0.00993050	0.00799040	0.00046002	0.00000000
247.500	0.00055003	0.00320016	0.00674034	0.00422021	0.00011001	0.00000000
270.000	0.00106005	0.00217011	0.00525026	0.00365018	0.00046002	0.00000000
292.500	0.00073004	0.00160008	0.00365018	0.00308015	0.00023001	0.00011001
315.000	0.00073004	0.00263013	0.00491025	0.00662033	0.00034002	0.00011001
337.500	0.00070003	0.00240012	0.00856043	0.01199060	0.00057003	0.00000000

SEASON 1

STABILITY CATEGORY 5

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00000000	0.00331017	0.00719036	0.00000000	0.00000000	0.00000000
22.500	0.00000000	0.00263013	0.00251013	0.00000000	0.00000000	0.00000000
45.000	0.00000000	0.00297015	0.00251013	0.00000000	0.00000000	0.00000000
67.500	0.00000000	0.00331017	0.00388019	0.00000000	0.00000000	0.00000000
90.000	0.00000000	0.00434022	0.00377019	0.00000000	0.00000000	0.00000000
112.500	0.00000000	0.00434022	0.00103005	0.00000000	0.00000000	0.00000000
135.000	0.00000000	0.00993050	0.00365018	0.00000000	0.00000000	0.00000000
157.500	0.00000000	0.00548027	0.00468023	0.00000000	0.00000000	0.00000000
180.000	0.00000000	0.01176059	0.01986099	0.00000000	0.00000000	0.00000000
202.500	0.00000000	0.00297015	0.00594030	0.00000000	0.00000000	0.00000000
225.000	0.00000000	0.00205010	0.00285014	0.00000000	0.00000000	0.00000000
247.500	0.00000000	0.00205010	0.00114006	0.00000000	0.00000000	0.00000000
270.000	0.00000000	0.00148007	0.00103005	0.00000000	0.00000000	0.00000000
292.500	0.00000000	0.00137007	0.00160008	0.00000000	0.00000000	0.00000000
315.000	0.00000000	0.00148007	0.00274014	0.00000000	0.00000000	0.00000000
337.500	0.00000000	0.00068003	0.00251013	0.00000000	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 6

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.01062053	0.00765038	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00490024	0.00320016	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00582029	0.00297015	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00490024	0.00320016	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00862043	0.00457023	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.01025051	0.00548027	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.01760088	0.01039052	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.01095055	0.00616031	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.02149107	0.01598080	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00585029	0.00502025	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00617031	0.00331017	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00477024	0.00217011	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.01384069	0.00559028	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00593030	0.00263013	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00512026	0.00274014	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00164008	0.00160008	0.00000000	0.00000000	0.00000000	0.00000000

- VERTICAL POTENTIAL TEMPERATURE GRADIENT (DEGREES KELVIN/METER) -

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 2	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 3	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 4	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 5	0.200000E-01	0.200000E-01	0.200000E-01	0.200000E-01	0.200000E-01	0.200000E-01
STABILITY CATEGORY 6	0.350000E-01	0.350000E-01	0.350000E-01	0.350000E-01	0.350000E-01	0.350000E-01

- WIND PROFILE POWER LAW EXPONENTS -

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01
STABILITY CATEGORY 2	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01
STABILITY CATEGORY 3	0.100000E+00	0.100000E+00	0.100000E+00	0.100000E+00	0.100000E+00	0.100000E+00
STABILITY CATEGORY 4	0.150000E+00	0.150000E+00	0.150000E+00	0.150000E+00	0.150000E+00	0.150000E+00
STABILITY CATEGORY 5	0.350000E+00	0.350000E+00	0.350000E+00	0.350000E+00	0.350000E+00	0.350000E+00
STABILITY CATEGORY 6	0.550000E+00	0.550000E+00	0.550000E+00	0.550000E+00	0.550000E+00	0.550000E+00

NOTE THAT BUILDING DIMENSIONS ON CARD GROUP 17 FOR SOURCE NO. 1 DO NOT MEET THE SCHULMAN-SCIRE CRITERIA.
THEREFORE, DIRECTION SPECIFIC BUILDING DIMENSIONS WILL BE READ, BUT NOT USED BY THE MODEL.

- SOURCE INPUT DATA -

C A R D	T A P E	SOURCE NUMBER	SOURCE TYPE	X COORDINATE (M)	Y COORDINATE (M)	EMISSION HEIGHT (M)	BASE ELEV-ATION (M)	- SOURCE DETAILS DEPENDING ON TYPE -
X		1	STACK	516322.70	3711890.00	22.86	34.44	GAS EXIT TEMP (DEG K)= 427.59, GAS EXIT VEL. (M/SEC)= 16.61, STACK DIAMETER (M)= 3.423, HEIGHT OF ASSO. BLDG. (M)= 13.60, WIDTH OF ASSO. BLDG. (M)= 105.82, WAKE EFFECTS FLAG = 0

- SOURCE STRENGTHS (GRAMS PER SEC) -

SEASON 1	SEASON 2	SEASON 3	SEASON 4
1.04300E+01			

WARNING - HW/HB > 5 FOR SOURCE 1 PROG. USES LATERAL VIRTUAL DIST. FOR UPPER BOUND OF CONCENTRATION (DEPOSITION). IF LOWER BOUND IS DESIRED SET WAKE EFFECTS FLAG (WAKE) = 1 AND RERUN

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
516276.8	3711378.0	0.084943	516411.0	3712159.0	0.153001	516679.3	3711159.0	0.042575
516679.3	3711378.0	0.039914	517079.3	3711378.0	0.040090	517079.3	3711549.0	0.031474
517530.5	3711488.0	0.048851	517530.5	3711317.0	0.050116	518743.9	3711171.0	0.062467
518743.9	3711573.0	0.069195	519914.6	3711573.0	0.067722	519914.6	3711171.0	0.062229
520304.8	3711171.0	0.061384	520304.8	3711024.0	0.059616	520707.2	3711024.0	0.058714
520817.0	3711628.0	0.065273	520402.3	3712176.0	0.071890	518707.2	3712176.0	0.083061
518707.2	3712030.0	0.079195	518280.4	3712030.0	0.079013	518280.4	3712250.0	0.087740
518060.9	3712335.0	0.092920	518060.9	3712878.0	0.106057	517426.8	3712878.0	0.099113
517426.8	3713079.0	0.104061	516993.9	3713079.0	0.102307	516993.9	3713280.0	0.112371
516603.7	3713280.0	0.192895	516603.7	3712884.0	0.124314	516372.0	3712884.0	0.197740
516372.0	3712798.0	0.177860	516256.2	3712774.0	0.165671	516276.8	3711378.0	0.084943
516264.6	3712122.0	0.239532	516264.6	3711598.0	0.113039	516008.5	3712006.0	0.019233
516008.5	3712122.0	0.030867	516115.2	3712189.0	0.062184	516179.3	3712061.0	0.086641
516179.3	3712122.0	0.091085	516264.6	3712122.0	0.239532	515277.0	3711278.0	0.074329
515377.0	3711278.0	0.072276	515477.0	3711278.0	0.070651	515577.0	3711278.0	0.069404
515677.0	3711278.0	0.068792	515777.0	3711278.0	0.061808	515877.0	3711278.0	0.053725
515977.0	3711278.0	0.054112	516077.0	3711278.0	0.055019	516177.0	3711278.0	0.083301
516277.0	3711278.0	0.096406	516377.0	3711278.0	0.118062	516477.0	3711278.0	0.088346
516577.0	3711278.0	0.062930	516677.0	3711278.0	0.041205	516777.0	3711278.0	0.036732
516877.0	3711278.0	0.036002	516977.0	3711278.0	0.039276	517077.0	3711278.0	0.044386
517177.0	3711278.0	0.045340	515277.0	3711178.0	0.079925	515377.0	3711178.0	0.087728
515477.0	3711178.0	0.078550	515577.0	3711178.0	0.078810	515677.0	3711178.0	0.082889
515777.0	3711178.0	0.075465	515877.0	3711178.0	0.068400	515977.0	3711178.0	0.055773
516077.0	3711178.0	0.061614	516177.0	3711178.0	0.067638	516277.0	3711178.0	0.087721
516377.0	3711178.0	0.087299	516477.0	3711178.0	0.066751	516577.0	3711178.0	0.051525
516677.0	3711178.0	0.039794	516777.0	3711178.0	0.041175	516877.0	3711178.0	0.044259
516977.0	3711178.0	0.048012	517077.0	3711178.0	0.050335	517177.0	3711178.0	0.050517
515277.0	3711078.0	0.104749	515377.0	3711078.0	0.094650	515477.0	3711078.0	0.078584
515577.0	3711078.0	0.091666	515677.0	3711078.0	0.095880	515777.0	3711078.0	0.090076
515877.0	3711078.0	0.085460	515977.0	3711078.0	0.072571	516077.0	3711078.0	0.075893
516177.0	3711078.0	0.094109	516277.0	3711078.0	0.100055	516377.0	3711078.0	0.098183
516477.0	3711078.0	0.078752	516577.0	3711078.0	0.072129	516677.0	3711078.0	0.045308
516777.0	3711078.0	0.046324	516877.0	3711078.0	0.048320	516977.0	3711078.0	0.056882
517077.0	3711078.0	0.054121	517177.0	3711078.0	0.055913	515277.0	3710978.0	0.110607
515377.0	3710978.0	0.101386	515477.0	3710978.0	0.081547	515577.0	3710978.0	0.093246
515677.0	3710978.0	0.098708	515777.0	3710978.0	0.106601	515877.0	3710978.0	0.091470
515977.0	3710978.0	0.096100	516077.0	3710978.0	0.117560	516177.0	3710978.0	0.125115
516277.0	3710978.0	0.150685	516377.0	3710978.0	0.128835	516477.0	3710978.0	0.092428
516577.0	3710978.0	0.075026	516677.0	3710978.0	0.069517	516777.0	3710978.0	0.058394
516877.0	3710978.0	0.059187	516977.0	3710978.0	0.060721	517077.0	3710978.0	0.062811
517177.0	3710978.0	0.059362	515277.0	3710878.0	0.116221	515377.0	3710878.0	0.094644
515477.0	3710878.0	0.090374	515577.0	3710878.0	0.095185	515677.0	3710878.0	0.113780
515777.0	3710878.0	0.124964	515877.0	3710878.0	0.109059	515977.0	3710878.0	0.125590
516077.0	3710878.0	0.174398	516177.0	3710878.0	0.160581	516277.0	3710878.0	0.166766

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
515577.0	3712376.0	0.048613	515677.0	3712376.0	0.051576	515777.0	3712376.0	0.049844
515877.0	3712376.0	0.049758	515977.0	3712376.0	0.057968	516077.0	3712376.0	0.067582
516177.0	3712376.0	0.116422	516277.0	3712376.0	0.157397	516377.0	3712376.0	0.118070
516477.0	3712376.0	0.068630	516577.0	3712376.0	0.046075	516677.0	3712376.0	0.035810
516777.0	3712376.0	0.037801	516877.0	3712376.0	0.038692	516977.0	3712376.0	0.046017
517077.0	3712376.0	0.056020	517177.0	3712376.0	0.070110	515277.0	3712476.0	0.061566
515377.0	3712476.0	0.063150	515477.0	3712476.0	0.058892	515577.0	3712476.0	0.060689
515677.0	3712476.0	0.068788	515777.0	3712476.0	0.063191	515877.0	3712476.0	0.053726
515977.0	3712476.0	0.055387	516077.0	3712476.0	0.070910	516177.0	3712476.0	0.121944
516277.0	3712476.0	0.148459	516377.0	3712476.0	0.116918	516477.0	3712476.0	0.079572
516577.0	3712476.0	0.052638	516677.0	3712476.0	0.050219	516777.0	3712476.0	0.040530
516877.0	3712476.0	0.045304	516977.0	3712476.0	0.046576	517077.0	3712476.0	0.058326
517177.0	3712476.0	0.065213	515277.0	3712576.0	0.072075	515377.0	3712576.0	0.074485
515477.0	3712576.0	0.069994	515577.0	3712576.0	0.072794	515677.0	3712576.0	0.079562
515777.0	3712576.0	0.071485	515877.0	3712576.0	0.063130	515977.0	3712576.0	0.058727
516077.0	3712576.0	0.082844	516177.0	3712576.0	0.110613	516277.0	3712576.0	0.152091
516377.0	3712576.0	0.124652	516477.0	3712576.0	0.092657	516577.0	3712576.0	0.061674
516677.0	3712576.0	0.054030	516777.0	3712576.0	0.048637	516877.0	3712576.0	0.052131
516977.0	3712576.0	0.056581	517077.0	3712576.0	0.056266	517177.0	3712576.0	0.067003
515277.0	3712676.0	0.075618	515377.0	3712676.0	0.078311	515477.0	3712676.0	0.089764
515577.0	3712676.0	0.089631	515677.0	3712676.0	0.083899	515777.0	3712676.0	0.078539
515877.0	3712676.0	0.073957	515977.0	3712676.0	0.070408	516077.0	3712676.0	0.086486
516177.0	3712676.0	0.133431	516277.0	3712676.0	0.146435	516377.0	3712676.0	0.123274
516477.0	3712676.0	0.097368	516577.0	3712676.0	0.076028	516677.0	3712676.0	0.063842
516777.0	3712676.0	0.057233	516877.0	3712676.0	0.053343	516977.0	3712676.0	0.061784
517077.0	3712676.0	0.065479	517177.0	3712676.0	0.069704	515277.0	3712776.0	0.078724
515377.0	3712776.0	0.081570	515477.0	3712776.0	0.081396	515577.0	3712776.0	0.093420
515677.0	3712776.0	0.089128	515777.0	3712776.0	0.068678	515877.0	3712776.0	0.083120
515977.0	3712776.0	0.085795	516077.0	3712776.0	0.107421	516177.0	3712776.0	0.134565
516277.0	3712776.0	0.144662	516377.0	3712776.0	0.142678	516477.0	3712776.0	0.101964
516577.0	3712776.0	0.082694	516677.0	3712776.0	0.067659	516777.0	3712776.0	0.065314
516877.0	3712776.0	0.065717	516977.0	3712776.0	0.067298	517077.0	3712776.0	0.076400
517177.0	3712776.0	0.079539	515277.0	3712876.0	0.088184	515377.0	3712876.0	0.088406
515477.0	3712876.0	0.084340	515577.0	3712876.0	0.080623	515677.0	3712876.0	0.095097
515777.0	3712876.0	0.074934	515877.0	3712876.0	0.081892	515977.0	3712876.0	0.092359
516077.0	3712876.0	0.128462	516177.0	3712876.0	0.138141	516277.0	3712876.0	0.146700
516377.0	3712876.0	0.144768	516477.0	3712876.0	0.120541	516577.0	3712876.0	0.099223
516677.0	3712876.0	0.081466	516777.0	3712876.0	0.080279	516877.0	3712876.0	0.079477
516977.0	3712876.0	0.072899	517077.0	3712876.0	0.081256	517177.0	3712876.0	0.083359
515277.0	3712976.0	0.094568	515377.0	3712976.0	0.091127	515477.0	3712976.0	0.087950
515577.0	3712976.0	0.085185	515677.0	3712976.0	0.082987	515777.0	3712976.0	0.081500
515877.0	3712976.0	0.101188	515977.0	3712976.0	0.122417	516077.0	3712976.0	0.148097
516177.0	3712976.0	0.177713	516277.0	3712976.0	0.165024	516377.0	3712976.0	0.162900
516477.0	3712976.0	0.137828	516577.0	3712976.0	0.115114	516677.0	3712976.0	0.095450

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
516777.0	3712976.0	0.087579	516877.0	3712976.0	0.086070	516977.0	3712976.0	0.085644
517077.0	3712976.0	0.079081	517177.0	3712976.0	0.080451	515277.0	3713076.0	0.097009
515377.0	3713076.0	0.094340	515477.0	3713076.0	0.091989	515577.0	3713076.0	0.090084
515677.0	3713076.0	0.088758	515777.0	3713076.0	0.088123	515877.0	3713076.0	0.094940
515977.0	3713076.0	0.112367	516077.0	3713076.0	0.132974	516177.0	3713076.0	0.156367
516277.0	3713076.0	0.181884	516377.0	3713076.0	0.161001	516477.0	3713076.0	0.154037
516577.0	3713076.0	0.130408	516677.0	3713076.0	0.121015	516777.0	3713076.0	0.110324
516877.0	3713076.0	0.092187	516977.0	3713076.0	0.091110	517077.0	3713076.0	0.090870
517177.0	3713076.0	0.091302	515277.0	3713176.0	0.099822	515377.0	3713176.0	0.097863
515477.0	3713176.0	0.096255	515577.0	3713176.0	0.095109	515677.0	3713176.0	0.094531
515777.0	3713176.0	0.104182	515877.0	3713176.0	0.119927	515977.0	3713176.0	0.126950
516077.0	3713176.0	0.164938	516177.0	3713176.0	0.171936	516277.0	3713176.0	0.197409
516377.0	3713176.0	0.195006	516477.0	3713176.0	0.169190	516577.0	3713176.0	0.144975
516677.0	3713176.0	0.122938	516777.0	3713176.0	0.113490	516877.0	3713176.0	0.106805
516977.0	3713176.0	0.088460	517077.0	3713176.0	0.095346	517177.0	3713176.0	0.134310
515277.0	3712176.0	0.050471	515377.0	3712176.0	0.041387	515477.0	3712176.0	0.040528
515577.0	3712176.0	0.029252	515677.0	3712176.0	0.023653	515777.0	3712176.0	0.021011
515877.0	3712176.0	0.018827	515977.0	3712176.0	0.021930	516077.0	3712176.0	0.045048
516177.0	3712176.0	0.079366	515277.0	3712076.0	0.049068	515377.0	3712076.0	0.044069
515477.0	3712076.0	0.041481	515577.0	3712076.0	0.028631	515677.0	3712076.0	0.025591
515777.0	3712076.0	0.018549	515877.0	3712076.0	0.014239	515977.0	3712076.0	0.020178
516077.0	3712076.0	0.025392	516177.0	3712076.0	0.077634	515277.0	3711976.0	0.058790
515377.0	3711976.0	0.053074	515477.0	3711976.0	0.040221	515577.0	3711976.0	0.030411
515677.0	3711976.0	0.026829	515777.0	3711976.0	0.019229	515877.0	3711976.0	0.016306
515977.0	3711976.0	0.018173	516077.0	3711976.0	0.022741	516177.0	3711976.0	0.034647
515277.0	3711876.0	0.069573	515377.0	3711876.0	0.051493	515477.0	3711876.0	0.048429
515577.0	3711876.0	0.037412	515677.0	3711876.0	0.029564	515777.0	3711876.0	0.021895
515877.0	3711876.0	0.019604	515977.0	3711876.0	0.023499	516077.0	3711876.0	0.033628
516177.0	3711876.0	0.067990	515277.0	3711776.0	0.064398	515377.0	3711776.0	0.051705
515477.0	3711776.0	0.043067	515577.0	3711776.0	0.032677	515677.0	3711776.0	0.026913
515777.0	3711776.0	0.021817	515877.0	3711776.0	0.022030	515977.0	3711776.0	0.027860
516077.0	3711776.0	0.041675	516177.0	3711776.0	0.073418	515277.0	3711676.0	0.068152
515377.0	3711676.0	0.054213	515477.0	3711676.0	0.045854	515577.0	3711676.0	0.035709
515677.0	3711676.0	0.031472	515777.0	3711676.0	0.022685	515877.0	3711676.0	0.024255
515977.0	3711676.0	0.030285	516077.0	3711676.0	0.041697	516177.0	3711676.0	0.080045
515277.0	3711576.0	0.066081	515377.0	3711576.0	0.059684	515477.0	3711576.0	0.052278
515577.0	3711576.0	0.043221	515677.0	3711576.0	0.031678	515777.0	3711576.0	0.027245
515877.0	3711576.0	0.034980	515977.0	3711576.0	0.040910	516077.0	3711576.0	0.048324
516177.0	3711576.0	0.077672	515277.0	3711476.0	0.065679	515377.0	3711476.0	0.060764
515477.0	3711476.0	0.056242	515577.0	3711476.0	0.044158	515677.0	3711476.0	0.039296
515777.0	3711476.0	0.048199	515877.0	3711476.0	0.049690	515977.0	3711476.0	0.049826
516077.0	3711476.0	0.053017	516177.0	3711476.0	0.075037	511277.0	3709378.0	0.123873
512277.0	3709378.0	0.133493	513277.0	3709378.0	0.144751	514277.0	3709378.0	0.155580
515277.0	3709378.0	0.163928	516277.0	3709378.0	0.270749	517277.0	3709378.0	0.121601

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
514277.0	3707378.0	0.121368	515277.0	3707378.0	0.201992	516277.0	3707378.0	0.250252
517277.0	3707378.0	0.202940	518277.0	3707378.0	0.097724	519277.0	3707378.0	0.066372
520277.0	3707378.0	0.052453	521277.0	3707378.0	0.046400	522277.0	3707378.0	0.041248
511277.0	3706378.0	0.101399	512277.0	3706378.0	0.106581	513277.0	3706378.0	0.111565
514277.0	3706378.0	0.129683	515277.0	3706378.0	0.196946	516277.0	3706378.0	0.227124
517277.0	3706378.0	0.166797	518277.0	3706378.0	0.115469	519277.0	3706378.0	0.067080
520277.0	3706378.0	0.054557	521277.0	3706378.0	0.049164	522277.0	3706378.0	0.042158
523277.0	3706378.0	0.038084	522402.0	3710378.0	0.042645	522402.0	3711378.0	0.052907
522402.0	3712378.0	0.057255	511277.0	3714176.0	0.080918	512277.0	3714176.0	0.099008
513277.0	3714176.0	0.115963	514277.0	3714176.0	0.130934	515277.0	3714176.0	0.227566
516277.0	3714176.0	0.540537	517277.0	3714176.0	0.235187	518277.0	3714176.0	0.107421
519277.0	3714176.0	0.084245	520277.0	3714176.0	0.076767	521277.0	3714176.0	0.066593
522277.0	3714176.0	0.058739	511277.0	3715176.0	0.133414	512277.0	3715176.0	0.226144
513277.0	3715176.0	0.164693	514277.0	3715176.0	0.234243	515277.0	3715176.0	0.337345
516277.0	3715176.0	0.415051	517277.0	3715176.0	0.171357	518277.0	3715176.0	0.102325
519277.0	3715176.0	0.084397	520277.0	3715176.0	0.070588	521277.0	3715176.0	0.068252
522277.0	3715176.0	0.060204	511277.0	3716176.0	0.211663	512277.0	3716176.0	0.156107
513277.0	3716176.0	0.215181	514277.0	3716176.0	0.250482	515277.0	3716176.0	0.391346
516277.0	3716176.0	0.282417	517277.0	3716176.0	0.199867	518277.0	3716176.0	0.100959
519277.0	3716176.0	0.088383	520277.0	3716176.0	0.082404	521277.0	3716176.0	0.065989
522277.0	3716176.0	0.058745	511277.0	3717176.0	0.182275	512277.0	3717176.0	0.212556
513277.0	3717176.0	0.226255	514277.0	3717176.0	0.246423	515277.0	3717176.0	0.282824
516277.0	3717176.0	0.307746	517277.0	3717176.0	0.211131	518277.0	3717176.0	0.121874
519277.0	3717176.0	0.096946	520277.0	3717176.0	0.077321	521277.0	3717176.0	0.065986
522277.0	3717176.0	0.059315	511277.0	3713176.0	0.095139	512277.0	3713176.0	0.082811
513277.0	3713176.0	0.081580	514277.0	3713176.0	0.105814	511277.0	3712176.0	0.091849
512277.0	3712176.0	0.104131	513277.0	3712176.0	0.107310	514277.0	3712176.0	0.085163
511277.0	3711176.0	0.118276	512277.0	3711176.0	0.157110	513277.0	3711176.0	0.103030
514277.0	3711176.0	0.115603	516500.0	3708100.0	0.309595	518100.0	3709350.0	0.135688
514500.0	3708800.0	0.148639	517300.0	3714400.0	0.255264			

- PROGRAM DETERMINED MAXIMUM 10 VALUES -

X COORDINATE (METERS)	Y COORDINATE (METERS)	CONCENTRATION
516277.00	3714176.00	0.540537
516277.00	3714176.00	0.540537
516277.00	3715176.00	0.415051
516277.00	3715176.00	0.415051
515277.00	3716176.00	0.391346
515277.00	3716176.00	0.391346

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- PROGRAM DETERMINED MAXIMUM 10 VALUES -

X COORDINATE (METERS)	Y COORDINATE (METERS)	CONCENTRATION
515277.00	3715176.00	0.337345
515277.00	3715176.00	0.337345
516500.00	3708100.00	0.309595
516277.00	3717176.00	0.307746

********** END OF ISCLT PROGRAM, 1 SOURCES PROCESSED **********

Woodward-Clyde
Consultants

SECTION H.3

1983 MODELING OUTPUT FOR NOx ISCLT

ISCLT - VERSION DATED 90008
BOWMAN ENVIRONMENTAL ENGINEERING VERSION 6.95

SESSION INFORMATION

INPUT DATA FILE NAME : ISCNOX83.DTA
OUTPUT LIST FILE NAME : ISCNOX83.LST

- ISCLT INPUT DATA -

NUMBER OF SOURCES = 1
NUMBER OF X AXIS GRID SYSTEM POINTS = 0
NUMBER OF Y AXIS GRID SYSTEM POINTS = 0
NUMBER OF SPECIAL POINTS = 749
NUMBER OF SEASONS = 1
NUMBER OF WIND SPEED CLASSES = 6
NUMBER OF STABILITY CLASSES = 6
NUMBER OF WIND DIRECTION CLASSES = 16
FILE NUMBER OF DATA FILE USED FOR REPORTS = 1
THE PROGRAM IS RUN IN RURAL MODE
CONCENTRATION (DEPOSITION) UNITS CONVERSION FACTOR =0.10000000E+07
ACCELERATION OF GRAVITY (METERS/SEC**2) = 9.800
HEIGHT OF MEASUREMENT OF WIND SPEED (METERS) = 10.000
CORRECTION ANGLE FOR GRID SYSTEM VERSUS DIRECTION DATA NORTH (DEGREES) = 0.000
DECAY COEFFICIENT =0.00000000E+00
PROGRAM OPTION SWITCHES = 1, 1, 1, 1, 0, 3, 2, 2, 3, 2, 2, 0, 0, 0, 0, 0, 0, 1, 0, 1, 0, 0, 1, 1, 0,
ALL SOURCES ARE USED TO FORM SOURCE COMBINATION 1

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516276.8	3711378.0	34.439460	516411.0	3712159.0	34.439460	516679.3	3711159.0	34.439460
516679.3	3711378.0	34.439460	517079.3	3711378.0	34.439460	517079.3	3711549.0	34.439460
517530.5	3711488.0	34.439460	517530.5	3711317.0	34.439460	518743.9	3711171.0	34.439460
518743.9	3711573.0	34.439460	519914.6	3711573.0	34.439460	519914.6	3711171.0	34.439460
520304.8	3711171.0	34.439460	520304.8	3711024.0	34.439460	520707.2	3711024.0	34.439460
520817.0	3711628.0	34.439460	520402.3	3712176.0	34.439460	518707.2	3712176.0	34.439460
518707.2	3712030.0	34.439460	518280.4	3712030.0	34.439460	518280.4	3712250.0	34.439460
518060.9	3712335.0	34.439460	518060.9	3712878.0	34.439460	517426.8	3712878.0	34.439460
517426.8	3713079.0	34.439460	516993.9	3713079.0	34.439460	516993.9	3713280.0	34.439460
516603.7	3713280.0	34.439460	516603.7	3712884.0	34.439460	516372.0	3712884.0	34.439460
516372.0	3712798.0	34.439460	516256.2	3712774.0	34.439460	516276.8	3711378.0	34.439460
516264.6	3712122.0	34.439460	516264.6	3711598.0	34.439460	516008.5	3712006.0	34.439460
516008.5	3712122.0	34.439460	516115.2	3712189.0	34.439460	516179.3	3712061.0	34.439460
516179.3	3712122.0	34.439460	516264.6	3712122.0	34.439460	515277.0	3711278.0	39.621080
515377.0	3711278.0	39.621080	515477.0	3711278.0	39.621080	515577.0	3711278.0	39.621080
515677.0	3711278.0	39.621080	515777.0	3711278.0	39.621080	515877.0	3711278.0	39.621080
515977.0	3711278.0	39.621080	516077.0	3711278.0	39.621080	516177.0	3711278.0	39.621080
516277.0	3711278.0	36.579170	516377.0	3711278.0	39.621080	516477.0	3711278.0	39.621080
516577.0	3711278.0	39.621080	516677.0	3711278.0	33.531160	516777.0	3711278.0	33.531160
516877.0	3711278.0	30.480100	516977.0	3711278.0	30.480100	517077.0	3711278.0	33.531160
517177.0	3711278.0	33.531160	515277.0	3711178.0	39.621080	515377.0	3711178.0	42.669090
515477.0	3711178.0	39.621080	515577.0	3711178.0	39.621080	515677.0	3711178.0	42.669090
515777.0	3711178.0	42.669090	515877.0	3711178.0	42.669090	515977.0	3711178.0	39.621080
516077.0	3711178.0	39.621080	516177.0	3711178.0	36.579170	516277.0	3711178.0	36.579170
516377.0	3711178.0	36.579170	516477.0	3711178.0	36.579170	516577.0	3711178.0	36.579170
516677.0	3711178.0	33.531160	516777.0	3711178.0	33.531160	516877.0	3711178.0	33.531160
516977.0	3711178.0	33.531160	517077.0	3711178.0	33.531160	517177.0	3711178.0	33.531160
515277.0	3711078.0	45.720150	515377.0	3711078.0	42.669090	515477.0	3711078.0	36.579170
515577.0	3711078.0	42.669090	515677.0	3711078.0	45.720150	515777.0	3711078.0	45.720150
515877.0	3711078.0	45.720150	515977.0	3711078.0	42.669090	516077.0	3711078.0	39.621080
516177.0	3711078.0	39.621080	516277.0	3711078.0	36.579170	516377.0	3711078.0	36.579170
516477.0	3711078.0	36.579170	516577.0	3711078.0	39.621080	516677.0	3711078.0	33.531160
516777.0	3711078.0	33.531160	516877.0	3711078.0	33.531160	516977.0	3711078.0	36.579170
517077.0	3711078.0	33.531160	517177.0	3711078.0	33.531160	515277.0	3710978.0	45.720150
515377.0	3710978.0	42.669090	515477.0	3710978.0	36.579170	515577.0	3710978.0	42.669090
515677.0	3710978.0	45.720150	515777.0	3710978.0	48.771210	515877.0	3710978.0	45.720150
515977.0	3710978.0	45.720150	516077.0	3710978.0	45.720150	516177.0	3710978.0	42.669090
516277.0	3710978.0	42.669090	516377.0	3710978.0	39.621080	516477.0	3710978.0	36.579170
516577.0	3710978.0	36.579170	516677.0	3710978.0	39.621080	516777.0	3710978.0	36.579170
516877.0	3710978.0	36.579170	516977.0	3710978.0	36.579170	517077.0	3710978.0	36.579170
517177.0	3710978.0	33.531160	515277.0	3710878.0	45.720150	515377.0	3710878.0	39.621080
515477.0	3710878.0	39.621080	515577.0	3710878.0	42.669090	515677.0	3710878.0	48.771210
515777.0	3710878.0	51.819210	515877.0	3710878.0	48.771210	515977.0	3710878.0	48.771210
516077.0	3710878.0	51.819210	516177.0	3710878.0	45.720150	516277.0	3710878.0	42.669090
516377.0	3710878.0	39.621080	516477.0	3710878.0	39.621080	516577.0	3710878.0	42.669090

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516677.0	3710878.0	45.720150	516777.0	3710878.0	45.720150	516877.0	3710878.0	39.621080
516977.0	3710878.0	39.621080	517077.0	3710878.0	36.579170	517177.0	3710878.0	36.579170
515277.0	3710778.0	45.720150	515377.0	3710778.0	39.621080	515477.0	3710778.0	45.720150
515577.0	3710778.0	42.669090	515677.0	3710778.0	48.771210	515777.0	3710778.0	54.861130
515877.0	3710778.0	51.819210	515977.0	3710778.0	51.819210	516077.0	3710778.0	54.861130
516177.0	3710778.0	45.720150	516277.0	3710778.0	45.720150	516377.0	3710778.0	42.669090
516477.0	3710778.0	45.720150	516577.0	3710778.0	45.720150	516677.0	3710778.0	51.819210
516777.0	3710778.0	51.819210	516877.0	3710778.0	48.771210	516977.0	3710778.0	48.771210
517077.0	3710778.0	45.720150	517177.0	3710778.0	36.579170	515277.0	3710678.0	42.669090
515377.0	3710678.0	42.669090	515477.0	3710678.0	45.720150	515577.0	3710678.0	45.720150
515677.0	3710678.0	45.720150	515777.0	3710678.0	48.771210	515877.0	3710678.0	51.819210
515977.0	3710678.0	54.861130	516077.0	3710678.0	54.861130	516177.0	3710678.0	48.771210
516277.0	3710678.0	45.720150	516377.0	3710678.0	45.720150	516477.0	3710678.0	45.720150
516577.0	3710678.0	48.771210	516677.0	3710678.0	51.819210	516777.0	3710678.0	51.819210
516877.0	3710678.0	48.771210	516977.0	3710678.0	45.720150	517077.0	3710678.0	42.669090
517177.0	3710678.0	36.579170	515277.0	3710578.0	45.720150	515377.0	3710578.0	45.720150
515477.0	3710578.0	51.819210	515577.0	3710578.0	51.819210	515677.0	3710578.0	48.771210
515777.0	3710578.0	54.861130	515877.0	3710578.0	54.861130	515977.0	3710578.0	54.861130
516077.0	3710578.0	51.819210	516177.0	3710578.0	51.819210	516277.0	3710578.0	48.771210
516377.0	3710578.0	51.819210	516477.0	3710578.0	51.819210	516577.0	3710578.0	51.819210
516677.0	3710578.0	51.819210	516777.0	3710578.0	45.720150	516877.0	3710578.0	45.720150
516977.0	3710578.0	39.621080	517077.0	3710578.0	39.621080	517177.0	3710578.0	36.579170
515277.0	3710478.0	45.720150	515377.0	3710478.0	51.819210	515477.0	3710478.0	54.861130
515577.0	3710478.0	54.861130	515677.0	3710478.0	51.819210	515777.0	3710478.0	54.861130
515877.0	3710478.0	57.909140	515977.0	3710478.0	57.909140	516077.0	3710478.0	54.861130
516177.0	3710478.0	54.861130	516277.0	3710478.0	51.819210	516377.0	3710478.0	51.819210
516477.0	3710478.0	51.819210	516577.0	3710478.0	51.819210	516677.0	3710478.0	51.819210
516777.0	3710478.0	48.771210	516877.0	3710478.0	45.720150	516977.0	3710478.0	45.720150
517077.0	3710478.0	39.621080	517177.0	3710478.0	36.579170	515277.0	3710378.0	45.720150
515377.0	3710378.0	48.771210	515477.0	3710378.0	51.819210	515577.0	3710378.0	54.861130
515677.0	3710378.0	57.909140	515777.0	3710378.0	57.909140	515877.0	3710378.0	57.909140
515977.0	3710378.0	57.909140	516077.0	3710378.0	51.819210	516177.0	3710378.0	51.819210
516277.0	3710378.0	48.771210	516377.0	3710378.0	48.771210	516477.0	3710378.0	45.720150
516577.0	3710378.0	48.771210	516677.0	3710378.0	48.771210	516777.0	3710378.0	48.771210
516877.0	3710378.0	51.819210	516977.0	3710378.0	45.720150	517077.0	3710378.0	39.621080
517177.0	3710378.0	36.579170	515277.0	3712276.0	30.480100	515377.0	3712276.0	30.480100
515477.0	3712276.0	30.480100	515577.0	3712276.0	30.480100	515677.0	3712276.0	33.531160
515777.0	3712276.0	30.480100	515877.0	3712276.0	30.480100	515977.0	3712276.0	30.480100
516077.0	3712276.0	30.480100	516177.0	3712276.0	33.531160	516277.0	3712276.0	33.531160
516377.0	3712276.0	30.480100	516477.0	3712276.0	30.480100	516577.0	3712276.0	30.480100
516677.0	3712276.0	30.480100	516777.0	3712276.0	27.429040	516877.0	3712276.0	33.531160
516977.0	3712276.0	30.480100	517077.0	3712276.0	27.429040	517177.0	3712276.0	27.429040
515277.0	3712376.0	30.480100	515377.0	3712376.0	30.480100	515477.0	3712376.0	30.480100
515577.0	3712376.0	30.480100	515677.0	3712376.0	33.531160	515777.0	3712376.0	33.531160
515877.0	3712376.0	33.531160	515977.0	3712376.0	36.579170	516077.0	3712376.0	36.579170

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516177.0	3712376.0	36.579170	516277.0	3712376.0	33.531160	516377.0	3712376.0	30.480100
516477.0	3712376.0	30.480100	516577.0	3712376.0	30.480100	516677.0	3712376.0	27.429040
516777.0	3712376.0	27.429040	516877.0	3712376.0	27.429040	516977.0	3712376.0	27.429040
517077.0	3712376.0	27.429040	517177.0	3712376.0	30.480100	515277.0	3712476.0	33.531160
515377.0	3712476.0	33.531160	515477.0	3712476.0	30.480100	515577.0	3712476.0	30.480100
515677.0	3712476.0	33.531160	515777.0	3712476.0	33.531160	515877.0	3712476.0	33.531160
515977.0	3712476.0	33.531160	516077.0	3712476.0	36.579170	516177.0	3712476.0	36.579170
516277.0	3712476.0	33.531160	516377.0	3712476.0	30.480100	516477.0	3712476.0	30.480100
516577.0	3712476.0	30.480100	516677.0	3712476.0	30.480100	516777.0	3712476.0	27.429040
516877.0	3712476.0	27.429040	516977.0	3712476.0	24.381030	517077.0	3712476.0	27.429040
517177.0	3712476.0	27.429040	515277.0	3712576.0	33.531160	515377.0	3712576.0	33.531160
515477.0	3712576.0	30.480100	515577.0	3712576.0	30.480100	515677.0	3712576.0	33.531160
515777.0	3712576.0	33.531160	515877.0	3712576.0	33.531160	515977.0	3712576.0	33.531160
516077.0	3712576.0	36.579170	516177.0	3712576.0	33.531160	516277.0	3712576.0	33.531160
516377.0	3712576.0	30.480100	516477.0	3712576.0	30.480100	516577.0	3712576.0	30.480100
516677.0	3712576.0	30.480100	516777.0	3712576.0	27.429040	516877.0	3712576.0	27.429040
516977.0	3712576.0	27.429040	517077.0	3712576.0	24.381030	517177.0	3712576.0	27.429040
515277.0	3712676.0	30.480100	515377.0	3712676.0	30.480100	515477.0	3712676.0	33.531160
515577.0	3712676.0	33.531160	515677.0	3712676.0	33.531160	515777.0	3712676.0	33.531160
515877.0	3712676.0	33.531160	515977.0	3712676.0	33.531160	516077.0	3712676.0	33.531160
516177.0	3712676.0	36.579170	516277.0	3712676.0	33.531160	516377.0	3712676.0	30.480100
516477.0	3712676.0	30.480100	516577.0	3712676.0	30.480100	516677.0	3712676.0	30.480100
516777.0	3712676.0	27.429040	516877.0	3712676.0	24.381030	516977.0	3712676.0	27.429040
517077.0	3712676.0	27.429040	517177.0	3712676.0	27.429040	515277.0	3712776.0	27.429040
515377.0	3712776.0	27.429040	515477.0	3712776.0	27.429040	515577.0	3712776.0	33.531160
515677.0	3712776.0	33.531160	515777.0	3712776.0	27.429040	515877.0	3712776.0	33.531160
515977.0	3712776.0	33.531160	516077.0	3712776.0	33.531160	516177.0	3712776.0	33.531160
516277.0	3712776.0	30.480100	516377.0	3712776.0	30.480100	516477.0	3712776.0	27.429040
516577.0	3712776.0	27.429040	516677.0	3712776.0	27.429040	516777.0	3712776.0	27.429040
516877.0	3712776.0	27.429040	516977.0	3712776.0	27.429040	517077.0	3712776.0	30.480100
517177.0	3712776.0	30.480100	515277.0	3712876.0	27.429040	515377.0	3712876.0	27.429040
515477.0	3712876.0	27.429040	515577.0	3712876.0	27.429040	515677.0	3712876.0	33.531160
515777.0	3712876.0	27.429040	515877.0	3712876.0	30.480100	515977.0	3712876.0	30.480100
516077.0	3712876.0	33.531160	516177.0	3712876.0	30.480100	516277.0	3712876.0	27.429040
516377.0	3712876.0	27.429040	516477.0	3712876.0	27.429040	516577.0	3712876.0	27.429040
516677.0	3712876.0	27.429040	516777.0	3712876.0	30.480100	516877.0	3712876.0	30.480100
516977.0	3712876.0	27.429040	517077.0	3712876.0	30.480100	517177.0	3712876.0	30.480100
515277.0	3712976.0	27.429040	515377.0	3712976.0	27.429040	515477.0	3712976.0	27.429040
515577.0	3712976.0	27.429040	515677.0	3712976.0	27.429040	515777.0	3712976.0	27.429040
515877.0	3712976.0	33.531160	515977.0	3712976.0	33.531160	516077.0	3712976.0	33.531160
516177.0	3712976.0	33.531160	516277.0	3712976.0	27.429040	516377.0	3712976.0	27.429040
516477.0	3712976.0	27.429040	516577.0	3712976.0	27.429040	516677.0	3712976.0	27.429040
516777.0	3712976.0	30.480100	516877.0	3712976.0	30.480100	516977.0	3712976.0	30.480100
517077.0	3712976.0	27.429040	517177.0	3712976.0	27.429040	515277.0	3713076.0	27.429040
515377.0	3713076.0	27.429040	515477.0	3713076.0	27.429040	515577.0	3713076.0	27.429040

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
515677.0	3713076.0	27.429040	515777.0	3713076.0	27.429040	515877.0	3713076.0	27.429040
515977.0	3713076.0	27.429040	516077.0	3713076.0	27.429040	516177.0	3713076.0	27.429040
516277.0	3713076.0	27.429040	516377.0	3713076.0	24.381030	516477.0	3713076.0	27.429040
516577.0	3713076.0	27.429040	516677.0	3713076.0	30.480100	516777.0	3713076.0	33.531160
516877.0	3713076.0	30.480100	516977.0	3713076.0	30.480100	517077.0	3713076.0	30.480100
517177.0	3713076.0	30.480100	515277.0	3713176.0	27.429040	515377.0	3713176.0	27.429040
515477.0	3713176.0	27.429040	515577.0	3713176.0	27.429040	515677.0	3713176.0	27.429040
515777.0	3713176.0	30.480100	515877.0	3713176.0	30.480100	515977.0	3713176.0	27.429040
516077.0	3713176.0	30.480100	516177.0	3713176.0	27.429040	516277.0	3713176.0	27.429040
516377.0	3713176.0	27.429040	516477.0	3713176.0	27.429040	516577.0	3713176.0	27.429040
516677.0	3713176.0	27.429040	516777.0	3713176.0	30.480100	516877.0	3713176.0	33.531160
516977.0	3713176.0	27.429040	517077.0	3713176.0	30.480100	517177.0	3713176.0	42.669090
515277.0	3712176.0	33.531160	515377.0	3712176.0	30.480100	515477.0	3712176.0	33.531160
515577.0	3712176.0	30.480100	515677.0	3712176.0	30.480100	515777.0	3712176.0	30.480100
515877.0	3712176.0	30.480100	515977.0	3712176.0	30.480100	516077.0	3712176.0	33.531160
516177.0	3712176.0	33.531160	515277.0	3712076.0	30.480100	515377.0	3712076.0	30.480100
515477.0	3712076.0	33.531160	515577.0	3712076.0	30.480100	515677.0	3712076.0	33.531160
515777.0	3712076.0	33.531160	515877.0	3712076.0	33.531160	515977.0	3712076.0	33.531160
516077.0	3712076.0	30.480100	516177.0	3712076.0	33.531160	515277.0	3711976.0	33.531160
515377.0	3711976.0	33.531160	515477.0	3711976.0	30.480100	515577.0	3711976.0	30.480100
515677.0	3711976.0	33.531160	515777.0	3711976.0	33.531160	515877.0	3711976.0	33.531160
515977.0	3711976.0	33.531160	516077.0	3711976.0	33.531160	516177.0	3711976.0	30.480100
515277.0	3711876.0	36.579170	515377.0	3711876.0	30.480100	515477.0	3711876.0	33.531160
515577.0	3711876.0	33.531160	515677.0	3711876.0	33.531160	515777.0	3711876.0	33.531160
515877.0	3711876.0	33.531160	515977.0	3711876.0	33.531160	516077.0	3711876.0	33.531160
516177.0	3711876.0	33.531160	515277.0	3711776.0	36.579170	515377.0	3711776.0	33.531160
515477.0	3711776.0	33.531160	515577.0	3711776.0	33.531160	515677.0	3711776.0	33.531160
515777.0	3711776.0	33.531160	515877.0	3711776.0	33.531160	515977.0	3711776.0	33.531160
516077.0	3711776.0	33.531160	516177.0	3711776.0	33.531160	515277.0	3711676.0	39.621080
515377.0	3711676.0	36.579170	515477.0	3711676.0	36.579170	515577.0	3711676.0	36.579170
515677.0	3711676.0	36.579170	515777.0	3711676.0	33.531160	515877.0	3711676.0	33.531160
515977.0	3711676.0	33.531160	516077.0	3711676.0	33.531160	516177.0	3711676.0	36.579170
515277.0	3711576.0	39.621080	515377.0	3711576.0	39.621080	515477.0	3711576.0	39.621080
515577.0	3711576.0	39.621080	515677.0	3711576.0	36.579170	515777.0	3711576.0	33.531160
515877.0	3711576.0	36.579170	515977.0	3711576.0	36.579170	516077.0	3711576.0	36.579170
516177.0	3711576.0	39.621080	515277.0	3711476.0	39.621080	515377.0	3711476.0	39.621080
515477.0	3711476.0	39.621080	515577.0	3711476.0	36.579170	515677.0	3711476.0	36.579170
515777.0	3711476.0	39.621080	515877.0	3711476.0	39.621080	515977.0	3711476.0	39.621080
516077.0	3711476.0	39.621080	516177.0	3711476.0	39.621080	511277.0	3709378.0	64.011250
512277.0	3709378.0	60.960200	513277.0	3709378.0	73.149190	514277.0	3709378.0	64.011250
515277.0	3709378.0	57.909140	516277.0	3709378.0	45.720150	517277.0	3709378.0	42.669090
518277.0	3709378.0	60.960200	519277.0	3709378.0	30.480100	520277.0	3709378.0	30.480100
521277.0	3709378.0	30.480100	522277.0	3709378.0	27.429040	511277.0	3708378.0	67.059270
512277.0	3708378.0	48.771210	513277.0	3708378.0	76.200250	514277.0	3708378.0	70.101180
515277.0	3708378.0	48.771210	516277.0	3708378.0	36.579170	517277.0	3708378.0	64.011250

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
518277.0	3708378.0	48.771210	519277.0	3708378.0	30.480100	520277.0	3708378.0	30.480100
521277.0	3708378.0	27.429040	522277.0	3708378.0	27.429040	511277.0	3707378.0	54.861130
512277.0	3707378.0	67.059270	513277.0	3707378.0	64.011250	514277.0	3707378.0	54.861130
515277.0	3707378.0	60.960200	516277.0	3707378.0	48.771210	517277.0	3707378.0	67.059270
518277.0	3707378.0	48.771210	519277.0	3707378.0	33.531160	520277.0	3707378.0	27.429040
521277.0	3707378.0	27.429040	522277.0	3707378.0	27.429040	511277.0	3706378.0	73.149190
512277.0	3706378.0	73.149190	513277.0	3706378.0	64.011250	514277.0	3706378.0	64.011250
515277.0	3706378.0	67.059270	516277.0	3706378.0	48.771210	517277.0	3706378.0	48.771210
518277.0	3706378.0	54.861130	519277.0	3706378.0	36.579170	520277.0	3706378.0	30.480100
521277.0	3706378.0	30.480100	522277.0	3706378.0	27.429040	523277.0	3706378.0	27.429040
522402.0	3710378.0	27.429040	522402.0	3711378.0	30.480100	522402.0	3712378.0	30.480100
511277.0	3714176.0	36.579170	512277.0	3714176.0	36.579170	513277.0	3714176.0	33.531160
514277.0	3714176.0	30.480100	515277.0	3714176.0	48.771210	516277.0	3714176.0	48.771210
517277.0	3714176.0	70.101180	518277.0	3714176.0	33.531160	519277.0	3714176.0	27.429040
520277.0	3714176.0	30.480100	521277.0	3714176.0	30.480100	522277.0	3714176.0	30.480100
511277.0	3715176.0	45.720150	512277.0	3715176.0	60.960200	513277.0	3715176.0	39.621080
514277.0	3715176.0	51.819210	515277.0	3715176.0	54.861130	516277.0	3715176.0	39.621080
517277.0	3715176.0	30.480100	518277.0	3715176.0	30.480100	519277.0	3715176.0	27.429040
520277.0	3715176.0	24.381030	521277.0	3715176.0	30.480100	522277.0	3715176.0	30.480100
511277.0	3716176.0	60.960200	512277.0	3716176.0	39.621080	513277.0	3716176.0	51.819210
514277.0	3716176.0	60.960200	515277.0	3716176.0	70.101180	516277.0	3716176.0	24.381030
517277.0	3716176.0	30.480100	518277.0	3716176.0	30.480100	519277.0	3716176.0	30.480100
520277.0	3716176.0	33.531160	521277.0	3716176.0	27.429040	522277.0	3716176.0	27.429040
511277.0	3717176.0	48.771210	512277.0	3717176.0	54.861130	513277.0	3717176.0	60.960200
514277.0	3717176.0	60.960200	515277.0	3717176.0	42.669090	516277.0	3717176.0	30.480100
517277.0	3717176.0	30.480100	518277.0	3717176.0	33.531160	519277.0	3717176.0	36.579170
520277.0	3717176.0	30.480100	521277.0	3717176.0	27.429040	522277.0	3717176.0	27.429040
511277.0	3713176.0	42.669090	512277.0	3713176.0	36.579170	513277.0	3713176.0	36.579170
514277.0	3713176.0	36.579170	511277.0	3712176.0	36.579170	512277.0	3712176.0	39.621080
513277.0	3712176.0	39.621080	514277.0	3712176.0	33.531160	511277.0	3711176.0	48.771210
512277.0	3711176.0	64.011250	513277.0	3711176.0	39.621080	514277.0	3711176.0	45.720150
511277.0	3709378.0	64.011250	512277.0	3709378.0	60.960200	513277.0	3709378.0	73.149190
514277.0	3709378.0	64.011250	515277.0	3709378.0	57.909140	516277.0	3709378.0	45.720150
517277.0	3709378.0	42.669090	518277.0	3709378.0	60.960200	519277.0	3709378.0	30.480100
520277.0	3709378.0	30.480100	521277.0	3709378.0	30.480100	522277.0	3709378.0	27.429040
511277.0	3708378.0	67.059270	512277.0	3708378.0	48.771210	513277.0	3708378.0	76.200250
514277.0	3708378.0	70.101180	515277.0	3708378.0	48.771210	516277.0	3708378.0	36.579170
517277.0	3708378.0	64.011250	518277.0	3708378.0	48.771210	519277.0	3708378.0	30.480100
520277.0	3708378.0	30.480100	521277.0	3708378.0	27.429040	522277.0	3708378.0	27.429040
511277.0	3707378.0	54.861130	512277.0	3707378.0	67.059270	513277.0	3707378.0	64.011250
514277.0	3707378.0	54.861130	515277.0	3707378.0	60.960200	516277.0	3707378.0	48.771210
517277.0	3707378.0	67.059270	518277.0	3707378.0	48.771210	519277.0	3707378.0	33.531160
520277.0	3707378.0	27.429040	521277.0	3707378.0	27.429040	522277.0	3707378.0	27.429040
511277.0	3706378.0	73.149190	512277.0	3706378.0	73.149190	513277.0	3706378.0	64.011250
514277.0	3706378.0	64.011250	515277.0	3706378.0	67.059270	516277.0	3706378.0	48.771210

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
517277.0	3706378.0	48.771210	518277.0	3706378.0	54.861130	519277.0	3706378.0	36.579170
520277.0	3706378.0	30.480100	521277.0	3706378.0	30.480100	522277.0	3706378.0	27.429040
523277.0	3706378.0	27.429040	522402.0	3710378.0	27.429040	522402.0	3711378.0	30.480100
522402.0	3712378.0	30.480100	511277.0	3714176.0	36.579170	512277.0	3714176.0	36.579170
513277.0	3714176.0	33.531160	514277.0	3714176.0	30.480100	515277.0	3714176.0	48.771210
516277.0	3714176.0	48.771210	517277.0	3714176.0	70.101180	518277.0	3714176.0	33.531160
519277.0	3714176.0	27.429040	520277.0	3714176.0	30.480100	521277.0	3714176.0	30.480100
522277.0	3714176.0	30.480100	511277.0	3715176.0	45.720150	512277.0	3715176.0	60.960200
513277.0	3715176.0	39.621080	514277.0	3715176.0	51.819210	515277.0	3715176.0	54.861130
516277.0	3715176.0	39.621080	517277.0	3715176.0	30.480100	518277.0	3715176.0	30.480100
519277.0	3715176.0	27.429040	520277.0	3715176.0	24.381030	521277.0	3715176.0	30.480100
522277.0	3715176.0	30.480100	511277.0	3716176.0	60.960200	512277.0	3716176.0	39.621080
513277.0	3716176.0	51.819210	514277.0	3716176.0	60.960200	515277.0	3716176.0	70.101180
516277.0	3716176.0	24.381030	517277.0	3716176.0	30.480100	518277.0	3716176.0	30.480100
519277.0	3716176.0	30.480100	520277.0	3716176.0	33.531160	521277.0	3716176.0	27.429040
522277.0	3716176.0	27.429040	511277.0	3717176.0	48.771210	512277.0	3717176.0	54.861130
513277.0	3717176.0	60.960200	514277.0	3717176.0	60.960200	515277.0	3717176.0	42.669090
516277.0	3717176.0	30.480100	517277.0	3717176.0	30.480100	518277.0	3717176.0	33.531160
519277.0	3717176.0	36.579170	520277.0	3717176.0	30.480100	521277.0	3717176.0	27.429040
522277.0	3717176.0	27.429040	511277.0	3713176.0	42.669090	512277.0	3713176.0	36.579170
513277.0	3713176.0	36.579170	514277.0	3713176.0	36.579170	511277.0	3712176.0	36.579170
512277.0	3712176.0	39.621080	513277.0	3712176.0	39.621080	514277.0	3712176.0	33.531160
511277.0	3711176.0	48.771210	512277.0	3711176.0	64.011250	513277.0	3711176.0	39.621080
514277.0	3711176.0	45.720150	516500.0	3708100.0	67.668870	518100.0	3709350.0	79.251300
514500.0	3708800.0	80.470510	517300.0	3714400.0	76.200250			

- ISCLT INPUT DATA (CONT.) -

- AMBIENT AIR TEMPERATURE (DEGREES KELVIN) -

	STABILITY CATEGORY 1	STABILITY CATEGORY 2	STABILITY CATEGORY 3	STABILITY CATEGORY 4	STABILITY CATEGORY 5	STABILITY CATEGORY 6
SEASON 1	293.0000	293.0000	293.0000	293.0000	293.0000	293.0000

- MIXING LAYER HEIGHT (METERS) -

SEASON 1

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 2	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 3	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 4	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 5	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 6	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 1

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00030000	0.00148000	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00008000	0.00068000	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00022000	0.00080000	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00018000	0.00046000	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00005000	0.00046000	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00018000	0.00046000	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.00017000	0.00034000	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.00031000	0.00046000	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.00015000	0.00023000	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00027000	0.00011000	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00014000	0.00011000	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00001000	0.00011000	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.00014000	0.00011000	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00017000	0.00034000	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00031000	0.00046000	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00007000	0.00057000	0.00000000	0.00000000	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 2

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00156000	0.00422000	0.00342000	0.00000000	0.00000000	0.00000000
22.500	0.00043000	0.00194000	0.00114000	0.00000000	0.00000000	0.00000000
45.000	0.00164000	0.00388000	0.00183000	0.00000000	0.00000000	0.00000000
67.500	0.00066000	0.00171000	0.00057000	0.00000000	0.00000000	0.00000000
90.000	0.00087000	0.00228000	0.00240000	0.00000000	0.00000000	0.00000000
112.500	0.00105000	0.00171000	0.00251000	0.00000000	0.00000000	0.00000000
135.000	0.00206000	0.00400000	0.00183000	0.00000000	0.00000000	0.00000000
157.500	0.00058000	0.00205000	0.00057000	0.00000000	0.00000000	0.00000000
180.000	0.00159000	0.00354000	0.00297000	0.00000000	0.00000000	0.00000000
202.500	0.00082000	0.00194000	0.00126000	0.00000000	0.00000000	0.00000000
225.000	0.00106000	0.00263000	0.00228000	0.00000000	0.00000000	0.00000000
247.500	0.00069000	0.00194000	0.00137000	0.00000000	0.00000000	0.00000000
270.000	0.00038000	0.00160000	0.00137000	0.00000000	0.00000000	0.00000000
292.500	0.00080000	0.00091000	0.00103000	0.00000000	0.00000000	0.00000000
315.000	0.00080000	0.00183000	0.00148000	0.00000000	0.00000000	0.00000000
337.500	0.00100000	0.00137000	0.00068000	0.00000000	0.00000000	0.00000000

SEASON 1

STABILITY CATEGORY 3

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00039000	0.00308000	0.00685000	0.00023000	0.00000000	0.00000000
22.500	0.00021000	0.00103000	0.00217000	0.00023000	0.00000000	0.00000000
45.000	0.00011000	0.00126000	0.00342000	0.00023000	0.00000000	0.00000000
67.500	0.00007000	0.00080000	0.00285000	0.00034000	0.00000000	0.00000000
90.000	0.00034000	0.00251000	0.00548000	0.00057000	0.00000000	0.00000000
112.500	0.00047000	0.00263000	0.00377000	0.00046000	0.00000000	0.00000000
135.000	0.00080000	0.00354000	0.00571000	0.00126000	0.00011000	0.00000000
157.500	0.00060000	0.00263000	0.00537000	0.00103000	0.00000000	0.00000000
180.000	0.00046000	0.00240000	0.01187000	0.00217000	0.00034000	0.00000000
202.500	0.00078000	0.00183000	0.00445000	0.00023000	0.00000000	0.00000000
225.000	0.00020000	0.00228000	0.00400000	0.00080000	0.00000000	0.00000000
247.500	0.00036000	0.00126000	0.00274000	0.00023000	0.00000000	0.00000000
270.000	0.00034000	0.00103000	0.00320000	0.00046000	0.00023000	0.00000000
292.500	0.00023000	0.00126000	0.00194000	0.00046000	0.00000000	0.00000000
315.000	0.00043000	0.00205000	0.00365000	0.00103000	0.00000000	0.00000000
337.500	0.00016000	0.00183000	0.00228000	0.00057000	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 4

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00235000	0.01199000	0.02055001	0.01393000	0.00057000	0.00000000
22.500	0.00116000	0.00445000	0.01050000	0.00183000	0.00000000	0.00000000
45.000	0.00074000	0.00400000	0.00913000	0.00160000	0.00000000	0.00000000
67.500	0.00107000	0.00479000	0.01107000	0.00365000	0.00000000	0.00000000
90.000	0.00166000	0.00856000	0.01153000	0.00434000	0.00000000	0.00000000
112.500	0.00212000	0.00811000	0.00845000	0.00365000	0.00000000	0.00000000
135.000	0.00296000	0.01450000	0.02158001	0.00959000	0.00057000	0.00011000
157.500	0.00164000	0.00696000	0.01553000	0.00685000	0.00034000	0.00000000
180.000	0.00210000	0.00788000	0.02694000	0.02352001	0.00217000	0.00023000
202.500	0.00077000	0.00297000	0.00833000	0.00354000	0.00011000	0.00011000
225.000	0.00087000	0.00400000	0.00365000	0.00354000	0.00034000	0.00000000
247.500	0.00028000	0.00308000	0.00285000	0.00285000	0.00034000	0.00000000
270.000	0.00090000	0.00297000	0.00457000	0.00799000	0.00068000	0.00046000
292.500	0.00078000	0.00308000	0.00525000	0.00696000	0.00126000	0.00023000
315.000	0.00056000	0.00331000	0.01221000	0.01689000	0.00285000	0.00091000
337.500	0.00069000	0.00342000	0.01142000	0.01244000	0.00080000	0.00000000

SEASON 1

STABILITY CATEGORY 5

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00000000	0.00411000	0.00342000	0.00000000	0.00000000	0.00000000
22.500	0.00000000	0.00263000	0.00068000	0.00000000	0.00000000	0.00000000
45.000	0.00000000	0.00183000	0.00068000	0.00000000	0.00000000	0.00000000
67.500	0.00000000	0.00263000	0.00194000	0.00000000	0.00000000	0.00000000
90.000	0.00000000	0.00468000	0.00251000	0.00000000	0.00000000	0.00000000
112.500	0.00000000	0.00445000	0.00171000	0.00000000	0.00000000	0.00000000
135.000	0.00000000	0.00925000	0.00240000	0.00000000	0.00000000	0.00000000
157.500	0.00000000	0.00468000	0.00434000	0.00000000	0.00000000	0.00000000
180.000	0.00000000	0.00719000	0.00776000	0.00000000	0.00000000	0.00000000
202.500	0.00000000	0.00308000	0.00251000	0.00000000	0.00000000	0.00000000
225.000	0.00000000	0.00183000	0.00080000	0.00000000	0.00000000	0.00000000
247.500	0.00000000	0.00388000	0.00160000	0.00000000	0.00000000	0.00000000
270.000	0.00000000	0.00320000	0.00240000	0.00000000	0.00000000	0.00000000
292.500	0.00000000	0.00205000	0.00628000	0.00000000	0.00000000	0.00000000
315.000	0.00000000	0.00194000	0.00799000	0.00000000	0.00000000	0.00000000
337.500	0.00000000	0.00114000	0.00171000	0.00000000	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 6

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00857000	0.00639000	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00282000	0.00217000	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00337000	0.00205000	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00402000	0.00205000	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00785000	0.00559000	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.01077000	0.00571000	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.02053001	0.01221000	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.01255000	0.00696000	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.01941000	0.01290000	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00779000	0.00674000	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00693000	0.00457000	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.01463000	0.00879000	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.01962001	0.01096000	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00736000	0.00457000	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00531000	0.00445000	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00188000	0.00137000	0.00000000	0.00000000	0.00000000	0.00000000

- VERTICAL POTENTIAL TEMPERATURE GRADIENT (DEGREES KELVIN/METER) -

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.000000E+000	0.000000E+000	0.000000E+000	0.000000E+000	0.000000E+000	0.000000E+00
STABILITY CATEGORY 2	0.000000E+000	0.000000E+000	0.000000E+000	0.000000E+000	0.000000E+000	0.000000E+00
STABILITY CATEGORY 3	0.000000E+000	0.000000E+000	0.000000E+000	0.000000E+000	0.000000E+000	0.000000E+00
STABILITY CATEGORY 4	0.000000E+000	0.000000E+000	0.000000E+000	0.000000E+000	0.000000E+000	0.000000E+00
STABILITY CATEGORY 5	0.200000E-010	0.200000E-010	0.200000E-010	0.200000E-010	0.200000E-010	0.200000E-01
STABILITY CATEGORY 6	0.350000E-010	0.350000E-010	0.350000E-010	0.350000E-010	0.350000E-010	0.350000E-01

- WIND PROFILE POWER LAW EXPONENTS -

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.700000E-010	0.700000E-010	0.700000E-010	0.700000E-010	0.700000E-010	0.700000E-01
STABILITY CATEGORY 2	0.700000E-010	0.700000E-010	0.700000E-010	0.700000E-010	0.700000E-010	0.700000E-01
STABILITY CATEGORY 3	0.100000E+000	0.100000E+000	0.100000E+000	0.100000E+000	0.100000E+000	0.100000E+00
STABILITY CATEGORY 4	0.150000E+000	0.150000E+000	0.150000E+000	0.150000E+000	0.150000E+000	0.150000E+00
STABILITY CATEGORY 5	0.350000E+000	0.350000E+000	0.350000E+000	0.350000E+000	0.350000E+000	0.350000E+00
STABILITY CATEGORY 6	0.550000E+000	0.550000E+000	0.550000E+000	0.550000E+000	0.550000E+000	0.550000E+00

NOTE THAT BUILDING DIMENSIONS ON CARD GROUP 17 FOR SOURCE NO. 1 DO NOT MEET THE SCHULMAN-SCIRE CRITERIA.
THEREFORE, DIRECTION SPECIFIC BUILDING DIMENSIONS WILL BE READ, BUT NOT USED BY THE MODEL.

- SOURCE INPUT DATA -

C A R D	T A P E	SOURCE NUMBER	SOURCE TYPE	X COORDINATE (M)	Y COORDINATE (M)	EMISSION HEIGHT (M)	BASE ELEV-ATION (M)	- SOURCE DETAILS DEPENDING ON TYPE -
X		1	STACK	516322.70	3711890.00	22.86	34.44	GAS EXIT TEMP (DEG K)= 427.59, GAS EXIT VEL. (M/SEC)= 16.61, STACK DIAMETER (M)= 3.423, HEIGHT OF ASSO. BLDG. (M)= 13.60, WIDTH OF ASSO. BLDG. (M)= 105.82, WAKE EFFECTS FLAG = 0

- SOURCE STRENGTHS (GRAMS PER SEC) -

SEASON 1	SEASON 2	SEASON 3	SEASON 4
1.04300E+01			

WARNING - HW/HB > 5 FOR SOURCE 1 PROG. USES LATERAL VIRTUAL DIST. FOR UPPER BOUND OF CONCENTRATION (DEPOSITION). IF LOWER BOUND IS DESIRED SET WAKE EFFECTS FLAG (WAKE) = 1 AND RERUN

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
516276.8	3711378.0	0.055992	516411.0	3712159.0	0.074294	516679.3	3711159.0	0.061115
516679.3	3711378.0	0.081065	517079.3	3711378.0	0.075756	517079.3	3711549.0	0.052985
517530.5	3711488.0	0.068688	517530.5	3711317.0	0.075624	518743.9	3711171.0	0.088173
518743.9	3711573.0	0.094328	519914.6	3711573.0	0.095393	519914.6	3711171.0	0.090459
520304.8	3711171.0	0.090029	520304.8	3711024.0	0.088518	520707.2	3711024.0	0.087706
520817.0	3711628.0	0.093790	520402.3	3712176.0	0.093079	518707.2	3712176.0	0.092279
518707.2	3712030.0	0.096735	518280.4	3712030.0	0.093113	518280.4	3712250.0	0.085710
518060.9	3712335.0	0.079030	518060.9	3712878.0	0.080024	517426.8	3712878.0	0.087412
517426.8	3713079.0	0.092661	516993.9	3713079.0	0.078017	516993.9	3713280.0	0.082279
516603.7	3713280.0	0.152438	516603.7	3712884.0	0.093669	516372.0	3712884.0	0.163169
516372.0	3712798.0	0.146174	516256.2	3712774.0	0.138776	516276.8	3711378.0	0.055992
516264.6	3712122.0	0.162156	516264.6	3711598.0	0.059282	516008.5	3712006.0	0.029933
516008.5	3712122.0	0.057124	516115.2	3712189.0	0.069445	516179.3	3712061.0	0.122303
516179.3	3712122.0	0.087223	516264.6	3712122.0	0.162156	515277.0	3711278.0	0.071120
515377.0	3711278.0	0.071035	515477.0	3711278.0	0.071339	515577.0	3711278.0	0.071884
515677.0	3711278.0	0.072674	515777.0	3711278.0	0.061654	515877.0	3711278.0	0.048140
515977.0	3711278.0	0.039468	516077.0	3711278.0	0.036267	516177.0	3711278.0	0.062243
516277.0	3711278.0	0.081316	516377.0	3711278.0	0.104225	516477.0	3711278.0	0.089988
516577.0	3711278.0	0.078822	516677.0	3711278.0	0.069557	516777.0	3711278.0	0.072496
516877.0	3711278.0	0.075350	516977.0	3711278.0	0.081161	517077.0	3711278.0	0.088639
517177.0	3711278.0	0.085679	515277.0	3711178.0	0.077139	515377.0	3711178.0	0.084065
515477.0	3711178.0	0.079155	515577.0	3711178.0	0.080887	515677.0	3711178.0	0.081346
515777.0	3711178.0	0.071517	515877.0	3711178.0	0.059354	515977.0	3711178.0	0.045917
516077.0	3711178.0	0.052473	516177.0	3711178.0	0.067594	516277.0	3711178.0	0.093041
516377.0	3711178.0	0.097091	516477.0	3711178.0	0.078177	516577.0	3711178.0	0.064655
516677.0	3711178.0	0.058659	516777.0	3711178.0	0.069877	516877.0	3711178.0	0.082512
516977.0	3711178.0	0.097559	517077.0	3711178.0	0.104397	517177.0	3711178.0	0.100114
515277.0	3711078.0	0.096365	515377.0	3711078.0	0.090955	515477.0	3711078.0	0.081486
515577.0	3711078.0	0.088343	515677.0	3711078.0	0.086565	515777.0	3711078.0	0.078040
515877.0	3711078.0	0.070285	515977.0	3711078.0	0.058152	516077.0	3711078.0	0.070841
516177.0	3711078.0	0.096308	516277.0	3711078.0	0.113512	516377.0	3711078.0	0.114473
516477.0	3711078.0	0.093711	516577.0	3711078.0	0.085411	516677.0	3711078.0	0.058762
516777.0	3711078.0	0.069012	516877.0	3711078.0	0.081539	516977.0	3711078.0	0.106725
517077.0	3711078.0	0.108807	517177.0	3711078.0	0.114498	515277.0	3710978.0	0.102155
515377.0	3710978.0	0.097616	515477.0	3710978.0	0.082404	515577.0	3710978.0	0.086172
515677.0	3710978.0	0.085093	515777.0	3710978.0	0.085014	515877.0	3710978.0	0.071335
515977.0	3710978.0	0.076158	516077.0	3710978.0	0.105840	516177.0	3710978.0	0.126121
516277.0	3710978.0	0.159240	516377.0	3710978.0	0.144275	516477.0	3710978.0	0.108431
516577.0	3710978.0	0.088947	516677.0	3710978.0	0.081799	516777.0	3710978.0	0.078007
516877.0	3710978.0	0.090319	516977.0	3710978.0	0.103722	517077.0	3710978.0	0.117534
517177.0	3710978.0	0.118108	515277.0	3710878.0	0.107614	515377.0	3710878.0	0.091800
515477.0	3710878.0	0.085298	515577.0	3710878.0	0.084285	515677.0	3710878.0	0.091117
515777.0	3710878.0	0.092857	515877.0	3710878.0	0.078958	515977.0	3710878.0	0.099506
516077.0	3710878.0	0.148474	516177.0	3710878.0	0.153702	516277.0	3710878.0	0.171204

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
516377.0	3710878.0	0.155608	516477.0	3710878.0	0.132163	516577.0	3710878.0	0.123434
516677.0	3710878.0	0.116246	516777.0	3710878.0	0.109506	516877.0	3710878.0	0.099556
516977.0	3710878.0	0.112924	517077.0	3710878.0	0.113969	517177.0	3710878.0	0.126696
515277.0	3710778.0	0.106997	515377.0	3710778.0	0.089066	515477.0	3710778.0	0.095173
515577.0	3710778.0	0.082656	515677.0	3710778.0	0.090015	515777.0	3710778.0	0.101925
515877.0	3710778.0	0.092739	515977.0	3710778.0	0.125511	516077.0	3710778.0	0.181195
516177.0	3710778.0	0.164948	516277.0	3710778.0	0.199098	516377.0	3710778.0	0.181181
516477.0	3710778.0	0.173511	516577.0	3710778.0	0.149287	516677.0	3710778.0	0.159357
516777.0	3710778.0	0.137199	516877.0	3710778.0	0.136212	516977.0	3710778.0	0.152716
517077.0	3710778.0	0.152055	517177.0	3710778.0	0.122758	515277.0	3710678.0	0.097366
515377.0	3710678.0	0.092166	515477.0	3710678.0	0.092993	515577.0	3710678.0	0.087443
515677.0	3710678.0	0.082058	515777.0	3710678.0	0.084120	515877.0	3710678.0	0.106756
515977.0	3710678.0	0.154257	516077.0	3710678.0	0.194211	516177.0	3710678.0	0.192664
516277.0	3710678.0	0.207338	516377.0	3710678.0	0.208231	516477.0	3710678.0	0.183082
516577.0	3710678.0	0.176872	516677.0	3710678.0	0.171035	516777.0	3710678.0	0.148829
516877.0	3710678.0	0.132885	516977.0	3710678.0	0.133010	517077.0	3710678.0	0.132565
517177.0	3710678.0	0.119368	515277.0	3710578.0	0.100725	515377.0	3710578.0	0.095980
515477.0	3710578.0	0.106034	515577.0	3710578.0	0.101073	515677.0	3710578.0	0.088303
515777.0	3710578.0	0.101165	515877.0	3710578.0	0.132030	515977.0	3710578.0	0.167233
516077.0	3710578.0	0.185688	516177.0	3710578.0	0.222235	516277.0	3710578.0	0.235625
516377.0	3710578.0	0.261472	516477.0	3710578.0	0.232980	516577.0	3710578.0	0.206109
516677.0	3710578.0	0.181470	516777.0	3710578.0	0.130557	516877.0	3710578.0	0.117816
516977.0	3710578.0	0.106719	517077.0	3710578.0	0.117169	517177.0	3710578.0	0.116446
515277.0	3710478.0	0.098022	515377.0	3710478.0	0.108474	515477.0	3710478.0	0.113045
515577.0	3710478.0	0.108705	515677.0	3710478.0	0.095494	515777.0	3710478.0	0.113518
515877.0	3710478.0	0.156664	515977.0	3710478.0	0.193742	516077.0	3710478.0	0.215242
516177.0	3710478.0	0.253666	516277.0	3710478.0	0.265526	516377.0	3710478.0	0.266964
516477.0	3710478.0	0.240052	516577.0	3710478.0	0.214451	516677.0	3710478.0	0.190677
516777.0	3710478.0	0.153474	516877.0	3710478.0	0.123852	516977.0	3710478.0	0.127128
517077.0	3710478.0	0.114886	517177.0	3710478.0	0.113909	515277.0	3710378.0	0.095577
515377.0	3710378.0	0.098514	515477.0	3710378.0	0.102328	515577.0	3710378.0	0.107345
515677.0	3710378.0	0.111836	515777.0	3710378.0	0.135557	515877.0	3710378.0	0.168488
515977.0	3710378.0	0.204109	516077.0	3710378.0	0.203186	516177.0	3710378.0	0.236200
516277.0	3710378.0	0.246134	516377.0	3710378.0	0.247314	516477.0	3710378.0	0.204704
516577.0	3710378.0	0.201747	516677.0	3710378.0	0.180912	516777.0	3710378.0	0.161807
516877.0	3710378.0	0.158695	516977.0	3710378.0	0.124733	517077.0	3710378.0	0.112889
517177.0	3710378.0	0.111677	515277.0	3712276.0	0.073500	515377.0	3712276.0	0.069365
515477.0	3712276.0	0.065415	515577.0	3712276.0	0.058065	515677.0	3712276.0	0.055632
515777.0	3712276.0	0.046448	515877.0	3712276.0	0.045882	515977.0	3712276.0	0.045886
516077.0	3712276.0	0.040027	516177.0	3712276.0	0.054651	516277.0	3712276.0	0.128149
516377.0	3712276.0	0.084687	516477.0	3712276.0	0.019248	516577.0	3712276.0	0.018126
516677.0	3712276.0	0.021535	516777.0	3712276.0	0.019985	516877.0	3712276.0	0.031077
516977.0	3712276.0	0.029465	517077.0	3712276.0	0.031629	517177.0	3712276.0	0.036385
515277.0	3712376.0	0.078078	515377.0	3712376.0	0.076400	515477.0	3712376.0	0.073929

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
515577.0	3712376.0	0.070086	515677.0	3712376.0	0.070750	515777.0	3712376.0	0.065943
515877.0	3712376.0	0.065090	515977.0	3712376.0	0.064890	516077.0	3712376.0	0.055833
516177.0	3712376.0	0.081543	516277.0	3712376.0	0.113306	516377.0	3712376.0	0.080743
516477.0	3712376.0	0.034556	516577.0	3712376.0	0.017772	516677.0	3712376.0	0.018956
516777.0	3712376.0	0.026912	516877.0	3712376.0	0.031092	516977.0	3712376.0	0.035112
517077.0	3712376.0	0.039777	517177.0	3712376.0	0.046443	515277.0	3712476.0	0.094269
515377.0	3712476.0	0.094096	515477.0	3712476.0	0.084905	515577.0	3712476.0	0.083153
515677.0	3712476.0	0.089830	515777.0	3712476.0	0.078911	515877.0	3712476.0	0.061918
515977.0	3712476.0	0.055184	516077.0	3712476.0	0.055802	516177.0	3712476.0	0.090240
516277.0	3712476.0	0.109855	516377.0	3712476.0	0.083053	516477.0	3712476.0	0.047185
516577.0	3712476.0	0.022037	516677.0	3712476.0	0.027229	516777.0	3712476.0	0.029803
516877.0	3712476.0	0.040560	516977.0	3712476.0	0.042784	517077.0	3712476.0	0.048312
517177.0	3712476.0	0.049648	515277.0	3712576.0	0.105676	515377.0	3712576.0	0.106623
515477.0	3712576.0	0.097389	515577.0	3712576.0	0.097222	515677.0	3712576.0	0.101257
515777.0	3712576.0	0.084379	515877.0	3712576.0	0.068044	515977.0	3712576.0	0.056560
516077.0	3712576.0	0.069078	516177.0	3712576.0	0.087015	516277.0	3712576.0	0.116972
516377.0	3712576.0	0.093015	516477.0	3712576.0	0.062061	516577.0	3712576.0	0.035453
516677.0	3712576.0	0.032900	516777.0	3712576.0	0.036330	516877.0	3712576.0	0.045740
516977.0	3712576.0	0.054591	517077.0	3712576.0	0.053232	517177.0	3712576.0	0.057552
515277.0	3712676.0	0.108391	515377.0	3712676.0	0.109733	515477.0	3712676.0	0.122073
515577.0	3712676.0	0.116962	515677.0	3712676.0	0.102028	515777.0	3712676.0	0.087808
515877.0	3712676.0	0.075302	515977.0	3712676.0	0.065111	516077.0	3712676.0	0.075031
516177.0	3712676.0	0.109514	516277.0	3712676.0	0.119662	516377.0	3712676.0	0.099019
516477.0	3712676.0	0.073243	516577.0	3712676.0	0.052318	516677.0	3712676.0	0.042290
516777.0	3712676.0	0.043566	516877.0	3712676.0	0.045710	516977.0	3712676.0	0.056592
517077.0	3712676.0	0.063863	517177.0	3712676.0	0.065617	515277.0	3712776.0	0.110970
515377.0	3712776.0	0.112604	515477.0	3712776.0	0.108408	515577.0	3712776.0	0.116221
515677.0	3712776.0	0.102645	515777.0	3712776.0	0.073499	515877.0	3712776.0	0.079634
515977.0	3712776.0	0.076191	516077.0	3712776.0	0.093259	516177.0	3712776.0	0.114608
516277.0	3712776.0	0.123367	516377.0	3712776.0	0.119045	516477.0	3712776.0	0.082888
516577.0	3712776.0	0.063096	516677.0	3712776.0	0.046974	516777.0	3712776.0	0.048255
516877.0	3712776.0	0.053017	516977.0	3712776.0	0.058690	517077.0	3712776.0	0.069598
517177.0	3712776.0	0.075875	515277.0	3712876.0	0.122380	515377.0	3712876.0	0.119158
515477.0	3712876.0	0.107536	515577.0	3712876.0	0.096127	515677.0	3712876.0	0.103448
515777.0	3712876.0	0.075839	515877.0	3712876.0	0.075063	515977.0	3712876.0	0.081389
516077.0	3712876.0	0.110104	516177.0	3712876.0	0.118996	516277.0	3712876.0	0.127210
516377.0	3712876.0	0.123517	516477.0	3712876.0	0.099562	516577.0	3712876.0	0.078030
516677.0	3712876.0	0.059637	516777.0	3712876.0	0.057107	516877.0	3712876.0	0.060907
516977.0	3712876.0	0.060860	517077.0	3712876.0	0.070754	517177.0	3712876.0	0.076049
515277.0	3712976.0	0.128218	515377.0	3712976.0	0.117544	515477.0	3712976.0	0.106834
515577.0	3712976.0	0.096420	515677.0	3712976.0	0.086712	515777.0	3712976.0	0.078179
515877.0	3712976.0	0.087455	515977.0	3712976.0	0.104900	516077.0	3712976.0	0.125930
516177.0	3712976.0	0.150110	516277.0	3712976.0	0.143079	516377.0	3712976.0	0.139458
516477.0	3712976.0	0.114919	516577.0	3712976.0	0.092331	516677.0	3712976.0	0.072408

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
516777.0	3712976.0	0.061154	516877.0	3712976.0	0.064106	516977.0	3712976.0	0.067859
517077.0	3712976.0	0.067291	517177.0	3712976.0	0.071710	515277.0	3713076.0	0.125998
515377.0	3713076.0	0.116127	515477.0	3713076.0	0.106309	515577.0	3713076.0	0.096849
515677.0	3713076.0	0.088109	515777.0	3713076.0	0.080496	515877.0	3713076.0	0.082933
515977.0	3713076.0	0.098014	516077.0	3713076.0	0.115724	516177.0	3713076.0	0.135711
516277.0	3713076.0	0.157401	516377.0	3713076.0	0.140046	516477.0	3713076.0	0.129090
516577.0	3713076.0	0.105923	516677.0	3713076.0	0.092882	516777.0	3713076.0	0.078897
516877.0	3713076.0	0.067146	516977.0	3713076.0	0.070111	517077.0	3713076.0	0.073523
517177.0	3713076.0	0.077136	515277.0	3713176.0	0.123999	515377.0	3713176.0	0.114904
515477.0	3713176.0	0.105936	515577.0	3713176.0	0.097367	515677.0	3713176.0	0.089517
515777.0	3713176.0	0.090301	515877.0	3713176.0	0.102710	515977.0	3713176.0	0.109925
516077.0	3713176.0	0.140624	516177.0	3713176.0	0.148513	516277.0	3713176.0	0.170226
516377.0	3713176.0	0.166738	516477.0	3713176.0	0.142035	516577.0	3713176.0	0.118635
516677.0	3713176.0	0.097114	516777.0	3713176.0	0.084427	516877.0	3713176.0	0.075694
516977.0	3713176.0	0.067340	517077.0	3713176.0	0.074998	517177.0	3713176.0	0.104507
515277.0	3712176.0	0.078508	515377.0	3712176.0	0.067033	515477.0	3712176.0	0.066258
515577.0	3712176.0	0.050105	515677.0	3712176.0	0.039745	515777.0	3712176.0	0.033723
515877.0	3712176.0	0.032294	515977.0	3712176.0	0.041527	516077.0	3712176.0	0.067983
516177.0	3712176.0	0.061959	515277.0	3712076.0	0.072617	515377.0	3712076.0	0.066281
515477.0	3712076.0	0.062897	515577.0	3712076.0	0.045017	515677.0	3712076.0	0.040087
515777.0	3712076.0	0.029492	515877.0	3712076.0	0.023418	515977.0	3712076.0	0.035499
516077.0	3712076.0	0.047804	516177.0	3712076.0	0.100092	515277.0	3711976.0	0.080911
515377.0	3711976.0	0.073722	515477.0	3711976.0	0.057058	515577.0	3711976.0	0.043756
515677.0	3711976.0	0.038367	515777.0	3711976.0	0.027926	515877.0	3711976.0	0.024046
515977.0	3711976.0	0.027078	516077.0	3711976.0	0.034557	516177.0	3711976.0	0.058550
515277.0	3711876.0	0.090198	515377.0	3711876.0	0.068701	515477.0	3711876.0	0.064395
515577.0	3711876.0	0.050228	515677.0	3711876.0	0.039539	515777.0	3711876.0	0.029146
515877.0	3711876.0	0.025659	515977.0	3711876.0	0.029879	516077.0	3711876.0	0.040432
516177.0	3711876.0	0.072681	515277.0	3711776.0	0.079783	515377.0	3711776.0	0.065688
515477.0	3711776.0	0.055459	515577.0	3711776.0	0.042783	515677.0	3711776.0	0.033744
515777.0	3711776.0	0.024799	515877.0	3711776.0	0.021410	515977.0	3711776.0	0.023522
516077.0	3711776.0	0.027950	516177.0	3711776.0	0.028699	515277.0	3711676.0	0.077664
515377.0	3711676.0	0.063426	515477.0	3711676.0	0.054243	515577.0	3711676.0	0.042781
515677.0	3711676.0	0.035388	515777.0	3711676.0	0.023404	515877.0	3711676.0	0.018172
515977.0	3711676.0	0.016213	516077.0	3711676.0	0.014413	516177.0	3711676.0	0.022493
515277.0	3711576.0	0.069297	515377.0	3711576.0	0.062490	515477.0	3711576.0	0.054963
515577.0	3711576.0	0.045736	515677.0	3711576.0	0.034409	515777.0	3711576.0	0.025652
515877.0	3711576.0	0.022031	515977.0	3711576.0	0.015831	516077.0	3711576.0	0.014317
516177.0	3711576.0	0.022846	515277.0	3711476.0	0.062767	515377.0	3711476.0	0.059065
515477.0	3711476.0	0.057028	515577.0	3711476.0	0.047823	515677.0	3711476.0	0.042113
515777.0	3711476.0	0.041870	515877.0	3711476.0	0.033826	515977.0	3711476.0	0.023084
516077.0	3711476.0	0.018613	516177.0	3711476.0	0.031263	511277.0	3709378.0	0.094655
512277.0	3709378.0	0.100557	513277.0	3709378.0	0.107986	514277.0	3709378.0	0.113962
515277.0	3709378.0	0.107190	516277.0	3709378.0	0.235908	517277.0	3709378.0	0.124776

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
518277.0	3709378.0	0.225644	519277.0	3709378.0	0.121880	520277.0	3709378.0	0.095425
521277.0	3709378.0	0.078247	522277.0	3709378.0	0.062663	511277.0	3708378.0	0.085214
512277.0	3708378.0	0.076378	513277.0	3708378.0	0.094854	514277.0	3708378.0	0.097382
515277.0	3708378.0	0.119369	516277.0	3708378.0	0.180948	517277.0	3708378.0	0.187884
518277.0	3708378.0	0.138153	519277.0	3708378.0	0.116668	520277.0	3708378.0	0.112338
521277.0	3708378.0	0.087359	522277.0	3708378.0	0.073888	511277.0	3707378.0	0.073274
512277.0	3707378.0	0.080383	513277.0	3707378.0	0.084343	514277.0	3707378.0	0.082536
515277.0	3707378.0	0.157108	516277.0	3707378.0	0.211913	517277.0	3707378.0	0.184638
518277.0	3707378.0	0.107399	519277.0	3707378.0	0.100147	520277.0	3707378.0	0.100664
521277.0	3707378.0	0.096600	522277.0	3707378.0	0.082125	511277.0	3706378.0	0.069518
512277.0	3706378.0	0.073422	513277.0	3706378.0	0.076766	514277.0	3706378.0	0.092391
515277.0	3706378.0	0.156879	516277.0	3706378.0	0.192295	517277.0	3706378.0	0.150084
518277.0	3706378.0	0.116305	519277.0	3706378.0	0.086773	520277.0	3706378.0	0.088867
521277.0	3706378.0	0.095296	522277.0	3706378.0	0.087308	523277.0	3706378.0	0.076052
522402.0	3710378.0	0.066437	522402.0	3711378.0	0.078284	522402.0	3712378.0	0.077129
511277.0	3714176.0	0.097255	512277.0	3714176.0	0.122202	513277.0	3714176.0	0.147948
514277.0	3714176.0	0.162860	515277.0	3714176.0	0.198413	516277.0	3714176.0	0.400022
517277.0	3714176.0	0.175428	518277.0	3714176.0	0.085550	519277.0	3714176.0	0.066453
520277.0	3714176.0	0.064150	521277.0	3714176.0	0.061889	522277.0	3714176.0	0.061911
511277.0	3715176.0	0.159326	512277.0	3715176.0	0.269334	513277.0	3715176.0	0.198191
514277.0	3715176.0	0.235549	515277.0	3715176.0	0.267935	516277.0	3715176.0	0.301133
517277.0	3715176.0	0.125523	518277.0	3715176.0	0.076228	519277.0	3715176.0	0.064319
520277.0	3715176.0	0.054362	521277.0	3715176.0	0.058234	522277.0	3715176.0	0.057447
511277.0	3716176.0	0.250511	512277.0	3716176.0	0.186464	513277.0	3716176.0	0.228399
514277.0	3716176.0	0.228004	515277.0	3716176.0	0.298444	516277.0	3716176.0	0.203714
517277.0	3716176.0	0.143068	518277.0	3716176.0	0.073847	519277.0	3716176.0	0.065535
520277.0	3716176.0	0.061339	521277.0	3716176.0	0.050863	522277.0	3716176.0	0.049575
511277.0	3717176.0	0.214768	512277.0	3717176.0	0.232017	513277.0	3717176.0	0.222760
514277.0	3717176.0	0.208757	515277.0	3717176.0	0.207608	516277.0	3717176.0	0.214429
517277.0	3717176.0	0.148560	518277.0	3717176.0	0.089188	519277.0	3717176.0	0.073196
520277.0	3717176.0	0.057353	521277.0	3717176.0	0.048357	522277.0	3717176.0	0.045813
511277.0	3713176.0	0.109044	512277.0	3713176.0	0.099369	513277.0	3713176.0	0.104332
514277.0	3713176.0	0.141912	511277.0	3712176.0	0.101595	512277.0	3712176.0	0.116274
513277.0	3712176.0	0.123280	514277.0	3712176.0	0.106969	511277.0	3711176.0	0.116225
512277.0	3711176.0	0.149853	513277.0	3711176.0	0.098045	514277.0	3711176.0	0.101347
511277.0	3709378.0	0.094655	512277.0	3709378.0	0.100557	513277.0	3709378.0	0.107986
514277.0	3709378.0	0.113962	515277.0	3709378.0	0.107190	516277.0	3709378.0	0.235908
517277.0	3709378.0	0.124776	518277.0	3709378.0	0.225644	519277.0	3709378.0	0.121880
520277.0	3709378.0	0.095425	521277.0	3709378.0	0.078247	522277.0	3709378.0	0.062663
511277.0	3708378.0	0.085214	512277.0	3708378.0	0.076378	513277.0	3708378.0	0.094854
514277.0	3708378.0	0.097382	515277.0	3708378.0	0.119369	516277.0	3708378.0	0.180948
517277.0	3708378.0	0.187884	518277.0	3708378.0	0.138153	519277.0	3708378.0	0.116668
520277.0	3708378.0	0.112338	521277.0	3708378.0	0.087359	522277.0	3708378.0	0.073888
511277.0	3707378.0	0.073274	512277.0	3707378.0	0.080383	513277.0	3707378.0	0.084343

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
514277.0	3707378.0	0.082536	515277.0	3707378.0	0.157108	516277.0	3707378.0	0.211913
517277.0	3707378.0	0.184638	518277.0	3707378.0	0.107399	519277.0	3707378.0	0.100147
520277.0	3707378.0	0.100664	521277.0	3707378.0	0.096600	522277.0	3707378.0	0.082125
511277.0	3706378.0	0.069518	512277.0	3706378.0	0.073422	513277.0	3706378.0	0.076766
514277.0	3706378.0	0.092391	515277.0	3706378.0	0.156879	516277.0	3706378.0	0.192295
517277.0	3706378.0	0.150084	518277.0	3706378.0	0.116305	519277.0	3706378.0	0.086773
520277.0	3706378.0	0.088867	521277.0	3706378.0	0.095296	522277.0	3706378.0	0.087308
523277.0	3706378.0	0.076052	522402.0	3710378.0	0.066437	522402.0	3711378.0	0.078284
522402.0	3712378.0	0.077129	511277.0	3714176.0	0.097255	512277.0	3714176.0	0.122202
513277.0	3714176.0	0.147948	514277.0	3714176.0	0.162860	515277.0	3714176.0	0.198413
516277.0	3714176.0	0.400022	517277.0	3714176.0	0.175428	518277.0	3714176.0	0.085550
519277.0	3714176.0	0.066453	520277.0	3714176.0	0.064150	521277.0	3714176.0	0.061889
522277.0	3714176.0	0.061911	511277.0	3715176.0	0.159326	512277.0	3715176.0	0.269334
513277.0	3715176.0	0.198191	514277.0	3715176.0	0.235549	515277.0	3715176.0	0.267935
516277.0	3715176.0	0.301133	517277.0	3715176.0	0.125523	518277.0	3715176.0	0.076228
519277.0	3715176.0	0.064319	520277.0	3715176.0	0.054362	521277.0	3715176.0	0.058234
522277.0	3715176.0	0.057447	511277.0	3716176.0	0.250511	512277.0	3716176.0	0.186464
513277.0	3716176.0	0.228399	514277.0	3716176.0	0.228004	515277.0	3716176.0	0.298444
516277.0	3716176.0	0.203714	517277.0	3716176.0	0.143068	518277.0	3716176.0	0.073847
519277.0	3716176.0	0.065535	520277.0	3716176.0	0.061339	521277.0	3716176.0	0.050863
522277.0	3716176.0	0.049575	511277.0	3717176.0	0.214768	512277.0	3717176.0	0.232017
513277.0	3717176.0	0.222760	514277.0	3717176.0	0.208757	515277.0	3717176.0	0.207608
516277.0	3717176.0	0.214429	517277.0	3717176.0	0.148560	518277.0	3717176.0	0.089188
519277.0	3717176.0	0.073196	520277.0	3717176.0	0.057353	521277.0	3717176.0	0.048357
522277.0	3717176.0	0.045813	511277.0	3713176.0	0.109044	512277.0	3713176.0	0.099369
513277.0	3713176.0	0.104332	514277.0	3713176.0	0.141912	511277.0	3712176.0	0.101595
512277.0	3712176.0	0.116274	513277.0	3712176.0	0.123280	514277.0	3712176.0	0.106969
511277.0	3711176.0	0.116225	512277.0	3711176.0	0.149853	513277.0	3711176.0	0.098045
514277.0	3711176.0	0.101347	516500.0	3708100.0	0.264163	518100.0	3709350.0	0.213483
514500.0	3708800.0	0.103047	517300.0	3714400.0	0.190746			

- PROGRAM DETERMINED MAXIMUM 10 VALUES -

X COORDINATE (METERS)	Y COORDINATE (METERS)	CONCENTRATION
516277.00	3714176.00	0.400022
516277.00	3714176.00	0.400022
516277.00	3715176.00	0.301133
516277.00	3715176.00	0.301133
515277.00	3716176.00	0.298444
515277.00	3716176.00	0.298444

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- PROGRAM DETERMINED MAXIMUM 10 VALUES -

X COORDINATE (METERS)	Y COORDINATE (METERS)	CONCENTRATION
512277.00	3715176.00	0.269334
512277.00	3715176.00	0.269334
515277.00	3715176.00	0.267935
515277.00	3715176.00	0.267935

********** END OF ISCLT PROGRAM, 1 SOURCES PROCESSED **********

Woodward-Clyde
Consultants

SECTION H.4

1984 MODELING OUTPUT FOR NOx ISCLT

ISCLT - VERSION DATED 90008
BOWMAN ENVIRONMENTAL ENGINEERING VERSION 6.95

SESSION INFORMATION

INPUT DATA FILE NAME : ISCNOX84.DTA
OUTPUT LIST FILE NAME : ISCNOX84.LST

- ISCLT INPUT DATA -

NUMBER OF SOURCES = 1
NUMBER OF X AXIS GRID SYSTEM POINTS = 0
NUMBER OF Y AXIS GRID SYSTEM POINTS = 0
NUMBER OF SPECIAL POINTS = 749
NUMBER OF SEASONS = 1
NUMBER OF WIND SPEED CLASSES = 6
NUMBER OF STABILITY CLASSES = 6
NUMBER OF WIND DIRECTION CLASSES = 16
FILE NUMBER OF DATA FILE USED FOR REPORTS = 1
THE PROGRAM IS RUN IN RURAL MODE
CONCENTRATION (DEPOSITION) UNITS CONVERSION FACTOR =0.10000000E+07
ACCELERATION OF GRAVITY (METERS/SEC**2) = 9.800
HEIGHT OF MEASUREMENT OF WIND SPEED (METERS) = 10.000
CORRECTION ANGLE FOR GRID SYSTEM VERSUS DIRECTION DATA NORTH (DEGREES) = 0.000
DECAY COEFFICIENT =0.00000000E+00
PROGRAM OPTION SWITCHES = 1, 1, 1, 1, 0, 3, 2, 2, 3, 2, 2, 0, 0, 0, 0, 0, 0, 1, 0, 1, 0, 0, 1, 1, 0,
ALL SOURCES ARE USED TO FORM SOURCE COMBINATION 1

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516276.8	3711378.0	34.439460	516411.0	3712159.0	34.439460	516679.3	3711159.0	34.439460
516679.3	3711378.0	34.439460	517079.3	3711378.0	34.439460	517079.3	3711549.0	34.439460
517530.5	3711488.0	34.439460	517530.5	3711317.0	34.439460	518743.9	3711171.0	34.439460
518743.9	3711573.0	34.439460	519914.6	3711573.0	34.439460	519914.6	3711171.0	34.439460
520304.8	3711171.0	34.439460	520304.8	3711024.0	34.439460	520707.2	3711024.0	34.439460
520817.0	3711628.0	34.439460	520402.3	3712176.0	34.439460	518707.2	3712176.0	34.439460
518707.2	3712030.0	34.439460	518280.4	3712030.0	34.439460	518280.4	3712250.0	34.439460
518060.9	3712335.0	34.439460	518060.9	3712878.0	34.439460	517426.8	3712878.0	34.439460
517426.8	3713079.0	34.439460	516993.9	3713079.0	34.439460	516993.9	3713280.0	34.439460
516603.7	3713280.0	34.439460	516603.7	3712884.0	34.439460	516372.0	3712884.0	34.439460
516372.0	3712798.0	34.439460	516256.2	3712774.0	34.439460	516276.8	3711378.0	34.439460
516264.6	3712122.0	34.439460	516264.6	3711598.0	34.439460	516008.5	3712006.0	34.439460
516008.5	3712122.0	34.439460	516115.2	3712189.0	34.439460	516179.3	3712061.0	34.439460
516179.3	3712122.0	34.439460	516264.6	3712122.0	34.439460	515277.0	3711278.0	39.621080
515377.0	3711278.0	39.621080	515477.0	3711278.0	39.621080	515577.0	3711278.0	39.621080
515677.0	3711278.0	39.621080	515777.0	3711278.0	39.621080	515877.0	3711278.0	39.621080
515977.0	3711278.0	39.621080	516077.0	3711278.0	39.621080	516177.0	3711278.0	39.621080
516277.0	3711278.0	36.579170	516377.0	3711278.0	39.621080	516477.0	3711278.0	39.621080
516577.0	3711278.0	39.621080	516677.0	3711278.0	33.531160	516777.0	3711278.0	33.531160
516877.0	3711278.0	30.480100	516977.0	3711278.0	30.480100	517077.0	3711278.0	33.531160
517177.0	3711278.0	33.531160	515277.0	3711178.0	39.621080	515377.0	3711178.0	42.669090
515477.0	3711178.0	39.621080	515577.0	3711178.0	39.621080	515677.0	3711178.0	42.669090
515777.0	3711178.0	42.669090	515877.0	3711178.0	42.669090	515977.0	3711178.0	39.621080
516077.0	3711178.0	39.621080	516177.0	3711178.0	36.579170	516277.0	3711178.0	36.579170
516377.0	3711178.0	36.579170	516477.0	3711178.0	36.579170	516577.0	3711178.0	36.579170
516677.0	3711178.0	33.531160	516777.0	3711178.0	33.531160	516877.0	3711178.0	33.531160
516977.0	3711178.0	33.531160	517077.0	3711178.0	33.531160	517177.0	3711178.0	33.531160
515277.0	3711078.0	45.720150	515377.0	3711078.0	42.669090	515477.0	3711078.0	36.579170
515577.0	3711078.0	42.669090	515677.0	3711078.0	45.720150	515777.0	3711078.0	45.720150
515877.0	3711078.0	45.720150	515977.0	3711078.0	42.669090	516077.0	3711078.0	39.621080
516177.0	3711078.0	39.621080	516277.0	3711078.0	36.579170	516377.0	3711078.0	36.579170
516477.0	3711078.0	36.579170	516577.0	3711078.0	39.621080	516677.0	3711078.0	33.531160
516777.0	3711078.0	33.531160	516877.0	3711078.0	33.531160	516977.0	3711078.0	36.579170
517077.0	3711078.0	33.531160	517177.0	3711078.0	33.531160	515277.0	3710978.0	45.720150
515377.0	3710978.0	42.669090	515477.0	3710978.0	36.579170	515577.0	3710978.0	42.669090
515677.0	3710978.0	45.720150	515777.0	3710978.0	48.771210	515877.0	3710978.0	45.720150
515977.0	3710978.0	45.720150	516077.0	3710978.0	45.720150	516177.0	3710978.0	42.669090
516277.0	3710978.0	42.669090	516377.0	3710978.0	39.621080	516477.0	3710978.0	36.579170
516577.0	3710978.0	36.579170	516677.0	3710978.0	39.621080	516777.0	3710978.0	36.579170
516877.0	3710978.0	36.579170	516977.0	3710978.0	36.579170	517077.0	3710978.0	36.579170
517177.0	3710978.0	33.531160	515277.0	3710878.0	45.720150	515377.0	3710878.0	39.621080
515477.0	3710878.0	39.621080	515577.0	3710878.0	42.669090	515677.0	3710878.0	48.771210
515777.0	3710878.0	51.819210	515877.0	3710878.0	48.771210	515977.0	3710878.0	48.771210
516077.0	3710878.0	51.819210	516177.0	3710878.0	45.720150	516277.0	3710878.0	42.669090
516377.0	3710878.0	39.621080	516477.0	3710878.0	39.621080	516577.0	3710878.0	42.669090

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516677.0	3710878.0	45.720150	516777.0	3710878.0	45.720150	516877.0	3710878.0	39.621080
516977.0	3710878.0	39.621080	517077.0	3710878.0	36.579170	517177.0	3710878.0	36.579170
515277.0	3710778.0	45.720150	515377.0	3710778.0	39.621080	515477.0	3710778.0	45.720150
515577.0	3710778.0	42.669090	515677.0	3710778.0	48.771210	515777.0	3710778.0	54.861130
515877.0	3710778.0	51.819210	515977.0	3710778.0	51.819210	516077.0	3710778.0	54.861130
516177.0	3710778.0	45.720150	516277.0	3710778.0	45.720150	516377.0	3710778.0	42.669090
516477.0	3710778.0	45.720150	516577.0	3710778.0	45.720150	516677.0	3710778.0	51.819210
516777.0	3710778.0	51.819210	516877.0	3710778.0	48.771210	516977.0	3710778.0	48.771210
517077.0	3710778.0	45.720150	517177.0	3710778.0	36.579170	515277.0	3710678.0	42.669090
515377.0	3710678.0	42.669090	515477.0	3710678.0	45.720150	515577.0	3710678.0	45.720150
515677.0	3710678.0	45.720150	515777.0	3710678.0	48.771210	515877.0	3710678.0	51.819210
515977.0	3710678.0	54.861130	516077.0	3710678.0	54.861130	516177.0	3710678.0	48.771210
516277.0	3710678.0	45.720150	516377.0	3710678.0	45.720150	516477.0	3710678.0	45.720150
516577.0	3710678.0	48.771210	516677.0	3710678.0	51.819210	516777.0	3710678.0	51.819210
516877.0	3710678.0	48.771210	516977.0	3710678.0	45.720150	517077.0	3710678.0	42.669090
517177.0	3710678.0	36.579170	515277.0	3710578.0	45.720150	515377.0	3710578.0	45.720150
515477.0	3710578.0	51.819210	515577.0	3710578.0	51.819210	515677.0	3710578.0	48.771210
515777.0	3710578.0	54.861130	515877.0	3710578.0	54.861130	515977.0	3710578.0	54.861130
516077.0	3710578.0	51.819210	516177.0	3710578.0	51.819210	516277.0	3710578.0	48.771210
516377.0	3710578.0	51.819210	516477.0	3710578.0	51.819210	516577.0	3710578.0	51.819210
516677.0	3710578.0	51.819210	516777.0	3710578.0	45.720150	516877.0	3710578.0	45.720150
516977.0	3710578.0	39.621080	517077.0	3710578.0	39.621080	517177.0	3710578.0	36.579170
515277.0	3710478.0	45.720150	515377.0	3710478.0	51.819210	515477.0	3710478.0	54.861130
515577.0	3710478.0	54.861130	515677.0	3710478.0	51.819210	515777.0	3710478.0	54.861130
515877.0	3710478.0	57.909140	515977.0	3710478.0	57.909140	516077.0	3710478.0	54.861130
516177.0	3710478.0	54.861130	516277.0	3710478.0	51.819210	516377.0	3710478.0	51.819210
516477.0	3710478.0	51.819210	516577.0	3710478.0	51.819210	516677.0	3710478.0	51.819210
516777.0	3710478.0	48.771210	516877.0	3710478.0	45.720150	516977.0	3710478.0	45.720150
517077.0	3710478.0	39.621080	517177.0	3710478.0	36.579170	515277.0	3710378.0	45.720150
515377.0	3710378.0	48.771210	515477.0	3710378.0	51.819210	515577.0	3710378.0	54.861130
515677.0	3710378.0	57.909140	515777.0	3710378.0	57.909140	515877.0	3710378.0	57.909140
515977.0	3710378.0	57.909140	516077.0	3710378.0	51.819210	516177.0	3710378.0	51.819210
516277.0	3710378.0	48.771210	516377.0	3710378.0	48.771210	516477.0	3710378.0	45.720150
516577.0	3710378.0	48.771210	516677.0	3710378.0	48.771210	516777.0	3710378.0	48.771210
516877.0	3710378.0	51.819210	516977.0	3710378.0	45.720150	517077.0	3710378.0	39.621080
517177.0	3710378.0	36.579170	515277.0	3712276.0	30.480100	515377.0	3712276.0	30.480100
515477.0	3712276.0	30.480100	515577.0	3712276.0	30.480100	515677.0	3712276.0	33.531160
515777.0	3712276.0	30.480100	515877.0	3712276.0	30.480100	515977.0	3712276.0	30.480100
516077.0	3712276.0	30.480100	516177.0	3712276.0	33.531160	516277.0	3712276.0	33.531160
516377.0	3712276.0	30.480100	516477.0	3712276.0	30.480100	516577.0	3712276.0	30.480100
516677.0	3712276.0	30.480100	516777.0	3712276.0	27.429040	516877.0	3712276.0	33.531160
516977.0	3712276.0	30.480100	517077.0	3712276.0	27.429040	517177.0	3712276.0	27.429040
515277.0	3712376.0	30.480100	515377.0	3712376.0	30.480100	515477.0	3712376.0	30.480100
515577.0	3712376.0	30.480100	515677.0	3712376.0	33.531160	515777.0	3712376.0	33.531160
515877.0	3712376.0	33.531160	515977.0	3712376.0	36.579170	516077.0	3712376.0	36.579170

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516177.0	3712376.0	36.579170	516277.0	3712376.0	33.531160	516377.0	3712376.0	30.480100
516477.0	3712376.0	30.480100	516577.0	3712376.0	30.480100	516677.0	3712376.0	27.429040
516777.0	3712376.0	27.429040	516877.0	3712376.0	27.429040	516977.0	3712376.0	27.429040
517077.0	3712376.0	27.429040	517177.0	3712376.0	30.480100	515277.0	3712476.0	33.531160
515377.0	3712476.0	33.531160	515477.0	3712476.0	30.480100	515577.0	3712476.0	30.480100
515677.0	3712476.0	33.531160	515777.0	3712476.0	33.531160	515877.0	3712476.0	33.531160
515977.0	3712476.0	33.531160	516077.0	3712476.0	36.579170	516177.0	3712476.0	36.579170
516277.0	3712476.0	33.531160	516377.0	3712476.0	30.480100	516477.0	3712476.0	30.480100
516577.0	3712476.0	30.480100	516677.0	3712476.0	30.480100	516777.0	3712476.0	27.429040
516877.0	3712476.0	27.429040	516977.0	3712476.0	24.381030	517077.0	3712476.0	27.429040
517177.0	3712476.0	27.429040	515277.0	3712576.0	33.531160	515377.0	3712576.0	33.531160
515477.0	3712576.0	30.480100	515577.0	3712576.0	30.480100	515677.0	3712576.0	33.531160
515777.0	3712576.0	33.531160	515877.0	3712576.0	33.531160	515977.0	3712576.0	33.531160
516077.0	3712576.0	36.579170	516177.0	3712576.0	33.531160	516277.0	3712576.0	33.531160
516377.0	3712576.0	30.480100	516477.0	3712576.0	30.480100	516577.0	3712576.0	30.480100
516677.0	3712576.0	30.480100	516777.0	3712576.0	27.429040	516877.0	3712576.0	27.429040
516977.0	3712576.0	27.429040	517077.0	3712576.0	24.381030	517177.0	3712576.0	27.429040
515277.0	3712676.0	30.480100	515377.0	3712676.0	30.480100	515477.0	3712676.0	33.531160
515577.0	3712676.0	33.531160	515677.0	3712676.0	33.531160	515777.0	3712676.0	33.531160
515877.0	3712676.0	33.531160	515977.0	3712676.0	33.531160	516077.0	3712676.0	33.531160
516177.0	3712676.0	36.579170	516277.0	3712676.0	33.531160	516377.0	3712676.0	30.480100
516477.0	3712676.0	30.480100	516577.0	3712676.0	30.480100	516677.0	3712676.0	30.480100
516777.0	3712676.0	27.429040	516877.0	3712676.0	24.381030	516977.0	3712676.0	27.429040
517077.0	3712676.0	27.429040	517177.0	3712676.0	27.429040	515277.0	3712776.0	27.429040
515377.0	3712776.0	27.429040	515477.0	3712776.0	27.429040	515577.0	3712776.0	33.531160
515677.0	3712776.0	33.531160	515777.0	3712776.0	27.429040	515877.0	3712776.0	33.531160
515977.0	3712776.0	33.531160	516077.0	3712776.0	33.531160	516177.0	3712776.0	33.531160
516277.0	3712776.0	30.480100	516377.0	3712776.0	30.480100	516477.0	3712776.0	27.429040
516577.0	3712776.0	27.429040	516677.0	3712776.0	27.429040	516777.0	3712776.0	27.429040
516877.0	3712776.0	27.429040	516977.0	3712776.0	27.429040	517077.0	3712776.0	30.480100
517177.0	3712776.0	30.480100	515277.0	3712876.0	27.429040	515377.0	3712876.0	27.429040
515477.0	3712876.0	27.429040	515577.0	3712876.0	27.429040	515677.0	3712876.0	33.531160
515777.0	3712876.0	27.429040	515877.0	3712876.0	30.480100	515977.0	3712876.0	30.480100
516077.0	3712876.0	33.531160	516177.0	3712876.0	30.480100	516277.0	3712876.0	27.429040
516377.0	3712876.0	27.429040	516477.0	3712876.0	27.429040	516577.0	3712876.0	27.429040
516677.0	3712876.0	27.429040	516777.0	3712876.0	30.480100	516877.0	3712876.0	30.480100
516977.0	3712876.0	27.429040	517077.0	3712876.0	30.480100	517177.0	3712876.0	30.480100
515277.0	3712976.0	27.429040	515377.0	3712976.0	27.429040	515477.0	3712976.0	27.429040
515577.0	3712976.0	27.429040	515677.0	3712976.0	27.429040	515777.0	3712976.0	27.429040
515877.0	3712976.0	33.531160	515977.0	3712976.0	33.531160	516077.0	3712976.0	33.531160
516177.0	3712976.0	33.531160	516277.0	3712976.0	27.429040	516377.0	3712976.0	27.429040
516477.0	3712976.0	27.429040	516577.0	3712976.0	27.429040	516677.0	3712976.0	27.429040
516777.0	3712976.0	30.480100	516877.0	3712976.0	30.480100	516977.0	3712976.0	30.480100
517077.0	3712976.0	27.429040	517177.0	3712976.0	27.429040	515277.0	3713076.0	27.429040
515377.0	3713076.0	27.429040	515477.0	3713076.0	27.429040	515577.0	3713076.0	27.429040

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
515677.0	3713076.0	27.429040	515777.0	3713076.0	27.429040	515877.0	3713076.0	27.429040
515977.0	3713076.0	27.429040	516077.0	3713076.0	27.429040	516177.0	3713076.0	27.429040
516277.0	3713076.0	27.429040	516377.0	3713076.0	24.381030	516477.0	3713076.0	27.429040
516577.0	3713076.0	27.429040	516677.0	3713076.0	30.480100	516777.0	3713076.0	33.531160
516877.0	3713076.0	30.480100	516977.0	3713076.0	30.480100	517077.0	3713076.0	30.480100
517177.0	3713076.0	30.480100	515277.0	3713176.0	27.429040	515377.0	3713176.0	27.429040
515477.0	3713176.0	27.429040	515577.0	3713176.0	27.429040	515677.0	3713176.0	27.429040
515777.0	3713176.0	30.480100	515877.0	3713176.0	30.480100	515977.0	3713176.0	27.429040
516077.0	3713176.0	30.480100	516177.0	3713176.0	27.429040	516277.0	3713176.0	27.429040
516377.0	3713176.0	27.429040	516477.0	3713176.0	27.429040	516577.0	3713176.0	27.429040
516677.0	3713176.0	27.429040	516777.0	3713176.0	30.480100	516877.0	3713176.0	33.531160
516977.0	3713176.0	27.429040	517077.0	3713176.0	30.480100	517177.0	3713176.0	42.669090
515277.0	3712176.0	33.531160	515377.0	3712176.0	30.480100	515477.0	3712176.0	33.531160
515577.0	3712176.0	30.480100	515677.0	3712176.0	30.480100	515777.0	3712176.0	30.480100
515877.0	3712176.0	30.480100	515977.0	3712176.0	30.480100	516077.0	3712176.0	33.531160
516177.0	3712176.0	33.531160	515277.0	3712076.0	30.480100	515377.0	3712076.0	30.480100
515477.0	3712076.0	33.531160	515577.0	3712076.0	30.480100	515677.0	3712076.0	33.531160
515777.0	3712076.0	33.531160	515877.0	3712076.0	33.531160	515977.0	3712076.0	33.531160
516077.0	3712076.0	30.480100	516177.0	3712076.0	33.531160	515277.0	3711976.0	33.531160
515377.0	3711976.0	33.531160	515477.0	3711976.0	30.480100	515577.0	3711976.0	30.480100
515677.0	3711976.0	33.531160	515777.0	3711976.0	33.531160	515877.0	3711976.0	33.531160
515977.0	3711976.0	33.531160	516077.0	3711976.0	33.531160	516177.0	3711976.0	30.480100
515277.0	3711876.0	36.579170	515377.0	3711876.0	30.480100	515477.0	3711876.0	33.531160
515577.0	3711876.0	33.531160	515677.0	3711876.0	33.531160	515777.0	3711876.0	33.531160
515877.0	3711876.0	33.531160	515977.0	3711876.0	33.531160	516077.0	3711876.0	33.531160
516177.0	3711876.0	33.531160	515277.0	3711776.0	36.579170	515377.0	3711776.0	33.531160
515477.0	3711776.0	33.531160	515577.0	3711776.0	33.531160	515677.0	3711776.0	33.531160
515777.0	3711776.0	33.531160	515877.0	3711776.0	33.531160	515977.0	3711776.0	33.531160
516077.0	3711776.0	33.531160	516177.0	3711776.0	33.531160	515277.0	3711676.0	39.621080
515377.0	3711676.0	36.579170	515477.0	3711676.0	36.579170	515577.0	3711676.0	36.579170
515677.0	3711676.0	36.579170	515777.0	3711676.0	33.531160	515877.0	3711676.0	33.531160
515977.0	3711676.0	33.531160	516077.0	3711676.0	33.531160	516177.0	3711676.0	36.579170
515277.0	3711576.0	39.621080	515377.0	3711576.0	39.621080	515477.0	3711576.0	39.621080
515577.0	3711576.0	39.621080	515677.0	3711576.0	36.579170	515777.0	3711576.0	33.531160
515877.0	3711576.0	36.579170	515977.0	3711576.0	36.579170	516077.0	3711576.0	36.579170
516177.0	3711576.0	39.621080	515277.0	3711476.0	39.621080	515377.0	3711476.0	39.621080
515477.0	3711476.0	39.621080	515577.0	3711476.0	36.579170	515677.0	3711476.0	36.579170
515777.0	3711476.0	39.621080	515877.0	3711476.0	39.621080	515977.0	3711476.0	39.621080
516077.0	3711476.0	39.621080	516177.0	3711476.0	39.621080	511277.0	3709378.0	64.011250
512277.0	3709378.0	60.960200	513277.0	3709378.0	73.149190	514277.0	3709378.0	64.011250
515277.0	3709378.0	57.909140	516277.0	3709378.0	45.720150	517277.0	3709378.0	42.669090
518277.0	3709378.0	60.960200	519277.0	3709378.0	30.480100	520277.0	3709378.0	30.480100
521277.0	3709378.0	30.480100	522277.0	3709378.0	27.429040	511277.0	3708378.0	67.059270
512277.0	3708378.0	48.771210	513277.0	3708378.0	76.200250	514277.0	3708378.0	70.101180
515277.0	3708378.0	48.771210	516277.0	3708378.0	36.579170	517277.0	3708378.0	64.011250

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
518277.0	3708378.0	48.771210	519277.0	3708378.0	30.480100	520277.0	3708378.0	30.480100
521277.0	3708378.0	27.429040	522277.0	3708378.0	27.429040	511277.0	3707378.0	54.861130
512277.0	3707378.0	67.059270	513277.0	3707378.0	64.011250	514277.0	3707378.0	54.861130
515277.0	3707378.0	60.960200	516277.0	3707378.0	48.771210	517277.0	3707378.0	67.059270
518277.0	3707378.0	48.771210	519277.0	3707378.0	33.531160	520277.0	3707378.0	27.429040
521277.0	3707378.0	27.429040	522277.0	3707378.0	27.429040	511277.0	3706378.0	73.149190
512277.0	3706378.0	73.149190	513277.0	3706378.0	64.011250	514277.0	3706378.0	64.011250
515277.0	3706378.0	67.059270	516277.0	3706378.0	48.771210	517277.0	3706378.0	48.771210
518277.0	3706378.0	54.861130	519277.0	3706378.0	36.579170	520277.0	3706378.0	30.480100
521277.0	3706378.0	30.480100	522277.0	3706378.0	27.429040	523277.0	3706378.0	27.429040
522402.0	3710378.0	27.429040	522402.0	3711378.0	30.480100	522402.0	3712378.0	30.480100
511277.0	3714176.0	36.579170	512277.0	3714176.0	36.579170	513277.0	3714176.0	33.531160
514277.0	3714176.0	30.480100	515277.0	3714176.0	48.771210	516277.0	3714176.0	48.771210
517277.0	3714176.0	70.101180	518277.0	3714176.0	33.531160	519277.0	3714176.0	27.429040
520277.0	3714176.0	30.480100	521277.0	3714176.0	30.480100	522277.0	3714176.0	30.480100
511277.0	3715176.0	45.720150	512277.0	3715176.0	60.960200	513277.0	3715176.0	39.621080
514277.0	3715176.0	51.819210	515277.0	3715176.0	54.861130	516277.0	3715176.0	39.621080
517277.0	3715176.0	30.480100	518277.0	3715176.0	30.480100	519277.0	3715176.0	27.429040
520277.0	3715176.0	24.381030	521277.0	3715176.0	30.480100	522277.0	3715176.0	30.480100
511277.0	3716176.0	60.960200	512277.0	3716176.0	39.621080	513277.0	3716176.0	51.819210
514277.0	3716176.0	60.960200	515277.0	3716176.0	70.101180	516277.0	3716176.0	24.381030
517277.0	3716176.0	30.480100	518277.0	3716176.0	30.480100	519277.0	3716176.0	30.480100
520277.0	3716176.0	33.531160	521277.0	3716176.0	27.429040	522277.0	3716176.0	27.429040
511277.0	3717176.0	48.771210	512277.0	3717176.0	54.861130	513277.0	3717176.0	60.960200
514277.0	3717176.0	60.960200	515277.0	3717176.0	42.669090	516277.0	3717176.0	30.480100
517277.0	3717176.0	30.480100	518277.0	3717176.0	33.531160	519277.0	3717176.0	36.579170
520277.0	3717176.0	30.480100	521277.0	3717176.0	27.429040	522277.0	3717176.0	27.429040
511277.0	3713176.0	42.669090	512277.0	3713176.0	36.579170	513277.0	3713176.0	36.579170
514277.0	3713176.0	36.579170	511277.0	3712176.0	36.579170	512277.0	3712176.0	39.621080
513277.0	3712176.0	39.621080	514277.0	3712176.0	33.531160	511277.0	3711176.0	48.771210
512277.0	3711176.0	64.011250	513277.0	3711176.0	39.621080	514277.0	3711176.0	45.720150
511277.0	3709378.0	64.011250	512277.0	3709378.0	60.960200	513277.0	3709378.0	73.149190
514277.0	3709378.0	64.011250	515277.0	3709378.0	57.909140	516277.0	3709378.0	45.720150
517277.0	3709378.0	42.669090	518277.0	3709378.0	60.960200	519277.0	3709378.0	30.480100
520277.0	3709378.0	30.480100	521277.0	3709378.0	30.480100	522277.0	3709378.0	27.429040
511277.0	3708378.0	67.059270	512277.0	3708378.0	48.771210	513277.0	3708378.0	76.200250
514277.0	3708378.0	70.101180	515277.0	3708378.0	48.771210	516277.0	3708378.0	36.579170
517277.0	3708378.0	64.011250	518277.0	3708378.0	48.771210	519277.0	3708378.0	30.480100
520277.0	3708378.0	30.480100	521277.0	3708378.0	27.429040	522277.0	3708378.0	27.429040
511277.0	3707378.0	54.861130	512277.0	3707378.0	67.059270	513277.0	3707378.0	64.011250
514277.0	3707378.0	54.861130	515277.0	3707378.0	60.960200	516277.0	3707378.0	48.771210
517277.0	3707378.0	67.059270	518277.0	3707378.0	48.771210	519277.0	3707378.0	33.531160
520277.0	3707378.0	27.429040	521277.0	3707378.0	27.429040	522277.0	3707378.0	27.429040
511277.0	3706378.0	73.149190	512277.0	3706378.0	73.149190	513277.0	3706378.0	64.011250
514277.0	3706378.0	64.011250	515277.0	3706378.0	67.059270	516277.0	3706378.0	48.771210

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
517277.0	3706378.0	48.771210	518277.0	3706378.0	54.861130	519277.0	3706378.0	36.579170
520277.0	3706378.0	30.480100	521277.0	3706378.0	30.480100	522277.0	3706378.0	27.429040
523277.0	3706378.0	27.429040	522402.0	3710378.0	27.429040	522402.0	3711378.0	30.480100
522402.0	3712378.0	30.480100	511277.0	3714176.0	36.579170	512277.0	3714176.0	36.579170
513277.0	3714176.0	33.531160	514277.0	3714176.0	30.480100	515277.0	3714176.0	48.771210
516277.0	3714176.0	48.771210	517277.0	3714176.0	70.101180	518277.0	3714176.0	33.531160
519277.0	3714176.0	27.429040	520277.0	3714176.0	30.480100	521277.0	3714176.0	30.480100
522277.0	3714176.0	30.480100	511277.0	3715176.0	45.720150	512277.0	3715176.0	60.960200
513277.0	3715176.0	39.621080	514277.0	3715176.0	51.819210	515277.0	3715176.0	54.861130
516277.0	3715176.0	39.621080	517277.0	3715176.0	30.480100	518277.0	3715176.0	30.480100
519277.0	3715176.0	27.429040	520277.0	3715176.0	24.381030	521277.0	3715176.0	30.480100
522277.0	3715176.0	30.480100	511277.0	3716176.0	60.960200	512277.0	3716176.0	39.621080
513277.0	3716176.0	51.819210	514277.0	3716176.0	60.960200	515277.0	3716176.0	70.101180
516277.0	3716176.0	24.381030	517277.0	3716176.0	30.480100	518277.0	3716176.0	30.480100
519277.0	3716176.0	30.480100	520277.0	3716176.0	33.531160	521277.0	3716176.0	27.429040
522277.0	3716176.0	27.429040	511277.0	3717176.0	48.771210	512277.0	3717176.0	54.861130
513277.0	3717176.0	60.960200	514277.0	3717176.0	60.960200	515277.0	3717176.0	42.669090
516277.0	3717176.0	30.480100	517277.0	3717176.0	30.480100	518277.0	3717176.0	33.531160
519277.0	3717176.0	36.579170	520277.0	3717176.0	30.480100	521277.0	3717176.0	27.429040
522277.0	3717176.0	27.429040	511277.0	3713176.0	42.669090	512277.0	3713176.0	36.579170
513277.0	3713176.0	36.579170	514277.0	3713176.0	36.579170	511277.0	3712176.0	36.579170
512277.0	3712176.0	39.621080	513277.0	3712176.0	39.621080	514277.0	3712176.0	33.531160
511277.0	3711176.0	48.771210	512277.0	3711176.0	64.011250	513277.0	3711176.0	39.621080
514277.0	3711176.0	45.720150	516500.0	3708100.0	67.668870	518100.0	3709350.0	79.251300
514500.0	3708800.0	80.470510	517300.0	3714400.0	76.200250			

- ISCLT INPUT DATA (CONT.) -

- AMBIENT AIR TEMPERATURE (DEGREES KELVIN) -

	STABILITY CATEGORY 1	STABILITY CATEGORY 2	STABILITY CATEGORY 3	STABILITY CATEGORY 4	STABILITY CATEGORY 5	STABILITY CATEGORY 6
SEASON 1	293.0000	293.0000	293.0000	293.0000	293.0000	293.0000

- MIXING LAYER HEIGHT (METERS) -

SEASON 1

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 2	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 3	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 4	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 5	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 6	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 1

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00050002	0.00091004	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00009000	0.00023001	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00044002	0.00034001	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00024001	0.00023001	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00069003	0.00057002	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00024001	0.00023001	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.00093004	0.00080003	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.00021001	0.00057002	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.00046002	0.00080003	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00067003	0.00011000	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00044002	0.00034001	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00017001	0.00046002	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.00017001	0.00046002	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00024001	0.00023001	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00089004	0.00068003	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 2

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00100004	0.00217009	0.00160006	0.00000000	0.00000000	0.00000000
22.500	0.00073003	0.00091004	0.00114005	0.00000000	0.00000000	0.00000000
45.000	0.00071003	0.00183007	0.00114005	0.00000000	0.00000000	0.00000000
67.500	0.00081003	0.00160006	0.00080003	0.00000000	0.00000000	0.00000000
90.000	0.00138006	0.00217009	0.00148006	0.00000000	0.00000000	0.00000000
112.500	0.00093004	0.00160006	0.00091004	0.00000000	0.00000000	0.00000000
135.000	0.00107004	0.00285011	0.00068003	0.00000000	0.00000000	0.00000000
157.500	0.00067003	0.00148006	0.00068003	0.00000000	0.00000000	0.00000000
180.000	0.00210008	0.00537021	0.00445018	0.00000000	0.00000000	0.00000000
202.500	0.00087003	0.00217009	0.00114005	0.00000000	0.00000000	0.00000000
225.000	0.00132005	0.00285011	0.00240010	0.00000000	0.00000000	0.00000000
247.500	0.00098004	0.00320013	0.00103004	0.00000000	0.00000000	0.00000000
270.000	0.00086003	0.00205008	0.00114005	0.00000000	0.00000000	0.00000000
292.500	0.00124005	0.00205008	0.00011000	0.00000000	0.00000000	0.00000000
315.000	0.00090004	0.00126005	0.00080003	0.00000000	0.00000000	0.00000000
337.500	0.00054002	0.00148006	0.00068003	0.00000000	0.00000000	0.00000000

SEASON 1

STABILITY CATEGORY 3

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00087003	0.00274011	0.00457018	0.00068003	0.00000000	0.00000000
22.500	0.00013001	0.00103004	0.00228009	0.00034001	0.00000000	0.00000000
45.000	0.00051002	0.00194008	0.00422017	0.00114005	0.00000000	0.00000000
67.500	0.00019001	0.00148006	0.00240010	0.00023001	0.00000000	0.00000000
90.000	0.00051002	0.00194008	0.00445018	0.00023001	0.00000000	0.00000000
112.500	0.00078003	0.00205008	0.00285011	0.00034001	0.00000000	0.00000000
135.000	0.00083003	0.00240010	0.00765031	0.00080003	0.00000000	0.00000000
157.500	0.00103004	0.00194008	0.00388015	0.00103004	0.00000000	0.00000000
180.000	0.00098004	0.00457018	0.00890036	0.00263011	0.00034001	0.00011000
202.500	0.00031001	0.00137005	0.00320013	0.00057002	0.00000000	0.00000000
225.000	0.00067003	0.00320013	0.00605024	0.00046002	0.00000000	0.00000000
247.500	0.00116005	0.00297012	0.00377015	0.00046002	0.00011000	0.00000000
270.000	0.00025001	0.00194008	0.00320013	0.00091004	0.00000000	0.00000000
292.500	0.00029001	0.00126005	0.00194008	0.00057002	0.00023001	0.00000000
315.000	0.00013001	0.00103004	0.00388015	0.00091004	0.00011000	0.00000000
337.500	0.00013001	0.00103004	0.00228009	0.00046002	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 4

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00185007	0.00708028	0.01792072	0.01199048	0.00137005	0.00000000
22.500	0.00056002	0.00308012	0.01244050	0.00468019	0.00000000	0.00000000
45.000	0.00040002	0.00274011	0.01199048	0.00251010	0.00000000	0.00000000
67.500	0.00034001	0.00217009	0.01005040	0.00388015	0.00000000	0.00000000
90.000	0.00134005	0.00457018	0.01324053	0.00320013	0.00011000	0.00000000
112.500	0.00102004	0.00765031	0.00856034	0.00137005	0.00000000	0.00000000
135.000	0.00268011	0.01039042	0.02466099	0.00925037	0.00091004	0.00011000
157.500	0.00160006	0.00833033	0.02717109	0.01256050	0.00137005	0.00000000
180.000	0.00264011	0.01119045	0.03813152	0.03037121	0.00297012	0.00023001
202.500	0.00039002	0.00388015	0.01016041	0.00582023	0.00034001	0.00000000
225.000	0.00108004	0.00445018	0.00799032	0.00582023	0.00011000	0.00000000
247.500	0.00048002	0.00228009	0.00320013	0.00308012	0.00011000	0.00011000
270.000	0.00054002	0.00160006	0.00320013	0.00616025	0.00057002	0.00011000
292.500	0.00052002	0.00137005	0.00502020	0.00708028	0.00091004	0.00057002
315.000	0.00059002	0.00331013	0.00537021	0.01518061	0.00365015	0.00046002
337.500	0.00064003	0.00263011	0.00514021	0.00731029	0.00114005	0.00023001

SEASON 1

STABILITY CATEGORY 5

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00000000	0.00263011	0.00479019	0.00000000	0.00000000	0.00000000
22.500	0.00000000	0.00160006	0.00320013	0.00000000	0.00000000	0.00000000
45.000	0.00000000	0.00228009	0.00434017	0.00000000	0.00000000	0.00000000
67.500	0.00000000	0.00183007	0.00411016	0.00000000	0.00000000	0.00000000
90.000	0.00000000	0.00594024	0.00320013	0.00000000	0.00000000	0.00000000
112.500	0.00000000	0.00605024	0.00240010	0.00000000	0.00000000	0.00000000
135.000	0.00000000	0.01073043	0.00354014	0.00000000	0.00000000	0.00000000
157.500	0.00000000	0.00822033	0.00639026	0.00000000	0.00000000	0.00000000
180.000	0.00000000	0.01027041	0.01438057	0.00000000	0.00000000	0.00000000
202.500	0.00000000	0.00274011	0.00400016	0.00000000	0.00000000	0.00000000
225.000	0.00000000	0.00274011	0.00137005	0.00000000	0.00000000	0.00000000
247.500	0.00000000	0.00251010	0.00046002	0.00000000	0.00000000	0.00000000
270.000	0.00000000	0.00251010	0.00274011	0.00000000	0.00000000	0.00000000
292.500	0.00000000	0.00103004	0.00582023	0.00000000	0.00000000	0.00000000
315.000	0.00000000	0.00080003	0.00582023	0.00000000	0.00000000	0.00000000
337.500	0.00000000	0.00046002	0.00228009	0.00000000	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 6

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00345014	0.00354014	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00461018	0.00491020	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00138006	0.00114005	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00457018	0.00514021	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00688027	0.00594024	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00753030	0.00548022	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.01689067	0.00913036	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.01336053	0.00936037	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.01989079	0.01895076	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00648026	0.00537021	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00558022	0.00491020	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00834033	0.00525021	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.01329053	0.00788032	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00767031	0.00651026	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00239010	0.00285011	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00119005	0.00114005	0.00000000	0.00000000	0.00000000	0.00000000

- VERTICAL POTENTIAL TEMPERATURE GRADIENT (DEGREES KELVIN/METER) -

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 2	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 3	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 4	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 5	0.200000E-01	0.200000E-01	0.200000E-01	0.200000E-01	0.200000E-01	0.200000E-01
STABILITY CATEGORY 6	0.350000E-01	0.350000E-01	0.350000E-01	0.350000E-01	0.350000E-01	0.350000E-01

- WIND PROFILE POWER LAW EXPONENTS -

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01
STABILITY CATEGORY 2	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01
STABILITY CATEGORY 3	0.100000E+00	0.100000E+00	0.100000E+00	0.100000E+00	0.100000E+00	0.100000E+00
STABILITY CATEGORY 4	0.150000E+00	0.150000E+00	0.150000E+00	0.150000E+00	0.150000E+00	0.150000E+00
STABILITY CATEGORY 5	0.350000E+00	0.350000E+00	0.350000E+00	0.350000E+00	0.350000E+00	0.350000E+00
STABILITY CATEGORY 6	0.550000E+00	0.550000E+00	0.550000E+00	0.550000E+00	0.550000E+00	0.550000E+00

NOTE THAT BUILDING DIMENSIONS ON CARD GROUP 17 FOR SOURCE NO. 1 DO NOT MEET THE SCHULMAN-SCIRE CRITERIA.
THEREFORE, DIRECTION SPECIFIC BUILDING DIMENSIONS WILL BE READ, BUT NOT USED BY THE MODEL.

- SOURCE INPUT DATA -

C A R D	T A P E	SOURCE NUMBER	SOURCE TYPE	X COORDINATE (M)	Y COORDINATE (M)	EMISSION HEIGHT (M)	BASE ELEV- ATION (M)	- SOURCE DETAILS DEPENDING ON TYPE -
X		1	STACK	516322.70	3711890.00	22.86	34.44	GAS EXIT TEMP (DEG K)= 427.59, GAS EXIT VEL. (M/SEC)= 16.61, STACK DIAMETER (M)= 3.423, HEIGHT OF ASSO. BLDG. (M)= 13.60, WIDTH OF ASSO. BLDG. (M)= 105.82, WAKE EFFECTS FLAG = 0

- SOURCE STRENGTHS (GRAMS PER SEC) -

SEASON 1	SEASON 2	SEASON 3	SEASON 4
1.04300E+01			

WARNING - HW/HB > 5 FOR SOURCE 1 PROG. USES LATERAL VIRTUAL DIST. FOR UPPER BOUND OF CONCENTRATION (DEPOSITION). IF LOWER BOUND IS DESIRED SET WAKE EFFECTS FLAG (WAKE) = 1 AND RERUN

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
516276.8	3711378.0	0.057114	516411.0	3712159.0	0.104696	516679.3	3711159.0	0.044496
516679.3	3711378.0	0.070892	517079.3	3711378.0	0.074059	517079.3	3711549.0	0.051578
517530.5	3711488.0	0.069146	517530.5	3711317.0	0.075567	518743.9	3711171.0	0.090041
518743.9	3711573.0	0.091958	519914.6	3711573.0	0.088515	519914.6	3711171.0	0.087031
520304.8	3711171.0	0.085087	520304.8	3711024.0	0.084712	520707.2	3711024.0	0.082483
520817.0	3711628.0	0.083622	520402.3	3712176.0	0.084623	518707.2	3712176.0	0.092437
518707.2	3712030.0	0.093891	518280.4	3712030.0	0.092208	518280.4	3712250.0	0.090421
518060.9	3712335.0	0.087852	518060.9	3712878.0	0.098789	517426.8	3712878.0	0.109770
517426.8	3713079.0	0.115724	516993.9	3713079.0	0.089503	516993.9	3713280.0	0.090771
516603.7	3713280.0	0.185721	516603.7	3712884.0	0.116803	516372.0	3712884.0	0.214831
516372.0	3712798.0	0.195362	516256.2	3712774.0	0.185610	516276.8	3711378.0	0.057114
516264.6	3712122.0	0.235383	516264.6	3711598.0	0.071179	516008.5	3712006.0	0.015807
516008.5	3712122.0	0.047742	516115.2	3712189.0	0.083550	516179.3	3712061.0	0.132006
516179.3	3712122.0	0.117191	516264.6	3712122.0	0.235383	515277.0	3711278.0	0.070214
515377.0	3711278.0	0.069432	515477.0	3711278.0	0.068984	515577.0	3711278.0	0.068655
515677.0	3711278.0	0.068466	515777.0	3711278.0	0.058946	515877.0	3711278.0	0.047455
515977.0	3711278.0	0.042350	516077.0	3711278.0	0.040448	516177.0	3711278.0	0.060639
516277.0	3711278.0	0.072238	516377.0	3711278.0	0.087912	516477.0	3711278.0	0.068925
516577.0	3711278.0	0.052756	516677.0	3711278.0	0.055585	516777.0	3711278.0	0.066201
516877.0	3711278.0	0.074814	516977.0	3711278.0	0.081249	517077.0	3711278.0	0.086062
517177.0	3711278.0	0.082405	515277.0	3711178.0	0.075690	515377.0	3711178.0	0.083049
515477.0	3711178.0	0.076388	515577.0	3711178.0	0.077459	515677.0	3711178.0	0.079078
515777.0	3711178.0	0.069494	515877.0	3711178.0	0.058972	515977.0	3711178.0	0.044998
516077.0	3711178.0	0.048548	516177.0	3711178.0	0.056049	516277.0	3711178.0	0.074318
516377.0	3711178.0	0.074542	516477.0	3711178.0	0.056861	516577.0	3711178.0	0.043481
516677.0	3711178.0	0.042899	516777.0	3711178.0	0.059594	516877.0	3711178.0	0.075870
516977.0	3711178.0	0.092987	517077.0	3711178.0	0.099687	517177.0	3711178.0	0.094587
515277.0	3711078.0	0.097022	515377.0	3711078.0	0.089600	515477.0	3711078.0	0.077186
515577.0	3711078.0	0.086726	515677.0	3711078.0	0.087338	515777.0	3711078.0	0.079414
515877.0	3711078.0	0.072211	515977.0	3711078.0	0.058334	516077.0	3711078.0	0.061535
516177.0	3711078.0	0.077440	516277.0	3711078.0	0.086196	516377.0	3711078.0	0.084918
516477.0	3711078.0	0.067647	516577.0	3711078.0	0.060377	516677.0	3711078.0	0.040692
516777.0	3711078.0	0.055534	516877.0	3711078.0	0.071324	516977.0	3711078.0	0.096366
517077.0	3711078.0	0.100855	517177.0	3711078.0	0.106085	515277.0	3710978.0	0.102651
515377.0	3710978.0	0.095979	515477.0	3710978.0	0.078431	515577.0	3710978.0	0.085681
515677.0	3710978.0	0.087387	515777.0	3710978.0	0.090908	515877.0	3710978.0	0.075402
515977.0	3710978.0	0.076699	516077.0	3710978.0	0.092892	516177.0	3710978.0	0.100147
516277.0	3710978.0	0.120586	516377.0	3710978.0	0.106184	516477.0	3710978.0	0.078205
516577.0	3710978.0	0.063505	516677.0	3710978.0	0.058468	516777.0	3710978.0	0.060591
516877.0	3710978.0	0.075598	516977.0	3710978.0	0.090438	517077.0	3710978.0	0.104598
517177.0	3710978.0	0.106822	515277.0	3710878.0	0.108052	515377.0	3710878.0	0.089347
515477.0	3710878.0	0.083610	515577.0	3710878.0	0.085096	515677.0	3710878.0	0.097654
515777.0	3710878.0	0.104306	515877.0	3710878.0	0.088228	515977.0	3710878.0	0.098598
516077.0	3710878.0	0.132453	516177.0	3710878.0	0.122993	516277.0	3710878.0	0.129391

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
516377.0	3710878.0	0.114685	516477.0	3710878.0	0.096985	516577.0	3710878.0	0.090934
516677.0	3710878.0	0.085799	516777.0	3710878.0	0.083018	516877.0	3710878.0	0.080675
516977.0	3710878.0	0.095142	517077.0	3710878.0	0.098801	517177.0	3710878.0	0.111153
515277.0	3710778.0	0.108380	515377.0	3710778.0	0.087793	515477.0	3710778.0	0.098434
515577.0	3710778.0	0.084891	515677.0	3710778.0	0.098446	515777.0	3710778.0	0.120171
515877.0	3710778.0	0.105747	515977.0	3710778.0	0.122451	516077.0	3710778.0	0.160711
516177.0	3710778.0	0.131131	516277.0	3710778.0	0.151326	516377.0	3710778.0	0.134519
516477.0	3710778.0	0.129470	516577.0	3710778.0	0.111298	516677.0	3710778.0	0.119139
516777.0	3710778.0	0.102241	516877.0	3710778.0	0.106690	516977.0	3710778.0	0.123691
517077.0	3710778.0	0.126618	517177.0	3710778.0	0.105575	515277.0	3710678.0	0.098353
515377.0	3710678.0	0.093943	515477.0	3710678.0	0.097868	515577.0	3710678.0	0.093510
515677.0	3710678.0	0.089395	515777.0	3710678.0	0.096019	515877.0	3710678.0	0.115093
515977.0	3710678.0	0.148451	516077.0	3710678.0	0.169321	516177.0	3710678.0	0.153821
516277.0	3710678.0	0.157203	516377.0	3710678.0	0.155562	516477.0	3710678.0	0.136779
516577.0	3710678.0	0.132712	516677.0	3710678.0	0.128427	516777.0	3710678.0	0.111584
516877.0	3710678.0	0.102229	516977.0	3710678.0	0.106334	517077.0	3710678.0	0.109062
517177.0	3710678.0	0.100862	515277.0	3710578.0	0.105216	515377.0	3710578.0	0.101425
515477.0	3710578.0	0.118455	515577.0	3710578.0	0.115247	515677.0	3710578.0	0.100558
515777.0	3710578.0	0.124137	515877.0	3710578.0	0.139091	515977.0	3710578.0	0.156804
516077.0	3710578.0	0.158010	516177.0	3710578.0	0.178021	516277.0	3710578.0	0.179615
516377.0	3710578.0	0.197219	516477.0	3710578.0	0.175562	516577.0	3710578.0	0.155179
516677.0	3710578.0	0.136513	516777.0	3710578.0	0.098446	516877.0	3710578.0	0.089581
516977.0	3710578.0	0.084736	517077.0	3710578.0	0.095305	517177.0	3710578.0	0.096821
515277.0	3710478.0	0.104152	515377.0	3710478.0	0.121307	515477.0	3710478.0	0.131386
515577.0	3710478.0	0.129219	515677.0	3710478.0	0.113605	515777.0	3710478.0	0.131836
515877.0	3710478.0	0.161382	515977.0	3710478.0	0.179740	516077.0	3710478.0	0.183116
516177.0	3710478.0	0.203663	516277.0	3710478.0	0.203318	516377.0	3710478.0	0.201332
516477.0	3710478.0	0.180937	516577.0	3710478.0	0.161545	516677.0	3710478.0	0.143530
516777.0	3710478.0	0.115581	516877.0	3710478.0	0.093707	516977.0	3710478.0	0.098345
517077.0	3710478.0	0.091979	517177.0	3710478.0	0.093289	515277.0	3710378.0	0.103360
515377.0	3710378.0	0.110110	515477.0	3710378.0	0.118788	515577.0	3710378.0	0.130045
515677.0	3710378.0	0.141357	515777.0	3710378.0	0.152605	515877.0	3710378.0	0.168427
515977.0	3710378.0	0.186063	516077.0	3710378.0	0.169944	516177.0	3710378.0	0.187849
516277.0	3710378.0	0.187495	516377.0	3710378.0	0.185915	516477.0	3710378.0	0.153348
516577.0	3710378.0	0.151772	516677.0	3710378.0	0.136146	516777.0	3710378.0	0.121794
516877.0	3710378.0	0.119060	516977.0	3710378.0	0.095049	517077.0	3710378.0	0.089025
517177.0	3710378.0	0.090140	515277.0	3712276.0	0.049628	515377.0	3712276.0	0.044525
515477.0	3712276.0	0.044182	515577.0	3712276.0	0.042280	515677.0	3712276.0	0.044556
515777.0	3712276.0	0.041346	515877.0	3712276.0	0.043300	515977.0	3712276.0	0.045315
516077.0	3712276.0	0.049967	516177.0	3712276.0	0.087750	516277.0	3712276.0	0.171004
516377.0	3712276.0	0.111041	516477.0	3712276.0	0.030227	516577.0	3712276.0	0.023935
516677.0	3712276.0	0.024946	516777.0	3712276.0	0.024674	516877.0	3712276.0	0.040237
516977.0	3712276.0	0.040455	517077.0	3712276.0	0.044406	517177.0	3712276.0	0.050349
515277.0	3712376.0	0.054590	515377.0	3712376.0	0.056522	515477.0	3712376.0	0.058716

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
515577.0	3712376.0	0.060528	515677.0	3712376.0	0.066502	515777.0	3712376.0	0.066924
515877.0	3712376.0	0.069251	515977.0	3712376.0	0.076129	516077.0	3712376.0	0.080711
516177.0	3712376.0	0.119739	516277.0	3712376.0	0.150910	516377.0	3712376.0	0.106412
516477.0	3712376.0	0.048277	516577.0	3712376.0	0.025045	516677.0	3712376.0	0.024309
516777.0	3712376.0	0.034229	516877.0	3712376.0	0.040692	516977.0	3712376.0	0.047182
517077.0	3712376.0	0.053724	517177.0	3712376.0	0.061372	515277.0	3712476.0	0.074035
515377.0	3712476.0	0.077772	515477.0	3712476.0	0.074488	515577.0	3712476.0	0.078571
515677.0	3712476.0	0.091055	515777.0	3712476.0	0.084864	515877.0	3712476.0	0.069935
515977.0	3712476.0	0.069397	516077.0	3712476.0	0.083243	516177.0	3712476.0	0.127537
516277.0	3712476.0	0.149421	516377.0	3712476.0	0.112864	516477.0	3712476.0	0.064955
516577.0	3712476.0	0.030644	516677.0	3712476.0	0.035810	516777.0	3712476.0	0.038570
516877.0	3712476.0	0.052593	516977.0	3712476.0	0.056351	517077.0	3712476.0	0.063246
517177.0	3712476.0	0.064738	515277.0	3712576.0	0.089166	515377.0	3712576.0	0.094056
515477.0	3712576.0	0.090410	515577.0	3712576.0	0.096019	515677.0	3712576.0	0.104822
515777.0	3712576.0	0.091171	515877.0	3712576.0	0.077684	515977.0	3712576.0	0.069203
516077.0	3712576.0	0.092475	516177.0	3712576.0	0.120476	516277.0	3712576.0	0.161473
516377.0	3712576.0	0.129257	516477.0	3712576.0	0.085668	516577.0	3712576.0	0.046974
516677.0	3712576.0	0.041873	516777.0	3712576.0	0.046377	516877.0	3712576.0	0.058613
516977.0	3712576.0	0.069851	517077.0	3712576.0	0.068230	517177.0	3712576.0	0.073506
515277.0	3712676.0	0.095432	515377.0	3712676.0	0.100481	515477.0	3712676.0	0.116993
515577.0	3712676.0	0.116791	515677.0	3712676.0	0.105879	515777.0	3712676.0	0.095092
515877.0	3712676.0	0.085269	515977.0	3712676.0	0.077558	516077.0	3712676.0	0.096370
516177.0	3712676.0	0.147041	516277.0	3712676.0	0.164327	516377.0	3712676.0	0.137515
516477.0	3712676.0	0.099915	516577.0	3712676.0	0.068054	516677.0	3712676.0	0.051265
516777.0	3712676.0	0.053686	516877.0	3712676.0	0.057200	516977.0	3712676.0	0.070929
517077.0	3712676.0	0.080244	517177.0	3712676.0	0.082566	515277.0	3712776.0	0.100495
515377.0	3712776.0	0.105476	515477.0	3712776.0	0.104971	515577.0	3712776.0	0.116826
515677.0	3712776.0	0.107312	515777.0	3712776.0	0.079045	515877.0	3712776.0	0.090959
515977.0	3712776.0	0.091155	516077.0	3712776.0	0.117999	516177.0	3712776.0	0.150562
516277.0	3712776.0	0.166914	516377.0	3712776.0	0.161362	516477.0	3712776.0	0.111022
516577.0	3712776.0	0.081231	516677.0	3712776.0	0.056205	516777.0	3712776.0	0.057792
516877.0	3712776.0	0.064327	516977.0	3712776.0	0.071910	517077.0	3712776.0	0.086010
517177.0	3712776.0	0.094580	515277.0	3712876.0	0.113419	515377.0	3712876.0	0.113158
515477.0	3712876.0	0.104702	515577.0	3712876.0	0.096492	515677.0	3712876.0	0.109479
515777.0	3712876.0	0.081821	515877.0	3712876.0	0.085185	515977.0	3712876.0	0.097421
516077.0	3712876.0	0.138970	516177.0	3712876.0	0.154497	516277.0	3712876.0	0.169588
516377.0	3712876.0	0.165036	516477.0	3712876.0	0.130842	516577.0	3712876.0	0.099472
516677.0	3712876.0	0.071975	516777.0	3712876.0	0.066152	516877.0	3712876.0	0.071736
516977.0	3712876.0	0.072807	517077.0	3712876.0	0.085831	517177.0	3712876.0	0.093477
515277.0	3712976.0	0.120622	515377.0	3712976.0	0.112826	515477.0	3712976.0	0.105149
515577.0	3712976.0	0.097807	515677.0	3712976.0	0.091038	515777.0	3712976.0	0.085094
515877.0	3712976.0	0.102316	515977.0	3712976.0	0.127861	516077.0	3712976.0	0.158090
516177.0	3712976.0	0.192316	516277.0	3712976.0	0.187054	516377.0	3712976.0	0.182573
516477.0	3712976.0	0.148317	516577.0	3712976.0	0.116229	516677.0	3712976.0	0.087338

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
516777.0	3712976.0	0.068822	516877.0	3712976.0	0.073511	516977.0	3712976.0	0.079284
517077.0	3712976.0	0.079940	517177.0	3712976.0	0.086579	515277.0	3713076.0	0.120141
515377.0	3713076.0	0.113067	515477.0	3713076.0	0.106180	515577.0	3713076.0	0.099683
515677.0	3713076.0	0.093799	515777.0	3713076.0	0.088749	515877.0	3713076.0	0.095372
515977.0	3713076.0	0.117662	516077.0	3713076.0	0.143361	516177.0	3713076.0	0.171911
516277.0	3713076.0	0.202461	516377.0	3713076.0	0.180901	516477.0	3713076.0	0.164049
516577.0	3713076.0	0.131793	516677.0	3713076.0	0.111524	516777.0	3713076.0	0.089644
516877.0	3713076.0	0.075094	516977.0	3713076.0	0.080082	517077.0	3713076.0	0.085744
517177.0	3713076.0	0.091772	515277.0	3713176.0	0.120128	515377.0	3713176.0	0.113773
515477.0	3713176.0	0.107655	515577.0	3713176.0	0.101961	515677.0	3713176.0	0.096889
515777.0	3713176.0	0.103016	515877.0	3713176.0	0.121246	515977.0	3713176.0	0.132245
516077.0	3713176.0	0.173960	516177.0	3713176.0	0.186247	516277.0	3713176.0	0.216156
516377.0	3713176.0	0.211736	516477.0	3713176.0	0.178286	516577.0	3713176.0	0.146208
516677.0	3713176.0	0.116313	516777.0	3713176.0	0.096775	516877.0	3713176.0	0.082861
516977.0	3713176.0	0.075174	517077.0	3713176.0	0.085793	517177.0	3713176.0	0.122949
515277.0	3712176.0	0.058348	515377.0	3712176.0	0.048004	515477.0	3712176.0	0.045386
515577.0	3712176.0	0.030864	515677.0	3712176.0	0.024042	515777.0	3712176.0	0.023012
515877.0	3712176.0	0.025379	515977.0	3712176.0	0.035532	516077.0	3712176.0	0.068977
516177.0	3712176.0	0.094101	515277.0	3712076.0	0.058843	515377.0	3712076.0	0.053197
515477.0	3712076.0	0.048975	515577.0	3712076.0	0.032729	515677.0	3712076.0	0.025821
515777.0	3712076.0	0.016846	515877.0	3712076.0	0.012553	515977.0	3712076.0	0.025224
516077.0	3712076.0	0.040324	516177.0	3712076.0	0.113257	515277.0	3711976.0	0.071071
515377.0	3711976.0	0.065345	515477.0	3711976.0	0.050866	515577.0	3711976.0	0.037879
515677.0	3711976.0	0.030023	515777.0	3711976.0	0.019342	515877.0	3711976.0	0.015169
515977.0	3711976.0	0.016014	516077.0	3711976.0	0.017937	516177.0	3711976.0	0.044658
515277.0	3711876.0	0.083696	515377.0	3711876.0	0.065884	515477.0	3711876.0	0.062156
515577.0	3711876.0	0.047989	515677.0	3711876.0	0.035177	515777.0	3711876.0	0.023097
515877.0	3711876.0	0.018745	515977.0	3711876.0	0.021802	516077.0	3711876.0	0.030361
516177.0	3711876.0	0.058309	515277.0	3711776.0	0.074688	515377.0	3711776.0	0.062540
515477.0	3711776.0	0.053182	515577.0	3711776.0	0.040327	515677.0	3711776.0	0.030096
515777.0	3711776.0	0.020994	515877.0	3711776.0	0.018473	515977.0	3711776.0	0.021661
516077.0	3711776.0	0.029903	516177.0	3711776.0	0.045161	515277.0	3711676.0	0.073840
515377.0	3711676.0	0.060653	515477.0	3711676.0	0.051796	515577.0	3711676.0	0.040082
515677.0	3711676.0	0.032212	515777.0	3711676.0	0.021038	515877.0	3711676.0	0.019192
515977.0	3711676.0	0.022110	516077.0	3711676.0	0.028522	516177.0	3711676.0	0.050947
515277.0	3711576.0	0.067283	515377.0	3711576.0	0.060878	515477.0	3711576.0	0.053208
515577.0	3711576.0	0.043748	515677.0	3711576.0	0.032197	515777.0	3711576.0	0.025114
515877.0	3711576.0	0.027512	515977.0	3711576.0	0.029563	516077.0	3711576.0	0.032796
516177.0	3711576.0	0.050995	515277.0	3711476.0	0.062489	515377.0	3711476.0	0.058386
515477.0	3711476.0	0.055359	515577.0	3711476.0	0.045157	515677.0	3711476.0	0.039701
515777.0	3711476.0	0.042712	515877.0	3711476.0	0.040116	515977.0	3711476.0	0.036441
516077.0	3711476.0	0.036500	516177.0	3711476.0	0.049262	511277.0	3709378.0	0.109272
512277.0	3709378.0	0.116155	513277.0	3709378.0	0.124347	514277.0	3709378.0	0.134780
515277.0	3709378.0	0.143370	516277.0	3709378.0	0.182547	517277.0	3709378.0	0.090800

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
518277.0	3709378.0	0.169514	519277.0	3709378.0	0.100474	520277.0	3709378.0	0.083876
521277.0	3709378.0	0.073199	522277.0	3709378.0	0.061960	511277.0	3708378.0	0.098690
512277.0	3708378.0	0.089592	513277.0	3708378.0	0.113648	514277.0	3708378.0	0.125784
515277.0	3708378.0	0.124911	516277.0	3708378.0	0.142519	517277.0	3708378.0	0.136630
518277.0	3708378.0	0.099065	519277.0	3708378.0	0.089243	520277.0	3708378.0	0.088415
521277.0	3708378.0	0.072631	522277.0	3708378.0	0.064668	511277.0	3707378.0	0.085225
512277.0	3707378.0	0.095843	513277.0	3707378.0	0.107019	514277.0	3707378.0	0.111724
515277.0	3707378.0	0.151756	516277.0	3707378.0	0.166180	517277.0	3707378.0	0.135383
518277.0	3707378.0	0.072701	519277.0	3707378.0	0.072440	520277.0	3707378.0	0.075191
521277.0	3707378.0	0.073870	522277.0	3707378.0	0.065651	511277.0	3706378.0	0.081872
512277.0	3706378.0	0.091480	513277.0	3706378.0	0.101555	514277.0	3706378.0	0.115242
515277.0	3706378.0	0.143258	516277.0	3706378.0	0.150004	517277.0	3706378.0	0.111876
518277.0	3706378.0	0.079941	519277.0	3706378.0	0.059853	520277.0	3706378.0	0.063680
521277.0	3706378.0	0.069287	522277.0	3706378.0	0.065156	523277.0	3706378.0	0.059102
522402.0	3710378.0	0.062256	522402.0	3711378.0	0.068274	522402.0	3712378.0	0.066513
511277.0	3714176.0	0.088600	512277.0	3714176.0	0.113238	513277.0	3714176.0	0.139964
514277.0	3714176.0	0.161281	515277.0	3714176.0	0.253019	516277.0	3714176.0	0.510712
517277.0	3714176.0	0.183708	518277.0	3714176.0	0.109437	519277.0	3714176.0	0.086524
520277.0	3714176.0	0.074305	521277.0	3714176.0	0.063168	522277.0	3714176.0	0.057127
511277.0	3715176.0	0.151005	512277.0	3715176.0	0.255579	513277.0	3715176.0	0.198798
514277.0	3715176.0	0.274393	515277.0	3715176.0	0.360490	516277.0	3715176.0	0.388598
517277.0	3715176.0	0.147246	518277.0	3715176.0	0.088644	519277.0	3715176.0	0.085911
520277.0	3715176.0	0.072154	521277.0	3715176.0	0.067611	522277.0	3715176.0	0.059194
511277.0	3716176.0	0.237135	512277.0	3716176.0	0.186096	513277.0	3716176.0	0.252886
514277.0	3716176.0	0.298617	515277.0	3716176.0	0.402704	516277.0	3716176.0	0.264234
517277.0	3716176.0	0.176397	518277.0	3716176.0	0.080301	519277.0	3716176.0	0.080180
520277.0	3716176.0	0.082209	521277.0	3716176.0	0.066711	522277.0	3716176.0	0.058499
511277.0	3717176.0	0.209998	512277.0	3717176.0	0.247094	513277.0	3717176.0	0.268991
514277.0	3717176.0	0.289568	515277.0	3717176.0	0.281003	516277.0	3717176.0	0.283902
517277.0	3717176.0	0.188270	518277.0	3717176.0	0.100275	519277.0	3717176.0	0.083021
520277.0	3717176.0	0.071749	521277.0	3717176.0	0.065661	522277.0	3717176.0	0.059659
511277.0	3713176.0	0.101712	512277.0	3713176.0	0.088801	513277.0	3713176.0	0.087765
514277.0	3713176.0	0.125448	511277.0	3712176.0	0.098624	512277.0	3712176.0	0.111023
513277.0	3712176.0	0.113390	514277.0	3712176.0	0.090798	511277.0	3711176.0	0.119460
512277.0	3711176.0	0.156307	513277.0	3711176.0	0.098698	514277.0	3711176.0	0.105132
511277.0	3709378.0	0.109272	512277.0	3709378.0	0.116155	513277.0	3709378.0	0.124347
514277.0	3709378.0	0.134780	515277.0	3709378.0	0.143370	516277.0	3709378.0	0.182547
517277.0	3709378.0	0.090800	518277.0	3709378.0	0.169514	519277.0	3709378.0	0.100474
520277.0	3709378.0	0.083876	521277.0	3709378.0	0.073199	522277.0	3709378.0	0.061960
511277.0	3708378.0	0.098690	512277.0	3708378.0	0.089592	513277.0	3708378.0	0.113648
514277.0	3708378.0	0.125784	515277.0	3708378.0	0.124911	516277.0	3708378.0	0.142519
517277.0	3708378.0	0.136630	518277.0	3708378.0	0.099065	519277.0	3708378.0	0.089243
520277.0	3708378.0	0.088415	521277.0	3708378.0	0.072631	522277.0	3708378.0	0.064668
511277.0	3707378.0	0.085225	512277.0	3707378.0	0.095843	513277.0	3707378.0	0.107019

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
514277.0	3707378.0	0.111724	515277.0	3707378.0	0.151756	516277.0	3707378.0	0.166180
517277.0	3707378.0	0.135383	518277.0	3707378.0	0.072701	519277.0	3707378.0	0.072440
520277.0	3707378.0	0.075191	521277.0	3707378.0	0.073870	522277.0	3707378.0	0.065651
511277.0	3706378.0	0.081872	512277.0	3706378.0	0.091480	513277.0	3706378.0	0.101555
514277.0	3706378.0	0.115242	515277.0	3706378.0	0.143258	516277.0	3706378.0	0.150004
517277.0	3706378.0	0.111876	518277.0	3706378.0	0.079941	519277.0	3706378.0	0.059853
520277.0	3706378.0	0.063680	521277.0	3706378.0	0.069287	522277.0	3706378.0	0.065156
523277.0	3706378.0	0.059102	522402.0	3710378.0	0.062256	522402.0	3711378.0	0.068274
522402.0	3712378.0	0.066513	511277.0	3714176.0	0.088600	512277.0	3714176.0	0.113238
513277.0	3714176.0	0.139964	514277.0	3714176.0	0.161281	515277.0	3714176.0	0.253019
516277.0	3714176.0	0.510712	517277.0	3714176.0	0.183708	518277.0	3714176.0	0.109437
519277.0	3714176.0	0.086524	520277.0	3714176.0	0.074305	521277.0	3714176.0	0.063168
522277.0	3714176.0	0.057127	511277.0	3715176.0	0.151005	512277.0	3715176.0	0.255579
513277.0	3715176.0	0.198798	514277.0	3715176.0	0.274393	515277.0	3715176.0	0.360490
516277.0	3715176.0	0.388598	517277.0	3715176.0	0.147246	518277.0	3715176.0	0.088644
519277.0	3715176.0	0.085911	520277.0	3715176.0	0.072154	521277.0	3715176.0	0.067611
522277.0	3715176.0	0.059194	511277.0	3716176.0	0.237135	512277.0	3716176.0	0.186096
513277.0	3716176.0	0.252886	514277.0	3716176.0	0.298617	515277.0	3716176.0	0.402704
516277.0	3716176.0	0.264234	517277.0	3716176.0	0.176397	518277.0	3716176.0	0.080301
519277.0	3716176.0	0.080180	520277.0	3716176.0	0.082209	521277.0	3716176.0	0.066711
522277.0	3716176.0	0.058499	511277.0	3717176.0	0.209998	512277.0	3717176.0	0.247094
513277.0	3717176.0	0.268991	514277.0	3717176.0	0.289568	515277.0	3717176.0	0.281003
516277.0	3717176.0	0.283902	517277.0	3717176.0	0.188270	518277.0	3717176.0	0.100275
519277.0	3717176.0	0.083021	520277.0	3717176.0	0.071749	521277.0	3717176.0	0.065661
522277.0	3717176.0	0.059659	511277.0	3713176.0	0.101712	512277.0	3713176.0	0.088801
513277.0	3713176.0	0.087765	514277.0	3713176.0	0.125448	511277.0	3712176.0	0.098624
512277.0	3712176.0	0.111023	513277.0	3712176.0	0.113390	514277.0	3712176.0	0.090798
511277.0	3711176.0	0.119460	512277.0	3711176.0	0.156307	513277.0	3711176.0	0.098698
514277.0	3711176.0	0.105132	516500.0	3708100.0	0.201433	518100.0	3709350.0	0.159405
514500.0	3708800.0	0.131655	517300.0	3714400.0	0.205629			

- PROGRAM DETERMINED MAXIMUM 10 VALUES -

X COORDINATE (METERS)	Y COORDINATE (METERS)	CONCENTRATION
516277.00	3714176.00	0.510712
516277.00	3714176.00	0.510712
515277.00	3716176.00	0.402704
515277.00	3716176.00	0.402704
516277.00	3715176.00	0.388598
516277.00	3715176.00	0.388598

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- PROGRAM DETERMINED MAXIMUM 10 VALUES -

X COORDINATE (METERS)	Y COORDINATE (METERS)	CONCENTRATION
515277.00	3715176.00	0.360490
515277.00	3715176.00	0.360490
514277.00	3716176.00	0.298617
514277.00	3716176.00	0.298617

********** END OF ISCLT PROGRAM, 1 SOURCES PROCESSED **********

Woodward-Clyde
Consultants

SECTION H.5

1985 MODELING OUTPUT FOR NOx ISCLT

ISCLT - VERSION DATED 90008
BOWMAN ENVIRONMENTAL ENGINEERING VERSION 6.95

SESSION INFORMATION

INPUT DATA FILE NAME : ISCNOX85.DTA
OUTPUT LIST FILE NAME : ISCNOX85.LST

- ISCLT INPUT DATA -

```
NUMBER OF SOURCES =   1
NUMBER OF X AXIS GRID SYSTEM POINTS =    0
NUMBER OF Y AXIS GRID SYSTEM POINTS =    0
NUMBER OF SPECIAL POINTS =  749
NUMBER OF SEASONS =   1
NUMBER OF WIND SPEED CLASSES =   6
NUMBER OF STABILITY CLASSES =   6
NUMBER OF WIND DIRECTION CLASSES =  16
FILE NUMBER OF DATA FILE USED FOR REPORTS =   1
THE PROGRAM IS RUN IN RURAL MODE
CONCENTRATION (DEPOSITION) UNITS CONVERSION FACTOR =0.10000000E+07
ACCELERATION OF GRAVITY (METERS/SEC**2) =  9.800
HEIGHT OF MEASUREMENT OF WIND SPEED (METERS) =  10.000
CORRECTION ANGLE FOR GRID SYSTEM VERSUS DIRECTION DATA NORTH (DEGREES) =   0.000
DECAY COEFFICIENT =0.00000000E+00
PROGRAM OPTION SWITCHES = 1, 1, 1, 1, 0, 3, 2, 2, 3, 2, 2, 0, 0, 0, 0, 0, 0, 1, 0, 1, 0, 0, 1, 1, 0,
ALL SOURCES ARE USED TO FORM SOURCE COMBINATION  1
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- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516276.8	3711378.0	34.439460	516411.0	3712159.0	34.439460	516679.3	3711159.0	34.439460
516679.3	3711378.0	34.439460	517079.3	3711378.0	34.439460	517079.3	3711549.0	34.439460
517530.5	3711488.0	34.439460	517530.5	3711317.0	34.439460	518743.9	3711171.0	34.439460
518743.9	3711573.0	34.439460	519914.6	3711573.0	34.439460	519914.6	3711171.0	34.439460
520304.8	3711171.0	34.439460	520304.8	3711024.0	34.439460	520707.2	3711024.0	34.439460
520817.0	3711628.0	34.439460	520402.3	3712176.0	34.439460	518707.2	3712176.0	34.439460
518707.2	3712030.0	34.439460	518280.4	3712030.0	34.439460	518280.4	3712250.0	34.439460
518060.9	3712335.0	34.439460	518060.9	3712878.0	34.439460	517426.8	3712878.0	34.439460
517426.8	3713079.0	34.439460	516993.9	3713079.0	34.439460	516993.9	3713280.0	34.439460
516603.7	3713280.0	34.439460	516603.7	3712884.0	34.439460	516372.0	3712884.0	34.439460
516372.0	3712798.0	34.439460	516256.2	3712774.0	34.439460	516276.8	3711378.0	34.439460
516264.6	3712122.0	34.439460	516264.6	3711598.0	34.439460	516008.5	3712006.0	34.439460
516008.5	3712122.0	34.439460	516115.2	3712189.0	34.439460	516179.3	3712061.0	34.439460
516179.3	3712122.0	34.439460	516264.6	3712122.0	34.439460	515277.0	3711278.0	39.621080
515377.0	3711278.0	39.621080	515477.0	3711278.0	39.621080	515577.0	3711278.0	39.621080
515677.0	3711278.0	39.621080	515777.0	3711278.0	39.621080	515877.0	3711278.0	39.621080
515977.0	3711278.0	39.621080	516077.0	3711278.0	39.621080	516177.0	3711278.0	39.621080
516277.0	3711278.0	36.579170	516377.0	3711278.0	39.621080	516477.0	3711278.0	39.621080
516577.0	3711278.0	39.621080	516677.0	3711278.0	33.531160	516777.0	3711278.0	33.531160
516877.0	3711278.0	30.480100	516977.0	3711278.0	30.480100	517077.0	3711278.0	33.531160
517177.0	3711278.0	33.531160	515277.0	3711178.0	39.621080	515377.0	3711178.0	42.669090
515477.0	3711178.0	39.621080	515577.0	3711178.0	39.621080	515677.0	3711178.0	42.669090
515777.0	3711178.0	42.669090	515877.0	3711178.0	42.669090	515977.0	3711178.0	39.621080
516077.0	3711178.0	39.621080	516177.0	3711178.0	36.579170	516277.0	3711178.0	36.579170
516377.0	3711178.0	36.579170	516477.0	3711178.0	36.579170	516577.0	3711178.0	36.579170
516677.0	3711178.0	33.531160	516777.0	3711178.0	33.531160	516877.0	3711178.0	33.531160
516977.0	3711178.0	33.531160	517077.0	3711178.0	33.531160	517177.0	3711178.0	33.531160
515277.0	3711078.0	45.720150	515377.0	3711078.0	42.669090	515477.0	3711078.0	36.579170
515577.0	3711078.0	42.669090	515677.0	3711078.0	45.720150	515777.0	3711078.0	45.720150
515877.0	3711078.0	45.720150	515977.0	3711078.0	42.669090	516077.0	3711078.0	39.621080
516177.0	3711078.0	39.621080	516277.0	3711078.0	36.579170	516377.0	3711078.0	36.579170
516477.0	3711078.0	36.579170	516577.0	3711078.0	39.621080	516677.0	3711078.0	33.531160
516777.0	3711078.0	33.531160	516877.0	3711078.0	33.531160	516977.0	3711078.0	36.579170
517077.0	3711078.0	33.531160	517177.0	3711078.0	33.531160	515277.0	3710978.0	45.720150
515377.0	3710978.0	42.669090	515477.0	3710978.0	36.579170	515577.0	3710978.0	42.669090
515677.0	3710978.0	45.720150	515777.0	3710978.0	48.771210	515877.0	3710978.0	45.720150
515977.0	3710978.0	45.720150	516077.0	3710978.0	45.720150	516177.0	3710978.0	42.669090
516277.0	3710978.0	42.669090	516377.0	3710978.0	39.621080	516477.0	3710978.0	36.579170
516577.0	3710978.0	36.579170	516677.0	3710978.0	39.621080	516777.0	3710978.0	36.579170
516877.0	3710978.0	36.579170	516977.0	3710978.0	36.579170	517077.0	3710978.0	36.579170
517177.0	3710978.0	33.531160	515277.0	3710878.0	45.720150	515377.0	3710878.0	39.621080
515477.0	3710878.0	39.621080	515577.0	3710878.0	42.669090	515677.0	3710878.0	48.771210
515777.0	3710878.0	51.819210	515877.0	3710878.0	48.771210	515977.0	3710878.0	48.771210
516077.0	3710878.0	51.819210	516177.0	3710878.0	45.720150	516277.0	3710878.0	42.669090
516377.0	3710878.0	39.621080	516477.0	3710878.0	39.621080	516577.0	3710878.0	42.669090

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516677.0	3710878.0	45.720150	516777.0	3710878.0	45.720150	516877.0	3710878.0	39.621080
516977.0	3710878.0	39.621080	517077.0	3710878.0	36.579170	517177.0	3710878.0	36.579170
515277.0	3710778.0	45.720150	515377.0	3710778.0	39.621080	515477.0	3710778.0	45.720150
515577.0	3710778.0	42.669090	515677.0	3710778.0	48.771210	515777.0	3710778.0	54.861130
515877.0	3710778.0	51.819210	515977.0	3710778.0	51.819210	516077.0	3710778.0	54.861130
516177.0	3710778.0	45.720150	516277.0	3710778.0	45.720150	516377.0	3710778.0	42.669090
516477.0	3710778.0	45.720150	516577.0	3710778.0	45.720150	516677.0	3710778.0	51.819210
516777.0	3710778.0	51.819210	516877.0	3710778.0	48.771210	516977.0	3710778.0	48.771210
517077.0	3710778.0	45.720150	517177.0	3710778.0	36.579170	515277.0	3710678.0	42.669090
515377.0	3710678.0	42.669090	515477.0	3710678.0	45.720150	515577.0	3710678.0	45.720150
515677.0	3710678.0	45.720150	515777.0	3710678.0	48.771210	515877.0	3710678.0	51.819210
515977.0	3710678.0	54.861130	516077.0	3710678.0	54.861130	516177.0	3710678.0	48.771210
516277.0	3710678.0	45.720150	516377.0	3710678.0	45.720150	516477.0	3710678.0	45.720150
516577.0	3710678.0	48.771210	516677.0	3710678.0	51.819210	516777.0	3710678.0	51.819210
516877.0	3710678.0	48.771210	516977.0	3710678.0	45.720150	517077.0	3710678.0	42.669090
517177.0	3710678.0	36.579170	515277.0	3710578.0	45.720150	515377.0	3710578.0	45.720150
515477.0	3710578.0	51.819210	515577.0	3710578.0	51.819210	515677.0	3710578.0	48.771210
515777.0	3710578.0	54.861130	515877.0	3710578.0	54.861130	515977.0	3710578.0	54.861130
516077.0	3710578.0	51.819210	516177.0	3710578.0	51.819210	516277.0	3710578.0	48.771210
516377.0	3710578.0	51.819210	516477.0	3710578.0	51.819210	516577.0	3710578.0	51.819210
516677.0	3710578.0	51.819210	516777.0	3710578.0	45.720150	516877.0	3710578.0	45.720150
516977.0	3710578.0	39.621080	517077.0	3710578.0	39.621080	517177.0	3710578.0	36.579170
515277.0	3710478.0	45.720150	515377.0	3710478.0	51.819210	515477.0	3710478.0	54.861130
515577.0	3710478.0	54.861130	515677.0	3710478.0	51.819210	515777.0	3710478.0	54.861130
515877.0	3710478.0	57.909140	515977.0	3710478.0	57.909140	516077.0	3710478.0	54.861130
516177.0	3710478.0	54.861130	516277.0	3710478.0	51.819210	516377.0	3710478.0	51.819210
516477.0	3710478.0	51.819210	516577.0	3710478.0	51.819210	516677.0	3710478.0	51.819210
516777.0	3710478.0	48.771210	516877.0	3710478.0	45.720150	516977.0	3710478.0	45.720150
517077.0	3710478.0	39.621080	517177.0	3710478.0	36.579170	515277.0	3710378.0	45.720150
515377.0	3710378.0	48.771210	515477.0	3710378.0	51.819210	515577.0	3710378.0	54.861130
515677.0	3710378.0	57.909140	515777.0	3710378.0	57.909140	515877.0	3710378.0	57.909140
515977.0	3710378.0	57.909140	516077.0	3710378.0	51.819210	516177.0	3710378.0	51.819210
516277.0	3710378.0	48.771210	516377.0	3710378.0	48.771210	516477.0	3710378.0	45.720150
516577.0	3710378.0	48.771210	516677.0	3710378.0	48.771210	516777.0	3710378.0	48.771210
516877.0	3710378.0	51.819210	516977.0	3710378.0	45.720150	517077.0	3710378.0	39.621080
517177.0	3710378.0	36.579170	515277.0	3712276.0	30.480100	515377.0	3712276.0	30.480100
515477.0	3712276.0	30.480100	515577.0	3712276.0	30.480100	515677.0	3712276.0	33.531160
515777.0	3712276.0	30.480100	515877.0	3712276.0	30.480100	515977.0	3712276.0	30.480100
516077.0	3712276.0	30.480100	516177.0	3712276.0	33.531160	516277.0	3712276.0	33.531160
516377.0	3712276.0	30.480100	516477.0	3712276.0	30.480100	516577.0	3712276.0	30.480100
516677.0	3712276.0	30.480100	516777.0	3712276.0	27.429040	516877.0	3712276.0	33.531160
516977.0	3712276.0	30.480100	517077.0	3712276.0	27.429040	517177.0	3712276.0	27.429040
515277.0	3712376.0	30.480100	515377.0	3712376.0	30.480100	515477.0	3712376.0	30.480100
515577.0	3712376.0	30.480100	515677.0	3712376.0	33.531160	515777.0	3712376.0	33.531160
515877.0	3712376.0	33.531160	515977.0	3712376.0	36.579170	516077.0	3712376.0	36.579170

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
516177.0	3712376.0	36.579170	516277.0	3712376.0	33.531160	516377.0	3712376.0	30.480100
516477.0	3712376.0	30.480100	516577.0	3712376.0	30.480100	516677.0	3712376.0	27.429040
516777.0	3712376.0	27.429040	516877.0	3712376.0	27.429040	516977.0	3712376.0	27.429040
517077.0	3712376.0	27.429040	517177.0	3712376.0	30.480100	515277.0	3712476.0	33.531160
515377.0	3712476.0	33.531160	515477.0	3712476.0	30.480100	515577.0	3712476.0	30.480100
515677.0	3712476.0	33.531160	515777.0	3712476.0	33.531160	515877.0	3712476.0	33.531160
515977.0	3712476.0	33.531160	516077.0	3712476.0	36.579170	516177.0	3712476.0	36.579170
516277.0	3712476.0	33.531160	516377.0	3712476.0	30.480100	516477.0	3712476.0	30.480100
516577.0	3712476.0	30.480100	516677.0	3712476.0	30.480100	516777.0	3712476.0	27.429040
516877.0	3712476.0	27.429040	516977.0	3712476.0	24.381030	517077.0	3712476.0	27.429040
517177.0	3712476.0	27.429040	515277.0	3712576.0	33.531160	515377.0	3712576.0	33.531160
515477.0	3712576.0	30.480100	515577.0	3712576.0	30.480100	515677.0	3712576.0	33.531160
515777.0	3712576.0	33.531160	515877.0	3712576.0	33.531160	515977.0	3712576.0	33.531160
516077.0	3712576.0	36.579170	516177.0	3712576.0	33.531160	516277.0	3712576.0	33.531160
516377.0	3712576.0	30.480100	516477.0	3712576.0	30.480100	516577.0	3712576.0	30.480100
516677.0	3712576.0	30.480100	516777.0	3712576.0	27.429040	516877.0	3712576.0	27.429040
516977.0	3712576.0	27.429040	517077.0	3712576.0	24.381030	517177.0	3712576.0	27.429040
515277.0	3712676.0	30.480100	515377.0	3712676.0	30.480100	515477.0	3712676.0	33.531160
515577.0	3712676.0	33.531160	515677.0	3712676.0	33.531160	515777.0	3712676.0	33.531160
515877.0	3712676.0	33.531160	515977.0	3712676.0	33.531160	516077.0	3712676.0	33.531160
516177.0	3712676.0	36.579170	516277.0	3712676.0	33.531160	516377.0	3712676.0	30.480100
516477.0	3712676.0	30.480100	516577.0	3712676.0	30.480100	516677.0	3712676.0	30.480100
516777.0	3712676.0	27.429040	516877.0	3712676.0	24.381030	516977.0	3712676.0	27.429040
517077.0	3712676.0	27.429040	517177.0	3712676.0	27.429040	515277.0	3712776.0	27.429040
515377.0	3712776.0	27.429040	515477.0	3712776.0	27.429040	515577.0	3712776.0	33.531160
515677.0	3712776.0	33.531160	515777.0	3712776.0	27.429040	515877.0	3712776.0	33.531160
515977.0	3712776.0	33.531160	516077.0	3712776.0	33.531160	516177.0	3712776.0	33.531160
516277.0	3712776.0	30.480100	516377.0	3712776.0	30.480100	516477.0	3712776.0	27.429040
516577.0	3712776.0	27.429040	516677.0	3712776.0	27.429040	516777.0	3712776.0	27.429040
516877.0	3712776.0	27.429040	516977.0	3712776.0	27.429040	517077.0	3712776.0	30.480100
517177.0	3712776.0	30.480100	515277.0	3712876.0	27.429040	515377.0	3712876.0	27.429040
515477.0	3712876.0	27.429040	515577.0	3712876.0	27.429040	515677.0	3712876.0	33.531160
515777.0	3712876.0	27.429040	515877.0	3712876.0	30.480100	515977.0	3712876.0	30.480100
516077.0	3712876.0	33.531160	516177.0	3712876.0	30.480100	516277.0	3712876.0	27.429040
516377.0	3712876.0	27.429040	516477.0	3712876.0	27.429040	516577.0	3712876.0	27.429040
516677.0	3712876.0	27.429040	516777.0	3712876.0	30.480100	516877.0	3712876.0	30.480100
516977.0	3712876.0	27.429040	517077.0	3712876.0	30.480100	517177.0	3712876.0	30.480100
515277.0	3712976.0	27.429040	515377.0	3712976.0	27.429040	515477.0	3712976.0	27.429040
515577.0	3712976.0	27.429040	515677.0	3712976.0	27.429040	515777.0	3712976.0	27.429040
515877.0	3712976.0	33.531160	515977.0	3712976.0	33.531160	516077.0	3712976.0	33.531160
516177.0	3712976.0	33.531160	516277.0	3712976.0	27.429040	516377.0	3712976.0	27.429040
516477.0	3712976.0	27.429040	516577.0	3712976.0	27.429040	516677.0	3712976.0	27.429040
516777.0	3712976.0	30.480100	516877.0	3712976.0	30.480100	516977.0	3712976.0	30.480100
517077.0	3712976.0	27.429040	517177.0	3712976.0	27.429040	515277.0	3713076.0	27.429040
515377.0	3713076.0	27.429040	515477.0	3713076.0	27.429040	515577.0	3713076.0	27.429040

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
515677.0	3713076.0	27.429040	515777.0	3713076.0	27.429040	515877.0	3713076.0	27.429040
515977.0	3713076.0	27.429040	516077.0	3713076.0	27.429040	516177.0	3713076.0	27.429040
516277.0	3713076.0	27.429040	516377.0	3713076.0	24.381030	516477.0	3713076.0	27.429040
516577.0	3713076.0	27.429040	516677.0	3713076.0	30.480100	516777.0	3713076.0	33.531160
516877.0	3713076.0	30.480100	516977.0	3713076.0	30.480100	517077.0	3713076.0	30.480100
517177.0	3713076.0	30.480100	515277.0	3713176.0	27.429040	515377.0	3713176.0	27.429040
515477.0	3713176.0	27.429040	515577.0	3713176.0	27.429040	515677.0	3713176.0	27.429040
515777.0	3713176.0	30.480100	515877.0	3713176.0	30.480100	515977.0	3713176.0	27.429040
516077.0	3713176.0	30.480100	516177.0	3713176.0	27.429040	516277.0	3713176.0	27.429040
516377.0	3713176.0	27.429040	516477.0	3713176.0	27.429040	516577.0	3713176.0	27.429040
516677.0	3713176.0	27.429040	516777.0	3713176.0	30.480100	516877.0	3713176.0	33.531160
516977.0	3713176.0	27.429040	517077.0	3713176.0	30.480100	517177.0	3713176.0	42.669090
515277.0	3712176.0	33.531160	515377.0	3712176.0	30.480100	515477.0	3712176.0	33.531160
515577.0	3712176.0	30.480100	515677.0	3712176.0	30.480100	515777.0	3712176.0	30.480100
515877.0	3712176.0	30.480100	515977.0	3712176.0	30.480100	516077.0	3712176.0	33.531160
516177.0	3712176.0	33.531160	515277.0	3712076.0	30.480100	515377.0	3712076.0	30.480100
515477.0	3712076.0	33.531160	515577.0	3712076.0	30.480100	515677.0	3712076.0	33.531160
515777.0	3712076.0	33.531160	515877.0	3712076.0	33.531160	515977.0	3712076.0	33.531160
516077.0	3712076.0	30.480100	516177.0	3712076.0	33.531160	515277.0	3711976.0	33.531160
515377.0	3711976.0	33.531160	515477.0	3711976.0	30.480100	515577.0	3711976.0	30.480100
515677.0	3711976.0	33.531160	515777.0	3711976.0	33.531160	515877.0	3711976.0	33.531160
515977.0	3711976.0	33.531160	516077.0	3711976.0	33.531160	516177.0	3711976.0	30.480100
515277.0	3711876.0	36.579170	515377.0	3711876.0	30.480100	515477.0	3711876.0	33.531160
515577.0	3711876.0	33.531160	515677.0	3711876.0	33.531160	515777.0	3711876.0	33.531160
515877.0	3711876.0	33.531160	515977.0	3711876.0	33.531160	516077.0	3711876.0	33.531160
516177.0	3711876.0	33.531160	515277.0	3711776.0	36.579170	515377.0	3711776.0	33.531160
515477.0	3711776.0	33.531160	515577.0	3711776.0	33.531160	515677.0	3711776.0	33.531160
515777.0	3711776.0	33.531160	515877.0	3711776.0	33.531160	515977.0	3711776.0	33.531160
516077.0	3711776.0	33.531160	516177.0	3711776.0	33.531160	515277.0	3711676.0	39.621080
515377.0	3711676.0	36.579170	515477.0	3711676.0	36.579170	515577.0	3711676.0	36.579170
515677.0	3711676.0	36.579170	515777.0	3711676.0	33.531160	515877.0	3711676.0	33.531160
515977.0	3711676.0	33.531160	516077.0	3711676.0	33.531160	516177.0	3711676.0	36.579170
515277.0	3711576.0	39.621080	515377.0	3711576.0	39.621080	515477.0	3711576.0	39.621080
515577.0	3711576.0	39.621080	515677.0	3711576.0	36.579170	515777.0	3711576.0	33.531160
515877.0	3711576.0	36.579170	515977.0	3711576.0	36.579170	516077.0	3711576.0	36.579170
516177.0	3711576.0	39.621080	515277.0	3711476.0	39.621080	515377.0	3711476.0	39.621080
515477.0	3711476.0	39.621080	515577.0	3711476.0	36.579170	515677.0	3711476.0	36.579170
515777.0	3711476.0	39.621080	515877.0	3711476.0	39.621080	515977.0	3711476.0	39.621080
516077.0	3711476.0	39.621080	516177.0	3711476.0	39.621080	511277.0	3709378.0	64.011250
512277.0	3709378.0	60.960200	513277.0	3709378.0	73.149190	514277.0	3709378.0	64.011250
515277.0	3709378.0	57.909140	516277.0	3709378.0	45.720150	517277.0	3709378.0	42.669090
518277.0	3709378.0	60.960200	519277.0	3709378.0	30.480100	520277.0	3709378.0	30.480100
521277.0	3709378.0	30.480100	522277.0	3709378.0	27.429040	511277.0	3708378.0	67.059270
512277.0	3708378.0	48.771210	513277.0	3708378.0	76.200250	514277.0	3708378.0	70.101180
515277.0	3708378.0	48.771210	516277.0	3708378.0	36.579170	517277.0	3708378.0	64.011250

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
518277.0	3708378.0	48.771210	519277.0	3708378.0	30.480100	520277.0	3708378.0	30.480100
521277.0	3708378.0	27.429040	522277.0	3708378.0	27.429040	511277.0	3707378.0	54.861130
512277.0	3707378.0	67.059270	513277.0	3707378.0	64.011250	514277.0	3707378.0	54.861130
515277.0	3707378.0	60.960200	516277.0	3707378.0	48.771210	517277.0	3707378.0	67.059270
518277.0	3707378.0	48.771210	519277.0	3707378.0	33.531160	520277.0	3707378.0	27.429040
521277.0	3707378.0	27.429040	522277.0	3707378.0	27.429040	511277.0	3706378.0	73.149190
512277.0	3706378.0	73.149190	513277.0	3706378.0	64.011250	514277.0	3706378.0	64.011250
515277.0	3706378.0	67.059270	516277.0	3706378.0	48.771210	517277.0	3706378.0	48.771210
518277.0	3706378.0	54.861130	519277.0	3706378.0	36.579170	520277.0	3706378.0	30.480100
521277.0	3706378.0	30.480100	522277.0	3706378.0	27.429040	523277.0	3706378.0	27.429040
522402.0	3710378.0	27.429040	522402.0	3711378.0	30.480100	522402.0	3712378.0	30.480100
511277.0	3714176.0	36.579170	512277.0	3714176.0	36.579170	513277.0	3714176.0	33.531160
514277.0	3714176.0	30.480100	515277.0	3714176.0	48.771210	516277.0	3714176.0	48.771210
517277.0	3714176.0	70.101180	518277.0	3714176.0	33.531160	519277.0	3714176.0	27.429040
520277.0	3714176.0	30.480100	521277.0	3714176.0	30.480100	522277.0	3714176.0	30.480100
511277.0	3715176.0	45.720150	512277.0	3715176.0	60.960200	513277.0	3715176.0	39.621080
514277.0	3715176.0	51.819210	515277.0	3715176.0	54.861130	516277.0	3715176.0	39.621080
517277.0	3715176.0	30.480100	518277.0	3715176.0	30.480100	519277.0	3715176.0	27.429040
520277.0	3715176.0	24.381030	521277.0	3715176.0	30.480100	522277.0	3715176.0	30.480100
511277.0	3716176.0	60.960200	512277.0	3716176.0	39.621080	513277.0	3716176.0	51.819210
514277.0	3716176.0	60.960200	515277.0	3716176.0	70.101180	516277.0	3716176.0	24.381030
517277.0	3716176.0	30.480100	518277.0	3716176.0	30.480100	519277.0	3716176.0	30.480100
520277.0	3716176.0	33.531160	521277.0	3716176.0	27.429040	522277.0	3716176.0	27.429040
511277.0	3717176.0	48.771210	512277.0	3717176.0	54.861130	513277.0	3717176.0	60.960200
514277.0	3717176.0	60.960200	515277.0	3717176.0	42.669090	516277.0	3717176.0	30.480100
517277.0	3717176.0	30.480100	518277.0	3717176.0	33.531160	519277.0	3717176.0	36.579170
520277.0	3717176.0	30.480100	521277.0	3717176.0	27.429040	522277.0	3717176.0	27.429040
511277.0	3713176.0	42.669090	512277.0	3713176.0	36.579170	513277.0	3713176.0	36.579170
514277.0	3713176.0	36.579170	511277.0	3712176.0	36.579170	512277.0	3712176.0	39.621080
513277.0	3712176.0	39.621080	514277.0	3712176.0	33.531160	511277.0	3711176.0	48.771210
512277.0	3711176.0	64.011250	513277.0	3711176.0	39.621080	514277.0	3711176.0	45.720150
511277.0	3709378.0	64.011250	512277.0	3709378.0	60.960200	513277.0	3709378.0	73.149190
514277.0	3709378.0	64.011250	515277.0	3709378.0	57.909140	516277.0	3709378.0	45.720150
517277.0	3709378.0	42.669090	518277.0	3709378.0	60.960200	519277.0	3709378.0	30.480100
520277.0	3709378.0	30.480100	521277.0	3709378.0	30.480100	522277.0	3709378.0	27.429040
511277.0	3708378.0	67.059270	512277.0	3708378.0	48.771210	513277.0	3708378.0	76.200250
514277.0	3708378.0	70.101180	515277.0	3708378.0	48.771210	516277.0	3708378.0	36.579170
517277.0	3708378.0	64.011250	518277.0	3708378.0	48.771210	519277.0	3708378.0	30.480100
520277.0	3708378.0	30.480100	521277.0	3708378.0	27.429040	522277.0	3708378.0	27.429040
511277.0	3707378.0	54.861130	512277.0	3707378.0	67.059270	513277.0	3707378.0	64.011250
514277.0	3707378.0	54.861130	515277.0	3707378.0	60.960200	516277.0	3707378.0	48.771210
517277.0	3707378.0	67.059270	518277.0	3707378.0	48.771210	519277.0	3707378.0	33.531160
520277.0	3707378.0	27.429040	521277.0	3707378.0	27.429040	522277.0	3707378.0	27.429040
511277.0	3706378.0	73.149190	512277.0	3706378.0	73.149190	513277.0	3706378.0	64.011250
514277.0	3706378.0	64.011250	515277.0	3706378.0	67.059270	516277.0	3706378.0	48.771210

- DISCRETE RECEPTOR TERRAIN ELEVATIONS (METERS) (CONT.) -

X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	ELEVATION
517277.0	3706378.0	48.771210	518277.0	3706378.0	54.861130	519277.0	3706378.0	36.579170
520277.0	3706378.0	30.480100	521277.0	3706378.0	30.480100	522277.0	3706378.0	27.429040
523277.0	3706378.0	27.429040	522402.0	3710378.0	27.429040	522402.0	3711378.0	30.480100
522402.0	3712378.0	30.480100	511277.0	3714176.0	36.579170	512277.0	3714176.0	36.579170
513277.0	3714176.0	33.531160	514277.0	3714176.0	30.480100	515277.0	3714176.0	48.771210
516277.0	3714176.0	48.771210	517277.0	3714176.0	70.101180	518277.0	3714176.0	33.531160
519277.0	3714176.0	27.429040	520277.0	3714176.0	30.480100	521277.0	3714176.0	30.480100
522277.0	3714176.0	30.480100	511277.0	3715176.0	45.720150	512277.0	3715176.0	60.960200
513277.0	3715176.0	39.621080	514277.0	3715176.0	51.819210	515277.0	3715176.0	54.861130
516277.0	3715176.0	39.621080	517277.0	3715176.0	30.480100	518277.0	3715176.0	30.480100
519277.0	3715176.0	27.429040	520277.0	3715176.0	24.381030	521277.0	3715176.0	30.480100
522277.0	3715176.0	30.480100	511277.0	3716176.0	60.960200	512277.0	3716176.0	39.621080
513277.0	3716176.0	51.819210	514277.0	3716176.0	60.960200	515277.0	3716176.0	70.101180
516277.0	3716176.0	24.381030	517277.0	3716176.0	30.480100	518277.0	3716176.0	30.480100
519277.0	3716176.0	30.480100	520277.0	3716176.0	33.531160	521277.0	3716176.0	27.429040
522277.0	3716176.0	27.429040	511277.0	3717176.0	48.771210	512277.0	3717176.0	54.861130
513277.0	3717176.0	60.960200	514277.0	3717176.0	60.960200	515277.0	3717176.0	42.669090
516277.0	3717176.0	30.480100	517277.0	3717176.0	30.480100	518277.0	3717176.0	33.531160
519277.0	3717176.0	36.579170	520277.0	3717176.0	30.480100	521277.0	3717176.0	27.429040
522277.0	3717176.0	27.429040	511277.0	3713176.0	42.669090	512277.0	3713176.0	36.579170
513277.0	3713176.0	36.579170	514277.0	3713176.0	36.579170	511277.0	3712176.0	36.579170
512277.0	3712176.0	39.621080	513277.0	3712176.0	39.621080	514277.0	3712176.0	33.531160
511277.0	3711176.0	48.771210	512277.0	3711176.0	64.011250	513277.0	3711176.0	39.621080
514277.0	3711176.0	45.720150	516500.0	3708100.0	67.668870	518100.0	3709350.0	79.251300
514500.0	3708800.0	80.470510	517300.0	3714400.0	76.200250			

- ISCLT INPUT DATA (CONT.) -

- AMBIENT AIR TEMPERATURE (DEGREES KELVIN) -

	STABILITY CATEGORY 1	STABILITY CATEGORY 2	STABILITY CATEGORY 3	STABILITY CATEGORY 4	STABILITY CATEGORY 5	STABILITY CATEGORY 6
SEASON 1	293.0000	293.0000	293.0000	293.0000	293.0000	293.0000

- MIXING LAYER HEIGHT (METERS) -

SEASON 1

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 2	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 3	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 4	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 5	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05
STABILITY CATEGORY 6	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05	0.100000E+05

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 1

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00032002	0.00034002	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00047003	0.00046003	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00006000	0.00034002	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00007000	0.00046003	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00009001	0.00057004	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00024002	0.00068005	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.00024002	0.00068005	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.00034002	0.00046003	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.00100007	0.00126009	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00017001	0.00023002	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00028002	0.00091006	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00038003	0.00068005	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.00055004	0.00091006	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00002000	0.00011001	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00017001	0.00023002	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00015001	0.00011001	0.00000000	0.00000000	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 2

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00093007	0.00263018	0.00240017	0.00000000	0.00000000	0.00000000
22.500	0.00051004	0.00114008	0.00103007	0.00000000	0.00000000	0.00000000
45.000	0.00080006	0.00263018	0.00126009	0.00000000	0.00000000	0.00000000
67.500	0.00068005	0.00148010	0.00057004	0.00000000	0.00000000	0.00000000
90.000	0.00152011	0.00217015	0.00137010	0.00000000	0.00000000	0.00000000
112.500	0.00100007	0.00320022	0.00137010	0.00000000	0.00000000	0.00000000
135.000	0.00077005	0.00342024	0.00205014	0.00000000	0.00000000	0.00000000
157.500	0.00087006	0.00205014	0.00091006	0.00000000	0.00000000	0.00000000
180.000	0.00242017	0.00457032	0.00297021	0.00000000	0.00000000	0.00000000
202.500	0.00083006	0.00171012	0.00160011	0.00000000	0.00000000	0.00000000
225.000	0.00101007	0.00331023	0.00263018	0.00000000	0.00000000	0.00000000
247.500	0.00139010	0.00217015	0.00194014	0.00000000	0.00000000	0.00000000
270.000	0.00195014	0.00263018	0.00297021	0.00000000	0.00000000	0.00000000
292.500	0.00061004	0.00091006	0.00068005	0.00000000	0.00000000	0.00000000
315.000	0.00102007	0.00228016	0.00068005	0.00000000	0.00000000	0.00000000
337.500	0.00060004	0.00080006	0.00068005	0.00000000	0.00000000	0.00000000

SEASON 1

STABILITY CATEGORY 3

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00029002	0.00263018	0.00662046	0.00068005	0.00000000	0.00000000
22.500	0.00020001	0.00126009	0.00308022	0.00046003	0.00000000	0.00000000
45.000	0.00034002	0.00148010	0.00354025	0.00000000	0.00000000	0.00000000
67.500	0.00019001	0.00103007	0.00285020	0.00023002	0.00000000	0.00000000
90.000	0.00047003	0.00354025	0.00479034	0.00023002	0.00000000	0.00000000
112.500	0.00016001	0.00251018	0.00411029	0.00080006	0.00000000	0.00000000
135.000	0.00042003	0.00274019	0.00719050	0.00057004	0.00000000	0.00000000
157.500	0.00064004	0.00240017	0.00468033	0.00068005	0.00000000	0.00000000
180.000	0.00057004	0.00502035	0.01119079	0.00297021	0.00000000	0.00000000
202.500	0.00027002	0.00228016	0.00388027	0.00091006	0.00000000	0.00000000
225.000	0.00043003	0.00285020	0.00457032	0.00080006	0.00011001	0.00000000
247.500	0.00063004	0.00228016	0.00525037	0.00023002	0.00000000	0.00000000
270.000	0.00015001	0.00228016	0.00411029	0.00034002	0.00000000	0.00000000
292.500	0.00004000	0.00068005	0.00251018	0.00068005	0.00000000	0.00000000
315.000	0.00013001	0.00194014	0.00479034	0.00091006	0.00000000	0.00000000
337.500	0.00019001	0.00103007	0.00388027	0.00034002	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 4

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00189013	0.00799056	0.02123149	0.02089147	0.00377026	0.00011001
22.500	0.00114008	0.00537038	0.01096077	0.00479034	0.00126009	0.00000000
45.000	0.00095007	0.00342024	0.00662046	0.00285020	0.00000000	0.00000000
67.500	0.00087006	0.00251018	0.00708050	0.00171012	0.00000000	0.00000000
90.000	0.00179013	0.00822058	0.00868061	0.00308022	0.00000000	0.00000000
112.500	0.00155011	0.00833058	0.00868061	0.00263018	0.00000000	0.00000000
135.000	0.00300021	0.01301091	0.02078146	0.00594042	0.00011001	0.00000000
157.500	0.00139010	0.00674047	0.02032143	0.01073075	0.00068005	0.00023002
180.000	0.00180013	0.01358095	0.02626184	0.02763194	0.00263018	0.00023002
202.500	0.00084006	0.00354025	0.00616043	0.00582041	0.00034002	0.00000000
225.000	0.00105007	0.00445031	0.00411029	0.00411029	0.00000000	0.00000000
247.500	0.00082006	0.00331023	0.00194014	0.00171012	0.00011001	0.00000000
270.000	0.00038003	0.00400028	0.00320022	0.00171012	0.00000000	0.00000000
292.500	0.00072005	0.00228016	0.00559039	0.00411029	0.00023002	0.00011001
315.000	0.00059004	0.00354025	0.01199084	0.01279090	0.00160011	0.00011001
337.500	0.00052004	0.00285020	0.00822058	0.00982069	0.00046003	0.00000000

SEASON 1

STABILITY CATEGORY 5

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00000000	0.00479034	0.00491034	0.00000000	0.00000000	0.00000000
22.500	0.00000000	0.00388027	0.00274019	0.00000000	0.00000000	0.00000000
45.000	0.00000000	0.00194014	0.00137010	0.00000000	0.00000000	0.00000000
67.500	0.00000000	0.00171012	0.00285020	0.00000000	0.00000000	0.00000000
90.000	0.00000000	0.00400028	0.00434030	0.00000000	0.00000000	0.00000000
112.500	0.00000000	0.00605042	0.00228016	0.00000000	0.00000000	0.00000000
135.000	0.00000000	0.01164082	0.00297021	0.00000000	0.00000000	0.00000000
157.500	0.00000000	0.00685048	0.00365026	0.00000000	0.00000000	0.00000000
180.000	0.00000000	0.01164082	0.00742052	0.00000000	0.00000000	0.00000000
202.500	0.00000000	0.00388027	0.00240017	0.00000000	0.00000000	0.00000000
225.000	0.00000000	0.00377026	0.00126009	0.00000000	0.00000000	0.00000000
247.500	0.00000000	0.00377026	0.00103007	0.00000000	0.00000000	0.00000000
270.000	0.00000000	0.00308022	0.00103007	0.00000000	0.00000000	0.00000000
292.500	0.00000000	0.00160011	0.00342024	0.00000000	0.00000000	0.00000000
315.000	0.00000000	0.00217015	0.00616043	0.00000000	0.00000000	0.00000000
337.500	0.00000000	0.00137010	0.00126009	0.00000000	0.00000000	0.00000000

- ISCLT INPUT DATA (CONT.) -

- FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY -

SEASON 1

STABILITY CATEGORY 6

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.5000MPS)	WIND SPEED CATEGORY 2 (2.5000MPS)	WIND SPEED CATEGORY 3 (4.3000MPS)	WIND SPEED CATEGORY 4 (6.8000MPS)	WIND SPEED CATEGORY 5 (9.5000MPS)	WIND SPEED CATEGORY 6 (12.5000MPS)
0.000	0.00626044	0.00662046	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00442031	0.00411029	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00215015	0.00183013	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00313022	0.00388027	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00875061	0.00925065	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.01413099	0.00993070	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.01685118	0.01119079	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.01255088	0.00811057	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.01656116	0.01621114	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00573040	0.00582041	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00513036	0.00491034	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.01214085	0.00605042	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.01282090	0.00651046	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00687048	0.00639045	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00475033	0.00548038	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00109008	0.00137010	0.00000000	0.00000000	0.00000000	0.00000000

- VERTICAL POTENTIAL TEMPERATURE GRADIENT (DEGREES KELVIN/METER) -

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 2	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 3	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 4	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
STABILITY CATEGORY 5	0.200000E-01	0.200000E-01	0.200000E-01	0.200000E-01	0.200000E-01	0.200000E-01
STABILITY CATEGORY 6	0.350000E-01	0.350000E-01	0.350000E-01	0.350000E-01	0.350000E-01	0.350000E-01

- WIND PROFILE POWER LAW EXPONENTS -

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY 1	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01
STABILITY CATEGORY 2	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01	0.700000E-01
STABILITY CATEGORY 3	0.100000E+00	0.100000E+00	0.100000E+00	0.100000E+00	0.100000E+00	0.100000E+00
STABILITY CATEGORY 4	0.150000E+00	0.150000E+00	0.150000E+00	0.150000E+00	0.150000E+00	0.150000E+00
STABILITY CATEGORY 5	0.350000E+00	0.350000E+00	0.350000E+00	0.350000E+00	0.350000E+00	0.350000E+00
STABILITY CATEGORY 6	0.550000E+00	0.550000E+00	0.550000E+00	0.550000E+00	0.550000E+00	0.550000E+00

NOTE THAT BUILDING DIMENSIONS ON CARD GROUP 17 FOR SOURCE NO. 1 DO NOT MEET THE SCHULMAN-SCIRE CRITERIA.
THEREFORE, DIRECTION SPECIFIC BUILDING DIMENSIONS WILL BE READ, BUT NOT USED BY THE MODEL.

- SOURCE INPUT DATA -

C A R D	T A P E	SOURCE NUMBER	SOURCE TYPE	X COORDINATE (M)	Y COORDINATE (M)	EMISSION HEIGHT (M)	BASE ELEV- ATION (M)	- SOURCE DETAILS DEPENDING ON TYPE -
X		1	STACK	516322.70	3711890.00	22.86	34.44	GAS EXIT TEMP (DEG K)= 427.59, GAS EXIT VEL. (M/SEC)= 16.61, STACK DIAMETER (M)= 3.423, HEIGHT OF ASSO. BLDG. (M)= 13.60, WIDTH OF ASSO. BLDG. (M)= 105.82, WAKE EFFECTS FLAG = 0

- SOURCE STRENGTHS (GRAMS PER SEC) -

SEASON 1	SEASON 2	SEASON 3	SEASON 4
1.04300E+01			

WARNING - HW/HB > 5 FOR SOURCE 1 PROG. USES LATERAL VIRTUAL DIST. FOR UPPER BOUND OF CONCENTRATION (DEPOSITION). IF LOWER BOUND IS DESIRED SET WAKE EFFECTS FLAG (WAKE) = 1 AND RERUN

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
516276.8	3711378.0	0.096891	516411.0	3712159.0	0.102915	516679.3	3711159.0	0.044442
516679.3	3711378.0	0.054312	517079.3	3711378.0	0.054970	517079.3	3711549.0	0.035543
517530.5	3711488.0	0.058311	517530.5	3711317.0	0.058353	518743.9	3711171.0	0.073960
518743.9	3711573.0	0.087284	519914.6	3711573.0	0.081601	519914.6	3711171.0	0.074855
520304.8	3711171.0	0.073511	520304.8	3711024.0	0.071654	520707.2	3711024.0	0.070247
520817.0	3711628.0	0.076209	520402.3	3712176.0	0.081658	518707.2	3712176.0	0.096780
518707.2	3712030.0	0.098334	518280.4	3712030.0	0.100403	518280.4	3712250.0	0.097363
518060.9	3712335.0	0.095373	518060.9	3712878.0	0.099238	517426.8	3712878.0	0.107225
517426.8	3713079.0	0.110532	516993.9	3713079.0	0.090658	516993.9	3713280.0	0.092661
516603.7	3713280.0	0.176981	516603.7	3712884.0	0.113947	516372.0	3712884.0	0.204856
516372.0	3712798.0	0.188015	516256.2	3712774.0	0.178417	516276.8	3711378.0	0.096891
516264.6	3712122.0	0.204607	516264.6	3711598.0	0.126528	516008.5	3712006.0	0.029023
516008.5	3712122.0	0.035580	516115.2	3712189.0	0.059375	516179.3	3712061.0	0.084675
516179.3	3712122.0	0.086752	516264.6	3712122.0	0.204607	515277.0	3711278.0	0.056983
515377.0	3711278.0	0.055782	515477.0	3711278.0	0.054628	515577.0	3711278.0	0.053365
515677.0	3711278.0	0.051970	515777.0	3711278.0	0.047274	515877.0	3711278.0	0.044917
515977.0	3711278.0	0.051087	516077.0	3711278.0	0.060042	516177.0	3711278.0	0.093063
516277.0	3711278.0	0.110138	516377.0	3711278.0	0.131092	516477.0	3711278.0	0.090503
516577.0	3711278.0	0.056068	516677.0	3711278.0	0.047380	516777.0	3711278.0	0.049858
516877.0	3711278.0	0.053299	516977.0	3711278.0	0.059640	517077.0	3711278.0	0.066179
517177.0	3711278.0	0.064718	515277.0	3711178.0	0.061389	515377.0	3711178.0	0.066341
515477.0	3711178.0	0.060393	515577.0	3711178.0	0.060028	515677.0	3711178.0	0.064439
515777.0	3711178.0	0.063822	515877.0	3711178.0	0.063361	515977.0	3711178.0	0.058885
516077.0	3711178.0	0.069446	516177.0	3711178.0	0.077152	516277.0	3711178.0	0.099766
516377.0	3711178.0	0.097155	516477.0	3711178.0	0.070989	516577.0	3711178.0	0.050514
516677.0	3711178.0	0.041937	516777.0	3711178.0	0.050701	516877.0	3711178.0	0.061525
516977.0	3711178.0	0.073804	517077.0	3711178.0	0.080063	517177.0	3711178.0	0.077600
515277.0	3711078.0	0.078093	515377.0	3711078.0	0.071895	515477.0	3711078.0	0.061499
515577.0	3711078.0	0.071433	515677.0	3711078.0	0.078417	515777.0	3711078.0	0.079883
515877.0	3711078.0	0.083189	515977.0	3711078.0	0.078447	516077.0	3711078.0	0.084385
516177.0	3711078.0	0.104774	516277.0	3711078.0	0.112114	516377.0	3711078.0	0.108512
516477.0	3711078.0	0.084249	516577.0	3711078.0	0.072848	516677.0	3711078.0	0.045057
516777.0	3711078.0	0.052878	516877.0	3711078.0	0.062685	516977.0	3711078.0	0.082946
517077.0	3711078.0	0.085311	517177.0	3711078.0	0.090790	515277.0	3710978.0	0.083089
515377.0	3710978.0	0.077519	515477.0	3710978.0	0.065745	515577.0	3710978.0	0.076418
515677.0	3710978.0	0.084853	515777.0	3710978.0	0.097645	515877.0	3710978.0	0.091567
515977.0	3710978.0	0.101994	516077.0	3710978.0	0.125732	516177.0	3710978.0	0.135236
516277.0	3710978.0	0.162748	516377.0	3710978.0	0.138869	516477.0	3710978.0	0.098197
516577.0	3710978.0	0.077086	516677.0	3710978.0	0.067355	516777.0	3710978.0	0.062234
516877.0	3710978.0	0.071731	516977.0	3710978.0	0.082531	517077.0	3710978.0	0.094100
517177.0	3710978.0	0.095394	515277.0	3710878.0	0.087969	515377.0	3710878.0	0.075491
515477.0	3710878.0	0.074543	515577.0	3710878.0	0.081041	515677.0	3710878.0	0.100527
515777.0	3710878.0	0.117173	515877.0	3710878.0	0.110117	515977.0	3710878.0	0.130409
516077.0	3710878.0	0.181267	516177.0	3710878.0	0.169864	516277.0	3710878.0	0.177762

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
516377.0	3710878.0	0.153552	516477.0	3710878.0	0.126483	516577.0	3710878.0	0.114946
516677.0	3710878.0	0.102148	516777.0	3710878.0	0.090256	516877.0	3710878.0	0.081171
516977.0	3710878.0	0.091841	517077.0	3710878.0	0.092913	517177.0	3710878.0	0.103861
515277.0	3710778.0	0.091326	515377.0	3710778.0	0.078163	515477.0	3710778.0	0.092217
515577.0	3710778.0	0.085273	515677.0	3710778.0	0.106175	515777.0	3710778.0	0.138944
515877.0	3710778.0	0.133367	515977.0	3710778.0	0.162551	516077.0	3710778.0	0.221966
516177.0	3710778.0	0.182963	516277.0	3710778.0	0.213723	516377.0	3710778.0	0.186130
516477.0	3710778.0	0.175904	516577.0	3710778.0	0.144758	516677.0	3710778.0	0.147285
516777.0	3710778.0	0.115676	516877.0	3710778.0	0.113104	516977.0	3710778.0	0.126241
517077.0	3710778.0	0.125677	517177.0	3710778.0	0.101984	515277.0	3710678.0	0.087005
515377.0	3710678.0	0.087278	515477.0	3710678.0	0.095969	515577.0	3710678.0	0.097796
515677.0	3710678.0	0.100400	515777.0	3710678.0	0.115646	515877.0	3710678.0	0.146828
515977.0	3710678.0	0.198330	516077.0	3710678.0	0.235421	516177.0	3710678.0	0.217893
516277.0	3710678.0	0.224289	516377.0	3710678.0	0.220348	516477.0	3710678.0	0.188254
516577.0	3710678.0	0.176785	516677.0	3710678.0	0.162719	516777.0	3710678.0	0.131173
516877.0	3710678.0	0.111727	516977.0	3710678.0	0.111333	517077.0	3710678.0	0.110893
517177.0	3710678.0	0.100281	515277.0	3710578.0	0.096487	515377.0	3710578.0	0.097761
515477.0	3710578.0	0.119932	515577.0	3710578.0	0.123805	515677.0	3710578.0	0.115642
515777.0	3710578.0	0.150100	515877.0	3710578.0	0.178623	515977.0	3710578.0	0.211242
516077.0	3710578.0	0.220498	516177.0	3710578.0	0.254845	516277.0	3710578.0	0.260132
516377.0	3710578.0	0.286057	516477.0	3710578.0	0.247566	516577.0	3710578.0	0.210740
516677.0	3710578.0	0.176446	516777.0	3710578.0	0.118439	516877.0	3710578.0	0.100180
516977.0	3710578.0	0.090511	517077.0	3710578.0	0.099096	517177.0	3710578.0	0.098702
515277.0	3710478.0	0.098933	515377.0	3710478.0	0.120264	515477.0	3710478.0	0.136721
515577.0	3710478.0	0.141902	515677.0	3710478.0	0.132729	515777.0	3710478.0	0.162170
515877.0	3710478.0	0.208914	515977.0	3710478.0	0.243599	516077.0	3710478.0	0.257114
516177.0	3710478.0	0.293635	516277.0	3710478.0	0.297419	516377.0	3710478.0	0.293139
516477.0	3710478.0	0.256717	516577.0	3710478.0	0.221607	516677.0	3710478.0	0.188537
516777.0	3710478.0	0.143092	516877.0	3710478.0	0.108101	516977.0	3710478.0	0.108106
517077.0	3710478.0	0.097854	517177.0	3710478.0	0.097204	515277.0	3710378.0	0.101272
515377.0	3710378.0	0.112750	515477.0	3710378.0	0.127346	515577.0	3710378.0	0.145892
515677.0	3710378.0	0.165725	515777.0	3710378.0	0.189642	515877.0	3710378.0	0.220285
515977.0	3710378.0	0.253719	516077.0	3710378.0	0.239034	516177.0	3710378.0	0.270426
516277.0	3710378.0	0.273306	516377.0	3710378.0	0.269813	516477.0	3710378.0	0.216136
516577.0	3710378.0	0.208801	516677.0	3710378.0	0.180343	516777.0	3710378.0	0.153872
516877.0	3710378.0	0.142296	516977.0	3710378.0	0.106504	517077.0	3710378.0	0.096615
517177.0	3710378.0	0.095750	515277.0	3712276.0	0.073960	515377.0	3712276.0	0.070772
515477.0	3712276.0	0.066485	515577.0	3712276.0	0.058502	515677.0	3712276.0	0.054306
515777.0	3712276.0	0.041517	515877.0	3712276.0	0.034582	515977.0	3712276.0	0.031272
516077.0	3712276.0	0.036833	516177.0	3712276.0	0.072937	516277.0	3712276.0	0.151577
516377.0	3712276.0	0.101767	516477.0	3712276.0	0.033321	516577.0	3712276.0	0.026246
516677.0	3712276.0	0.028516	516777.0	3712276.0	0.030047	516877.0	3712276.0	0.046170
516977.0	3712276.0	0.048927	517077.0	3712276.0	0.054138	517177.0	3712276.0	0.060604
515277.0	3712376.0	0.079291	515377.0	3712376.0	0.076582	515477.0	3712376.0	0.073506

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
515577.0	3712376.0	0.069318	515677.0	3712376.0	0.067739	515777.0	3712376.0	0.059957
515877.0	3712376.0	0.054627	515977.0	3712376.0	0.059029	516077.0	3712376.0	0.064527
516177.0	3712376.0	0.102739	516277.0	3712376.0	0.134825	516377.0	3712376.0	0.097776
516477.0	3712376.0	0.048617	516577.0	3712376.0	0.029137	516677.0	3712376.0	0.030215
516777.0	3712376.0	0.043491	516877.0	3712376.0	0.050562	516977.0	3712376.0	0.056430
517077.0	3712376.0	0.062939	517177.0	3712376.0	0.070452	515277.0	3712476.0	0.093533
515377.0	3712476.0	0.092021	515477.0	3712476.0	0.082497	515577.0	3712476.0	0.080501
515677.0	3712476.0	0.085708	515777.0	3712476.0	0.074422	515877.0	3712476.0	0.060089
515977.0	3712476.0	0.058204	516077.0	3712476.0	0.070703	516177.0	3712476.0	0.113491
516277.0	3712476.0	0.137579	516377.0	3712476.0	0.106885	516477.0	3712476.0	0.064764
516577.0	3712476.0	0.034856	516677.0	3712476.0	0.041596	516777.0	3712476.0	0.046751
516877.0	3712476.0	0.061934	516977.0	3712476.0	0.064770	517077.0	3712476.0	0.070977
517177.0	3712476.0	0.072161	515277.0	3712576.0	0.102307	515377.0	3712576.0	0.101886
515477.0	3712576.0	0.092621	515577.0	3712576.0	0.092193	515677.0	3712576.0	0.096423
515777.0	3712576.0	0.083400	515877.0	3712576.0	0.070160	515977.0	3712576.0	0.062542
516077.0	3712576.0	0.084065	516177.0	3712576.0	0.112191	516277.0	3712576.0	0.153333
516377.0	3712576.0	0.125756	516477.0	3712576.0	0.085199	516577.0	3712576.0	0.048748
516677.0	3712576.0	0.045484	516777.0	3712576.0	0.051530	516877.0	3712576.0	0.064578
516977.0	3712576.0	0.076103	517077.0	3712576.0	0.074388	517177.0	3712576.0	0.078987
515277.0	3712676.0	0.102837	515377.0	3712676.0	0.103085	515477.0	3712676.0	0.113448
515577.0	3712676.0	0.109633	515677.0	3712676.0	0.098954	515777.0	3712676.0	0.088869
515877.0	3712676.0	0.080097	515977.0	3712676.0	0.073392	516077.0	3712676.0	0.091766
516177.0	3712676.0	0.139693	516277.0	3712676.0	0.158992	516377.0	3712676.0	0.135420
516477.0	3712676.0	0.099138	516577.0	3712676.0	0.068151	516677.0	3712676.0	0.052315
516777.0	3712676.0	0.056220	516877.0	3712676.0	0.060930	516977.0	3712676.0	0.074946
517077.0	3712676.0	0.083994	517177.0	3712676.0	0.085947	515277.0	3712776.0	0.103610
515377.0	3712776.0	0.104387	515477.0	3712776.0	0.101204	515577.0	3712776.0	0.110889
515677.0	3712776.0	0.101617	515777.0	3712776.0	0.076057	515877.0	3712776.0	0.086717
515977.0	3712776.0	0.087662	516077.0	3712776.0	0.113532	516177.0	3712776.0	0.144967
516277.0	3712776.0	0.162337	516377.0	3712776.0	0.157374	516477.0	3712776.0	0.109390
516577.0	3712776.0	0.080321	516677.0	3712776.0	0.056019	516777.0	3712776.0	0.059117
516877.0	3712776.0	0.066626	516977.0	3712776.0	0.074505	517077.0	3712776.0	0.087827
517177.0	3712776.0	0.095436	515277.0	3712876.0	0.112509	515377.0	3712876.0	0.110049
515477.0	3712876.0	0.101750	515577.0	3712876.0	0.093705	515677.0	3712876.0	0.104626
515777.0	3712876.0	0.079819	515877.0	3712876.0	0.082931	515977.0	3712876.0	0.094728
516077.0	3712876.0	0.133130	516177.0	3712876.0	0.148847	516277.0	3712876.0	0.164277
516377.0	3712876.0	0.159968	516477.0	3712876.0	0.127305	516577.0	3712876.0	0.097497
516677.0	3712876.0	0.071583	516777.0	3712876.0	0.067285	516877.0	3712876.0	0.073431
516977.0	3712876.0	0.074678	517077.0	3712876.0	0.086887	517177.0	3712876.0	0.093535
515277.0	3712976.0	0.117519	515377.0	3712976.0	0.110071	515477.0	3712976.0	0.102678
515577.0	3712976.0	0.095602	515677.0	3712976.0	0.089162	515777.0	3712976.0	0.083701
515877.0	3712976.0	0.098906	515977.0	3712976.0	0.122548	516077.0	3712976.0	0.150609
516177.0	3712976.0	0.182474	516277.0	3712976.0	0.179142	516377.0	3712976.0	0.174953
516477.0	3712976.0	0.142905	516577.0	3712976.0	0.113092	516677.0	3712976.0	0.086470

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
516777.0	3712976.0	0.070229	516877.0	3712976.0	0.075211	516977.0	3712976.0	0.080741
517077.0	3712976.0	0.081058	517177.0	3712976.0	0.086801	515277.0	3713076.0	0.117087
515377.0	3713076.0	0.110440	515477.0	3713076.0	0.103916	515577.0	3713076.0	0.097752
515677.0	3713076.0	0.092225	515777.0	3713076.0	0.087631	515877.0	3713076.0	0.093776
515977.0	3713076.0	0.114143	516077.0	3713076.0	0.137720	516177.0	3713076.0	0.164016
516277.0	3713076.0	0.192264	516377.0	3713076.0	0.172632	516477.0	3713076.0	0.156920
516577.0	3713076.0	0.127429	516677.0	3713076.0	0.109455	516777.0	3713076.0	0.090509
516877.0	3713076.0	0.077097	516977.0	3713076.0	0.081664	517077.0	3713076.0	0.086515
517177.0	3713076.0	0.091420	515277.0	3713176.0	0.116981	515377.0	3713176.0	0.111095
515477.0	3713176.0	0.105384	515577.0	3713176.0	0.100057	515677.0	3713176.0	0.095352
515777.0	3713176.0	0.100541	515877.0	3713176.0	0.117110	515977.0	3713176.0	0.127445
516077.0	3713176.0	0.165122	516177.0	3713176.0	0.176689	516277.0	3713176.0	0.204092
516377.0	3713176.0	0.200108	516477.0	3713176.0	0.169662	516577.0	3713176.0	0.140641
516677.0	3713176.0	0.113761	516777.0	3713176.0	0.096888	516877.0	3713176.0	0.085287
516977.0	3713176.0	0.077180	517077.0	3713176.0	0.086768	517177.0	3713176.0	0.120346
515277.0	3712176.0	0.075481	515377.0	3712176.0	0.065187	515477.0	3712176.0	0.065938
515577.0	3712176.0	0.051188	515677.0	3712176.0	0.041251	515777.0	3712176.0	0.032047
515877.0	3712176.0	0.024773	515977.0	3712176.0	0.024758	516077.0	3712176.0	0.044669
516177.0	3712176.0	0.073691	515277.0	3712076.0	0.065844	515377.0	3712076.0	0.060900
515477.0	3712076.0	0.058866	515577.0	3712076.0	0.043120	515677.0	3712076.0	0.039059
515777.0	3712076.0	0.029719	515877.0	3712076.0	0.024519	515977.0	3712076.0	0.027822
516077.0	3712076.0	0.028693	516177.0	3712076.0	0.075511	515277.0	3711976.0	0.069745
515377.0	3711976.0	0.063974	515477.0	3711976.0	0.049766	515577.0	3711976.0	0.038450
515677.0	3711976.0	0.033383	515777.0	3711976.0	0.023776	515877.0	3711976.0	0.020210
515977.0	3711976.0	0.023529	516077.0	3711976.0	0.031733	516177.0	3711976.0	0.038901
515277.0	3711876.0	0.074943	515377.0	3711876.0	0.056635	515477.0	3711876.0	0.053185
515577.0	3711876.0	0.040909	515677.0	3711876.0	0.031141	515777.0	3711876.0	0.021223
515877.0	3711876.0	0.016999	515977.0	3711876.0	0.019275	516077.0	3711876.0	0.026153
516177.0	3711876.0	0.046651	515277.0	3711776.0	0.066216	515377.0	3711776.0	0.054332
515477.0	3711776.0	0.045765	515577.0	3711776.0	0.034801	515677.0	3711776.0	0.026157
515777.0	3711776.0	0.017401	515877.0	3711776.0	0.013082	515977.0	3711776.0	0.013124
516077.0	3711776.0	0.015681	516177.0	3711776.0	0.028322	515277.0	3711676.0	0.064672
515377.0	3711676.0	0.052534	515477.0	3711676.0	0.044783	515577.0	3711676.0	0.034711
515677.0	3711676.0	0.027104	515777.0	3711676.0	0.016502	515877.0	3711676.0	0.011552
515977.0	3711676.0	0.011488	516077.0	3711676.0	0.014959	516177.0	3711676.0	0.054652
515277.0	3711576.0	0.057498	515377.0	3711576.0	0.051642	515477.0	3711576.0	0.045248
515577.0	3711576.0	0.036985	515677.0	3711576.0	0.026790	515777.0	3711576.0	0.018627
515877.0	3711576.0	0.016580	515977.0	3711576.0	0.015421	516077.0	3711576.0	0.027228
516177.0	3711576.0	0.072381	515277.0	3711476.0	0.051905	515377.0	3711476.0	0.048270
515477.0	3711476.0	0.045616	515577.0	3711476.0	0.036866	515677.0	3711476.0	0.030801
515777.0	3711476.0	0.030418	515877.0	3711476.0	0.025791	515977.0	3711476.0	0.028288
516077.0	3711476.0	0.041968	516177.0	3711476.0	0.079240	511277.0	3709378.0	0.081703
512277.0	3709378.0	0.087965	513277.0	3709378.0	0.096097	514277.0	3709378.0	0.118068
515277.0	3709378.0	0.162143	516277.0	3709378.0	0.264361	517277.0	3709378.0	0.109519

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
518277.0	3709378.0	0.196221	519277.0	3709378.0	0.105487	520277.0	3709378.0	0.079348
521277.0	3709378.0	0.062876	522277.0	3709378.0	0.048828	511277.0	3708378.0	0.074871
512277.0	3708378.0	0.068247	513277.0	3708378.0	0.095272	514277.0	3708378.0	0.126129
515277.0	3708378.0	0.155815	516277.0	3708378.0	0.202532	517277.0	3708378.0	0.181382
518277.0	3708378.0	0.116778	519277.0	3708378.0	0.101462	520277.0	3708378.0	0.097431
521277.0	3708378.0	0.073796	522277.0	3708378.0	0.061063	511277.0	3707378.0	0.065394
512277.0	3707378.0	0.078903	513277.0	3707378.0	0.100785	514277.0	3707378.0	0.120681
515277.0	3707378.0	0.195407	516277.0	3707378.0	0.237463	517277.0	3707378.0	0.185170
518277.0	3707378.0	0.087912	519277.0	3707378.0	0.085377	520277.0	3707378.0	0.087567
521277.0	3707378.0	0.084069	522277.0	3707378.0	0.070264	511277.0	3706378.0	0.067000
512277.0	3706378.0	0.083258	513277.0	3706378.0	0.102810	514277.0	3706378.0	0.131720
515277.0	3706378.0	0.188420	516277.0	3706378.0	0.213793	517277.0	3706378.0	0.153977
518277.0	3706378.0	0.101982	519277.0	3706378.0	0.072424	520277.0	3706378.0	0.076224
521277.0	3706378.0	0.083319	522277.0	3706378.0	0.076387	523277.0	3706378.0	0.065723
522402.0	3710378.0	0.051682	522402.0	3711378.0	0.060425	522402.0	3712378.0	0.062465
511277.0	3714176.0	0.109501	512277.0	3714176.0	0.126912	513277.0	3714176.0	0.141044
514277.0	3714176.0	0.149910	515277.0	3714176.0	0.224339	516277.0	3714176.0	0.456880
517277.0	3714176.0	0.180099	518277.0	3714176.0	0.098628	519277.0	3714176.0	0.078662
520277.0	3714176.0	0.072109	521277.0	3714176.0	0.065145	522277.0	3714176.0	0.060597
511277.0	3715176.0	0.163077	512277.0	3715176.0	0.260922	513277.0	3715176.0	0.184706
514277.0	3715176.0	0.245178	515277.0	3715176.0	0.310394	516277.0	3715176.0	0.346378
517277.0	3715176.0	0.139048	518277.0	3715176.0	0.083382	519277.0	3715176.0	0.075043
520277.0	3715176.0	0.063831	521277.0	3715176.0	0.063967	522277.0	3715176.0	0.059400
511277.0	3716176.0	0.240765	512277.0	3716176.0	0.174399	513277.0	3716176.0	0.229736
514277.0	3716176.0	0.256283	515277.0	3716176.0	0.343759	516277.0	3716176.0	0.236503
517277.0	3716176.0	0.160615	518277.0	3716176.0	0.077079	519277.0	3716176.0	0.072455
520277.0	3716176.0	0.071297	521277.0	3716176.0	0.058815	522277.0	3716176.0	0.054394
511277.0	3717176.0	0.201240	512277.0	3717176.0	0.228802	513277.0	3717176.0	0.237075
514277.0	3717176.0	0.243193	515277.0	3717176.0	0.240632	516277.0	3717176.0	0.248201
517277.0	3717176.0	0.167613	518277.0	3717176.0	0.093335	519277.0	3717176.0	0.076531
520277.0	3717176.0	0.063695	521277.0	3717176.0	0.056511	522277.0	3717176.0	0.052609
511277.0	3713176.0	0.122099	512277.0	3713176.0	0.110082	513277.0	3713176.0	0.116887
514277.0	3713176.0	0.140152	511277.0	3712176.0	0.104462	512277.0	3712176.0	0.119249
513277.0	3712176.0	0.124324	514277.0	3712176.0	0.103143	511277.0	3711176.0	0.115086
512277.0	3711176.0	0.148213	513277.0	3711176.0	0.089350	514277.0	3711176.0	0.087603
511277.0	3709378.0	0.081703	512277.0	3709378.0	0.087965	513277.0	3709378.0	0.096097
514277.0	3709378.0	0.118068	515277.0	3709378.0	0.162143	516277.0	3709378.0	0.264361
517277.0	3709378.0	0.109519	518277.0	3709378.0	0.196221	519277.0	3709378.0	0.105487
520277.0	3709378.0	0.079348	521277.0	3709378.0	0.062876	522277.0	3709378.0	0.048828
511277.0	3708378.0	0.074871	512277.0	3708378.0	0.068247	513277.0	3708378.0	0.095272
514277.0	3708378.0	0.126129	515277.0	3708378.0	0.155815	516277.0	3708378.0	0.202532
517277.0	3708378.0	0.181382	518277.0	3708378.0	0.116778	519277.0	3708378.0	0.101462
520277.0	3708378.0	0.097431	521277.0	3708378.0	0.073796	522277.0	3708378.0	0.061063
511277.0	3707378.0	0.065394	512277.0	3707378.0	0.078903	513277.0	3707378.0	0.100785

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- DISCRETE RECEPTORS -

X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION	X DISTANCE (METERS)	Y DISTANCE (METERS)	CONCENTRATION
514277.0	3707378.0	0.120681	515277.0	3707378.0	0.195407	516277.0	3707378.0	0.237463
517277.0	3707378.0	0.185170	518277.0	3707378.0	0.087912	519277.0	3707378.0	0.085377
520277.0	3707378.0	0.087567	521277.0	3707378.0	0.084069	522277.0	3707378.0	0.070264
511277.0	3706378.0	0.067000	512277.0	3706378.0	0.083258	513277.0	3706378.0	0.102810
514277.0	3706378.0	0.131720	515277.0	3706378.0	0.188420	516277.0	3706378.0	0.213793
517277.0	3706378.0	0.153977	518277.0	3706378.0	0.101982	519277.0	3706378.0	0.072424
520277.0	3706378.0	0.076224	521277.0	3706378.0	0.083319	522277.0	3706378.0	0.076387
523277.0	3706378.0	0.065723	522402.0	3710378.0	0.051682	522402.0	3711378.0	0.060425
522402.0	3712378.0	0.062465	511277.0	3714176.0	0.109501	512277.0	3714176.0	0.126912
513277.0	3714176.0	0.141044	514277.0	3714176.0	0.149910	515277.0	3714176.0	0.224339
516277.0	3714176.0	0.456880	517277.0	3714176.0	0.180099	518277.0	3714176.0	0.098628
519277.0	3714176.0	0.078662	520277.0	3714176.0	0.072109	521277.0	3714176.0	0.065145
522277.0	3714176.0	0.060597	511277.0	3715176.0	0.163077	512277.0	3715176.0	0.260922
513277.0	3715176.0	0.184706	514277.0	3715176.0	0.245178	515277.0	3715176.0	0.310394
516277.0	3715176.0	0.346378	517277.0	3715176.0	0.139048	518277.0	3715176.0	0.083382
519277.0	3715176.0	0.075043	520277.0	3715176.0	0.063831	521277.0	3715176.0	0.063967
522277.0	3715176.0	0.059400	511277.0	3716176.0	0.240765	512277.0	3716176.0	0.174399
513277.0	3716176.0	0.229736	514277.0	3716176.0	0.256283	515277.0	3716176.0	0.343759
516277.0	3716176.0	0.236503	517277.0	3716176.0	0.160615	518277.0	3716176.0	0.077079
519277.0	3716176.0	0.072455	520277.0	3716176.0	0.071297	521277.0	3716176.0	0.058815
522277.0	3716176.0	0.054394	511277.0	3717176.0	0.201240	512277.0	3717176.0	0.228802
513277.0	3717176.0	0.237075	514277.0	3717176.0	0.243193	515277.0	3717176.0	0.240632
516277.0	3717176.0	0.248201	517277.0	3717176.0	0.167613	518277.0	3717176.0	0.093335
519277.0	3717176.0	0.076531	520277.0	3717176.0	0.063695	521277.0	3717176.0	0.056511
522277.0	3717176.0	0.052609	511277.0	3713176.0	0.122099	512277.0	3713176.0	0.110082
513277.0	3713176.0	0.116887	514277.0	3713176.0	0.140152	511277.0	3712176.0	0.104462
512277.0	3712176.0	0.119249	513277.0	3712176.0	0.124324	514277.0	3712176.0	0.103143
511277.0	3711176.0	0.115086	512277.0	3711176.0	0.148213	513277.0	3711176.0	0.089350
514277.0	3711176.0	0.087603	516500.0	3708100.0	0.289824	518100.0	3709350.0	0.184353
514500.0	3708800.0	0.131948	517300.0	3714400.0	0.197587			

- PROGRAM DETERMINED MAXIMUM 10 VALUES -

X COORDINATE (METERS)	Y COORDINATE (METERS)	CONCENTRATION
516277.00	3714176.00	0.456880
516277.00	3714176.00	0.456880
516277.00	3715176.00	0.346378
516277.00	3715176.00	0.346378
515277.00	3716176.00	0.343759
515277.00	3716176.00	0.343759

** ANNUAL GROUND LEVEL CONCENTRATION (MICROGRAMS PER CUBIC METER) FROM ALL SOURCES COMBINED (CONT.) **

- PROGRAM DETERMINED MAXIMUM 10 VALUES -

X COORDINATE (METERS)	Y COORDINATE (METERS)	CONCENTRATION
515277.00	3715176.00	0.310394
515277.00	3715176.00	0.310394
516277.00	3710478.00	0.297419
516177.00	3710478.00	0.293635

********** END OF ISCLT PROGRAM, 1 SOURCES PROCESSED **********

SECTION H.6

1981 MODELING OUTPUT FOR NOx COMPLEX I

COMPLEX I (DATED 90095)
BOWMAN ENVIRONMENTAL ENGINEERING VER. 6.27

SESSION INFORMATION

INPUT DATA FILE NAME : ICNOX81.DTA
OUTPUT LIST FILE NAME : ICNOX81.LST
MET DATA FILE NAME : c:\bee\shvggg81.bin

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
NOX SCREEN - 1981 SHREVEPORT/LONGVIEW BINARY MET. DATA

GENERAL INPUT INFORMATION

THIS RUN OF COMPLEX I -VERSION 2.0 IS FOR THE POLLUTANT PART FOR 365 24-HOUR PERIODS.
CONCENTRATION ESTIMATES BEGIN ON HOUR- 1,JULIAN DAY- 1, YEAR-1981.
A FACTOR OF 1.0000000 HAS BEEN SPECIFIED TO CONVERT USER LENGTH UNITS TO KILOMETERS.
0 SIGNIFICANT SOURCES ARE TO BE CONSIDERED.
THIS RUN WILL NOT CONSIDER ANY POLLUTANT LOSS.
HIGH-FIVE SUMMARY CONCENTRATION TABLES WILL BE OUTPUT FOR 4 AVERAGING PERIODS.
AVG TIMES OF 1,3,8, AND 24 HOURS ARE AUTOMATICALLY DISPLAYED.

OPTION	OPTION LIST	OPTION SPECIFICATION : 0= IGNORE OPTION 1= USE OPTION
	TECHNICAL OPTIONS	
1	TERRAIN ADJUSTMENTS	0
2	DO NOT INCLUDE STACK DOWNWASH CALCULATIONS	0
3	DO NOT INCLUDE GRADUAL PLUME RISE CALCULATIONS	1
4	CALCULATE INITIAL PLUME SIZE	1
	INPUT OPTIONS	
5	READ MET DATA FROM CARDS	0
6	READ HOURLY EMISSIONS	0
7	SPECIFY SIGNIFICANT SOURCES	0
8	READ RADIAL DISTANCES TO GENERATE RECEPTORS	0
	PRINTED OUTPUT OPTIONS	
9	DELETE EMISSIONS WITH HEIGHT TABLE	1
10	DELETE MET DATA SUMMARY FOR AVG PERIOD	1
11	DELETE HOURLY CONTRIBUTIONS	1
12	DELETE MET DATA ON HOURLY CONTRIBUTIONS	1
13	DELETE FINAL PLUME RISE CALC ON HRLY CONTRIBUTIONS	1
14	DELETE HOURLY SUMMARY	1
15	DELETE MET DATA ON HRLY SUMMARY	1
16	DELETE FINAL PLUME RISE CALC ON HRLY SUMMARY	1
17	DELETE AVG-PERIOD CONTRIBUTIONS	1
18	DELETE AVERAGING PERIOD SUMMARY	1
19	DELETE AVG CONCENTRATIONS AND HI-5 TABLES	0
	OTHER CONTROL AND OUTPUT OPTIONS	
20	RUN IS PART OF A SEGMENTED RUN	0
21	WRITE PARTIAL CONC TO DISK OR TAPE	0
22	WRITE HOURLY CONC TO DISK OR TAPE	0
23	WRITE AVG-PERIOD CONC TO DISK OR TAPE	0
24	PUNCH AVG-PERIOD CONC ONTO CARDS	0
25	COMPLEX TERRAIN OPTION	1
26	CALM PROCESSING OPTION	0
27	VALLEY SCREENING OPTION	0

ANEMOMETER HEIGHT= 10.00
WIND PROFILE WITH HEIGHT EXPONENTS CORRESPONDING TO STABILITY ARE AS FOLLOWS:
FOR STABILITY A: 0.07
STABILITY B: 0.07
STABILITY C: 0.10
STABILITY D: 0.15
STABILITY E: 0.35
STABILITY F: 0.55

POINT SOURCE INFORMATION

SOURCE		EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	SO2(G/SEC) EMISSIONS	PART(G/SEC) EMISSIONS	STACK HT(M)	STACK TEMP(K)	STACK DIAM(M)	STACK VEL(M/SEC)	POTEN. IMPACT (MICRO G/M**3)	EFF HT(M)	GRD-LVL ELEV USER HT UNITS	BUOY FLUX F M**4/S**3
1 1	COGEN	516.32	3711.89	0.00	10.43	22.9	427.6	3.4	16.6	8.07	283.88	34.40	150.19

ADDITIONAL INFORMATION ON SOURCES.

EMISSION INFORMATION FOR 1 (NPT) POINT SOURCES HAS BEEN INPUT
0 SIGNIFICANT POINT SOURCES(NSIGP) ARE TO BE USED FOR THIS RUN
THE ORDER OF SIGNIFICANCE(IMPS) FOR 25 OR LESS POINT SOURCES USED IN THIS RUN AS LISTED BY POINT SOURCE NUMBER:

SURFACE MET DATA FROM STATION(ISFCD) 13957, YEAR(ISFCYR) 1981
MIXING HEIGHT DATA FROM STATION(IMXD) 3951, YEAR(IMXYR) 1981

RECEPTOR INFORMATION

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)
1		515.977	3710.478	0.0	57.9
2		515.877	3710.478	0.0	57.9
3		515.777	3710.378	0.0	57.9
4		515.877	3710.378	0.0	57.9
5		515.677	3710.378	0.0	57.9
6		515.977	3710.378	0.0	57.9
7		511.277	3709.378	0.0	64.0
8		512.277	3709.378	0.0	61.0
9		513.277	3709.378	0.0	73.2
10		514.277	3709.378	0.0	64.0
11		515.277	3709.378	0.0	57.9
12		518.277	3709.378	0.0	61.0
13		511.277	3708.378	0.0	67.1
14		513.277	3708.378	0.0	76.2
15		514.277	3708.378	0.0	70.1
16		517.277	3708.378	0.0	64.0
17		513.277	3707.378	0.0	64.0
18		512.277	3707.378	0.0	67.1
19		515.277	3707.378	0.0	61.0
20		517.277	3707.378	0.0	67.1
21		511.277	3706.378	0.0	73.2
22		512.277	3706.378	0.0	73.2
23		513.277	3706.378	0.0	64.0
24		514.277	3706.378	0.0	64.0
25		515.277	3706.378	0.0	67.1
26		517.277	3714.176	0.0	70.1
27		512.277	3715.176	0.0	61.0
28		514.277	3716.176	0.0	61.0
29		515.277	3716.176	0.0	70.1
30		513.277	3717.176	0.0	61.0
31		514.277	3717.176	0.0	61.0
32		512.277	3711.176	0.0	64.0
33		511.277	3709.378	0.0	64.0
34		511.277	3709.378	0.0	61.0
35		513.277	3709.378	0.0	73.2
36		514.277	3709.378	0.0	64.0
37		515.277	3709.378	0.0	57.9
38		511.277	3708.378	0.0	67.1
39		513.277	3708.378	0.0	76.2
40		514.277	3708.378	0.0	70.1
41		517.277	3708.378	0.0	64.0
42		513.277	3707.378	0.0	64.0

43	512.277	3707.378	0.0	67.1
44	515.277	3707.378	0.0	61.0
45	517.277	3707.378	0.0	67.1
46	511.277	3706.378	0.0	73.2
47	512.277	3706.378	0.0	73.2
48	513.277	3706.378	0.0	64.0
49	514.277	3706.378	0.0	64.0
50	515.277	3706.378	0.0	67.1
51	517.277	3714.176	0.0	70.1
52	512.277	3715.176	0.0	61.0
53	511.277	3716.176	0.0	61.0
54	514.277	3716.176	0.0	61.0
55	515.277	3716.176	0.0	70.1
56	513.277	3717.176	0.0	61.0
57	514.277	3717.176	0.0	61.0
58	512.277	3711.176	0.0	64.0
59	516.500	3708.100	0.0	67.7
60	518.100	3709.350	0.0	79.3
61	514.500	3708.800	0.0	80.5
62	517.300	3714.400	0.0	76.2

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
NOX SCREEN - 1981 SHREVEPORT/LONGVIEW BINARY MET. DATA

RECEPTORS

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)	AVG CONC FOR PERIOD DAY 1.HR 1. TO DAY365.HR24. (MICROGRAMS/M**3)
1		515.98	3710.48	0.0	57.9	0.04
2		515.88	3710.48	0.0	57.9	0.04
3		515.78	3710.38	0.0	57.9	0.04
4		515.88	3710.38	0.0	57.9	0.04
5		515.68	3710.38	0.0	57.9	0.04
6		515.98	3710.38	0.0	57.9	0.05
7		511.28	3709.38	0.0	64.0	0.04
8		512.28	3709.38	0.0	61.0	0.04
9		513.28	3709.38	0.0	73.2	0.04
10		514.28	3709.38	0.0	64.0	0.04
11		515.28	3709.38	0.0	57.9	0.04
12		518.28	3709.38	0.0	61.0	0.05
13		511.28	3708.38	0.0	67.1	0.04
14		513.28	3708.38	0.0	76.2	0.04
15		514.28	3708.38	0.0	70.1	0.03
16		517.28	3708.38	0.0	64.0	0.06
17		513.28	3707.38	0.0	64.0	0.03
18		512.28	3707.38	0.0	67.1	0.03
19		515.28	3707.38	0.0	61.0	0.05
20		517.28	3707.38	0.0	67.1	0.06
21		511.28	3706.38	0.0	73.2	0.03
22		512.28	3706.38	0.0	73.2	0.03
23		513.28	3706.38	0.0	64.0	0.03
24		514.28	3706.38	0.0	64.0	0.04
25		515.28	3706.38	0.0	67.1	0.05
26		517.28	3714.18	0.0	70.1	0.08
27		512.28	3715.18	0.0	61.0	0.07
28		514.28	3716.18	0.0	61.0	0.06
29		515.28	3716.18	0.0	70.1	* 0.10
30		513.28	3717.18	0.0	61.0	0.07
31		514.28	3717.18	0.0	61.0	0.08
32		512.28	3711.18	0.0	64.0	0.04
33		511.28	3709.38	0.0	64.0	0.04

34	511.28	3709.38	0.0	61.0	0.04
35	513.28	3709.38	0.0	73.2	0.04
36	514.28	3709.38	0.0	64.0	0.04
37	515.28	3709.38	0.0	57.9	0.04
38	511.28	3708.38	0.0	67.1	0.04
39	513.28	3708.38	0.0	76.2	0.04
40	514.28	3708.38	0.0	70.1	0.03
41	517.28	3708.38	0.0	64.0	0.06
42	513.28	3707.38	0.0	64.0	0.03
43	512.28	3707.38	0.0	67.1	0.03
44	515.28	3707.38	0.0	61.0	0.05
45	517.28	3707.38	0.0	67.1	0.06
46	511.28	3706.38	0.0	73.2	0.03
47	512.28	3706.38	0.0	73.2	0.03
48	513.28	3706.38	0.0	64.0	0.03
49	514.28	3706.38	0.0	64.0	0.04
50	515.28	3706.38	0.0	67.1	0.05
51	517.28	3714.18	0.0	70.1	0.08
52	512.28	3715.18	0.0	61.0	0.07
53	511.28	3716.18	0.0	61.0	0.07
54	514.28	3716.18	0.0	61.0	0.06
55	515.28	3716.18	0.0	70.1	0.10
56	513.28	3717.18	0.0	61.0	0.07
57	514.28	3717.18	0.0	61.0	0.08
58	512.28	3711.18	0.0	64.0	0.04
59	516.50	3708.10	0.0	67.7	0.06
60	518.10	3709.35	0.0	79.3	0.05
61	514.50	3708.80	0.0	80.5	0.03
62	517.30	3714.40	0.0	76.2	0.08

FIVE HIGHEST 1-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48) *	8.26	(234,13) *	8.19	(220,11)	8.18	(234,12)	7.98	(232,12)	7.69	(255,13)
2(515.88,3710.48)	8.18	(234,13)	8.07	(234,12)	7.70	(255,13)	7.49	(91,13)	7.37	(252,10)
3(515.78,3710.38)	7.75	(234,13)	7.61	(255,13)	7.54	(234,12)	7.43	(91,13)	7.33	(252,10)
4(515.88,3710.38)	7.86	(234,13)	7.68	(234,12)	7.65	(255,13)	7.46	(91,13)	7.36	(252,10)
5(515.68,3710.38)	7.61	(234,13)	7.56	(255,13)	7.39	(91,13)	7.30	(190,15)	7.30	(192,13)
6(515.98,3710.38)	7.95	(234,13)	7.89	(220,11)	7.82	(232,12)	7.79	(234,12)	7.67	(255,13)
7(511.28,3709.38)	2.53	(174,11)	2.52	(189,16)	2.51	(207,13)	2.48	(193, 9)	2.42	(342,15)
8(512.28,3709.38)	2.86	(249,16)	2.84	(210,17)	2.80	(223,17)	2.80	(193, 9)	2.77	(183,18)
9(513.28,3709.38)	3.67	(316,14)	3.59	(222,16)	3.59	(238,12)	3.46	(83,12)	3.35	(223,17)
10(514.28,3709.38)	4.59	(222,16)	4.59	(218,13)	4.32	(205,16)	4.27	(191,10)	4.16	(316,14)
11(515.28,3709.38)	5.37	(205,16)	5.36	(204,11)	5.30	(222,15)	5.27	(255,12)	5.25	(255,14)
12(518.28,3709.38)	4.70	(198,15)	4.68	(274,15)	4.65	(190,10)	4.59	(266,10)	4.56	(254,16)
13(511.28,3708.38)	2.37	(212,13)	2.28	(193, 9)	2.23	(342,15)	2.19	(27,14)	2.18	(249,16)
14(513.28,3708.38)	3.25	(218,13)	3.09	(316,14)	2.94	(241,16)	2.92	(249,16)	2.89	(210,17)
15(514.28,3708.38)	3.81	(218,13)	3.51	(315,11)	3.43	(255,12)	3.36	(320,13)	3.22	(258,14)
16(517.28,3708.38)	4.26	(218,15)	4.17	(224,10)	4.14	(91,16)	4.08	(208,14)	3.99	(308,13)
17(513.28,3707.38)	2.62	(241,16)	2.59	(218,13)	2.54	(252,16)	2.50	(233, 8)	2.50	(316,14)
18(512.28,3707.38)	2.40	(212,13)	2.37	(241,16)	2.35	(255,18)	2.27	(147,11)	2.22	(249,16)
19(515.28,3707.38)	3.37	(191,13)	3.19	(51,14)	3.15	(308,14)	3.06	(315,11)	2.87	(183, 8)
20(517.28,3707.38)	3.25	(224,10)	3.21	(208,14)	3.16	(308,13)	3.12	(83,11)	3.06	(317,15)
21(511.28,3706.38)	1.99	(212,13)	1.97	(255,18)	1.92	(147,11)	1.85	(241,16)	1.84	(45,16)
22(512.28,3706.38)	2.14	(255,18)	2.08	(147,11)	2.07	(241,16)	2.01	(233, 8)	1.94	(45,15)
23(513.28,3706.38)	2.29	(255,18)	2.28	(241,16)	2.23	(240, 8)	2.22	(252,16)	2.19	(233, 8)
24(514.28,3706.38)	2.73	(191,13)	2.38	(252,16)	2.37	(121,17)	2.35	(255, 9)	2.34	(233, 8)
25(515.28,3706.38)	2.87	(191,13)	2.48	(114,17)	2.47	(121,17)	2.44	(51,14)	2.44	(234, 8)
26(517.28,3714.18)	5.81	(200,16)	5.78	(180,15)	5.71	(274,12)	5.66	(250,11)	5.61	(114,14)
27(512.28,3715.18)	2.72	(245,12)	2.69	(175,18)	2.67	(79,13)	2.67	(292,16)	2.66	(316,15)
28(514.28,3716.18)	3.17	(218,16)	3.12	(192, 9)	3.03	(301,15)	2.89	(214,14)	2.84	(179, 9)
29(515.28,3716.18)	3.48	(218,16)	3.43	(192, 9)	3.36	(104,10)	3.34	(307,15)	3.18	(359,12)
30(513.28,3717.18)	2.49	(301,15)	2.37	(207,12)	2.36	(238,13)	2.35	(214,14)	2.33	(175,18)
31(514.28,3717.18)	2.68	(301,15)	2.52	(214,14)	2.51	(237,16)	2.49	(184,14)	2.49	(214,16)

32(512.28,3711.18)	3.65	(175, 9)	3.53	(71,13)	3.38	(274,14)	3.26	(207,14)	3.26	(315,12)
33(511.28,3709.38)	2.53	(174,11)	2.52	(189,16)	2.51	(207,13)	2.48	(193, 9)	2.42	(342,15)
34(511.28,3709.38)	2.53	(174,11)	2.52	(189,16)	2.51	(207,13)	2.48	(193, 9)	2.42	(342,15)
35(513.28,3709.38)	3.67	(316,14)	3.59	(222,16)	3.59	(238,12)	3.46	(83,12)	3.35	(223,17)
36(514.28,3709.38)	4.59	(222,16)	4.59	(218,13)	4.32	(205,16)	4.27	(191,10)	4.16	(316,14)
37(515.28,3709.38)	5.37	(205,16)	5.36	(204,11)	5.30	(222,15)	5.27	(255,12)	5.25	(255,14)
38(511.28,3708.38)	2.37	(212,13)	2.28	(193, 9)	2.23	(342,15)	2.19	(27,14)	2.18	(249,16)
39(513.28,3708.38)	3.25	(218,13)	3.09	(316,14)	2.94	(241,16)	2.92	(249,16)	2.89	(210,17)
40(514.28,3708.38)	3.81	(218,13)	3.51	(315,11)	3.43	(255,12)	3.36	(320,13)	3.22	(258,14)
41(517.28,3708.38)	4.26	(218,15)	4.17	(224,10)	4.14	(91,16)	4.08	(208,14)	3.99	(308,13)
42(513.28,3707.38)	2.62	(241,16)	2.59	(218,13)	2.54	(252,16)	2.50	(233, 8)	2.50	(316,14)
43(512.28,3707.38)	2.40	(212,13)	2.37	(241,16)	2.35	(255,18)	2.27	(147,11)	2.22	(249,16)
44(515.28,3707.38)	3.37	(191,13)	3.19	(51,14)	3.15	(308,14)	3.06	(315,11)	2.87	(183, 8)
45(517.28,3707.38)	3.25	(224,10)	3.21	(208,14)	3.16	(308,13)	3.12	(83,11)	3.06	(317,15)
46(511.28,3706.38)	1.99	(212,13)	1.97	(255,18)	1.92	(147,11)	1.85	(241,16)	1.84	(45,16)
47(512.28,3706.38)	2.14	(255,18)	2.08	(147,11)	2.07	(241,16)	2.01	(233, 8)	1.94	(45,15)
48(513.28,3706.38)	2.29	(255,18)	2.28	(241,16)	2.23	(240, 8)	2.22	(252,16)	2.19	(233, 8)
49(514.28,3706.38)	2.73	(191,13)	2.38	(252,16)	2.37	(121,17)	2.35	(255, 9)	2.34	(233, 8)
50(515.28,3706.38)	2.87	(191,13)	2.48	(114,17)	2.47	(121,17)	2.44	(51,14)	2.44	(234, 8)
51(517.28,3714.18)	5.81	(200,16)	5.78	(180,15)	5.71	(274,12)	5.66	(250,11)	5.61	(114,14)
52(512.28,3715.18)	2.72	(245,12)	2.69	(175,18)	2.67	(79,13)	2.67	(292,16)	2.66	(316,15)
53(511.28,3716.18)	2.18	(237, 9)	2.14	(175,18)	2.13	(308,16)	2.12	(208, 9)	2.12	(308,15)
54(514.28,3716.18)	3.17	(218,16)	3.12	(192, 9)	3.03	(301,15)	2.89	(214,14)	2.84	(179, 9)
55(515.28,3716.18)	3.48	(218,16)	3.43	(192, 9)	3.36	(104,10)	3.34	(307,15)	3.18	(359,12)
56(513.28,3717.18)	2.49	(301,15)	2.37	(207,12)	2.36	(238,13)	2.35	(214,14)	2.33	(175,18)
57(514.28,3717.18)	2.68	(301,15)	2.52	(214,14)	2.51	(237,16)	2.49	(184,14)	2.49	(214,16)
58(512.28,3711.18)	3.65	(175, 9)	3.53	(71,13)	3.38	(274,14)	3.26	(207,14)	3.26	(315,12)
59(516.50,3708.10)	3.82	(292,13)	3.77	(213,10)	3.73	(249,11)	3.65	(72,14)	3.53	(44,13)
60(518.10,3709.35)	4.82	(198,15)	4.78	(190,10)	4.72	(218,15)	4.71	(266,10)	4.61	(254,16)
61(514.50,3708.80)	4.29	(218,13)	4.05	(255,12)	3.95	(320,13)	3.86	(315,11)	3.73	(205,16)
62(517.30,3714.40)	5.37	(200,16)	5.34	(180,15)	5.34	(270,14)	5.28	(274,12)	5.26	(239,12)

FIVE HIGHEST 3-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	4.56	(234,12)	4.46	(255,15)	3.15	(131,12)	2.93	(252,15)	2.75	(234,15)
2(515.88,3710.48)	4.56	(234,12)	4.50	(255,15)	4.24	(310,12)	2.73	(234,15)	2.68	(131, 9)
3(515.78,3710.38)	4.60	(255,15)	4.51	(234,12)	4.38	(310,12)	2.87	(140,12)	2.77	(131, 9)
4(515.88,3710.38)	4.59	(255,15)	4.53	(234,12)	2.75	(131, 9)	2.62	(234,15)	2.49	(91,15)
5(515.68,3710.38)	4.61	(255,15)	4.40	(310,12)	2.96	(140,12)	2.54	(234,15)	2.50	(45,12)
6(515.98,3710.38)	4.84	(190,15)	4.57	(255,15)	4.54	(234,12)	3.48	(227,18)	3.24	(252,15)
7(511.28,3709.38)	1.41	(247,18)	1.31	(363,15)	1.30	(105, 9)	1.22	(177,15)	1.15	(122,15)
8(512.28,3709.38)	2.04	(177,15)	2.03	(140,18)	1.76	(331,15)	1.72	(234,15)	1.55	(67,12)
9(513.28,3709.38)	3.04	(342,12)	3.03	(342,15)	2.92	(67,12)	2.13	(234,15)	2.06	(331,15)
10(514.28,3709.38)	3.58	(342,12)	2.51	(105,15)	2.49	(191,12)	2.38	(342,15)	2.35	(70,18)
11(515.28,3709.38)	3.55	(45,12)	3.29	(255,15)	3.21	(310,12)	2.63	(261,18)	2.55	(27,12)
12(518.28,3709.38)	3.39	(146,15)	2.70	(258,15)	2.55	(158,18)	2.39	(14,15)	2.37	(292,15)
13(511.28,3708.38)	1.97	(342,15)	1.64	(67,12)	1.54	(140,18)	1.53	(177,15)	1.31	(331,15)
14(513.28,3708.38)	2.54	(342,12)	2.42	(67,12)	1.76	(342,15)	1.65	(27,12)	1.57	(44,12)
15(514.28,3708.38)	2.87	(45,12)	2.81	(352,12)	2.04	(70,18)	1.92	(27,12)	1.88	(105,15)
16(517.28,3708.38)	3.55	(190,18)	3.23	(314,15)	3.20	(320,12)	2.95	(75,15)	2.62	(1,15)
17(513.28,3707.38)	2.07	(45,12)	1.49	(70,18)	1.34	(352,12)	1.34	(331,12)	1.34	(27,12)
18(512.28,3707.38)	1.78	(342,12)	1.68	(67,12)	1.25	(342,15)	1.18	(44,12)	1.15	(45,15)
19(515.28,3707.38)	2.57	(252,15)	1.98	(234,18)	1.94	(191,15)	1.85	(114,18)	1.83	(259,12)
20(517.28,3707.38)	2.78	(190,18)	2.25	(320,12)	2.19	(1,15)	1.94	(75,15)	1.88	(211,18)
21(511.28,3706.38)	1.29	(342,12)	1.21	(67,12)	0.98	(30,18)	0.94	(358, 9)	0.93	(44,12)
22(512.28,3706.38)	1.17	(104,24)	1.09	(70,18)	1.05	(342,15)	1.00	(342,12)	0.98	(352,12)
23(513.28,3706.38)	1.70	(45,12)	1.67	(352,12)	1.23	(70,18)	1.14	(261,18)	1.08	(27,12)
24(514.28,3706.38)	1.87	(45,12)	1.42	(343,15)	1.40	(121,18)	1.37	(259,12)	1.32	(15,12)
25(515.28,3706.38)	2.04	(4,15)	1.98	(252,15)	1.77	(121,18)	1.62	(234,18)	1.53	(114,18)
26(517.28,3714.18) *	4.87	(169,12) *	4.84	(269,15)	3.66	(254,12)	3.21	(160,15)	3.14	(180,18)
27(512.28,3715.18)	2.29	(316,12)	2.21	(303,12)	2.14	(302,15)	1.82	(272,12)	1.66	(117,15)
28(514.28,3716.18)	2.54	(339,15)	2.08	(294,15)	2.02	(137,12)	1.87	(301,15)	1.73	(311,12)
29(515.28,3716.18)	2.91	(307,15)	2.86	(301,15)	2.69	(326,12)	2.25	(137,12)	1.94	(99,18)

30(513.28,3717.18)	1.53	(207,12)	1.45	(301,15)	1.41	(286,24)	1.40	(92,12)	1.40	(294,15)
31(514.28,3717.18)	2.03	(339,15)	1.88	(311,15)	1.63	(238,15)	1.59	(142,12)	1.58	(301,15)
32(512.28,3711.18)	3.00	(247,15)	2.70	(5,12)	2.54	(178,15)	2.12	(247,18)	2.03	(175, 9)
33(511.28,3709.38)	1.41	(247,18)	1.31	(363,15)	1.30	(105, 9)	1.22	(177,15)	1.15	(122,15)
34(511.28,3709.38)	1.41	(247,18)	1.31	(363,15)	1.30	(105, 9)	1.22	(177,15)	1.15	(122,15)
35(513.28,3709.38)	3.04	(342,12)	3.03	(342,15)	2.92	(67,12)	2.13	(234,15)	2.06	(331,15)
36(514.28,3709.38)	3.58	(342,12)	2.51	(105,15)	2.49	(191,12)	2.38	(342,15)	2.35	(70,18)
37(515.28,3709.38)	3.55	(45,12)	3.29	(255,15)	3.21	(310,12)	2.63	(261,18)	2.55	(27,12)
38(511.28,3708.38)	1.97	(342,15)	1.64	(67,12)	1.54	(140,18)	1.53	(177,15)	1.31	(331,15)
39(513.28,3708.38)	2.54	(342,12)	2.42	(67,12)	1.76	(342,15)	1.65	(27,12)	1.57	(44,12)
40(514.28,3708.38)	2.87	(45,12)	2.81	(352,12)	2.04	(70,18)	1.92	(27,12)	1.88	(105,15)
41(517.28,3708.38)	3.55	(190,18)	3.23	(314,15)	3.20	(320,12)	2.95	(75,15)	2.62	(1,15)
42(513.28,3707.38)	2.07	(45,12)	1.49	(70,18)	1.34	(352,12)	1.34	(331,12)	1.34	(27,12)
43(512.28,3707.38)	1.78	(342,12)	1.68	(67,12)	1.25	(342,15)	1.18	(44,12)	1.15	(45,15)
44(515.28,3707.38)	2.57	(252,15)	1.98	(234,18)	1.94	(191,15)	1.85	(114,18)	1.83	(259,12)
45(517.28,3707.38)	2.78	(190,18)	2.25	(320,12)	2.19	(1,15)	1.94	(75,15)	1.88	(211,18)
46(511.28,3706.38)	1.29	(342,12)	1.21	(67,12)	0.98	(30,18)	0.94	(358, 9)	0.93	(44,12)
47(512.28,3706.38)	1.17	(104,24)	1.09	(70,18)	1.05	(342,15)	1.00	(342,12)	0.98	(352,12)
48(513.28,3706.38)	1.70	(45,12)	1.67	(352,12)	1.23	(70,18)	1.14	(261,18)	1.08	(27,12)
49(514.28,3706.38)	1.87	(45,12)	1.42	(343,15)	1.40	(121,18)	1.37	(259,12)	1.32	(15,12)
50(515.28,3706.38)	2.04	(4,15)	1.98	(252,15)	1.77	(121,18)	1.62	(234,18)	1.53	(114,18)
51(517.28,3714.18)	4.87	(169,12)	4.84	(269,15)	3.66	(254,12)	3.21	(160,15)	3.14	(180,18)
52(512.28,3715.18)	2.29	(316,12)	2.21	(303,12)	2.14	(302,15)	1.82	(272,12)	1.66	(117,15)
53(511.28,3716.18)	1.70	(316,12)	1.56	(303,12)	1.51	(302,15)	1.35	(361,12)	1.22	(272,12)
54(514.28,3716.18)	2.54	(339,15)	2.08	(294,15)	2.02	(137,12)	1.87	(301,15)	1.73	(311,12)
55(515.28,3716.18)	2.91	(307,15)	2.86	(301,15)	2.69	(326,12)	2.25	(137,12)	1.94	(99,18)
56(513.28,3717.18)	1.53	(207,12)	1.45	(301,15)	1.41	(286,24)	1.40	(92,12)	1.40	(294,15)
57(514.28,3717.18)	2.03	(339,15)	1.88	(311,15)	1.63	(238,15)	1.59	(142,12)	1.58	(301,15)
58(512.28,3711.18)	3.00	(247,15)	2.70	(5,12)	2.54	(178,15)	2.12	(247,18)	2.03	(175, 9)
59(516.50,3708.10)	2.39	(232,18)	2.38	(251,15)	2.27	(211,18)	2.26	(213,12)	2.17	(191,18)
60(518.10,3709.35)	3.55	(146,15)	2.77	(258,15)	2.39	(78,12)	2.37	(95,12)	2.33	(220,15)
61(514.50,3708.80)	3.18	(45,12)	3.09	(352,12)	2.23	(70,18)	2.22	(105,15)	2.17	(27,12)
62(517.30,3714.40)	4.48	(169,12)	3.90	(196,18)	3.32	(254,12)	3.23	(269,15)	3.05	(160,15)

FIVE HIGHEST 8-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	3.13	(234,16) *	2.86	(131,16)	2.36	(232,16)	2.12	(252,16)	1.73	(255,16)
2(515.88,3710.48) *	3.13	(234,16)	2.34	(310,16)	2.26	(255,16)	2.12	(131,16)	1.37	(232,16)
3(515.78,3710.38)	3.11	(234,16)	2.38	(255,16)	2.21	(131,16)	1.64	(310,16)	1.62	(140,16)
4(515.88,3710.38)	3.12	(234,16)	2.35	(255,16)	2.19	(131,16)	1.64	(310,16)	1.41	(232,16)
5(515.68,3710.38)	2.40	(255,16)	2.22	(131,16)	2.17	(234,16)	1.65	(310,16)	1.42	(252,16)
6(515.98,3710.38)	3.12	(234,16)	2.81	(131,16)	2.38	(232,16)	2.14	(252,16)	1.81	(190,16)
7(511.28,3709.38)	0.86	(363,16)	0.84	(280,16)	0.79	(346, 8)	0.77	(275,16)	0.66	(12, 8)
8(512.28,3709.38)	1.25	(177,16)	0.93	(234,16)	0.88	(67,16)	0.88	(275,16)	0.85	(346, 8)
9(513.28,3709.38)	2.28	(342,16)	1.47	(67,16)	1.14	(331,16)	1.05	(70,16)	0.92	(223,16)
10(514.28,3709.38)	2.25	(342,16)	1.73	(140,16)	1.37	(191,16)	0.95	(16,16)	0.94	(105,16)
11(515.28,3709.38)	2.11	(255,16)	1.87	(27,16)	1.78	(131,16)	1.67	(234,16)	1.39	(252,16)
12(518.28,3709.38)	1.43	(176,16)	1.43	(258,16)	1.34	(14,16)	1.27	(146,16)	1.22	(78,16)
13(511.28,3708.38)	1.16	(342,16)	0.89	(177,16)	0.83	(67,16)	0.79	(346, 8)	0.76	(105, 8)
14(513.28,3708.38)	1.64	(342,16)	1.10	(140,16)	0.91	(67,16)	0.74	(16,16)	0.74	(191,16)
15(514.28,3708.38)	1.41	(45,16)	1.10	(27,16)	1.05	(352,16)	0.98	(105,16)	0.97	(140,16)
16(517.28,3708.38)	1.66	(1,16)	1.65	(144,16)	1.60	(75,16)	1.58	(82,16)	1.33	(308,16)
17(513.28,3707.38)	1.12	(45,16)	0.82	(296,16)	0.79	(27,16)	0.74	(104,24)	0.64	(16,16)
18(512.28,3707.38)	1.18	(342,16)	0.75	(45,16)	0.74	(140,16)	0.65	(296,16)	0.63	(67,16)
19(515.28,3707.38)	1.33	(259,16)	1.20	(252,16)	1.03	(231,16)	1.01	(4,16)	1.00	(310,16)
20(517.28,3707.38)	1.22	(82,16)	1.21	(144,16)	1.14	(75,16)	1.04	(308,16)	1.04	(174,16)
21(511.28,3706.38)	0.88	(342,16)	0.61	(45,16)	0.59	(346,16)	0.56	(363, 8)	0.51	(126,24)
22(512.28,3706.38)	0.82	(342,16)	0.74	(104,24)	0.64	(363, 8)	0.63	(296,16)	0.52	(60, 8)
23(513.28,3706.38)	0.96	(296,16)	0.90	(45,16)	0.84	(259,16)	0.64	(27,16)	0.63	(352,16)
24(514.28,3706.38)	1.00	(259,16)	0.87	(255,16)	0.86	(296,16)	0.83	(352,16)	0.71	(27,16)
25(515.28,3706.38)	1.07	(4,16)	1.00	(261,16)	0.91	(15,16)	0.87	(259,16)	0.82	(81,16)
26(517.28,3714.18)	2.82	(269,16)	2.41	(160,16)	2.37	(169,16)	1.89	(263,16)	1.81	(180,16)
27(512.28,3715.18)	1.48	(316,16)	1.41	(302,16)	1.36	(297,16)	1.16	(303,16)	1.10	(271,16)

28(514.28,3716.18)	1.27	(339,16)	1.27	(137,16)	1.11	(294,16)	1.07	(285,16)	1.07	(87,16)
29(515.28,3716.18)	1.87	(142,16)	1.54	(137,16)	1.54	(84,16)	1.52	(326,16)	1.52	(87,24)
30(513.28,3717.18)	1.07	(287, 8)	0.88	(286,24)	0.87	(92,16)	0.87	(285,16)	0.85	(87,16)
31(514.28,3717.18)	1.10	(137,16)	1.06	(142,16)	1.04	(311,16)	1.02	(339,16)	0.90	(87,24)
32(512.28,3711.18)	1.72	(5,16)	1.52	(247,16)	1.34	(178,16)	1.14	(207,16)	1.09	(276,16)
33(511.28,3709.38)	0.86	(363,16)	0.84	(280,16)	0.79	(346, 8)	0.77	(275,16)	0.66	(12, 8)
34(511.28,3709.38)	0.86	(363,16)	0.84	(280,16)	0.79	(346, 8)	0.77	(275,16)	0.66	(12, 8)
35(513.28,3709.38)	2.28	(342,16)	1.47	(67,16)	1.14	(331,16)	1.05	(70,16)	0.92	(223,16)
36(514.28,3709.38)	2.25	(342,16)	1.73	(140,16)	1.37	(191,16)	0.95	(16,16)	0.94	(105,16)
37(515.28,3709.38)	2.11	(255,16)	1.87	(27,16)	1.78	(131,16)	1.67	(234,16)	1.39	(252,16)
38(511.28,3708.38)	1.16	(342,16)	0.89	(177,16)	0.83	(67,16)	0.79	(346, 8)	0.76	(105, 8)
39(513.28,3708.38)	1.64	(342,16)	1.10	(140,16)	0.91	(67,16)	0.74	(16,16)	0.74	(191,16)
40(514.28,3708.38)	1.41	(45,16)	1.10	(27,16)	1.05	(352,16)	0.98	(105,16)	0.97	(140,16)
41(517.28,3708.38)	1.66	(1,16)	1.65	(144,16)	1.60	(75,16)	1.58	(82,16)	1.33	(308,16)
42(513.28,3707.38)	1.12	(45,16)	0.82	(296,16)	0.79	(27,16)	0.74	(104,24)	0.64	(16,16)
43(512.28,3707.38)	1.18	(342,16)	0.75	(45,16)	0.74	(140,16)	0.65	(296,16)	0.63	(67,16)
44(515.28,3707.38)	1.33	(259,16)	1.20	(252,16)	1.03	(231,16)	1.01	(4,16)	1.00	(310,16)
45(517.28,3707.38)	1.22	(82,16)	1.21	(144,16)	1.14	(75,16)	1.04	(308,16)	1.04	(174,16)
46(511.28,3706.38)	0.88	(342,16)	0.61	(45,16)	0.59	(346,16)	0.56	(363, 8)	0.51	(126,24)
47(512.28,3706.38)	0.82	(342,16)	0.74	(104,24)	0.64	(363, 8)	0.63	(296,16)	0.52	(60, 8)
48(513.28,3706.38)	0.96	(296,16)	0.90	(45,16)	0.84	(259,16)	0.64	(27,16)	0.63	(352,16)
49(514.28,3706.38)	1.00	(259,16)	0.87	(255,16)	0.86	(296,16)	0.83	(352,16)	0.71	(27,16)
50(515.28,3706.38)	1.07	(4,16)	1.00	(261,16)	0.91	(15,16)	0.87	(259,16)	0.82	(81,16)
51(517.28,3714.18)	2.82	(269,16)	2.41	(160,16)	2.37	(169,16)	1.89	(263,16)	1.81	(180,16)
52(512.28,3715.18)	1.48	(316,16)	1.41	(302,16)	1.36	(297,16)	1.16	(303,16)	1.10	(271,16)
53(511.28,3716.18)	1.13	(316,16)	1.02	(302,16)	0.97	(297,16)	0.91	(286, 8)	0.85	(303,16)
54(514.28,3716.18)	1.27	(339,16)	1.27	(137,16)	1.11	(294,16)	1.07	(285,16)	1.07	(87,16)
55(515.28,3716.18)	1.87	(142,16)	1.54	(137,16)	1.54	(84,16)	1.52	(326,16)	1.52	(87,24)
56(513.28,3717.18)	1.07	(287, 8)	0.88	(286,24)	0.87	(92,16)	0.87	(285,16)	0.85	(87,16)
57(514.28,3717.18)	1.10	(137,16)	1.06	(142,16)	1.04	(311,16)	1.02	(339,16)	0.90	(87,24)
58(512.28,3711.18)	1.72	(5,16)	1.52	(247,16)	1.34	(178,16)	1.14	(207,16)	1.09	(276,16)
59(516.50,3708.10)	1.51	(15,16)	1.46	(232,16)	1.30	(317,16)	1.24	(191,16)	1.21	(174,16)
60(518.10,3709.35)	1.92	(258,16)	1.46	(176,16)	1.35	(78,16)	1.33	(146,16)	1.04	(41,24)
61(514.50,3708.80)	1.52	(45,16)	1.23	(27,16)	1.17	(105,16)	1.16	(352,16)	1.13	(140,16)
62(517.30,3714.40)	2.29	(160,16)	2.21	(169,16)	2.11	(187,16)	1.79	(263,16)	1.71	(180,16)

FIVE HIGHEST 24-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	1.18	(234,24) *	1.00	(131,24)	0.79	(232,24)	0.71	(252,24)	0.58	(255,24)
2(515.88,3710.48)	1.08	(234,24)	0.78	(310,24)	0.75	(255,24)	0.75	(131,24)	0.46	(232,24)
3(515.78,3710.38)	1.04	(234,24)	0.79	(131,24)	0.79	(255,24)	0.55	(310,24)	0.54	(140,24)
4(515.88,3710.38)	1.08	(234,24)	0.78	(255,24)	0.78	(131,24)	0.55	(310,24)	0.47	(232,24)
5(515.68,3710.38)	0.83	(255,24)	0.74	(131,24)	0.73	(234,24)	0.55	(310,24)	0.48	(252,24)
6(515.98,3710.38) *	1.20	(234,24)	0.99	(131,24)	0.80	(232,24)	0.71	(252,24)	0.61	(190,24)
7(511.28,3709.38)	0.59	(280,24)	0.56	(275,24)	0.49	(105,24)	0.39	(177,24)	0.35	(363,24)
8(512.28,3709.38)	0.61	(280,24)	0.60	(105,24)	0.54	(275,24)	0.54	(177,24)	0.44	(67,24)
9(513.28,3709.38)	0.76	(342,24)	0.64	(67,24)	0.52	(280,24)	0.47	(223,24)	0.38	(363,24)
10(514.28,3709.38)	0.75	(342,24)	0.58	(140,24)	0.47	(70,24)	0.46	(191,24)	0.41	(67,24)
11(515.28,3709.38)	0.70	(255,24)	0.62	(27,24)	0.59	(131,24)	0.57	(234,24)	0.50	(261,24)
12(518.28,3709.38)	0.65	(32,24)	0.60	(134,24)	0.57	(146,24)	0.52	(176,24)	0.52	(78,24)
13(511.28,3708.38)	0.63	(105,24)	0.58	(280,24)	0.52	(275,24)	0.49	(67,24)	0.44	(177,24)
14(513.28,3708.38)	0.55	(342,24)	0.46	(67,24)	0.37	(140,24)	0.37	(105,24)	0.36	(363,24)
15(514.28,3708.38)	0.47	(45,24)	0.47	(296,24)	0.39	(70,24)	0.37	(27,24)	0.36	(259,24)
16(517.28,3708.38)	0.74	(190,24)	0.68	(75,24)	0.68	(1,24)	0.64	(220,24)	0.62	(82,24)
17(513.28,3707.38)	0.47	(296,24)	0.38	(45,24)	0.30	(16,24)	0.29	(60,24)	0.28	(70,24)
18(512.28,3707.38)	0.40	(67,24)	0.40	(342,24)	0.38	(280,24)	0.38	(363,24)	0.35	(346,24)
19(515.28,3707.38)	0.61	(234,24)	0.56	(261,24)	0.56	(259,24)	0.44	(296,24)	0.43	(231,24)
20(517.28,3707.38)	0.63	(260,24)	0.59	(232,24)	0.59	(190,24)	0.57	(220,24)	0.55	(351,24)
21(511.28,3706.38)	0.39	(363,24)	0.35	(67,24)	0.34	(346,24)	0.34	(280,24)	0.31	(105,24)
22(512.28,3706.38)	0.37	(296,24)	0.34	(280,24)	0.33	(363,24)	0.28	(342,24)	0.28	(60,24)
23(513.28,3706.38)	0.58	(296,24)	0.42	(358,24)	0.36	(259,24)	0.33	(231,24)	0.31	(45,24)
24(514.28,3706.38)	0.52	(296,24)	0.43	(259,24)	0.36	(358,24)	0.36	(16,24)	0.36	(352,24)
25(515.28,3706.38)	0.58	(261,24)	0.49	(234,24)	0.42	(259,24)	0.41	(296,24)	0.39	(125,24)

26(	517.28,3714.18)	1.03	(169,24)	0.94	(269,24)	0.87	(160,24)	0.76	(180,24)	0.64	(263,24)
27(	512.28,3715.18)	0.80	(286,24)	0.74	(354,24)	0.57	(62,24)	0.54	(303,24)	0.54	(302,24)
28(	514.28,3716.18)	0.61	(137,24)	0.60	(87,24)	0.48	(339,24)	0.41	(287,24)	0.40	(92,24)
29(	515.28,3716.18)	0.91	(137,24)	0.79	(142,24)	0.78	(164,24)	0.74	(165,24)	0.71	(93,24)
30(	513.28,3717.18)	0.61	(287,24)	0.58	(87,24)	0.53	(92,24)	0.45	(286,24)	0.41	(137,24)
31(	514.28,3717.18)	0.72	(87,24)	0.66	(137,24)	0.51	(165,24)	0.49	(80,24)	0.49	(98,24)
32(	512.28,3711.18)	0.75	(5,24)	0.67	(247,24)	0.56	(178,24)	0.46	(122,24)	0.41	(276,24)
33(	511.28,3709.38)	0.59	(280,24)	0.56	(275,24)	0.49	(105,24)	0.39	(177,24)	0.35	(363,24)
34(	511.28,3709.38)	0.59	(280,24)	0.56	(275,24)	0.49	(105,24)	0.39	(177,24)	0.35	(363,24)
35(	513.28,3709.38)	0.76	(342,24)	0.64	(67,24)	0.52	(280,24)	0.47	(223,24)	0.38	(363,24)
36(	514.28,3709.38)	0.75	(342,24)	0.58	(140,24)	0.47	(70,24)	0.46	(191,24)	0.41	(67,24)
37(	515.28,3709.38)	0.70	(255,24)	0.62	(27,24)	0.59	(131,24)	0.57	(234,24)	0.50	(261,24)
38(	511.28,3708.38)	0.63	(105,24)	0.58	(280,24)	0.52	(275,24)	0.49	(67,24)	0.44	(177,24)
39(	513.28,3708.38)	0.55	(342,24)	0.46	(67,24)	0.37	(140,24)	0.37	(105,24)	0.36	(363,24)
40(	514.28,3708.38)	0.47	(45,24)	0.47	(296,24)	0.39	(70,24)	0.37	(27,24)	0.36	(259,24)
41(	517.28,3708.38)	0.74	(190,24)	0.68	(75,24)	0.68	(1,24)	0.64	(220,24)	0.62	(82,24)
42(	513.28,3707.38)	0.47	(296,24)	0.38	(45,24)	0.30	(16,24)	0.29	(60,24)	0.28	(70,24)
43(	512.28,3707.38)	0.40	(67,24)	0.40	(342,24)	0.38	(280,24)	0.38	(363,24)	0.35	(346,24)
44(	515.28,3707.38)	0.61	(234,24)	0.56	(261,24)	0.56	(259,24)	0.44	(296,24)	0.43	(231,24)
45(	517.28,3707.38)	0.63	(260,24)	0.59	(232,24)	0.59	(190,24)	0.57	(220,24)	0.55	(351,24)
46(	511.28,3706.38)	0.39	(363,24)	0.35	(67,24)	0.34	(346,24)	0.34	(280,24)	0.31	(105,24)
47(	512.28,3706.38)	0.37	(296,24)	0.34	(280,24)	0.33	(363,24)	0.28	(342,24)	0.28	(60,24)
48(	513.28,3706.38)	0.58	(296,24)	0.42	(358,24)	0.36	(259,24)	0.33	(231,24)	0.31	(45,24)
49(	514.28,3706.38)	0.52	(296,24)	0.43	(259,24)	0.36	(358,24)	0.36	(16,24)	0.36	(352,24)
50(	515.28,3706.38)	0.58	(261,24)	0.49	(234,24)	0.42	(259,24)	0.41	(296,24)	0.39	(125,24)
51(	517.28,3714.18)	1.03	(169,24)	0.94	(269,24)	0.87	(160,24)	0.76	(180,24)	0.64	(263,24)
52(	512.28,3715.18)	0.80	(286,24)	0.74	(354,24)	0.57	(62,24)	0.54	(303,24)	0.54	(302,24)
53(	511.28,3716.18)	0.81	(286,24)	0.74	(354,24)	0.64	(62,24)	0.54	(123,24)	0.48	(303,24)
54(	514.28,3716.18)	0.61	(137,24)	0.60	(87,24)	0.48	(339,24)	0.41	(287,24)	0.40	(92,24)
55(	515.28,3716.18)	0.91	(137,24)	0.79	(142,24)	0.78	(164,24)	0.74	(165,24)	0.71	(93,24)
56(	513.28,3717.18)	0.61	(287,24)	0.58	(87,24)	0.53	(92,24)	0.45	(286,24)	0.41	(137,24)
57(	514.28,3717.18)	0.72	(87,24)	0.66	(137,24)	0.51	(165,24)	0.49	(80,24)	0.49	(98,24)
58(	512.28,3711.18)	0.75	(5,24)	0.67	(247,24)	0.56	(178,24)	0.46	(122,24)	0.41	(276,24)
59(	516.50,3708.10)	0.83	(232,24)	0.66	(260,24)	0.60	(357,24)	0.57	(191,24)	0.54	(251,24)
60(	518.10,3709.35)	0.64	(258,24)	0.59	(146,24)	0.56	(78,24)	0.55	(32,24)	0.53	(176,24)
61(	514.50,3708.80)	0.51	(45,24)	0.43	(70,24)	0.43	(296,24)	0.41	(27,24)	0.41	(105,24)
62(	517.30,3714.40)	0.99	(169,24)	0.88	(160,24)	0.73	(180,24)	0.73	(187,24)	0.61	(263,24)

SECTION H.7

1982 MODELING OUTPUT FOR NOx COMPLEX I

COMPLEX I (DATED 90095)
BOWMAN ENVIRONMENTAL ENGINEERING VER. 6.27

SESSION INFORMATION

INPUT DATA FILE NAME : ICNOX82.DTA
OUTPUT LIST FILE NAME : ICNOX82.LST
MET DATA FILE NAME : c:\bee\shvggg82.bin

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
NOX SCREEN - 1982 SHREVEPORT/LONGVIEW BINARY MET. DATA

GENERAL INPUT INFORMATION

THIS RUN OF COMPLEX I -VERSION 2.0 IS FOR THE POLLUTANT PART FOR 365 24-HOUR PERIODS.
CONCENTRATION ESTIMATES BEGIN ON HOUR- 1,JULIAN DAY- 1, YEAR-1982.
A FACTOR OF 1.0000000 HAS BEEN SPECIFIED TO CONVERT USER LENGTH UNITS TO KILOMETERS.
0 SIGNIFICANT SOURCES ARE TO BE CONSIDERED.
THIS RUN WILL NOT CONSIDER ANY POLLUTANT LOSS.
HIGH-FIVE SUMMARY CONCENTRATION TABLES WILL BE OUTPUT FOR 4 AVERAGING PERIODS.
AVG TIMES OF 1,3,8, AND 24 HOURS ARE AUTOMATICALLY DISPLAYED.

OPTION	OPTION LIST	OPTION SPECIFICATION : 0= IGNORE OPTION 1= USE OPTION
	TECHNICAL OPTIONS	
1	TERRAIN ADJUSTMENTS	0
2	DO NOT INCLUDE STACK DOWNWASH CALCULATIONS	0
3	DO NOT INCLUDE GRADUAL PLUME RISE CALCULATIONS	1
4	CALCULATE INITIAL PLUME SIZE	1
	INPUT OPTIONS	
5	READ MET DATA FROM CARDS	0
6	READ HOURLY EMISSIONS	0
7	SPECIFY SIGNIFICANT SOURCES	0
8	READ RADIAL DISTANCES TO GENERATE RECEPTORS	0
	PRINTED OUTPUT OPTIONS	
9	DELETE EMISSIONS WITH HEIGHT TABLE	1
10	DELETE MET DATA SUMMARY FOR AVG PERIOD	1
11	DELETE HOURLY CONTRIBUTIONS	1
12	DELETE MET DATA ON HOURLY CONTRIBUTIONS	1
13	DELETE FINAL PLUME RISE CALC ON HRLY CONTRIBUTIONS	1
14	DELETE HOURLY SUMMARY	1
15	DELETE MET DATA ON HRLY SUMMARY	1
16	DELETE FINAL PLUME RISE CALC ON HRLY SUMMARY	1
17	DELETE AVG-PERIOD CONTRIBUTIONS	1
18	DELETE AVERAGING PERIOD SUMMARY	1
19	DELETE AVG CONCENTRATIONS AND HI-5 TABLES	0
	OTHER CONTROL AND OUTPUT OPTIONS	
20	RUN IS PART OF A SEGMENTED RUN	0
21	WRITE PARTIAL CONC TO DISK OR TAPE	0
22	WRITE HOURLY CONC TO DISK OR TAPE	0
23	WRITE AVG-PERIOD CONC TO DISK OR TAPE	0
24	PUNCH AVG-PERIOD CONC ONTO CARDS	0
25	COMPLEX TERRAIN OPTION	1
26	CALM PROCESSING OPTION	0
27	VALLEY SCREENING OPTION	0

ANEMOMETER HEIGHT= 10.00
WIND PROFILE WITH HEIGHT EXPONENTS CORRESPONDING TO STABILITY ARE AS FOLLOWS:
FOR STABILITY A: 0.07
STABILITY B: 0.07
STABILITY C: 0.10
STABILITY D: 0.15
STABILITY E: 0.35
STABILITY F: 0.55

POINT SOURCE INFORMATION

SOURCE		EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	SO2(G/SEC) EMISSIONS	PART(G/SEC) EMISSIONS	STACK HT(M)	STACK TEMP(K)	STACK DIAM(M)	STACK VEL(M/SEC)	POTEN. IMPACT (MICRO G/M**3)	EFF HT(M)	GRD-LVL ELEV (USER HT UNITS)	BUOY FLUX F M**4/S**3
1 1	COGEN	516.32	3711.89	0.00	10.43	22.9	427.6	3.4	16.6	8.07	283.88	34.40	150.19

ADDITIONAL INFORMATION ON SOURCES.

EMISSION INFORMATION FOR 1 (NPT) POINT SOURCES HAS BEEN INPUT
0 SIGNIFICANT POINT SOURCES(NSIGP) ARE TO BE USED FOR THIS RUN
THE ORDER OF SIGNIFICANCE(IMPS) FOR 25 OR LESS POINT SOURCES USED IN THIS RUN AS LISTED BY POINT SOURCE NUMBER:

SURFACE MET DATA FROM STATION(ISFCD) 13957, YEAR(ISFCYR) 1982
MIXING HEIGHT DATA FROM STATION(IMXD) 3951, YEAR(IMXYR) 1982

RECEPTOR INFORMATION

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)
1		515.977	3710.478	0.0	57.9
2		515.877	3710.478	0.0	57.9
3		515.777	3710.378	0.0	57.9
4		515.877	3710.378	0.0	57.9
5		515.677	3710.378	0.0	57.9
6		515.977	3710.378	0.0	57.9
7		511.277	3709.378	0.0	64.0
8		512.277	3709.378	0.0	61.0
9		513.277	3709.378	0.0	73.2
10		514.277	3709.378	0.0	64.0
11		515.277	3709.378	0.0	57.9
12		518.277	3709.378	0.0	61.0
13		511.277	3708.378	0.0	67.1
14		513.277	3708.378	0.0	76.2
15		514.277	3708.378	0.0	70.1
16		517.277	3708.378	0.0	64.0
17		513.277	3707.378	0.0	64.0
18		512.277	3707.378	0.0	67.1
19		515.277	3707.378	0.0	61.0
20		517.277	3707.378	0.0	67.1
21		511.277	3706.378	0.0	73.2
22		512.277	3706.378	0.0	73.2
23		513.277	3706.378	0.0	64.0
24		514.277	3706.378	0.0	64.0
25		515.277	3706.378	0.0	67.1
26		517.277	3714.176	0.0	70.1
27		512.277	3715.176	0.0	61.0
28		514.277	3716.176	0.0	61.0
29		515.277	3716.176	0.0	70.1
30		513.277	3717.176	0.0	61.0
31		514.277	3717.176	0.0	61.0
32		512.277	3711.176	0.0	64.0
33		511.277	3709.378	0.0	64.0
34		511.277	3709.378	0.0	61.0
35		513.277	3709.378	0.0	73.2
36		514.277	3709.378	0.0	64.0
37		515.277	3709.378	0.0	57.9
38		511.277	3708.378	0.0	67.1
39		513.277	3708.378	0.0	76.2
40		514.277	3708.378	0.0	70.1
41		517.277	3708.378	0.0	64.0
42		513.277	3707.378	0.0	64.0

43	512.277	3707.378	0.0	67.1
44	515.277	3707.378	0.0	61.0
45	517.277	3707.378	0.0	67.1
46	511.277	3706.378	0.0	73.2
47	512.277	3706.378	0.0	73.2
48	513.277	3706.378	0.0	64.0
49	514.277	3706.378	0.0	64.0
50	515.277	3706.378	0.0	67.1
51	517.277	3714.176	0.0	70.1
52	512.277	3715.176	0.0	61.0
53	511.277	3716.176	0.0	61.0
54	514.277	3716.176	0.0	61.0
55	515.277	3716.176	0.0	70.1
56	513.277	3717.176	0.0	61.0
57	514.277	3717.176	0.0	61.0
58	512.277	3711.176	0.0	64.0
59	516.500	3708.100	0.0	67.7
60	518.100	3709.350	0.0	79.3
61	514.500	3708.800	0.0	80.5
62	517.300	3714.400	0.0	76.2

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
NOX SCREEN - 1982 SHREVEPORT/LONGVIEW BINARY MET. DATA

RECEPTORS

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)	DAY	AVG CONC FOR PERIOD 1.HR 1. TO DAY365.HR24. (MICROGRAMS/M**3)
1		515.98	3710.48	0.0	57.9		0.04
2		515.88	3710.48	0.0	57.9		0.03
3		515.78	3710.38	0.0	57.9		0.04
4		515.88	3710.38	0.0	57.9		0.04
5		515.68	3710.38	0.0	57.9		0.04
6		515.98	3710.38	0.0	57.9		0.04
7		511.28	3709.38	0.0	64.0		0.04
8		512.28	3709.38	0.0	61.0		0.04
9		513.28	3709.38	0.0	73.2		0.05
10		514.28	3709.38	0.0	64.0		0.05
11		515.28	3709.38	0.0	57.9		0.04
12		518.28	3709.38	0.0	61.0		0.05
13		511.28	3708.38	0.0	67.1		0.05
14		513.28	3708.38	0.0	76.2		0.04
15		514.28	3708.38	0.0	70.1		0.04
16		517.28	3708.38	0.0	64.0		0.06
17		513.28	3707.38	0.0	64.0		0.04
18		512.28	3707.38	0.0	67.1		0.04
19		515.28	3707.38	0.0	61.0		0.06
20		517.28	3707.38	0.0	67.1		0.07
21		511.28	3706.38	0.0	73.2		0.04
22		512.28	3706.38	0.0	73.2		0.04
23		513.28	3706.38	0.0	64.0		0.04
24		514.28	3706.38	0.0	64.0		0.04
25		515.28	3706.38	0.0	67.1		0.06
26		517.28	3714.18	0.0	70.1		0.07
27		512.28	3715.18	0.0	61.0		0.06
28		514.28	3716.18	0.0	61.0		0.08
29		515.28	3716.18	0.0	70.1		* 0.11
30		513.28	3717.18	0.0	61.0		0.08
31		514.28	3717.18	0.0	61.0		0.09
32		512.28	3711.18	0.0	64.0		0.04
33		511.28	3709.38	0.0	64.0		0.04

34	511.28	3709.38	0.0	61.0	0.04
35	513.28	3709.38	0.0	73.2	0.05
36	514.28	3709.38	0.0	64.0	0.05
37	515.28	3709.38	0.0	57.9	0.04
38	511.28	3708.38	0.0	67.1	0.05
39	513.28	3708.38	0.0	76.2	0.04
40	514.28	3708.38	0.0	70.1	0.04
41	517.28	3708.38	0.0	64.0	0.06
42	513.28	3707.38	0.0	64.0	0.04
43	512.28	3707.38	0.0	67.1	0.04
44	515.28	3707.38	0.0	61.0	0.06
45	517.28	3707.38	0.0	67.1	0.07
46	511.28	3706.38	0.0	73.2	0.04
47	512.28	3706.38	0.0	73.2	0.04
48	513.28	3706.38	0.0	64.0	0.04
49	514.28	3706.38	0.0	64.0	0.04
50	515.28	3706.38	0.0	67.1	0.06
51	517.28	3714.18	0.0	70.1	0.07
52	512.28	3715.18	0.0	61.0	0.06
53	511.28	3716.18	0.0	61.0	0.06
54	514.28	3716.18	0.0	61.0	0.08
55	515.28	3716.18	0.0	70.1	0.11
56	513.28	3717.18	0.0	61.0	0.08
57	514.28	3717.18	0.0	61.0	0.09
58	512.28	3711.18	0.0	64.0	0.04
59	516.50	3708.10	0.0	67.7	0.07
60	518.10	3709.35	0.0	79.3	0.05
61	514.50	3708.80	0.0	80.5	0.04
62	517.30	3714.40	0.0	76.2	0.07

FIVE HIGHEST 1-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1	2	3	4	5
1(515.98,3710.48) *	10.23 (156,15) *	8.21 (230,12)	8.20 (205,13)	7.88 (218,12)	7.69 (248,15)
2(515.88,3710.48)	9.87 (156,15)	8.16 (205,13)	8.14 (230,12)	7.67 (156,14)	7.64 (173,15)
3(515.78,3710.38)	8.26 (156,15)	7.86 (205,13)	7.82 (218,16)	7.81 (250,12)	7.71 (230,12)
4(515.88,3710.38)	8.64 (156,15)	7.94 (205,13)	7.82 (230,12)	7.81 (218,12)	7.62 (156,14)
5(515.68,3710.38)	7.83 (156,15)	7.76 (218,16)	7.75 (205,13)	7.73 (233,12)	7.71 (250,12)
6(515.98,3710.38)	8.95 (156,15)	8.01 (205,13)	7.98 (194,13)	7.91 (230,12)	7.84 (218,12)
7(511.28,3709.38)	2.41 (213,13)	2.40 (248, 8)	2.40 (93,15)	2.31 (265, 9)	2.30 (343,15)
8(512.28,3709.38)	3.04 (93,15)	2.86 (213,13)	2.84 (231, 9)	2.80 (231,17)	2.80 (152,17)
9(513.28,3709.38)	3.69 (298,16)	3.53 (122,14)	3.36 (206,15)	3.35 (231,17)	3.28 (194,10)
10(514.28,3709.38)	4.24 (249,11)	4.24 (262,12)	4.19 (298,16)	4.16 (265,15)	4.06 (85,14)
11(515.28,3709.38)	5.20 (276,11)	5.09 (265,15)	4.92 (85,14)	4.86 (297,10)	4.86 (52,14)
12(518.28,3709.38)	4.73 (237,15)	4.68 (227,15)	4.53 (262,13)	4.50 (121,11)	4.45 (269,11)
13(511.28,3708.38)	2.35 (201,18)	2.28 (152,17)	2.22 (248, 8)	2.17 (213,13)	2.16 (231, 9)
14(513.28,3708.38)	3.10 (298,16)	2.99 (203,13)	2.98 (201,18)	2.94 (171,15)	2.93 (194,10)
15(514.28,3708.38)	3.31 (203,13)	3.29 (261,16)	3.26 (240,17)	3.24 (171,15)	3.23 (194,10)
16(517.28,3708.38)	4.22 (195,14)	3.98 (233,10)	3.94 (260,10)	3.57 (122,15)	3.56 (261,15)
17(513.28,3707.38)	2.65 (201,18)	2.60 (277,15)	2.55 (203,13)	2.53 (173,10)	2.52 (171,15)
18(512.28,3707.38)	2.39 (201,18)	2.31 (152,17)	2.30 (173,10)	2.25 (248, 8)	2.22 (171,15)
19(515.28,3707.38)	3.21 (90,14)	3.19 (173,11)	2.89 (204,18)	2.89 (205,18)	2.88 (240,17)
20(517.28,3707.38)	3.28 (195,14)	3.07 (101,10)	3.03 (201,17)	2.97 (169,18)	2.96 (168,17)
21(511.28,3706.38)	1.94 (260,18)	1.87 (201,18)	1.82 (152,17)	1.82 (173,10)	1.79 (248, 8)
22(512.28,3706.38)	2.11 (277,10)	2.09 (201,18)	2.02 (260,18)	2.02 (173,10)	1.98 (50,15)
23(513.28,3706.38)	2.26 (277,15)	2.25 (277,10)	2.21 (173,10)	2.16 (50,15)	2.14 (203,13)
24(514.28,3706.38)	2.43 (277,15)	2.36 (277,10)	2.33 (203,13)	2.31 (50,15)	2.28 (90,14)
25(515.28,3706.38)	2.45 (90,14)	2.44 (173,11)	2.42 (163, 9)	2.41 (90,12)	2.37 (122,11)
26(517.28,3714.18)	5.72 (221,13)	5.69 (231,16)	5.64 (217,16)	5.61 (231,14)	5.60 (200,12)
27(512.28,3715.18)	2.74 (171,12)	2.73 (241,17)	2.68 (189,18)	2.68 (220,12)	2.65 (229,16)
28(514.28,3716.18)	3.07 (269,16)	3.04 (287,11)	3.00 (309,16)	2.94 (317,15)	2.92 (244,16)
29(515.28,3716.18)	3.20 (317,15)	3.12 (227,17)	3.09 (224,17)	3.05 (184,16)	3.05 (223,16)
30(513.28,3717.18)	2.50 (287,11)	2.39 (244,17)	2.36 (244,16)	2.36 (234,16)	2.35 (214,17)
31(514.28,3717.18)	2.54 (244,16)	2.53 (214,17)	2.52 (237,17)	2.52 (200,18)	2.51 (244,17)

32(512.28,3711.18)	3.64	(163,11)	3.48	(350,13)	3.41	(241,15)	3.35	(250, 9)	3.23	(249,16)
33(511.28,3709.38)	2.41	(213,13)	2.40	(248, 8)	2.40	(93,15)	2.31	(265, 9)	2.30	(343,15)
34(511.28,3709.38)	2.41	(213,13)	2.40	(248, 8)	2.40	(93,15)	2.31	(265, 9)	2.30	(343,15)
35(513.28,3709.38)	3.69	(298,16)	3.53	(122,14)	3.36	(206,15)	3.35	(231,17)	3.28	(194,10)
36(514.28,3709.38)	4.24	(249,11)	4.24	(262,12)	4.19	(298,16)	4.16	(265,15)	4.06	(85,14)
37(515.28,3709.38)	5.20	(276,11)	5.09	(265,15)	4.92	(85,14)	4.86	(297,10)	4.86	(52,14)
38(511.28,3708.38)	2.35	(201,18)	2.28	(152,17)	2.22	(248, 8)	2.17	(213,13)	2.16	(231, 9)
39(513.28,3708.38)	3.10	(298,16)	2.99	(203,13)	2.98	(201,18)	2.94	(171,15)	2.93	(194,10)
40(514.28,3708.38)	3.31	(203,13)	3.29	(261,16)	3.26	(240,17)	3.24	(171,15)	3.23	(194,10)
41(517.28,3708.38)	4.22	(195,14)	3.98	(233,10)	3.94	(260,10)	3.57	(122,15)	3.56	(261,15)
42(513.28,3707.38)	2.65	(201,18)	2.60	(277,15)	2.55	(203,13)	2.53	(173,10)	2.52	(171,15)
43(512.28,3707.38)	2.39	(201,18)	2.31	(152,17)	2.30	(173,10)	2.25	(248, 8)	2.22	(171,15)
44(515.28,3707.38)	3.21	(90,14)	3.19	(173,11)	2.89	(204,18)	2.89	(205,18)	2.88	(240,17)
45(517.28,3707.38)	3.28	(195,14)	3.07	(101,10)	3.03	(201,17)	2.97	(169,18)	2.96	(168,17)
46(511.28,3706.38)	1.94	(260,18)	1.87	(201,18)	1.82	(152,17)	1.82	(173,10)	1.79	(248, 8)
47(512.28,3706.38)	2.11	(277,10)	2.09	(201,18)	2.02	(260,18)	2.02	(173,10)	1.98	(50,15)
48(513.28,3706.38)	2.26	(277,15)	2.25	(277,10)	2.21	(173,10)	2.16	(50,15)	2.14	(203,13)
49(514.28,3706.38)	2.43	(277,15)	2.36	(277,10)	2.33	(203,13)	2.31	(50,15)	2.28	(90,14)
50(515.28,3706.38)	2.45	(90,14)	2.44	(173,11)	2.42	(163, 9)	2.41	(90,12)	2.37	(122,11)
51(517.28,3714.18)	5.72	(221,13)	5.69	(231,16)	5.64	(217,16)	5.61	(231,14)	5.60	(200,12)
52(512.28,3715.18)	2.74	(171,12)	2.73	(241,17)	2.68	(189,18)	2.68	(220,12)	2.65	(229,16)
53(511.28,3716.18)	2.21	(276,16)	2.20	(174,18)	2.20	(220,13)	2.13	(189,18)	2.13	(220,12)
54(514.28,3716.18)	3.07	(269,16)	3.04	(287,11)	3.00	(309,16)	2.94	(317,15)	2.92	(244,16)
55(515.28,3716.18)	3.20	(317,15)	3.12	(227,17)	3.09	(224,17)	3.05	(184,16)	3.05	(223,16)
56(513.28,3717.18)	2.50	(287,11)	2.39	(244,17)	2.36	(244,16)	2.36	(234,16)	2.35	(214,17)
57(514.28,3717.18)	2.54	(244,16)	2.53	(214,17)	2.52	(237,17)	2.52	(200,18)	2.51	(244,17)
58(512.28,3711.18)	3.64	(163,11)	3.48	(350,13)	3.41	(241,15)	3.35	(250, 9)	3.23	(249,16)
59(516.50,3708.10)	4.07	(195,14)	3.96	(173,11)	3.90	(163, 9)	3.84	(201,16)	3.74	(163,12)
60(518.10,3709.35)	4.86	(237,15)	4.73	(227,15)	4.58	(262,13)	4.53	(258,13)	4.50	(221,16)
61(514.50,3708.80)	3.61	(265,15)	3.61	(261,16)	3.59	(233,15)	3.55	(259,12)	3.54	(85,14)
62(517.30,3714.40)	5.30	(221,13)	5.19	(146,12)	5.16	(144, 9)	5.09	(217,16)	5.07	(231,14)

FIVE HIGHEST 3-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48) *	5.96	(156,15)	3.19	(90,15)	3.03	(96,12)	2.82	(205,15)	2.74	(230,12)
2(515.88,3710.48)	5.84	(156,15)	3.23	(90,15)	2.81	(205,15)	2.71	(230,12)	2.65	(247,15)
3(515.78,3710.38)	5.28	(156,15)	2.91	(107,12)	2.90	(247,15)	2.73	(205,15)	2.70	(297,12)
4(515.88,3710.38)	5.42	(156,15)	3.33	(90,15)	2.94	(193,15)	2.85	(247,15)	2.75	(205,15)
5(515.68,3710.38)	5.12	(156,15) *	4.33	(265,15)	2.94	(107,12)	2.77	(297,12)	2.70	(205,15)
6(515.98,3710.38)	3.97	(194,15)	3.30	(90,15)	3.10	(96,12)	2.98	(156,15)	2.89	(193,15)
7(511.28,3709.38)	1.40	(50,12)	1.35	(254,18)	1.32	(85,18)	1.21	(86,15)	1.18	(120,12)
8(512.28,3709.38)	2.44	(251,12)	1.74	(117, 9)	1.69	(50,12)	1.53	(120,12)	1.47	(48,15)
9(513.28,3709.38)	3.07	(251,12)	3.03	(295,12)	2.10	(269,15)	2.08	(50,12)	2.08	(117, 9)
10(514.28,3709.38)	3.51	(295,12)	2.60	(44,12)	2.48	(249,12)	2.46	(251,12)	2.40	(113,15)
11(515.28,3709.38)	3.20	(265,15)	2.91	(297,12)	2.57	(203,15)	2.57	(107,12)	2.33	(277,15)
12(518.28,3709.38)	2.91	(237,15)	2.80	(121,12)	2.71	(269,12)	2.55	(204,15)	2.55	(170,18)
13(511.28,3708.38)	1.69	(251,12)	1.34	(56, 3)	1.33	(56, 6)	1.30	(276,15)	1.27	(80, 9)
14(513.28,3708.38)	2.56	(295,12)	1.86	(44,12)	1.71	(81,15)	1.68	(269,15)	1.67	(284,12)
15(514.28,3708.38)	2.14	(44,12)	1.99	(277,15)	1.95	(284,12)	1.94	(297,12)	1.78	(265,15)
16(517.28,3708.38)	2.32	(240,15)	2.30	(173,18)	2.28	(52,12)	2.25	(261,15)	2.25	(208,18)
17(513.28,3707.38)	1.72	(50,15)	1.56	(44,12)	1.51	(277,15)	1.43	(295,12)	1.41	(60,18)
18(512.28,3707.38)	1.81	(295,12)	1.40	(247,18)	1.38	(44,12)	1.20	(81,15)	1.19	(143,18)
19(515.28,3707.38)	2.07	(193,15)	1.81	(163, 9)	1.78	(205,18)	1.71	(363,12)	1.69	(90,15)
20(517.28,3707.38)	2.63	(261,15)	2.56	(293,15)	2.48	(168,18)	1.78	(173,18)	1.75	(286, 9)
21(511.28,3706.38)	1.32	(295,12)	1.23	(247,18)	1.18	(143,18)	1.13	(56,18)	0.95	(246,21)
22(512.28,3706.38)	1.24	(50,15)	1.21	(111, 9)	1.20	(44,12)	1.14	(96, 6)	1.04	(295,12)
23(513.28,3706.38)	1.30	(60,18)	1.28	(81,18)	1.27	(277,15)	1.23	(111, 9)	1.19	(246,15)
24(514.28,3706.38)	1.59	(247,15)	1.45	(203,15)	1.38	(277,15)	1.33	(81,18)	1.31	(363,12)
25(515.28,3706.38)	2.25	(163, 9)	1.77	(297,12)	1.68	(193,15)	1.48	(204,18)	1.40	(364,15)
26(517.28,3714.18)	3.26	(146,15)	3.23	(165, 9)	3.09	(149,18)	3.04	(183,15)	3.01	(141,15)
27(512.28,3715.18)	2.12	(273,15)	1.79	(88,15)	1.58	(347,12)	1.56	(290,12)	1.56	(220,12)
28(514.28,3716.18)	2.35	(270,15)	1.87	(244,18)	1.80	(135,12)	1.72	(347,15)	1.67	(272,15)
29(515.28,3716.18)	2.69	(126,12)	2.51	(300,12)	2.35	(242,15)	2.29	(197,12)	2.29	(153,18)

30(513.28,3717.18)	1.63	(270,15)	1.58	(244,18)	1.56	(174,18)	1.56	(347,12)	1.46	(287,12)
31(514.28,3717.18)	1.93	(126,12)	1.82	(270,15)	1.68	(244,18)	1.48	(135,12)	1.47	(30,12)
32(512.28,3711.18)	2.23	(85,18)	2.10	(249,18)	2.05	(230,18)	2.01	(120,18)	1.99	(82,12)
33(511.28,3709.38)	1.40	(50,12)	1.35	(254,18)	1.32	(85,18)	1.21	(86,15)	1.18	(120,12)
34(511.28,3709.38)	1.40	(50,12)	1.35	(254,18)	1.32	(85,18)	1.21	(86,15)	1.18	(120,12)
35(513.28,3709.38)	3.07	(251,12)	3.03	(295,12)	2.10	(269,15)	2.08	(50,12)	2.08	(117, 9)
36(514.28,3709.38)	3.51	(295,12)	2.60	(44,12)	2.48	(249,12)	2.46	(251,12)	2.40	(113,15)
37(515.28,3709.38)	3.20	(265,15)	2.91	(297,12)	2.57	(203,15)	2.57	(107,12)	2.33	(277,15)
38(511.28,3708.38)	1.69	(251,12)	1.34	(56, 3)	1.33	(56, 6)	1.30	(276,15)	1.27	(80, 9)
39(513.28,3708.38)	2.56	(295,12)	1.86	(44,12)	1.71	(81,15)	1.68	(269,15)	1.67	(284,12)
40(514.28,3708.38)	2.14	(44,12)	1.99	(277,15)	1.95	(284,12)	1.94	(297,12)	1.78	(265,15)
41(517.28,3708.38)	2.32	(240,15)	2.30	(173,18)	2.28	(52,12)	2.25	(261,15)	2.25	(208,18)
42(513.28,3707.38)	1.72	(50,15)	1.56	(44,12)	1.51	(277,15)	1.43	(295,12)	1.41	(60,18)
43(512.28,3707.38)	1.81	(295,12)	1.40	(247,18)	1.38	(44,12)	1.20	(81,15)	1.19	(143,18)
44(515.28,3707.38)	2.07	(193,15)	1.81	(163, 9)	1.78	(205,18)	1.71	(363,12)	1.69	(90,15)
45(517.28,3707.38)	2.63	(261,15)	2.56	(293,15)	2.48	(168,18)	1.78	(173,18)	1.75	(286, 9)
46(511.28,3706.38)	1.32	(295,12)	1.23	(247,18)	1.18	(143,18)	1.13	(56,18)	0.95	(246,21)
47(512.28,3706.38)	1.24	(50,15)	1.21	(111, 9)	1.20	(44,12)	1.14	(96, 6)	1.04	(295,12)
48(513.28,3706.38)	1.30	(60,18)	1.28	(81,18)	1.27	(277,15)	1.23	(111, 9)	1.19	(246,15)
49(514.28,3706.38)	1.59	(247,15)	1.45	(203,15)	1.38	(277,15)	1.33	(81,18)	1.31	(363,12)
50(515.28,3706.38)	2.25	(163, 9)	1.77	(297,12)	1.68	(193,15)	1.48	(204,18)	1.40	(364,15)
51(517.28,3714.18)	3.26	(146,15)	3.23	(165, 9)	3.09	(149,18)	3.04	(183,15)	3.01	(141,15)
52(512.28,3715.18)	2.12	(273,15)	1.79	(88,15)	1.58	(347,12)	1.56	(290,12)	1.56	(220,12)
53(511.28,3716.18)	1.53	(278,15)	1.47	(273,15)	1.38	(220,12)	1.35	(88,15)	1.27	(347,12)
54(514.28,3716.18)	2.35	(270,15)	1.87	(244,18)	1.80	(135,12)	1.72	(347,15)	1.67	(272,15)
55(515.28,3716.18)	2.69	(126,12)	2.51	(300,12)	2.35	(242,15)	2.29	(197,12)	2.29	(153,18)
56(513.28,3717.18)	1.63	(270,15)	1.58	(244,18)	1.56	(174,18)	1.56	(347,12)	1.46	(287,12)
57(514.28,3717.18)	1.93	(126,12)	1.82	(270,15)	1.68	(244,18)	1.48	(135,12)	1.47	(30,12)
58(512.28,3711.18)	2.23	(85,18)	2.10	(249,18)	2.05	(230,18)	2.01	(120,18)	1.99	(82,12)
59(516.50,3708.10)	3.16	(293,15)	2.38	(163, 9)	2.36	(260,12)	2.32	(173,12)	2.29	(204,18)
60(518.10,3709.35)	2.86	(127,12)	2.61	(204,15)	2.58	(170,18)	2.57	(240,15)	2.51	(362,15)
61(514.50,3708.80)	2.40	(44,12)	2.27	(297,12)	2.20	(284,12)	2.18	(265,15)	2.16	(277,15)
62(517.30,3714.40)	3.03	(165, 9)	2.92	(149,18)	2.88	(146,15)	2.84	(153,15)	2.78	(183,15)

FIVE HIGHEST 8-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	2.35	(230,16) *	2.24	(156,16)	2.15	(205,16)	1.88	(193,16)	1.59	(248,16)
2(515.88,3710.48)	2.38	(230,16)	2.19	(156,16)	2.13	(205,16)	1.44	(193,16)	1.30	(107,16)
3(515.78,3710.38) *	2.46	(230,16)	1.98	(156,16)	1.72	(107,16)	1.55	(297,16)	1.51	(193,16)
4(515.88,3710.38)	2.44	(230,16)	2.04	(205,16)	2.03	(156,16)	2.00	(193,16)	1.33	(107,16)
5(515.68,3710.38)	1.96	(230,16)	1.92	(156,16)	1.85	(297,16)	1.63	(265,16)	1.54	(52,16)
6(515.98,3710.38)	2.43	(230,16)	2.19	(194,16)	2.07	(205,16)	1.98	(193,16)	1.78	(107,16)
7(511.28,3709.38)	1.06	(35,16)	1.01	(56, 8)	0.79	(96,16)	0.78	(120,16)	0.74	(42,16)
8(512.28,3709.38)	1.21	(251,16)	0.96	(120,16)	0.90	(96,16)	0.88	(48,16)	0.85	(80,16)
9(513.28,3709.38)	1.16	(56, 8)	1.15	(251,16)	1.14	(295,16)	1.11	(113,16)	1.09	(50,16)
10(514.28,3709.38)	1.83	(81,16)	1.41	(328,16)	1.39	(52,16)	1.37	(249,16)	1.32	(295,16)
11(515.28,3709.38)	2.40	(297,16)	1.58	(52,16)	1.55	(230,16)	1.20	(265,16)	1.16	(276,16)
12(518.28,3709.38)	1.97	(121,16)	1.40	(204,16)	1.23	(66,16)	1.19	(23,16)	1.15	(362,16)
13(511.28,3708.38)	1.15	(56, 8)	0.99	(56,24)	0.92	(80,16)	0.83	(251,16)	0.77	(87, 8)
14(513.28,3708.38)	1.34	(81,16)	1.00	(328,16)	0.96	(295,16)	0.76	(296,16)	0.74	(249,16)
15(514.28,3708.38)	1.86	(297,16)	1.10	(52,16)	1.06	(277,16)	1.02	(328,16)	0.96	(230,16)
16(517.28,3708.38)	1.73	(293,16)	1.66	(308,16)	1.61	(52,16)	1.55	(286,16)	1.34	(127,16)
17(513.28,3707.38)	0.94	(81,16)	0.93	(328,16)	0.87	(277,16)	0.84	(297,16)	0.78	(7,24)
18(512.28,3707.38)	0.74	(81,16)	0.74	(328,16)	0.71	(56,24)	0.68	(295,16)	0.65	(56, 8)
19(515.28,3707.38)	1.27	(295,16)	1.20	(194,16)	1.10	(230,16)	1.04	(193,16)	0.98	(264, 8)
20(517.28,3707.38)	1.40	(293,16)	1.30	(95,24)	1.28	(52,16)	1.24	(286,16)	1.22	(261,16)
21(511.28,3706.38)	0.69	(246,24)	0.69	(56,24)	0.65	(112, 8)	0.64	(111,24)	0.60	(56, 8)
22(512.28,3706.38)	0.92	(81,16)	0.74	(328,16)	0.73	(10, 8)	0.72	(96, 8)	0.65	(112, 8)
23(513.28,3706.38)	1.07	(297,16)	0.97	(7,24)	0.81	(57, 8)	0.76	(277,16)	0.64	(111, 8)
24(514.28,3706.38)	0.92	(297,16)	0.90	(264, 8)	0.81	(277,16)	0.81	(264,16)	0.76	(230,16)
25(515.28,3706.38)	1.03	(264, 8)	1.00	(295,16)	0.92	(84,24)	0.91	(194,16)	0.84	(345,16)
26(517.28,3714.18)	2.14	(141,16)	1.92	(146,16)	1.71	(239,16)	1.70	(183,16)	1.67	(236,16)
27(512.28,3715.18)	1.28	(273,16)	1.07	(278,16)	0.90	(220,16)	0.83	(274,16)	0.83	(108,16)

28(514.28,3716.18)	1.94	(270,16)	1.40	(336, 8)	1.22	(272,16)	1.13	(94,16)	0.90	(132,16)
29(515.28,3716.18)	1.62	(300,16)	1.48	(30,16)	1.36	(126,16)	1.23	(197,16)	1.16	(336,24)
30(513.28,3717.18)	1.40	(270,16)	1.03	(129,16)	1.03	(336, 8)	0.95	(272,16)	0.95	(132, 8)
31(514.28,3717.18)	1.55	(270,16)	1.21	(30,16)	1.20	(336, 8)	1.03	(272,16)	1.01	(30, 8)
32(512.28,3711.18)	1.81	(250,16)	1.10	(82,16)	1.08	(249,16)	1.00	(38,16)	0.84	(85,24)
33(511.28,3709.38)	1.06	(35,16)	1.01	(56, 8)	0.79	(96,16)	0.78	(120,16)	0.74	(42,16)
34(511.28,3709.38)	1.06	(35,16)	1.01	(56, 8)	0.79	(96,16)	0.78	(120,16)	0.74	(42,16)
35(513.28,3709.38)	1.16	(56, 8)	1.15	(251,16)	1.14	(295,16)	1.11	(113,16)	1.09	(50,16)
36(514.28,3709.38)	1.83	(81,16)	1.41	(328,16)	1.39	(52,16)	1.37	(249,16)	1.32	(295,16)
37(515.28,3709.38)	2.40	(297,16)	1.58	(52,16)	1.55	(230,16)	1.20	(265,16)	1.16	(276,16)
38(511.28,3708.38)	1.15	(56, 8)	0.99	(56,24)	0.92	(80,16)	0.83	(251,16)	0.77	(87, 8)
39(513.28,3708.38)	1.34	(81,16)	1.00	(328,16)	0.96	(295,16)	0.76	(296,16)	0.74	(249,16)
40(514.28,3708.38)	1.86	(297,16)	1.10	(52,16)	1.06	(277,16)	1.02	(328,16)	0.96	(230,16)
41(517.28,3708.38)	1.73	(293,16)	1.66	(308,16)	1.61	(52,16)	1.55	(286,16)	1.34	(127,16)
42(513.28,3707.38)	0.94	(81,16)	0.93	(328,16)	0.87	(277,16)	0.84	(297,16)	0.78	(7,24)
43(512.28,3707.38)	0.74	(81,16)	0.74	(328,16)	0.71	(56,24)	0.68	(295,16)	0.65	(56, 8)
44(515.28,3707.38)	1.27	(295,16)	1.20	(194,16)	1.10	(230,16)	1.04	(193,16)	0.98	(264, 8)
45(517.28,3707.38)	1.40	(293,16)	1.30	(95,24)	1.28	(52,16)	1.24	(286,16)	1.22	(261,16)
46(511.28,3706.38)	0.69	(246,24)	0.69	(56,24)	0.65	(112, 8)	0.64	(111,24)	0.60	(56, 8)
47(512.28,3706.38)	0.92	(81,16)	0.74	(328,16)	0.73	(10, 8)	0.72	(96, 8)	0.65	(112, 8)
48(513.28,3706.38)	1.07	(297,16)	0.97	(7,24)	0.81	(57, 8)	0.76	(277,16)	0.64	(111, 8)
49(514.28,3706.38)	0.92	(297,16)	0.90	(264, 8)	0.81	(277,16)	0.81	(264,16)	0.76	(230,16)
50(515.28,3706.38)	1.03	(264, 8)	1.00	(295,16)	0.92	(84,24)	0.91	(194,16)	0.84	(345,16)
51(517.28,3714.18)	2.14	(141,16)	1.92	(146,16)	1.71	(239,16)	1.70	(183,16)	1.67	(236,16)
52(512.28,3715.18)	1.28	(273,16)	1.07	(278,16)	0.90	(220,16)	0.83	(274,16)	0.83	(108,16)
53(511.28,3716.18)	0.94	(273,16)	0.83	(278,16)	0.79	(220,16)	0.73	(46,24)	0.69	(270,24)
54(514.28,3716.18)	1.94	(270,16)	1.40	(336, 8)	1.22	(272,16)	1.13	(94,16)	0.90	(132,16)
55(515.28,3716.18)	1.62	(300,16)	1.48	(30,16)	1.36	(126,16)	1.23	(197,16)	1.16	(336,24)
56(513.28,3717.18)	1.40	(270,16)	1.03	(129,16)	1.03	(336, 8)	0.95	(272,16)	0.95	(132, 8)
57(514.28,3717.18)	1.55	(270,16)	1.21	(30,16)	1.20	(336, 8)	1.03	(272,16)	1.01	(30, 8)
58(512.28,3711.18)	1.81	(250,16)	1.10	(82,16)	1.08	(249,16)	1.00	(38,16)	0.84	(85,24)
59(516.50,3708.10)	1.67	(194,16)	1.57	(296,16)	1.55	(340,16)	1.55	(293,16)	1.46	(117,16)
60(518.10,3709.35)	1.70	(127,16)	1.44	(204,16)	1.23	(240,16)	1.19	(23,16)	1.15	(362,16)
61(514.50,3708.80)	2.08	(297,16)	1.26	(52,16)	1.14	(230,16)	1.10	(277,16)	1.08	(328,16)
62(517.30,3714.40)	2.07	(236,16)	1.95	(141,16)	1.73	(146,16)	1.60	(239,16)	1.41	(149,16)

FIVE HIGHEST 24-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	0.80	(205,24)	0.79	(230,24)	0.75	(156,24)	0.74	(193,24)	0.53	(248,24)
2(515.88,3710.48)	0.80	(230,24)	0.79	(205,24)	0.73	(156,24)	0.59	(193,24)	0.45	(107,24)
3(515.78,3710.38)	0.83	(230,24)	0.66	(156,24)	0.64	(193,24)	0.60	(205,24)	0.59	(107,24)
4(515.88,3710.38)	0.83	(230,24)	0.79	(193,24)	0.78	(205,24)	0.68	(156,24)	0.46	(107,24)
5(515.68,3710.38)	0.67	(230,24)	0.64	(156,24)	0.62	(297,24)	0.59	(205,24)	0.54	(265,24)
6(515.98,3710.38)	0.82	(230,24)	0.78	(205,24)	0.78	(193,24)	0.73	(194,24)	0.61	(107,24)
7(511.28,3709.38)	0.58	(56,24)	0.53	(35,24)	0.45	(120,24)	0.39	(42,24)	0.37	(96,24)
8(512.28,3709.38)	0.68	(56,24)	0.50	(87,24)	0.48	(120,24)	0.47	(251,24)	0.47	(80,24)
9(513.28,3709.38)	0.87	(56,24)	0.49	(117,24)	0.48	(87,24)	0.47	(247,24)	0.46	(248,24)
10(514.28,3709.38)	0.71	(81,24)	0.55	(117,24)	0.54	(328,24)	0.52	(284,24)	0.48	(52,24)
11(515.28,3709.38)	0.81	(297,24)	0.56	(230,24)	0.54	(52,24)	0.46	(81,24)	0.41	(205,24)
12(518.28,3709.38)	0.66	(121,24)	0.56	(23,24)	0.52	(170,24)	0.47	(204,24)	0.46	(127,24)
13(511.28,3708.38)	0.87	(56,24)	0.52	(80,24)	0.51	(87,24)	0.42	(35,24)	0.41	(247,24)
14(513.28,3708.38)	0.54	(56,24)	0.54	(81,24)	0.45	(111,24)	0.42	(284,24)	0.41	(328,24)
15(514.28,3708.38)	0.62	(297,24)	0.49	(328,24)	0.45	(111,24)	0.44	(81,24)	0.43	(230,24)
16(517.28,3708.38)	0.82	(293,24)	0.70	(286,24)	0.70	(307,24)	0.63	(152,24)	0.61	(308,24)
17(513.28,3707.38)	0.57	(111,24)	0.53	(81,24)	0.49	(56,24)	0.45	(328,24)	0.42	(246,24)
18(512.28,3707.38)	0.66	(56,24)	0.51	(111,24)	0.37	(112,24)	0.37	(284,24)	0.37	(81,24)
19(515.28,3707.38)	0.62	(264,24)	0.57	(57,24)	0.54	(84,24)	0.54	(295,24)	0.46	(230,24)
20(517.28,3707.38)	0.84	(307,24)	0.73	(293,24)	0.65	(286,24)	0.53	(36,24)	0.52	(261,24)
21(511.28,3706.38)	0.62	(56,24)	0.49	(111,24)	0.39	(112,24)	0.33	(87,24)	0.33	(81,24)
22(512.28,3706.38)	0.62	(111,24)	0.55	(81,24)	0.44	(56,24)	0.40	(328,24)	0.40	(112,24)
23(513.28,3706.38)	0.59	(111,24)	0.39	(112,24)	0.39	(264,24)	0.39	(81,24)	0.39	(328,24)
24(514.28,3706.38)	0.66	(264,24)	0.46	(57,24)	0.42	(81,24)	0.37	(8,24)	0.37	(230,24)
25(515.28,3706.38)	0.65	(264,24)	0.56	(57,24)	0.52	(84,24)	0.50	(10,24)	0.50	(295,24)

26(517.28,3714.18)	0.75	(183,24)	0.72	(141,24)	0.66	(149,24)	0.64	(239,24)	0.64	(146,24)
27(512.28,3715.18)	0.52	(273,24)	0.48	(278,24)	0.40	(88,24)	0.35	(97,24)	0.35	(162,24)
28(514.28,3716.18)	0.75	(270,24)	0.66	(132,24)	0.65	(336,24)	0.57	(30,24)	0.51	(281,24)
29(515.28,3716.18) *	0.93	(336,24) *	0.88	(30,24)	0.69	(335,24)	0.66	(68,24)	0.64	(300,24)
30(513.28,3717.18)	0.77	(132,24)	0.63	(270,24)	0.52	(281,24)	0.46	(336,24)	0.45	(88,24)
31(514.28,3717.18)	0.79	(30,24)	0.76	(336,24)	0.71	(132,24)	0.65	(357,24)	0.60	(270,24)
32(512.28,3711.18)	0.72	(250,24)	0.49	(249,24)	0.43	(120,24)	0.42	(82,24)	0.40	(85,24)
33(511.28,3709.38)	0.58	(56,24)	0.53	(35,24)	0.45	(120,24)	0.39	(42,24)	0.37	(96,24)
34(511.28,3709.38)	0.58	(56,24)	0.53	(35,24)	0.45	(120,24)	0.39	(42,24)	0.37	(96,24)
35(513.28,3709.38)	0.87	(56,24)	0.49	(117,24)	0.48	(87,24)	0.47	(247,24)	0.46	(248,24)
36(514.28,3709.38)	0.71	(81,24)	0.55	(117,24)	0.54	(328,24)	0.52	(284,24)	0.48	(52,24)
37(515.28,3709.38)	0.81	(297,24)	0.56	(230,24)	0.54	(52,24)	0.46	(81,24)	0.41	(205,24)
38(511.28,3708.38)	0.87	(56,24)	0.52	(80,24)	0.51	(87,24)	0.42	(35,24)	0.41	(247,24)
39(513.28,3708.38)	0.54	(56,24)	0.54	(81,24)	0.45	(111,24)	0.42	(284,24)	0.41	(328,24)
40(514.28,3708.38)	0.62	(297,24)	0.49	(328,24)	0.45	(111,24)	0.44	(81,24)	0.43	(230,24)
41(517.28,3708.38)	0.82	(293,24)	0.70	(286,24)	0.70	(307,24)	0.63	(152,24)	0.61	(308,24)
42(513.28,3707.38)	0.57	(111,24)	0.53	(81,24)	0.49	(56,24)	0.45	(328,24)	0.42	(246,24)
43(512.28,3707.38)	0.66	(56,24)	0.51	(111,24)	0.37	(112,24)	0.37	(284,24)	0.37	(81,24)
44(515.28,3707.38)	0.62	(264,24)	0.57	(57,24)	0.54	(84,24)	0.54	(295,24)	0.46	(230,24)
45(517.28,3707.38)	0.84	(307,24)	0.73	(293,24)	0.65	(286,24)	0.53	(36,24)	0.52	(261,24)
46(511.28,3706.38)	0.62	(56,24)	0.49	(111,24)	0.39	(112,24)	0.33	(87,24)	0.33	(81,24)
47(512.28,3706.38)	0.62	(111,24)	0.55	(81,24)	0.44	(56,24)	0.40	(328,24)	0.40	(112,24)
48(513.28,3706.38)	0.59	(111,24)	0.39	(112,24)	0.39	(264,24)	0.39	(81,24)	0.39	(328,24)
49(514.28,3706.38)	0.66	(264,24)	0.46	(57,24)	0.42	(81,24)	0.37	(8,24)	0.37	(230,24)
50(515.28,3706.38)	0.65	(264,24)	0.56	(57,24)	0.52	(84,24)	0.50	(10,24)	0.50	(295,24)
51(517.28,3714.18)	0.75	(183,24)	0.72	(141,24)	0.66	(149,24)	0.64	(239,24)	0.64	(146,24)
52(512.28,3715.18)	0.52	(273,24)	0.48	(278,24)	0.40	(88,24)	0.35	(97,24)	0.35	(162,24)
53(511.28,3716.18)	0.44	(273,24)	0.42	(278,24)	0.40	(88,24)	0.33	(46,24)	0.32	(220,24)
54(514.28,3716.18)	0.75	(270,24)	0.66	(132,24)	0.65	(336,24)	0.57	(30,24)	0.51	(281,24)
55(515.28,3716.18)	0.93	(336,24)	0.88	(30,24)	0.69	(335,24)	0.66	(68,24)	0.64	(300,24)
56(513.28,3717.18)	0.77	(132,24)	0.63	(270,24)	0.52	(281,24)	0.46	(336,24)	0.45	(88,24)
57(514.28,3717.18)	0.79	(30,24)	0.76	(336,24)	0.71	(132,24)	0.65	(357,24)	0.60	(270,24)
58(512.28,3711.18)	0.72	(250,24)	0.49	(249,24)	0.43	(120,24)	0.42	(82,24)	0.40	(85,24)
59(516.50,3708.10)	0.76	(307,24)	0.75	(163,24)	0.62	(293,24)	0.61	(296,24)	0.59	(345,24)
60(518.10,3709.35)	0.69	(127,24)	0.55	(23,24)	0.48	(204,24)	0.44	(362,24)	0.41	(240,24)
61(514.50,3708.80)	0.69	(297,24)	0.49	(328,24)	0.47	(230,24)	0.44	(52,24)	0.42	(81,24)
62(517.30,3714.40)	0.75	(236,24)	0.66	(141,24)	0.65	(149,24)	0.62	(239,24)	0.58	(146,24)

Woodward-Clyde
Consultants

SECTION H.8

1983 MODELING OUTPUT FOR NOx COMPLEX I

COMPLEX I (DATED 90095)
BOWMAN ENVIRONMENTAL ENGINEERING VER. 6.27

SESSION INFORMATION

INPUT DATA FILE NAME : ICNOX83.DTA
OUTPUT LIST FILE NAME : ICNOX83.LST
MET DATA FILE NAME : C:\BEE\SHVGGG83.BIN

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
NOX SCREEN - 1983 SHREVEPORT/LONGVIEW BINARY MET. DATA

GENERAL INPUT INFORMATION

THIS RUN OF COMPLEX I -VERSION 2.0 IS FOR THE POLLUTANT PART FOR 365 24-HOUR PERIODS.
CONCENTRATION ESTIMATES BEGIN ON HOUR- 1,JULIAN DAY- 1, YEAR-1983.
A FACTOR OF 1.0000000 HAS BEEN SPECIFIED TO CONVERT USER LENGTH UNITS TO KILOMETERS.
0 SIGNIFICANT SOURCES ARE TO BE CONSIDERED.
THIS RUN WILL NOT CONSIDER ANY POLLUTANT LOSS.
HIGH-FIVE SUMMARY CONCENTRATION TABLES WILL BE OUTPUT FOR 4 AVERAGING PERIODS.
AVG TIMES OF 1,3,8, AND 24 HOURS ARE AUTOMATICALLY DISPLAYED.

OPTION	OPTION LIST	OPTION SPECIFICATION : 0= IGNORE OPTION 1= USE OPTION
	TECHNICAL OPTIONS	
1	TERRAIN ADJUSTMENTS	0
2	DO NOT INCLUDE STACK DOWNWASH CALCULATIONS	0
3	DO NOT INCLUDE GRADUAL PLUME RISE CALCULATIONS	1
4	CALCULATE INITIAL PLUME SIZE	1
	INPUT OPTIONS	
5	READ MET DATA FROM CARDS	0
6	READ HOURLY EMISSIONS	0
7	SPECIFY SIGNIFICANT SOURCES	0
8	READ RADIAL DISTANCES TO GENERATE RECEPTORS	0
	PRINTED OUTPUT OPTIONS	
9	DELETE EMISSIONS WITH HEIGHT TABLE	1
10	DELETE MET DATA SUMMARY FOR AVG PERIOD	1
11	DELETE HOURLY CONTRIBUTIONS	1
12	DELETE MET DATA ON HOURLY CONTRIBUTIONS	1
13	DELETE FINAL PLUME RISE CALC ON HRLY CONTRIBUTIONS	1
14	DELETE HOURLY SUMMARY	1
15	DELETE MET DATA ON HRLY SUMMARY	1
16	DELETE FINAL PLUME RISE CALC ON HRLY SUMMARY	1
17	DELETE AVG-PERIOD CONTRIBUTIONS	1
18	DELETE AVERAGING PERIOD SUMMARY	1
19	DELETE AVG CONCENTRATIONS AND HI-5 TABLES	0
	OTHER CONTROL AND OUTPUT OPTIONS	
20	RUN IS PART OF A SEGMENTED RUN	0
21	WRITE PARTIAL CONC TO DISK OR TAPE	0
22	WRITE HOURLY CONC TO DISK OR TAPE	0
23	WRITE AVG-PERIOD CONC TO DISK OR TAPE	0
24	PUNCH AVG-PERIOD CONC ONTO CARDS	0
25	COMPLEX TERRAIN OPTION	1
26	CALM PROCESSING OPTION	0
27	VALLEY SCREENING OPTION	0

ANEMOMETER HEIGHT= 10.00
WIND PROFILE WITH HEIGHT EXPONENTS CORRESPONDING TO STABILITY ARE AS FOLLOWS:
FOR STABILITY A: 0.07
STABILITY B: 0.07
STABILITY C: 0.10
STABILITY D: 0.15
STABILITY E: 0.35
STABILITY F: 0.55

POINT SOURCE INFORMATION

SOURCE		EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	SO2(G/SEC) EMISSIONS	PART(G/SEC) EMISSIONS	STACK HT(M)	STACK TEMP(K)	STACK DIAM(M)	STACK VEL(M/SEC)	POTEN. IMPACT (MICRO G/M**3)	EFF HT(M)	GRD-LVL ELEV USER HT UNITS	BUOY FLUX F M**4/S**3
1 1	COGEN	516.32	3711.89	0.00	10.43	22.9	427.6	3.4	16.6	8.07	283.88	34.40	150.19

ADDITIONAL INFORMATION ON SOURCES.

EMISSION INFORMATION FOR 1 (NPT) POINT SOURCES HAS BEEN INPUT
0 SIGNIFICANT POINT SOURCES(NSIGP) ARE TO BE USED FOR THIS RUN
THE ORDER OF SIGNIFICANCE(IMPS) FOR 25 OR LESS POINT SOURCES USED IN THIS RUN AS LISTED BY POINT SOURCE NUMBER:

SURFACE MET DATA FROM STATION(ISFCD) 13957, YEAR(ISFCYR) 1983
MIXING HEIGHT DATA FROM STATION(IMXD) 3951, YEAR(IMXYR) 1983

RECEPTOR INFORMATION

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)
1		515.977	3710.478	0.0	57.9
2		515.877	3710.478	0.0	57.9
3		515.777	3710.378	0.0	57.9
4		515.877	3710.378	0.0	57.9
5		515.677	3710.378	0.0	57.9
6		515.977	3710.378	0.0	57.9
7		511.277	3709.378	0.0	64.0
8		512.277	3709.378	0.0	61.0
9		513.277	3709.378	0.0	73.2
10		514.277	3709.378	0.0	64.0
11		515.277	3709.378	0.0	57.9
12		518.277	3709.378	0.0	61.0
13		511.277	3708.378	0.0	67.1
14		513.277	3708.378	0.0	76.2
15		514.277	3708.378	0.0	70.1
16		517.277	3708.378	0.0	64.0
17		513.277	3707.378	0.0	64.0
18		512.277	3707.378	0.0	67.1
19		515.277	3707.378	0.0	61.0
20		517.277	3707.378	0.0	67.1
21		511.277	3706.378	0.0	73.2
22		512.277	3706.378	0.0	73.2
23		513.277	3706.378	0.0	64.0
24		514.277	3706.378	0.0	64.0
25		515.277	3706.378	0.0	67.1
26		517.277	3714.176	0.0	70.1
27		512.277	3715.176	0.0	61.0
28		514.277	3716.176	0.0	61.0
29		515.277	3716.176	0.0	70.1
30		513.277	3717.176	0.0	61.0
31		514.277	3717.176	0.0	61.0
32		512.277	3711.176	0.0	64.0
33		511.277	3709.378	0.0	64.0
34		511.277	3709.378	0.0	61.0
35		513.277	3709.378	0.0	73.2
36		514.277	3709.378	0.0	64.0
37		515.277	3709.378	0.0	57.9
38		511.277	3708.378	0.0	67.1
39		513.277	3708.378	0.0	76.2
40		514.277	3708.378	0.0	70.1
41		517.277	3708.378	0.0	64.0
42		513.277	3707.378	0.0	64.0

43	512.277	3707.378	0.0	67.1
44	515.277	3707.378	0.0	61.0
45	517.277	3707.378	0.0	67.1
46	511.277	3706.378	0.0	73.2
47	512.277	3706.378	0.0	73.2
48	513.277	3706.378	0.0	64.0
49	514.277	3706.378	0.0	64.0
50	515.277	3706.378	0.0	67.1
51	517.277	3714.176	0.0	70.1
52	512.277	3715.176	0.0	61.0
53	511.277	3716.176	0.0	61.0
54	514.277	3716.176	0.0	61.0
55	515.277	3716.176	0.0	70.1
56	513.277	3717.176	0.0	61.0
57	514.277	3717.176	0.0	61.0
58	512.277	3711.176	0.0	64.0
59	516.500	3708.100	0.0	67.7
60	518.100	3709.350	0.0	79.3
61	514.500	3708.800	0.0	80.5
62	517.300	3714.400	0.0	76.2

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
NOX SCREEN - 1983 SHREVEPORT/LONGVIEW BINARY MET. DATA

RECEPTORS

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)	DAY	AVG CONC FOR PERIOD 1.HR 1. TO DAY365.HR24. (MICROGRAMS/M**3)
1		515.98	3710.48	0.0	57.9		0.05
2		515.88	3710.48	0.0	57.9		0.04
3		515.78	3710.38	0.0	57.9		0.04
4		515.88	3710.38	0.0	57.9		0.04
5		515.68	3710.38	0.0	57.9		0.04
6		515.98	3710.38	0.0	57.9		0.05
7		511.28	3709.38	0.0	64.0		0.03
8		512.28	3709.38	0.0	61.0		0.04
9		513.28	3709.38	0.0	73.2		0.05
10		514.28	3709.38	0.0	64.0		0.04
11		515.28	3709.38	0.0	57.9		0.04
12		518.28	3709.38	0.0	61.0		0.07
13		511.28	3708.38	0.0	67.1		0.04
14		513.28	3708.38	0.0	76.2		0.04
15		514.28	3708.38	0.0	70.1		0.04
16		517.28	3708.38	0.0	64.0		0.06
17		513.28	3707.38	0.0	64.0		0.03
18		512.28	3707.38	0.0	67.1		0.03
19		515.28	3707.38	0.0	61.0		0.05
20		517.28	3707.38	0.0	67.1		0.06
21		511.28	3706.38	0.0	73.2		0.03
22		512.28	3706.38	0.0	73.2		0.03
23		513.28	3706.38	0.0	64.0		0.03
24		514.28	3706.38	0.0	64.0		0.03
25		515.28	3706.38	0.0	67.1		0.05
26		517.28	3714.18	0.0	70.1		0.06
27		512.28	3715.18	0.0	61.0	*	0.08
28		514.28	3716.18	0.0	61.0		0.07
29		515.28	3716.18	0.0	70.1		0.08
30		513.28	3717.18	0.0	61.0		0.07
31		514.28	3717.18	0.0	61.0		0.07
32		512.28	3711.18	0.0	64.0		0.04
33		511.28	3709.38	0.0	64.0		0.03

34	511.28	3709.38	0.0	61.0	0.03
35	513.28	3709.38	0.0	73.2	0.05
36	514.28	3709.38	0.0	64.0	0.04
37	515.28	3709.38	0.0	57.9	0.04
38	511.28	3708.38	0.0	67.1	0.04
39	513.28	3708.38	0.0	76.2	0.04
40	514.28	3708.38	0.0	70.1	0.04
41	517.28	3708.38	0.0	64.0	0.06
42	513.28	3707.38	0.0	64.0	0.03
43	512.28	3707.38	0.0	67.1	0.03
44	515.28	3707.38	0.0	61.0	0.05
45	517.28	3707.38	0.0	67.1	0.06
46	511.28	3706.38	0.0	73.2	0.03
47	512.28	3706.38	0.0	73.2	0.03
48	513.28	3706.38	0.0	64.0	0.03
49	514.28	3706.38	0.0	64.0	0.03
50	515.28	3706.38	0.0	67.1	0.05
51	517.28	3714.18	0.0	70.1	0.06
52	512.28	3715.18	0.0	61.0	0.08
53	511.28	3716.18	0.0	61.0	0.08
54	514.28	3716.18	0.0	61.0	0.07
55	515.28	3716.18	0.0	70.1	0.08
56	513.28	3717.18	0.0	61.0	0.07
57	514.28	3717.18	0.0	61.0	0.07
58	512.28	3711.18	0.0	64.0	0.04
59	516.50	3708.10	0.0	67.7	0.07
60	518.10	3709.35	0.0	79.3	0.06
61	514.50	3708.80	0.0	80.5	0.04
62	517.30	3714.40	0.0	76.2	0.06

FIVE HIGHEST 1-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48) *	10.05	(300,14) *	8.28	(212,14)	8.23	(211,14)	8.23	(246,14)	8.09	(245,11)
2(515.88,3710.48)	8.25	(245,12)	8.24	(212,14)	8.18	(211,14)	7.91	(237,13)	7.82	(243,11)
3(515.78,3710.38)	7.92	(212,14)	7.88	(211,14)	7.80	(245,12)	7.80	(237,13)	7.72	(243,11)
4(515.88,3710.38)	8.01	(212,14)	7.97	(211,14)	7.92	(245,12)	7.84	(237,13)	7.76	(243,11)
5(515.68,3710.38)	7.81	(212,14)	7.77	(211,14)	7.74	(237,13)	7.66	(245,12)	7.66	(243,11)
6(515.98,3710.38)	8.83	(300,14)	8.08	(212,14)	8.03	(246,14)	7.91	(245,11)	7.87	(237,13)
7(511.28,3709.38)	2.48	(243,15)	2.43	(254,10)	2.41	(243,17)	2.41	(257,17)	2.40	(253, 9)
8(512.28,3709.38)	3.10	(273,16)	3.09	(254,10)	3.07	(266,14)	2.97	(320,11)	2.97	(17,15)
9(513.28,3709.38)	3.85	(273,16)	3.84	(190, 9)	3.79	(266,14)	3.62	(17,15)	3.61	(225,15)
10(514.28,3709.38)	4.60	(232,14)	4.58	(202,10)	4.54	(257,14)	4.52	(269,13)	4.48	(254, 9)
11(515.28,3709.38)	5.47	(238,14)	5.42	(218,15)	5.33	(235,14)	5.30	(226,12)	5.23	(253,10)
12(518.28,3709.38)	4.76	(238,15)	4.60	(221, 9)	4.40	(286,11)	4.39	(67,11)	4.37	(235,10)
13(511.28,3708.38)	2.35	(243,15)	2.31	(283,15)	2.28	(253, 9)	2.28	(169,15)	2.23	(283,10)
14(513.28,3708.38)	3.20	(273,16)	3.19	(190, 9)	3.16	(266,14)	3.09	(87,17)	3.08	(54,11)
15(514.28,3708.38)	3.73	(270,11)	3.57	(87,17)	3.55	(54,11)	3.48	(238,14)	3.45	(232,14)
16(517.28,3708.38)	4.05	(241,14)	3.96	(220,11)	3.96	(245,10)	3.84	(54,10)	3.82	(49,14)
17(513.28,3707.38)	2.57	(246,16)	2.54	(219,12)	2.52	(278,10)	2.50	(87,17)	2.50	(159, 9)
18(512.28,3707.38)	2.41	(246,16)	2.33	(283,15)	2.31	(169,15)	2.31	(173,15)	2.29	(278,10)
19(515.28,3707.38)	3.27	(246,17)	3.21	(270,11)	3.17	(300,13)	2.93	(174,17)	2.89	(202, 9)
20(517.28,3707.38)	3.21	(175,18)	3.08	(54,10)	3.08	(44,16)	2.89	(202,13)	2.88	(124,17)
21(511.28,3706.38)	2.00	(246,16)	1.95	(283,15)	1.94	(173,15)	1.91	(283,17)	1.91	(283,10)
22(512.28,3706.38)	2.18	(246,16)	2.11	(173,15)	2.02	(278,10)	2.00	(159, 9)	1.92	(15,16)
23(513.28,3706.38)	2.34	(246,16)	2.25	(173,15)	2.19	(159, 9)	2.14	(87,18)	2.14	(219,12)
24(514.28,3706.38)	2.36	(167, 8)	2.33	(297,17)	2.33	(219,12)	2.30	(174,17)	2.28	(87,18)
25(515.28,3706.38)	2.52	(202, 9)	2.51	(212, 9)	2.48	(246,17)	2.46	(167, 8)	2.43	(300,13)
26(517.28,3714.18)	5.83	(209,16)	5.83	(240,14)	5.64	(235,13)	5.64	(240,15)	5.58	(209,12)
27(512.28,3715.18)	3.01	(269,16)	2.93	(265,16)	2.79	(238,17)	2.78	(218,17)	2.77	(220,17)
28(514.28,3716.18)	3.15	(224,15)	3.10	(150,17)	2.89	(229,17)	2.88	(170,17)	2.86	(239, 9)
29(515.28,3716.18)	3.38	(199,13)	3.10	(216,17)	3.07	(229,17)	3.04	(228, 9)	3.04	(227,10)
30(513.28,3717.18)	2.53	(265,16)	2.38	(190,16)	2.32	(259,12)	2.32	(260,12)	2.31	(145,18)
31(514.28,3717.18)	2.49	(259,12)	2.49	(260,12)	2.46	(168,18)	2.45	(152,17)	2.45	(269,10)

32(512.28,3711.18)	3.79	(246,15)	3.74	(193,10)	3.73	(191,11)	3.69	(145,17)	3.37	(274,15)
33(511.28,3709.38)	2.48	(243,15)	2.43	(254,10)	2.41	(243,17)	2.41	(257,17)	2.40	(253, 9)
34(511.28,3709.38)	2.48	(243,15)	2.43	(254,10)	2.41	(243,17)	2.41	(257,17)	2.40	(253, 9)
35(513.28,3709.38)	3.85	(273,16)	3.84	(190, 9)	3.79	(266,14)	3.62	(17,15)	3.61	(225,15)
36(514.28,3709.38)	4.60	(232,14)	4.58	(202,10)	4.54	(257,14)	4.52	(269,13)	4.48	(254, 9)
37(515.28,3709.38)	5.47	(238,14)	5.42	(218,15)	5.33	(235,14)	5.30	(226,12)	5.23	(253,10)
38(511.28,3708.38)	2.35	(243,15)	2.31	(283,15)	2.28	(253, 9)	2.28	(169,15)	2.23	(283,10)
39(513.28,3708.38)	3.20	(273,16)	3.19	(190, 9)	3.16	(266,14)	3.09	(87,17)	3.08	(54,11)
40(514.28,3708.38)	3.73	(270,11)	3.57	(87,17)	3.55	(54,11)	3.48	(238,14)	3.45	(232,14)
41(517.28,3708.38)	4.05	(241,14)	3.96	(220,11)	3.96	(245,10)	3.84	(54,10)	3.82	(49,14)
42(513.28,3707.38)	2.57	(246,16)	2.54	(219,12)	2.52	(278,10)	2.50	(87,17)	2.50	(159, 9)
43(512.28,3707.38)	2.41	(246,16)	2.33	(283,15)	2.31	(169,15)	2.31	(173,15)	2.29	(278,10)
44(515.28,3707.38)	3.27	(246,17)	3.21	(270,11)	3.17	(300,13)	2.93	(174,17)	2.89	(202, 9)
45(517.28,3707.38)	3.21	(175,18)	3.08	(54,10)	3.08	(44,16)	2.89	(202,13)	2.88	(124,17)
46(511.28,3706.38)	2.00	(246,16)	1.95	(283,15)	1.94	(173,15)	1.91	(283,17)	1.91	(283,10)
47(512.28,3706.38)	2.18	(246,16)	2.11	(173,15)	2.02	(278,10)	2.00	(159, 9)	1.92	(15,16)
48(513.28,3706.38)	2.34	(246,16)	2.25	(173,15)	2.19	(159, 9)	2.14	(87,18)	2.14	(219,12)
49(514.28,3706.38)	2.36	(167, 8)	2.33	(297,17)	2.33	(219,12)	2.30	(174,17)	2.28	(87,18)
50(515.28,3706.38)	2.52	(202, 9)	2.51	(212, 9)	2.48	(246,17)	2.46	(167, 8)	2.43	(300,13)
51(517.28,3714.18)	5.83	(209,16)	5.83	(240,14)	5.64	(235,13)	5.64	(240,15)	5.58	(209,12)
52(512.28,3715.18)	3.01	(269,16)	2.93	(265,16)	2.79	(238,17)	2.78	(218,17)	2.77	(220,17)
53(511.28,3716.18)	2.34	(269,16)	2.30	(265,16)	2.18	(273,17)	2.18	(202,18)	2.16	(270,10)
54(514.28,3716.18)	3.15	(224,15)	3.10	(150,17)	2.89	(229,17)	2.88	(170,17)	2.86	(239, 9)
55(515.28,3716.18)	3.38	(199,13)	3.10	(216,17)	3.07	(229,17)	3.04	(228, 9)	3.04	(227,10)
56(513.28,3717.18)	2.53	(265,16)	2.38	(190,16)	2.32	(259,12)	2.32	(260,12)	2.31	(145,18)
57(514.28,3717.18)	2.49	(259,12)	2.49	(260,12)	2.46	(168,18)	2.45	(152,17)	2.45	(269,10)
58(512.28,3711.18)	3.79	(246,15)	3.74	(193,10)	3.73	(191,11)	3.69	(145,17)	3.37	(274,15)
59(516.50,3708.10)	4.11	(246,17)	3.91	(300,13)	3.76	(245,10)	3.74	(175,16)	3.73	(44,16)
60(518.10,3709.35)	4.89	(238,15)	4.53	(235,10)	4.53	(253,14)	4.53	(202,12)	4.50	(286,11)
61(514.50,3708.80)	4.16	(270,11)	4.14	(238,14)	4.09	(232,14)	4.04	(257,14)	4.03	(253,10)
62(517.30,3714.40)	5.38	(209,16)	5.38	(240,14)	5.32	(246,10)	5.31	(194,10)	5.31	(253,11)

FIVE HIGHEST 3-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48) *	5.22	(300,15)	3.86	(188,15)	3.83	(243,12)	3.79	(158,15)	3.29	(143,12)
2(515.88,3710.48)	3.89	(188,15)	3.86	(243,12)	3.20	(158, 9)	3.01	(15,12)	2.75	(245,12)
3(515.78,3710.38)	3.97	(188,15)	3.95	(243,12)	3.16	(15,12)	2.64	(212,15)	2.63	(211,15)
4(515.88,3710.38)	3.96	(188,15)	3.94	(243,12)	3.31	(158, 9)	3.13	(15,12)	2.67	(212,15)
5(515.68,3710.38)	5.02	(211,15) *	3.96	(243,12)	3.55	(221,12)	2.60	(212,15)	2.58	(237,15)
6(515.98,3710.38)	5.05	(300,15)	3.95	(188,15)	3.92	(243,12)	3.80	(158,15)	3.28	(158, 9)
7(511.28,3709.38)	1.47	(189,12)	1.33	(44,12)	1.31	(189, 9)	1.30	(188, 9)	1.23	(214,12)
8(512.28,3709.38)	2.29	(57,12)	2.02	(189,12)	1.70	(282,15)	1.68	(257, 9)	1.65	(188,18)
9(513.28,3709.38)	3.18	(188,18)	2.86	(57,12)	2.77	(266,12)	2.31	(257, 9)	2.31	(266,15)
10(514.28,3709.38)	3.49	(266,12)	2.79	(264,12)	2.67	(188,18)	2.63	(48,15)	2.63	(59,15)
11(515.28,3709.38)	3.09	(211,15)	2.98	(243,12)	2.81	(245,18)	2.80	(213,12)	1.90	(221,12)
12(518.28,3709.38)	2.68	(286,12)	2.65	(34,15)	2.52	(70,12)	2.45	(159,18)	2.41	(106,18)
13(511.28,3708.38)	1.60	(57,12)	1.57	(245,15)	1.33	(157,15)	1.22	(283,12)	1.19	(282,15)
14(513.28,3708.38)	2.23	(266,12)	1.86	(269,15)	1.85	(266,15)	1.84	(157,15)	1.78	(59,15)
15(514.28,3708.38)	2.21	(245,18)	2.11	(59,15)	2.11	(87,18)	1.67	(159,12)	1.60	(211,15)
16(517.28,3708.38)	3.10	(49,15)	2.25	(297,15)	2.17	(67,15)	2.16	(124,18)	2.12	(186,18)
17(513.28,3707.38)	1.43	(47,12)	1.42	(59,15)	1.32	(266,12)	1.30	(144,18)	1.29	(281,15)
18(512.28,3707.38)	1.50	(266,12)	1.36	(157,15)	1.24	(47,12)	1.21	(266,15)	1.21	(59,15)
19(515.28,3707.38)	2.27	(300,15)	1.84	(158, 9)	1.79	(245,18)	1.76	(245, 9)	1.76	(15,12)
20(517.28,3707.38)	2.03	(175,18)	1.95	(186,18)	1.87	(186,15)	1.82	(49,15)	1.79	(297,15)
21(511.28,3706.38)	1.07	(266,12)	1.01	(157,15)	0.91	(47,12)	0.86	(264,12)	0.85	(59,15)
22(512.28,3706.38)	1.39	(264,12)	1.24	(266,12)	1.10	(20, 9)	1.04	(47,12)	0.99	(59,15)
23(513.28,3706.38)	1.38	(87,18)	1.16	(245,18)	1.13	(59,15)	1.00	(20, 6)	0.98	(157,12)
24(514.28,3706.38)	1.34	(15,12)	1.34	(245, 9)	1.29	(245,18)	1.24	(213,12)	1.04	(157,12)
25(515.28,3706.38)	1.72	(300,15)	1.65	(256,12)	1.49	(158, 9)	1.37	(256, 9)	1.36	(245, 9)
26(517.28,3714.18)	3.82	(240,15)	3.16	(181,15)	3.14	(247,15)	3.01	(184,15)	2.94	(154,18)
27(512.28,3715.18)	2.61	(218,18)	2.38	(162,18)	2.38	(279,15)	2.17	(280,15)	1.87	(269,18)
28(514.28,3716.18)	2.42	(287,15)	2.13	(305,15)	2.09	(163,12)	1.74	(115,18)	1.73	(131,15)
29(515.28,3716.18)	2.79	(338,15)	2.74	(177,12)	1.97	(258,15)	1.95	(204,18)	1.92	(73,18)

30(513.28,3717.18)	1.76	(250,12)	1.75	(163,18)	1.71	(305,15)	1.47	(288,12)	1.41	(163,12)
31(514.28,3717.18)	1.39	(115,18)	1.38	(85, 3)	1.38	(153, 9)	1.38	(131,15)	1.36	(338,15)
32(512.28,3711.18)	2.30	(257,18)	2.12	(193,12)	2.07	(171,18)	2.02	(221,15)	1.96	(212,18)
33(511.28,3709.38)	1.47	(189,12)	1.33	(44,12)	1.31	(189, 9)	1.30	(188, 9)	1.23	(214,12)
34(511.28,3709.38)	1.47	(189,12)	1.33	(44,12)	1.31	(189, 9)	1.30	(188, 9)	1.23	(214,12)
35(513.28,3709.38)	3.18	(188,18)	2.86	(57,12)	2.77	(266,12)	2.31	(257, 9)	2.31	(266,15)
36(514.28,3709.38)	3.49	(266,12)	2.79	(264,12)	2.67	(188,18)	2.63	(48,15)	2.63	(59,15)
37(515.28,3709.38)	3.09	(211,15)	2.98	(243,12)	2.81	(245,18)	2.80	(213,12)	1.90	(221,12)
38(511.28,3708.38)	1.60	(57,12)	1.57	(245,15)	1.33	(157,15)	1.22	(283,12)	1.19	(282,15)
39(513.28,3708.38)	2.23	(266,12)	1.86	(269,15)	1.85	(266,15)	1.84	(157,15)	1.78	(59,15)
40(514.28,3708.38)	2.21	(245,18)	2.11	(59,15)	2.11	(87,18)	1.67	(159,12)	1.60	(211,15)
41(517.28,3708.38)	3.10	(49,15)	2.25	(297,15)	2.17	(67,15)	2.16	(124,18)	2.12	(186,18)
42(513.28,3707.38)	1.43	(47,12)	1.42	(59,15)	1.32	(266,12)	1.30	(144,18)	1.29	(281,15)
43(512.28,3707.38)	1.50	(266,12)	1.36	(157,15)	1.24	(47,12)	1.21	(266,15)	1.21	(59,15)
44(515.28,3707.38)	2.27	(300,15)	1.84	(158, 9)	1.79	(245,18)	1.76	(245, 9)	1.76	(15,12)
45(517.28,3707.38)	2.03	(175,18)	1.95	(186,18)	1.87	(186,15)	1.82	(49,15)	1.79	(297,15)
46(511.28,3706.38)	1.07	(266,12)	1.01	(157,15)	0.91	(47,12)	0.86	(264,12)	0.85	(59,15)
47(512.28,3706.38)	1.39	(264,12)	1.24	(266,12)	1.10	(20, 9)	1.04	(47,12)	0.99	(59,15)
48(513.28,3706.38)	1.38	(87,18)	1.16	(245,18)	1.13	(59,15)	1.00	(20, 6)	0.98	(157,12)
49(514.28,3706.38)	1.34	(15,12)	1.34	(245, 9)	1.29	(245,18)	1.24	(213,12)	1.04	(157,12)
50(515.28,3706.38)	1.72	(300,15)	1.65	(256,12)	1.49	(158, 9)	1.37	(256, 9)	1.36	(245, 9)
51(517.28,3714.18)	3.82	(240,15)	3.16	(181,15)	3.14	(247,15)	3.01	(184,15)	2.94	(154,18)
52(512.28,3715.18)	2.61	(218,18)	2.38	(162,18)	2.38	(279,15)	2.17	(280,15)	1.87	(269,18)
53(511.28,3716.18)	1.86	(218,18)	1.73	(162,18)	1.66	(279,15)	1.57	(273,12)	1.51	(280,15)
54(514.28,3716.18)	2.42	(287,15)	2.13	(305,15)	2.09	(163,12)	1.74	(115,18)	1.73	(131,15)
55(515.28,3716.18)	2.79	(338,15)	2.74	(177,12)	1.97	(258,15)	1.95	(204,18)	1.92	(73,18)
56(513.28,3717.18)	1.76	(250,12)	1.75	(163,18)	1.71	(305,15)	1.47	(288,12)	1.41	(163,12)
57(514.28,3717.18)	1.39	(115,18)	1.38	(85, 3)	1.38	(153, 9)	1.38	(131,15)	1.36	(338,15)
58(512.28,3711.18)	2.30	(257,18)	2.12	(193,12)	2.07	(171,18)	2.02	(221,15)	1.96	(212,18)
59(516.50,3708.10)	3.37	(175,18)	2.52	(278,15)	2.24	(173,18)	2.14	(124,18)	2.10	(187, 9)
60(518.10,3709.35)	2.74	(286,12)	2.68	(34,15)	2.62	(70,12)	2.52	(159,18)	2.43	(106,18)
61(514.50,3708.80)	2.46	(245,18)	2.41	(59,15)	2.06	(159,12)	1.99	(211,15)	1.53	(264,12)
62(517.30,3714.40)	3.49	(240,15)	2.97	(154,18)	2.90	(247,15)	2.89	(184,15)	2.88	(181,15)

FIVE HIGHEST 8-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	2.32	(158,16)	2.15	(243,16)	2.08	(245,16)	2.00	(143,16)	1.96	(300,16)
2(515.88,3710.48)	2.17	(243,16)	2.13	(245,16)	1.63	(227,16)	1.51	(218,16)	1.46	(188,16)
3(515.78,3710.38)	2.21	(243,16)	2.17	(245,16)	1.56	(218,16)	1.52	(15,16)	1.49	(227,16)
4(515.88,3710.38)	2.21	(243,16)	2.16	(245,16)	1.86	(158,16)	1.66	(256,16)	1.55	(218,16)
5(515.68,3710.38)	2.22	(243,16)	2.18	(245,16)	1.88	(211,16)	1.57	(218,16)	1.47	(244,16)
6(515.98,3710.38)	2.33	(158,16) *	2.20	(243,16)	2.15	(245,16)	2.12	(256,16)	1.90	(300,16)
7(511.28,3709.38)	1.06	(57,16)	0.82	(214,16)	0.79	(18, 8)	0.76	(189,16)	0.67	(308,24)
8(512.28,3709.38)	1.55	(57,16)	1.04	(189,16)	0.95	(188,16)	0.94	(283,16)	0.89	(282,16)
9(513.28,3709.38)	1.94	(266,16)	1.62	(57,16)	1.38	(189,16)	1.25	(244,16)	1.21	(225,16)
10(514.28,3709.38)	1.86	(266,16)	1.76	(244,16)	1.49	(257,16)	1.26	(159,16)	1.18	(264,16)
11(515.28,3709.38)	1.74	(243,16)	1.68	(245,16)	1.56	(187,16)	1.27	(59,16)	1.25	(218,16)
12(518.28,3709.38)	1.46	(242,16)	1.44	(104,16)	1.42	(114,16)	1.33	(159,16)	1.27	(91,24)
13(511.28,3708.38)	1.18	(57,16)	0.84	(266,16)	0.79	(283,16)	0.61	(225,16)	0.60	(282,16)
14(513.28,3708.38)	1.58	(266,16)	1.00	(257,16)	0.93	(244,16)	0.88	(144,16)	0.84	(159,16)
15(514.28,3708.38)	1.52	(59,16)	1.04	(15,16)	0.99	(159,16)	0.86	(54,16)	0.84	(270,16)
16(517.28,3708.38)	1.28	(297,16)	1.21	(105,16)	1.16	(49,16)	1.16	(167,16)	1.15	(59,16)
17(513.28,3707.38)	0.83	(59,16)	0.77	(47,16)	0.74	(20, 8)	0.73	(15,16)	0.69	(244,16)
18(512.28,3707.38)	1.08	(266,16)	0.68	(257,16)	0.61	(20,16)	0.58	(144,16)	0.58	(159,16)
19(515.28,3707.38)	1.59	(256,16)	1.26	(255,16)	0.98	(15,16)	0.96	(243,16)	0.91	(70,16)
20(517.28,3707.38)	1.22	(358,16)	1.16	(59,16)	1.16	(105,16)	1.06	(128, 8)	1.01	(362,24)
21(511.28,3706.38)	0.78	(266,16)	0.63	(20,16)	0.59	(257, 8)	0.48	(283,16)	0.48	(335, 8)
22(512.28,3706.38)	0.68	(264,16)	0.68	(257, 8)	0.68	(266,16)	0.64	(20, 8)	0.60	(59,16)
23(513.28,3706.38)	0.89	(59,16)	0.66	(15,16)	0.62	(20, 8)	0.56	(350, 8)	0.55	(159,16)
24(514.28,3706.38)	0.73	(15,16)	0.71	(187,16)	0.70	(243,16)	0.54	(245,16)	0.53	(245, 8)
25(515.28,3706.38)	1.36	(256,16)	1.14	(255,16)	0.91	(278,16)	0.72	(70,16)	0.69	(315,16)
26(517.28,3714.18)	1.81	(184,16)	1.79	(247,16)	1.75	(181,16)	1.58	(301,16)	1.43	(240,16)
27(512.28,3715.18)	1.48	(279,16)	1.48	(161,16)	1.26	(88,16)	1.13	(162,24)	1.12	(137,16)

28(514.28,3716.18)	1.20	(131,16)	1.20	(287,16)	1.03	(268,16)	1.00	(163,16)	0.92	(164,16)
29(515.28,3716.18)	1.49	(248,16)	1.36	(177,16)	1.35	(258,16)	1.32	(131,16)	1.29	(228,16)
30(513.28,3717.18)	1.05	(163,16)	0.88	(164,16)	0.84	(178,24)	0.83	(231, 8)	0.82	(250,16)
31(514.28,3717.18)	1.06	(131,16)	0.86	(323, 8)	0.85	(117,16)	0.85	(162,16)	0.82	(63, 8)
32(512.28,3711.18)	1.27	(257,16)	1.12	(172,16)	1.12	(239,16)	1.07	(173,16)	1.01	(187,16)
33(511.28,3709.38)	1.06	(57,16)	0.82	(214,16)	0.79	(18, 8)	0.76	(189,16)	0.67	(308,24)
34(511.28,3709.38)	1.06	(57,16)	0.82	(214,16)	0.79	(18, 8)	0.76	(189,16)	0.67	(308,24)
35(513.28,3709.38)	1.94	(266,16)	1.62	(57,16)	1.38	(189,16)	1.25	(244,16)	1.21	(225,16)
36(514.28,3709.38)	1.86	(266,16)	1.76	(244,16)	1.49	(257,16)	1.26	(159,16)	1.18	(264,16)
37(515.28,3709.38)	1.74	(243,16)	1.68	(245,16)	1.56	(187,16)	1.27	(59,16)	1.25	(218,16)
38(511.28,3708.38)	1.18	(57,16)	0.84	(266,16)	0.79	(283,16)	0.61	(225,16)	0.60	(282,16)
39(513.28,3708.38)	1.58	(266,16)	1.00	(257,16)	0.93	(244,16)	0.88	(144,16)	0.84	(159,16)
40(514.28,3708.38)	1.52	(59,16)	1.04	(15,16)	0.99	(159,16)	0.86	(54,16)	0.84	(270,16)
41(517.28,3708.38)	1.28	(297,16)	1.21	(105,16)	1.16	(49,16)	1.16	(167,16)	1.15	(59,16)
42(513.28,3707.38)	0.83	(59,16)	0.77	(47,16)	0.74	(20, 8)	0.73	(15,16)	0.69	(244,16)
43(512.28,3707.38)	1.08	(266,16)	0.68	(257,16)	0.61	(20,16)	0.58	(144,16)	0.58	(159,16)
44(515.28,3707.38)	1.59	(256,16)	1.26	(255,16)	0.98	(15,16)	0.96	(243,16)	0.91	(70,16)
45(517.28,3707.38)	1.22	(358,16)	1.16	(59,16)	1.16	(105,16)	1.06	(128, 8)	1.01	(362,24)
46(511.28,3706.38)	0.78	(266,16)	0.63	(20,16)	0.59	(257, 8)	0.48	(283,16)	0.48	(335, 8)
47(512.28,3706.38)	0.68	(264,16)	0.68	(257, 8)	0.68	(266,16)	0.64	(20, 8)	0.60	(59,16)
48(513.28,3706.38)	0.89	(59,16)	0.66	(15,16)	0.62	(20, 8)	0.56	(350, 8)	0.55	(159,16)
49(514.28,3706.38)	0.73	(15,16)	0.71	(187,16)	0.70	(243,16)	0.54	(245,16)	0.53	(245, 8)
50(515.28,3706.38)	1.36	(256,16)	1.14	(255,16)	0.91	(278,16)	0.72	(70,16)	0.69	(315,16)
51(517.28,3714.18)	1.81	(184,16)	1.79	(247,16)	1.75	(181,16)	1.58	(301,16)	1.43	(240,16)
52(512.28,3715.18)	1.48	(279,16)	1.48	(161,16)	1.26	(88,16)	1.13	(162,24)	1.12	(137,16)
53(511.28,3716.18)	1.07	(279,16)	0.96	(273,16)	0.93	(280,16)	0.93	(162,24)	0.91	(330,16)
54(514.28,3716.18)	1.20	(131,16)	1.20	(287,16)	1.03	(268,16)	1.00	(163,16)	0.92	(164,16)
55(515.28,3716.18)	1.49	(248,16)	1.36	(177,16)	1.35	(258,16)	1.32	(131,16)	1.29	(228,16)
56(513.28,3717.18)	1.05	(163,16)	0.88	(164,16)	0.84	(178,24)	0.83	(231, 8)	0.82	(250,16)
57(514.28,3717.18)	1.06	(131,16)	0.86	(323, 8)	0.85	(117,16)	0.85	(162,16)	0.82	(63, 8)
58(512.28,3711.18)	1.27	(257,16)	1.12	(172,16)	1.12	(239,16)	1.07	(173,16)	1.01	(187,16)
59(516.50,3708.10)	1.84	(105,16)	1.65	(278,16)	1.51	(70,16)	1.49	(136,16)	1.45	(298,16)
60(518.10,3709.35)	1.90	(104,16)	1.50	(242,16)	1.45	(114,16)	1.26	(319,16)	1.24	(34,16)
61(514.50,3708.80)	1.27	(59,16)	1.14	(159,16)	1.12	(15,16)	0.98	(54,16)	0.98	(270,16)
62(517.30,3714.40) *	2.35	(247,16)	1.74	(184,16)	1.62	(181,16)	1.55	(182,16)	1.53	(301,16)

FIVE HIGHEST 24-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	0.88	(158,24)	0.85	(245,24)	0.72	(243,24)	0.68	(143,24)	0.65	(300,24)
2(515.88,3710.48)	0.88	(245,24)	0.73	(243,24)	0.54	(227,24)	0.50	(218,24)	0.50	(244,24)
3(515.78,3710.38)	0.92	(245,24)	0.74	(243,24)	0.52	(218,24)	0.51	(244,24)	0.51	(15,24)
4(515.88,3710.38)	0.91	(245,24)	0.74	(158,24)	0.74	(243,24)	0.56	(256,24)	0.52	(218,24)
5(515.68,3710.38)	0.86	(245,24)	0.74	(243,24)	0.63	(211,24)	0.52	(218,24)	0.51	(244,24)
6(515.98,3710.38) *	0.98	(158,24) *	0.89	(245,24)	0.74	(243,24)	0.71	(256,24)	0.63	(300,24)
7(511.28,3709.38)	0.56	(57,24)	0.46	(19,24)	0.46	(214,24)	0.45	(188,24)	0.42	(18,24)
8(512.28,3709.38)	0.69	(57,24)	0.63	(188,24)	0.47	(283,24)	0.45	(214,24)	0.40	(189,24)
9(513.28,3709.38)	0.72	(188,24)	0.65	(266,24)	0.64	(57,24)	0.51	(257,24)	0.46	(283,24)
10(514.28,3709.38)	0.62	(244,24)	0.62	(266,24)	0.60	(257,24)	0.46	(144,24)	0.42	(159,24)
11(515.28,3709.38)	0.74	(245,24)	0.60	(243,24)	0.53	(187,24)	0.43	(244,24)	0.42	(59,24)
12(518.28,3709.38)	0.83	(104,24)	0.70	(114,24)	0.60	(159,24)	0.60	(319,24)	0.59	(79,24)
13(511.28,3708.38)	0.61	(57,24)	0.45	(283,24)	0.43	(188,24)	0.35	(282,24)	0.29	(257,24)
14(513.28,3708.38)	0.53	(266,24)	0.51	(257,24)	0.43	(144,24)	0.37	(244,24)	0.37	(188,24)
15(514.28,3708.38)	0.51	(59,24)	0.40	(20,24)	0.38	(245,24)	0.37	(87,24)	0.35	(15,24)
16(517.28,3708.38)	0.79	(358,24)	0.61	(128,24)	0.55	(105,24)	0.52	(363,24)	0.45	(362,24)
17(513.28,3707.38)	0.59	(20,24)	0.30	(244,24)	0.30	(245,24)	0.28	(59,24)	0.26	(47,24)
18(512.28,3707.38)	0.44	(20,24)	0.41	(257,24)	0.37	(283,24)	0.36	(266,24)	0.31	(1,24)
19(515.28,3707.38)	0.61	(256,24)	0.58	(158,24)	0.54	(245,24)	0.42	(255,24)	0.42	(244,24)
20(517.28,3707.38)	0.91	(358,24)	0.61	(363,24)	0.56	(128,24)	0.55	(264,24)	0.53	(105,24)
21(511.28,3706.38)	0.45	(20,24)	0.36	(257,24)	0.35	(283,24)	0.32	(1,24)	0.26	(188,24)
22(512.28,3706.38)	0.46	(20,24)	0.29	(257,24)	0.25	(353,24)	0.24	(245,24)	0.23	(244,24)
23(513.28,3706.38)	0.48	(20,24)	0.31	(351,24)	0.30	(59,24)	0.28	(353,24)	0.28	(151,24)
24(514.28,3706.38)	0.44	(245,24)	0.43	(20,24)	0.33	(244,24)	0.32	(297,24)	0.31	(351,24)
25(515.28,3706.38)	0.56	(256,24)	0.48	(158,24)	0.40	(278,24)	0.39	(352,24)	0.39	(97,24)

26(517.28,3714.18)	0.67	(240,24)	0.63	(181,24)	0.63	(184,24)	0.62	(247,24)	0.58	(208,24)
27(512.28,3715.18)	0.75	(137,24)	0.68	(161,24)	0.62	(169,24)	0.58	(162,24)	0.58	(176,24)
28(514.28,3716.18)	0.59	(163,24)	0.49	(131,24)	0.42	(326,24)	0.41	(62,24)	0.41	(287,24)
29(515.28,3716.18)	0.70	(153,24)	0.61	(131,24)	0.60	(228,24)	0.60	(322,24)	0.60	(248,24)
30(513.28,3717.18)	0.63	(163,24)	0.49	(326,24)	0.48	(231,24)	0.47	(288,24)	0.47	(330,24)
31(514.28,3717.18)	0.52	(131,24)	0.43	(326,24)	0.42	(248,24)	0.42	(231,24)	0.41	(153,24)
32(512.28,3711.18)	0.61	(257,24)	0.51	(18,24)	0.46	(172,24)	0.42	(171,24)	0.38	(173,24)
33(511.28,3709.38)	0.56	(57,24)	0.46	(19,24)	0.46	(214,24)	0.45	(188,24)	0.42	(18,24)
34(511.28,3709.38)	0.56	(57,24)	0.46	(19,24)	0.46	(214,24)	0.45	(188,24)	0.42	(18,24)
35(513.28,3709.38)	0.72	(188,24)	0.65	(266,24)	0.64	(57,24)	0.51	(257,24)	0.46	(283,24)
36(514.28,3709.38)	0.62	(244,24)	0.62	(266,24)	0.60	(257,24)	0.46	(144,24)	0.42	(159,24)
37(515.28,3709.38)	0.74	(245,24)	0.60	(243,24)	0.53	(187,24)	0.43	(244,24)	0.42	(59,24)
38(511.28,3708.38)	0.61	(57,24)	0.45	(283,24)	0.43	(188,24)	0.35	(282,24)	0.29	(257,24)
39(513.28,3708.38)	0.53	(266,24)	0.51	(257,24)	0.43	(144,24)	0.37	(244,24)	0.37	(188,24)
40(514.28,3708.38)	0.51	(59,24)	0.40	(20,24)	0.38	(245,24)	0.37	(87,24)	0.35	(15,24)
41(517.28,3708.38)	0.79	(358,24)	0.61	(128,24)	0.55	(105,24)	0.52	(363,24)	0.45	(362,24)
42(513.28,3707.38)	0.59	(20,24)	0.30	(244,24)	0.30	(245,24)	0.28	(59,24)	0.26	(47,24)
43(512.28,3707.38)	0.44	(20,24)	0.41	(257,24)	0.37	(283,24)	0.36	(266,24)	0.31	(1,24)
44(515.28,3707.38)	0.61	(256,24)	0.58	(158,24)	0.54	(245,24)	0.42	(255,24)	0.42	(244,24)
45(517.28,3707.38)	0.91	(358,24)	0.61	(363,24)	0.56	(128,24)	0.55	(264,24)	0.53	(105,24)
46(511.28,3706.38)	0.45	(20,24)	0.36	(257,24)	0.35	(283,24)	0.32	(1,24)	0.26	(188,24)
47(512.28,3706.38)	0.46	(20,24)	0.29	(257,24)	0.25	(353,24)	0.24	(245,24)	0.23	(244,24)
48(513.28,3706.38)	0.48	(20,24)	0.31	(351,24)	0.30	(59,24)	0.28	(353,24)	0.28	(151,24)
49(514.28,3706.38)	0.44	(245,24)	0.43	(20,24)	0.33	(244,24)	0.32	(297,24)	0.31	(351,24)
50(515.28,3706.38)	0.56	(256,24)	0.48	(158,24)	0.40	(278,24)	0.39	(352,24)	0.39	(97,24)
51(517.28,3714.18)	0.67	(240,24)	0.63	(181,24)	0.63	(184,24)	0.62	(247,24)	0.58	(208,24)
52(512.28,3715.18)	0.75	(137,24)	0.68	(161,24)	0.62	(169,24)	0.58	(162,24)	0.58	(176,24)
53(511.28,3716.18)	0.60	(137,24)	0.59	(330,24)	0.54	(51,24)	0.53	(169,24)	0.51	(162,24)
54(514.28,3716.18)	0.59	(163,24)	0.49	(131,24)	0.42	(326,24)	0.41	(62,24)	0.41	(287,24)
55(515.28,3716.18)	0.70	(153,24)	0.61	(131,24)	0.60	(228,24)	0.60	(322,24)	0.60	(248,24)
56(513.28,3717.18)	0.63	(163,24)	0.49	(326,24)	0.48	(231,24)	0.47	(288,24)	0.47	(330,24)
57(514.28,3717.18)	0.52	(131,24)	0.43	(326,24)	0.42	(248,24)	0.42	(231,24)	0.41	(153,24)
58(512.28,3711.18)	0.61	(257,24)	0.51	(18,24)	0.46	(172,24)	0.42	(171,24)	0.38	(173,24)
59(516.50,3708.10)	0.76	(358,24)	0.66	(264,24)	0.63	(105,24)	0.63	(278,24)	0.61	(298,24)
60(518.10,3709.35)	0.94	(104,24)	0.68	(114,24)	0.64	(319,24)	0.51	(314,24)	0.50	(68,24)
61(514.50,3708.80)	0.43	(245,24)	0.42	(59,24)	0.38	(159,24)	0.37	(15,24)	0.35	(20,24)
62(517.30,3714.40)	0.89	(182,24)	0.81	(247,24)	0.63	(240,24)	0.62	(184,24)	0.61	(181,24)

Woodward-Clyde
Consultants

SECTION H.9

1984 MODELING OUTPUT FOR NOx COMPLEX I

COMPLEX I (DATED 90095)
BOWMAN ENVIRONMENTAL ENGINEERING VER. 6.27

SESSION INFORMATION

INPUT DATA FILE NAME : ICNOX84.DTA
OUTPUT LIST FILE NAME : ICNOX84.LST
MET DATA FILE NAME : c:\bee\shvggg84.bin

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
NOX SCREEN - 1984 SHREVEPORT/LONGVIEW BINARY MET. DATA

GENERAL INPUT INFORMATION

THIS RUN OF COMPLEX I -VERSION 2.0 IS FOR THE POLLUTANT PART FOR 366 24-HOUR PERIODS.
CONCENTRATION ESTIMATES BEGIN ON HOUR- 1,JULIAN DAY- 1, YEAR-1984.
A FACTOR OF 1.0000000 HAS BEEN SPECIFIED TO CONVERT USER LENGTH UNITS TO KILOMETERS.
0 SIGNIFICANT SOURCES ARE TO BE CONSIDERED.
THIS RUN WILL NOT CONSIDER ANY POLLUTANT LOSS.
HIGH-FIVE SUMMARY CONCENTRATION TABLES WILL BE OUTPUT FOR 4 AVERAGING PERIODS.
AVG TIMES OF 1,3,8, AND 24 HOURS ARE AUTOMATICALLY DISPLAYED.

OPTION	OPTION LIST	OPTION SPECIFICATION : 0= IGNORE OPTION 1= USE OPTION
	TECHNICAL OPTIONS	
1	TERRAIN ADJUSTMENTS	0
2	DO NOT INCLUDE STACK DOWNWASH CALCULATIONS	0
3	DO NOT INCLUDE GRADUAL PLUME RISE CALCULATIONS	1
4	CALCULATE INITIAL PLUME SIZE	1
	INPUT OPTIONS	
5	READ MET DATA FROM CARDS	0
6	READ HOURLY EMISSIONS	0
7	SPECIFY SIGNIFICANT SOURCES	0
8	READ RADIAL DISTANCES TO GENERATE RECEPTORS	0
	PRINTED OUTPUT OPTIONS	
9	DELETE EMISSIONS WITH HEIGHT TABLE	1
10	DELETE MET DATA SUMMARY FOR AVG PERIOD	1
11	DELETE HOURLY CONTRIBUTIONS	1
12	DELETE MET DATA ON HOURLY CONTRIBUTIONS	1
13	DELETE FINAL PLUME RISE CALC ON HRLY CONTRIBUTIONS	1
14	DELETE HOURLY SUMMARY	1
15	DELETE MET DATA ON HRLY SUMMARY	1
16	DELETE FINAL PLUME RISE CALC ON HRLY SUMMARY	1
17	DELETE AVG-PERIOD CONTRIBUTIONS	1
18	DELETE AVERAGING PERIOD SUMMARY	1
19	DELETE AVG CONCENTRATIONS AND HI-5 TABLES	0
	OTHER CONTROL AND OUTPUT OPTIONS	
20	RUN IS PART OF A SEGMENTED RUN	0
21	WRITE PARTIAL CONC TO DISK OR TAPE	0
22	WRITE HOURLY CONC TO DISK OR TAPE	0
23	WRITE AVG-PERIOD CONC TO DISK OR TAPE	0
24	PUNCH AVG-PERIOD CONC ONTO CARDS	0
25	COMPLEX TERRAIN OPTION	1
26	CALM PROCESSING OPTION	0
27	VALLEY SCREENING OPTION	0

ANEMOMETER HEIGHT= 10.00
WIND PROFILE WITH HEIGHT EXPONENTS CORRESPONDING TO STABILITY ARE AS FOLLOWS:
FOR STABILITY A: 0.07
STABILITY B: 0.07
STABILITY C: 0.10
STABILITY D: 0.15
STABILITY E: 0.35
STABILITY F: 0.55

POINT SOURCE INFORMATION

SOURCE		EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	SO2(G/SEC) EMISSIONS	PART(G/SEC) EMISSIONS	STACK HT(M)	STACK TEMP(K)	STACK DIAM(M)	STACK VEL(M/SEC)	POTEN. IMPACT (MICRO G/M**3)	EFF HT(M)	GRD-LVL ELEV USER HT UNITS	BUOY FLUX F M**4/S**3
1 1	COGEN	516.32	3711.89	0.00	10.43	22.9	427.6	3.4	16.6	8.07	283.88	34.40	150.19

ADDITIONAL INFORMATION ON SOURCES.

EMISSION INFORMATION FOR 1 (NPT) POINT SOURCES HAS BEEN INPUT
0 SIGNIFICANT POINT SOURCES(NSIGP) ARE TO BE USED FOR THIS RUN
THE ORDER OF SIGNIFICANCE(IMPS) FOR 25 OR LESS POINT SOURCES USED IN THIS RUN AS LISTED BY POINT SOURCE NUMBER:

SURFACE MET DATA FROM STATION(ISFCD) 13957, YEAR(ISFCYR) 1984
MIXING HEIGHT DATA FROM STATION(IMXD) 3951, YEAR(IMXYR) 1984

RECEPTOR INFORMATION

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)
1		515.977	3710.478	0.0	57.9
2		515.877	3710.478	0.0	57.9
3		515.777	3710.378	0.0	57.9
4		515.877	3710.378	0.0	57.9
5		515.677	3710.378	0.0	57.9
6		515.977	3710.378	0.0	57.9
7		511.277	3709.378	0.0	64.0
8		512.277	3709.378	0.0	61.0
9		513.277	3709.378	0.0	73.2
10		514.277	3709.378	0.0	64.0
11		515.277	3709.378	0.0	57.9
12		518.277	3709.378	0.0	61.0
13		511.277	3708.378	0.0	67.1
14		513.277	3708.378	0.0	76.2
15		514.277	3708.378	0.0	70.1
16		517.277	3708.378	0.0	64.0
17		513.277	3707.378	0.0	64.0
18		512.277	3707.378	0.0	67.1
19		515.277	3707.378	0.0	61.0
20		517.277	3707.378	0.0	67.1
21		511.277	3706.378	0.0	73.2
22		512.277	3706.378	0.0	73.2
23		513.277	3706.378	0.0	64.0
24		514.277	3706.378	0.0	64.0
25		515.277	3706.378	0.0	67.1
26		517.277	3714.176	0.0	70.1
27		512.277	3715.176	0.0	61.0
28		514.277	3716.176	0.0	61.0
29		515.277	3716.176	0.0	70.1
30		513.277	3717.176	0.0	61.0
31		514.277	3717.176	0.0	61.0
32		512.277	3711.176	0.0	64.0
33		511.277	3709.378	0.0	64.0
34		511.277	3709.378	0.0	61.0
35		513.277	3709.378	0.0	73.2
36		514.277	3709.378	0.0	64.0
37		515.277	3709.378	0.0	57.9
38		511.277	3708.378	0.0	67.1
39		513.277	3708.378	0.0	76.2
40		514.277	3708.378	0.0	70.1
41		517.277	3708.378	0.0	64.0
42		513.277	3707.378	0.0	64.0

43	512.277	3707.378	0.0	67.1
44	515.277	3707.378	0.0	61.0
45	517.277	3707.378	0.0	67.1
46	511.277	3706.378	0.0	73.2
47	512.277	3706.378	0.0	73.2
48	513.277	3706.378	0.0	64.0
49	514.277	3706.378	0.0	64.0
50	515.277	3706.378	0.0	67.1
51	517.277	3714.176	0.0	70.1
52	512.277	3715.176	0.0	61.0
53	511.277	3716.176	0.0	61.0
54	514.277	3716.176	0.0	61.0
55	515.277	3716.176	0.0	70.1
56	513.277	3717.176	0.0	61.0
57	514.277	3717.176	0.0	61.0
58	512.277	3711.176	0.0	64.0
59	516.500	3708.100	0.0	67.7
60	518.100	3709.350	0.0	79.3
61	514.500	3708.800	0.0	80.5
62	517.300	3714.400	0.0	76.2

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
NOX SCREEN - 1984 SHREVEPORT/LONGVIEW BINARY MET. DATA

RECEPTORS

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)	DAY	AVG CONC FOR PERIOD 1.HR 1. TO DAY366.HR24. (MICROGRAMS/M**3)
1		515.98	3710.48	0.0	57.9		0.05
2		515.88	3710.48	0.0	57.9		0.04
3		515.78	3710.38	0.0	57.9		0.04
4		515.88	3710.38	0.0	57.9		0.04
5		515.68	3710.38	0.0	57.9		0.03
6		515.98	3710.38	0.0	57.9		0.05
7		511.28	3709.38	0.0	64.0		0.04
8		512.28	3709.38	0.0	61.0		0.04
9		513.28	3709.38	0.0	73.2		0.05
10		514.28	3709.38	0.0	64.0		0.05
11		515.28	3709.38	0.0	57.9		0.04
12		518.28	3709.38	0.0	61.0		0.05
13		511.28	3708.38	0.0	67.1		0.04
14		513.28	3708.38	0.0	76.2		0.05
15		514.28	3708.38	0.0	70.1		0.04
16		517.28	3708.38	0.0	64.0		0.05
17		513.28	3707.38	0.0	64.0		0.04
18		512.28	3707.38	0.0	67.1		0.04
19		515.28	3707.38	0.0	61.0		0.05
20		517.28	3707.38	0.0	67.1		0.05
21		511.28	3706.38	0.0	73.2		0.04
22		512.28	3706.38	0.0	73.2		0.04
23		513.28	3706.38	0.0	64.0		0.04
24		514.28	3706.38	0.0	64.0		0.04
25		515.28	3706.38	0.0	67.1		0.05
26		517.28	3714.18	0.0	70.1		0.06
27		512.28	3715.18	0.0	61.0		0.07
28		514.28	3716.18	0.0	61.0		0.09
29		515.28	3716.18	0.0	70.1		* 0.12
30		513.28	3717.18	0.0	61.0		0.10
31		514.28	3717.18	0.0	61.0		0.10
32		512.28	3711.18	0.0	64.0		0.04
33		511.28	3709.38	0.0	64.0		0.04

34	511.28	3709.38	0.0	61.0	0.04
35	513.28	3709.38	0.0	73.2	0.05
36	514.28	3709.38	0.0	64.0	0.05
37	515.28	3709.38	0.0	57.9	0.04
38	511.28	3708.38	0.0	67.1	0.04
39	513.28	3708.38	0.0	76.2	0.05
40	514.28	3708.38	0.0	70.1	0.04
41	517.28	3708.38	0.0	64.0	0.05
42	513.28	3707.38	0.0	64.0	0.04
43	512.28	3707.38	0.0	67.1	0.04
44	515.28	3707.38	0.0	61.0	0.05
45	517.28	3707.38	0.0	67.1	0.05
46	511.28	3706.38	0.0	73.2	0.04
47	512.28	3706.38	0.0	73.2	0.04
48	513.28	3706.38	0.0	64.0	0.04
49	514.28	3706.38	0.0	64.0	0.04
50	515.28	3706.38	0.0	67.1	0.05
51	517.28	3714.18	0.0	70.1	0.06
52	512.28	3715.18	0.0	61.0	0.07
53	511.28	3716.18	0.0	61.0	0.07
54	514.28	3716.18	0.0	61.0	0.09
55	515.28	3716.18	0.0	70.1	0.12
56	513.28	3717.18	0.0	61.0	0.10
57	514.28	3717.18	0.0	61.0	0.10
58	512.28	3711.18	0.0	64.0	0.04
59	516.50	3708.10	0.0	67.7	0.05
60	518.10	3709.35	0.0	79.3	0.05
61	514.50	3708.80	0.0	80.5	0.04
62	517.30	3714.40	0.0	76.2	0.06

FIVE HIGHEST 1-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1	2	3	4	5
1(515.98,3710.48) *	9.97 (275,15) *	8.24 (227,12)	8.14 (200,12)	8.12 (212,11)	8.09 (200,11)
2(515.88,3710.48)	8.10 (200,12)	8.05 (212,11)	8.02 (238,13)	8.00 (213,13)	7.98 (248,13)
3(515.78,3710.38)	7.85 (230,15)	7.82 (243,14)	7.81 (200,12)	7.73 (213,13)	7.64 (212,11)
4(515.88,3710.38)	7.90 (230,15)	7.90 (200,12)	7.87 (243,14)	7.83 (238,13)	7.80 (213,13)
5(515.68,3710.38)	7.79 (230,15)	7.76 (243,14)	7.71 (200,12)	7.63 (213,13)	7.51 (212,15)
6(515.98,3710.38)	8.77 (275,15)	7.96 (200,12)	7.93 (227,12)	7.93 (230,15)	7.91 (200,11)
7(511.28,3709.38)	2.85 (135,17)	2.82 (135,15)	2.51 (249,17)	2.51 (236,13)	2.48 (205, 9)
8(512.28,3709.38)	3.26 (135,15)	3.26 (135,17)	3.07 (206, 9)	2.88 (201,17)	2.88 (238,17)
9(513.28,3709.38)	3.68 (275,11)	3.67 (317,14)	3.46 (135,17)	3.43 (317,12)	3.40 (258,16)
10(514.28,3709.38)	4.57 (205,13)	4.22 (136,15)	4.18 (261,11)	4.18 (275,11)	4.16 (317,14)
11(515.28,3709.38)	5.32 (205,11)	5.26 (207,10)	5.05 (73,14)	4.98 (205,12)	4.93 (213,11)
12(518.28,3709.38)	4.63 (167,10)	4.53 (166,10)	4.50 (176, 9)	4.32 (282,12)	3.87 (53,13)
13(511.28,3708.38)	2.59 (135,17)	2.56 (135,15)	2.35 (214,18)	2.31 (249,17)	2.29 (205, 9)
14(513.28,3708.38)	3.24 (205,13)	3.10 (275,11)	3.09 (317,14)	3.01 (231,17)	2.98 (257,17)
15(514.28,3708.38)	3.80 (205,13)	3.71 (213,10)	3.58 (317,14)	3.44 (205,11)	3.42 (207,10)
16(517.28,3708.38)	4.25 (257,16)	4.24 (224,15)	4.21 (199,18)	4.12 (176, 8)	4.03 (229,15)
17(513.28,3707.38)	2.60 (249,16)	2.59 (205,13)	2.57 (167,16)	2.57 (231,17)	2.56 (230,17)
18(512.28,3707.38)	2.41 (167,16)	2.35 (249,16)	2.32 (205, 9)	2.30 (100,17)	2.27 (264, 9)
19(515.28,3707.38)	3.19 (213,10)	3.19 (214, 9)	3.15 (209,14)	3.12 (73,13)	3.08 (5,12)
20(517.28,3707.38)	3.29 (257,16)	3.28 (224,15)	3.22 (176, 8)	3.09 (53,11)	2.90 (172,18)
21(511.28,3706.38)	2.00 (167,16)	1.94 (100,17)	1.86 (361,14)	1.86 (357,12)	1.84 (249,16)
22(512.28,3706.38)	2.18 (167,16)	2.10 (100,17)	2.06 (249,16)	2.01 (361,14)	2.01 (357,12)
23(513.28,3706.38)	2.24 (100,17)	2.22 (213, 9)	2.19 (212, 8)	2.15 (231,17)	2.15 (230,17)
24(514.28,3706.38)	2.64 (209,14)	2.34 (230,17)	2.34 (212, 8)	2.33 (257,17)	2.33 (176,13)
25(515.28,3706.38)	2.76 (209,14)	2.57 (229,17)	2.50 (228,17)	2.49 (243, 8)	2.47 (209, 9)
26(517.28,3714.18)	5.86 (234,14)	5.78 (165,16)	5.71 (168,10)	5.67 (197,16)	5.62 (174,16)
27(512.28,3715.18)	2.94 (246,13)	2.72 (239,17)	2.69 (232,14)	2.68 (178,12)	2.66 (317,15)
28(514.28,3716.18)	3.16 (204,15)	3.15 (218,17)	3.14 (170,18)	2.90 (171,13)	2.88 (163,14)
29(515.28,3716.18)	3.48 (188,15)	3.48 (204,15)	3.46 (170,14)	3.37 (244,10)	3.17 (31,11)
30(513.28,3717.18)	2.41 (256,16)	2.38 (196,18)	2.35 (235,18)	2.34 (222,17)	2.34 (170,19)
31(514.28,3717.18)	2.51 (164,18)	2.50 (196,18)	2.45 (152,17)	2.45 (170,19)	2.44 (188,15)

32(512.28,3711.18)	3.79	(197,15)	3.76	(226,16)	3.75	(214,17)	3.74	(243,11)	3.72	(207,11)
33(511.28,3709.38)	2.85	(135,17)	2.82	(135,15)	2.51	(249,17)	2.51	(236,13)	2.48	(205, 9)
34(511.28,3709.38)	2.85	(135,17)	2.82	(135,15)	2.51	(249,17)	2.51	(236,13)	2.48	(205, 9)
35(513.28,3709.38)	3.68	(275,11)	3.67	(317,14)	3.46	(135,17)	3.43	(317,12)	3.40	(258,16)
36(514.28,3709.38)	4.57	(205,13)	4.22	(136,15)	4.18	(261,11)	4.18	(275,11)	4.16	(317,14)
37(515.28,3709.38)	5.32	(205,11)	5.26	(207,10)	5.05	(73,14)	4.98	(205,12)	4.93	(213,11)
38(511.28,3708.38)	2.59	(135,17)	2.56	(135,15)	2.35	(214,18)	2.31	(249,17)	2.29	(205, 9)
39(513.28,3708.38)	3.24	(205,13)	3.10	(275,11)	3.09	(317,14)	3.01	(231,17)	2.98	(257,17)
40(514.28,3708.38)	3.80	(205,13)	3.71	(213,10)	3.58	(317,14)	3.44	(205,11)	3.42	(207,10)
41(517.28,3708.38)	4.25	(257,16)	4.24	(224,15)	4.21	(199,18)	4.12	(176, 8)	4.03	(229,15)
42(513.28,3707.38)	2.60	(249,16)	2.59	(205,13)	2.57	(167,16)	2.57	(231,17)	2.56	(230,17)
43(512.28,3707.38)	2.41	(167,16)	2.35	(249,16)	2.32	(205, 9)	2.30	(100,17)	2.27	(264, 9)
44(515.28,3707.38)	3.19	(213,10)	3.19	(214, 9)	3.15	(209,14)	3.12	(73,13)	3.08	(5,12)
45(517.28,3707.38)	3.29	(257,16)	3.28	(224,15)	3.22	(176, 8)	3.09	(53,11)	2.90	(172,18)
46(511.28,3706.38)	2.00	(167,16)	1.94	(100,17)	1.86	(361,14)	1.86	(357,12)	1.84	(249,16)
47(512.28,3706.38)	2.18	(167,16)	2.10	(100,17)	2.06	(249,16)	2.01	(361,14)	2.01	(357,12)
48(513.28,3706.38)	2.24	(100,17)	2.22	(213, 9)	2.19	(212, 8)	2.15	(231,17)	2.15	(230,17)
49(514.28,3706.38)	2.64	(209,14)	2.34	(230,17)	2.34	(212, 8)	2.33	(257,17)	2.33	(176,13)
50(515.28,3706.38)	2.76	(209,14)	2.57	(229,17)	2.50	(228,17)	2.49	(243, 8)	2.47	(209, 9)
51(517.28,3714.18)	5.86	(234,14)	5.78	(165,16)	5.71	(168,10)	5.67	(197,16)	5.62	(174,16)
52(512.28,3715.18)	2.94	(246,13)	2.72	(239,17)	2.69	(232,14)	2.68	(178,12)	2.66	(317,15)
53(511.28,3716.18)	2.31	(246,13)	2.25	(256,16)	2.15	(239,17)	2.14	(239, 9)	2.13	(178,12)
54(514.28,3716.18)	3.16	(204,15)	3.15	(218,17)	3.14	(170,18)	2.90	(171,13)	2.88	(163,14)
55(515.28,3716.18)	3.48	(188,15)	3.48	(204,15)	3.46	(170,14)	3.37	(244,10)	3.17	(31,11)
56(513.28,3717.18)	2.41	(256,16)	2.38	(196,18)	2.35	(235,18)	2.34	(222,17)	2.34	(170,19)
57(514.28,3717.18)	2.51	(164,18)	2.50	(196,18)	2.45	(152,17)	2.45	(170,19)	2.44	(188,15)
58(512.28,3711.18)	3.79	(197,15)	3.76	(226,16)	3.75	(214,17)	3.74	(243,11)	3.72	(207,11)
59(516.50,3708.10)	4.09	(257,16)	3.98	(176, 8)	3.82	(73,13)	3.78	(249,14)	3.73	(281,14)
60(518.10,3709.35)	4.83	(229,15)	4.75	(167,10)	4.65	(199,18)	4.58	(166,10)	4.57	(189,15)
61(514.50,3708.80)	4.27	(205,13)	4.14	(213,10)	4.07	(205,11)	4.04	(207,10)	3.95	(317,14)
62(517.30,3714.40)	5.42	(197,16)	5.40	(234,14)	5.34	(165,16)	5.28	(168,10)	5.27	(221,15)

FIVE HIGHEST 3-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	6.64	(212,12) *	5.41	(200,12)	4.98	(213,12)	4.64	(208,15)	3.54	(243,15)
2(515.88,3710.48) *	6.64	(212,12)	4.93	(213,12)	3.74	(205,12)	3.58	(243,15)	3.45	(327,12)
3(515.78,3710.38)	6.58	(212,12)	4.72	(213,12)	3.97	(205,12)	3.68	(327,12)	3.67	(243,15)
4(515.88,3710.38)	6.61	(212,12)	4.77	(213,12)	3.92	(205,12)	3.65	(243,15)	3.63	(327,12)
5(515.68,3710.38)	6.54	(212,12)	4.67	(213,12)	4.01	(205,12)	3.73	(327,12)	3.68	(243,15)
6(515.98,3710.38)	5.29	(200,12)	4.81	(213,12)	4.19	(238,15)	4.01	(212,12)	3.90	(208,15)
7(511.28,3709.38)	1.61	(206, 9)	1.54	(137,18)	1.54	(214,18)	1.42	(183,18)	1.40	(236,15)
8(512.28,3709.38)	1.93	(206, 9)	1.79	(201,18)	1.76	(214,18)	1.72	(136, 9)	1.72	(236,15)
9(513.28,3709.38)	2.64	(211,12)	2.50	(200,18)	2.10	(136, 9)	2.10	(248, 9)	2.05	(249,18)
10(514.28,3709.38)	3.75	(264,15)	2.57	(264,12)	2.55	(261,12)	2.47	(262,12)	2.43	(211, 9)
11(515.28,3709.38)	4.21	(212,12)	3.47	(213,12)	3.43	(205,12)	3.15	(327,12)	3.13	(205,15)
12(518.28,3709.38)	2.49	(231,12)	2.39	(108,12)	2.36	(55,12)	2.35	(53,15)	2.34	(35,12)
13(511.28,3708.38)	1.41	(214,18)	1.33	(206,18)	1.30	(201,18)	1.23	(136, 9)	1.14	(293,12)
14(513.28,3708.38)	2.16	(200,18)	2.01	(264,15)	1.77	(211, 9)	1.73	(260,12)	1.70	(262,12)
15(514.28,3708.38)	2.98	(212, 9)	2.12	(213,12)	1.87	(34,15)	1.86	(19,12)	1.77	(264,15)
16(517.28,3708.38)	3.39	(225,12)	2.37	(224,15)	2.36	(316,15)	2.05	(129,12)	1.99	(129,15)
17(513.28,3707.38)	1.73	(262,15)	1.72	(338,15)	1.49	(264,15)	1.48	(357,12)	1.47	(100,18)
18(512.28,3707.38)	1.63	(200,18)	1.43	(100,18)	1.34	(357,12)	1.30	(248, 9)	1.25	(211, 9)
19(515.28,3707.38)	1.92	(207,12)	1.91	(213,12)	1.90	(209,15)	1.79	(5,12)	1.77	(212, 9)
20(517.28,3707.38)	2.02	(176, 9)	1.83	(316,15)	1.72	(310,12)	1.72	(224,15)	1.47	(10,15)
21(511.28,3706.38)	1.27	(200,18)	1.12	(260,18)	1.07	(357,12)	1.03	(144,18)	0.97	(262,21)
22(512.28,3706.38)	1.37	(136,18)	1.35	(338,15)	1.35	(100,18)	1.32	(262,15)	1.19	(210,18)
23(513.28,3706.38)	1.97	(212, 9)	1.41	(100,18)	1.33	(259,18)	1.13	(19,12)	1.13	(259,21)
24(514.28,3706.38)	1.78	(205,15)	1.49	(209,15)	1.40	(207,12)	1.39	(212, 9)	1.35	(259,18)
25(515.28,3706.38)	1.53	(5,12)	1.51	(326,15)	1.40	(228,18)	1.36	(325,15)	1.35	(6,15)
26(517.28,3714.18)	3.73	(171,15)	3.52	(174,15)	3.46	(174,18)	3.16	(199,15)	3.06	(133,12)
27(512.28,3715.18)	2.03	(251,12)	1.80	(101,15)	1.65	(39,15)	1.63	(73,18)	1.62	(92,18)
28(514.28,3716.18)	2.69	(8,15)	2.24	(286,12)	1.84	(164,18)	1.83	(300,15)	1.79	(29,15)
29(515.28,3716.18)	2.84	(318,12)	2.48	(254,15)	2.33	(286,12)	2.24	(153,15)	2.22	(140,15)

30(513.28,3717.18)	1.56	(222,18)	1.44	(286,12)	1.42	(117,12)	1.41	(164,18)	1.41	(312,15)
31(514.28,3717.18)	1.96	(286,12)	1.73	(191,18)	1.49	(111,24)	1.48	(120, 9)	1.47	(29,15)
32(512.28,3711.18)	2.16	(190,18)	2.11	(204,18)	1.94	(177,18)	1.86	(263,15)	1.43	(207,15)
33(511.28,3709.38)	1.61	(206, 9)	1.54	(137,18)	1.54	(214,18)	1.42	(183,18)	1.40	(236,15)
34(511.28,3709.38)	1.61	(206, 9)	1.54	(137,18)	1.54	(214,18)	1.42	(183,18)	1.40	(236,15)
35(513.28,3709.38)	2.64	(211,12)	2.50	(200,18)	2.10	(136, 9)	2.10	(248, 9)	2.05	(249,18)
36(514.28,3709.38)	3.75	(264,15)	2.57	(264,12)	2.55	(261,12)	2.47	(262,12)	2.43	(211, 9)
37(515.28,3709.38)	4.21	(212,12)	3.47	(213,12)	3.43	(205,12)	3.15	(327,12)	3.13	(205,15)
38(511.28,3708.38)	1.41	(214,18)	1.33	(206,18)	1.30	(201,18)	1.23	(136, 9)	1.14	(293,12)
39(513.28,3708.38)	2.16	(200,18)	2.01	(264,15)	1.77	(211, 9)	1.73	(260,12)	1.70	(262,12)
40(514.28,3708.38)	2.98	(212, 9)	2.12	(213,12)	1.87	(34,15)	1.86	(19,12)	1.77	(264,15)
41(517.28,3708.38)	3.39	(225,12)	2.37	(224,15)	2.36	(316,15)	2.05	(129,12)	1.99	(129,15)
42(513.28,3707.38)	1.73	(262,15)	1.72	(338,15)	1.49	(264,15)	1.48	(357,12)	1.47	(100,18)
43(512.28,3707.38)	1.63	(200,18)	1.43	(100,18)	1.34	(357,12)	1.30	(248, 9)	1.25	(211, 9)
44(515.28,3707.38)	1.92	(207,12)	1.91	(213,12)	1.90	(209,15)	1.79	(5,12)	1.77	(212, 9)
45(517.28,3707.38)	2.02	(176, 9)	1.83	(316,15)	1.72	(310,12)	1.72	(224,15)	1.47	(10,15)
46(511.28,3706.38)	1.27	(200,18)	1.12	(260,18)	1.07	(357,12)	1.03	(144,18)	0.97	(262,21)
47(512.28,3706.38)	1.37	(136,18)	1.35	(338,15)	1.35	(100,18)	1.32	(262,15)	1.19	(210,18)
48(513.28,3706.38)	1.97	(212, 9)	1.41	(100,18)	1.33	(259,18)	1.13	(19,12)	1.13	(259,21)
49(514.28,3706.38)	1.78	(205,15)	1.49	(209,15)	1.40	(207,12)	1.39	(212, 9)	1.35	(259,18)
50(515.28,3706.38)	1.53	(5,12)	1.51	(326,15)	1.40	(228,18)	1.36	(325,15)	1.35	(6,15)
51(517.28,3714.18)	3.73	(171,15)	3.52	(174,15)	3.46	(174,18)	3.16	(199,15)	3.06	(133,12)
52(512.28,3715.18)	2.03	(251,12)	1.80	(101,15)	1.65	(39,15)	1.63	(73,18)	1.62	(92,18)
53(511.28,3716.18)	1.46	(244,18)	1.42	(92,18)	1.40	(251,12)	1.38	(101,15)	1.37	(73,18)
54(514.28,3716.18)	2.69	(8,15)	2.24	(286,12)	1.84	(164,18)	1.83	(300,15)	1.79	(29,15)
55(515.28,3716.18)	2.84	(318,12)	2.48	(254,15)	2.33	(286,12)	2.24	(153,15)	2.22	(140,15)
56(513.28,3717.18)	1.56	(222,18)	1.44	(286,12)	1.42	(117,12)	1.41	(164,18)	1.41	(312,15)
57(514.28,3717.18)	1.96	(286,12)	1.73	(191,18)	1.49	(111,24)	1.48	(120, 9)	1.47	(29,15)
58(512.28,3711.18)	2.16	(190,18)	2.11	(204,18)	1.94	(177,18)	1.86	(263,15)	1.43	(207,15)
59(516.50,3708.10)	2.32	(176, 9)	2.27	(316,15)	2.26	(249,15)	2.13	(282,15)	2.08	(310,12)
60(518.10,3709.35)	2.65	(225,12)	2.57	(231,12)	2.56	(199,18)	2.47	(335,15)	2.44	(108,12)
61(514.50,3708.80)	3.16	(212, 9)	2.47	(213,12)	2.19	(264,15)	2.11	(34,15)	2.03	(19,12)
62(517.30,3714.40)	3.95	(174,18)	3.37	(171,15)	3.14	(174,15)	2.87	(133,12)	2.77	(199,15)

FIVE HIGHEST 8-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	2.93	(213,16)	2.84	(212,16)	2.51	(208,16)	2.48	(200,16)	2.11	(327,16)
2(515.88,3710.48)	2.91	(213,16) *	2.86	(212,16)	1.97	(230,16)	1.75	(205,16)	1.54	(209,16)
3(515.78,3710.38) *	3.82	(212,16)	2.81	(213,16)	2.23	(205,16)	1.49	(200,16)	1.43	(209,16)
4(515.88,3710.38)	2.88	(212,16)	2.83	(213,16)	1.96	(230,16)	1.85	(205,16)	1.55	(209,16)
5(515.68,3710.38)	3.81	(212,16)	2.78	(213,16)	2.28	(205,16)	1.48	(200,16)	1.40	(327,16)
6(515.98,3710.38)	2.79	(213,16)	2.75	(200,16)	2.19	(327,16)	2.10	(208,16)	1.96	(230,16)
7(511.28,3709.38)	0.88	(263,16)	0.86	(183,16)	0.82	(206,16)	0.67	(264,24)	0.62	(137,16)
8(512.28,3709.38)	1.03	(211,16)	0.96	(258,16)	0.92	(200,16)	0.92	(264,16)	0.77	(261,16)
9(513.28,3709.38)	1.73	(261,16)	1.66	(211,16)	1.49	(248,16)	1.33	(260,16)	1.19	(200,16)
10(514.28,3709.38)	2.72	(264,16)	2.35	(262,16)	2.27	(248,16)	1.50	(260,16)	1.44	(136,16)
11(515.28,3709.38)	2.66	(212,16)	2.46	(205,16)	2.04	(213,16)	1.23	(19,16)	1.18	(327,16)
12(518.28,3709.38)	1.52	(108,16)	1.44	(89,16)	1.39	(231,16)	1.34	(55,16)	1.31	(50,16)
13(511.28,3708.38)	0.84	(260,16)	0.75	(92, 8)	0.70	(360,16)	0.69	(211,16)	0.66	(258,16)
14(513.28,3708.38)	1.62	(264,16)	1.62	(260,16)	1.52	(262,16)	1.52	(248,16)	0.89	(325,16)
15(514.28,3708.38)	1.70	(213,16)	1.30	(262,16)	1.09	(205,16)	1.06	(248,16)	1.05	(19,16)
16(517.28,3708.38)	1.64	(129,16)	1.38	(225,16)	1.33	(316,16)	1.20	(230,16)	1.16	(52,16)
17(513.28,3707.38)	1.39	(262,16)	1.22	(248,16)	0.91	(338,16)	0.83	(205,16)	0.75	(264,16)
18(512.28,3707.38)	1.24	(248,16)	1.24	(260,16)	1.05	(264,16)	1.02	(262,16)	0.90	(338,16)
19(515.28,3707.38)	1.49	(326,16)	1.25	(19,16)	1.22	(209,16)	1.08	(200,16)	0.97	(66,16)
20(517.28,3707.38)	1.01	(30,16)	0.92	(10,16)	0.92	(52,16)	0.91	(176, 8)	0.87	(129, 8)
21(511.28,3706.38)	0.97	(260,16)	0.88	(261,24)	0.74	(262,24)	0.73	(264,16)	0.73	(248,16)
22(512.28,3706.38)	1.01	(262,16)	0.90	(263, 8)	0.86	(248,16)	0.82	(338,16)	0.75	(259,24)
23(513.28,3706.38)	0.94	(213,16)	0.86	(205,16)	0.76	(262,16)	0.75	(259,24)	0.73	(272,16)
24(514.28,3706.38)	1.12	(326,16)	1.07	(205,16)	0.91	(213,16)	0.82	(212,16)	0.70	(19,16)
25(515.28,3706.38)	1.08	(326,16)	0.89	(66,16)	0.80	(151,16)	0.80	(200,16)	0.76	(209,16)
26(517.28,3714.18)	2.02	(174,16)	1.97	(171,16)	1.62	(131,16)	1.54	(154,16)	1.53	(190,16)
27(512.28,3715.18)	1.36	(251,16)	1.29	(39,16)	1.22	(109,16)	1.05	(91,16)	0.92	(101,16)

28(514.28,3716.18)	1.43	(312,16)	1.16	(300,16)	1.01	(8,16)	0.98	(239,16)	0.89	(170,24)
29(515.28,3716.18)	1.81	(286,16)	1.44	(111,24)	1.43	(153,16)	1.31	(319,16)	1.28	(146,16)
30(513.28,3717.18)	1.37	(312,16)	0.97	(348, 8)	0.97	(57, 8)	0.96	(294, 8)	0.93	(83,16)
31(514.28,3717.18)	1.40	(312,16)	1.07	(319,16)	1.05	(117,16)	1.02	(286,16)	0.95	(128, 8)
32(512.28,3711.18)	1.22	(263,16)	1.08	(204,24)	1.08	(182,16)	1.05	(207,16)	0.99	(237,16)
33(511.28,3709.38)	0.88	(263,16)	0.86	(183,16)	0.82	(206,16)	0.67	(264,24)	0.62	(137,16)
34(511.28,3709.38)	0.88	(263,16)	0.86	(183,16)	0.82	(206,16)	0.67	(264,24)	0.62	(137,16)
35(513.28,3709.38)	1.73	(261,16)	1.66	(211,16)	1.49	(248,16)	1.33	(260,16)	1.19	(200,16)
36(514.28,3709.38)	2.72	(264,16)	2.35	(262,16)	2.27	(248,16)	1.50	(260,16)	1.44	(136,16)
37(515.28,3709.38)	2.66	(212,16)	2.46	(205,16)	2.04	(213,16)	1.23	(19,16)	1.18	(327,16)
38(511.28,3708.38)	0.84	(260,16)	0.75	(92, 8)	0.70	(360,16)	0.69	(211,16)	0.66	(258,16)
39(513.28,3708.38)	1.62	(264,16)	1.62	(260,16)	1.52	(262,16)	1.52	(248,16)	0.89	(325,16)
40(514.28,3708.38)	1.70	(213,16)	1.30	(262,16)	1.09	(205,16)	1.06	(248,16)	1.05	(19,16)
41(517.28,3708.38)	1.64	(129,16)	1.38	(225,16)	1.33	(316,16)	1.20	(230,16)	1.16	(52,16)
42(513.28,3707.38)	1.39	(262,16)	1.22	(248,16)	0.91	(338,16)	0.83	(205,16)	0.75	(264,16)
43(512.28,3707.38)	1.24	(248,16)	1.24	(260,16)	1.05	(264,16)	1.02	(262,16)	0.90	(338,16)
44(515.28,3707.38)	1.49	(326,16)	1.25	(19,16)	1.22	(209,16)	1.08	(200,16)	0.97	(66,16)
45(517.28,3707.38)	1.01	(30,16)	0.92	(10,16)	0.92	(52,16)	0.91	(176, 8)	0.87	(129, 8)
46(511.28,3706.38)	0.97	(260,16)	0.88	(261,24)	0.74	(262,24)	0.73	(264,16)	0.73	(248,16)
47(512.28,3706.38)	1.01	(262,16)	0.90	(263, 8)	0.86	(248,16)	0.82	(338,16)	0.75	(259,24)
48(513.28,3706.38)	0.94	(213,16)	0.86	(205,16)	0.76	(262,16)	0.75	(259,24)	0.73	(272,16)
49(514.28,3706.38)	1.12	(326,16)	1.07	(205,16)	0.91	(213,16)	0.82	(212,16)	0.70	(19,16)
50(515.28,3706.38)	1.08	(326,16)	0.89	(66,16)	0.80	(151,16)	0.80	(200,16)	0.76	(209,16)
51(517.28,3714.18)	2.02	(174,16)	1.97	(171,16)	1.62	(131,16)	1.54	(154,16)	1.53	(190,16)
52(512.28,3715.18)	1.36	(251,16)	1.29	(39,16)	1.22	(109,16)	1.05	(91,16)	0.92	(101,16)
53(511.28,3716.18)	1.03	(39,16)	0.87	(251,16)	0.84	(22,24)	0.83	(292, 8)	0.83	(98,16)
54(514.28,3716.18)	1.43	(312,16)	1.16	(300,16)	1.01	(8,16)	0.98	(239,16)	0.89	(170,24)
55(515.28,3716.18)	1.81	(286,16)	1.44	(111,24)	1.43	(153,16)	1.31	(319,16)	1.28	(146,16)
56(513.28,3717.18)	1.37	(312,16)	0.97	(348, 8)	0.97	(57, 8)	0.96	(294, 8)	0.93	(83,16)
57(514.28,3717.18)	1.40	(312,16)	1.07	(319,16)	1.05	(117,16)	1.02	(286,16)	0.95	(128, 8)
58(512.28,3711.18)	1.22	(263,16)	1.08	(204,24)	1.08	(182,16)	1.05	(207,16)	0.99	(237,16)
59(516.50,3708.10)	1.79	(151,16)	1.44	(150,16)	1.30	(316,16)	1.09	(231,16)	1.09	(100,16)
60(518.10,3709.35)	1.77	(60,16)	1.60	(89,16)	1.54	(108,16)	1.44	(231,16)	1.37	(335,16)
61(514.50,3708.80)	1.62	(213,16)	1.47	(262,16)	1.23	(264,16)	1.23	(248,16)	1.20	(205,16)
62(517.30,3714.40)	1.81	(174,16)	1.81	(171,16)	1.52	(131,16)	1.36	(154,16)	1.28	(190,16)

FIVE HIGHEST 24-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	0.98	(212,24) *	0.98	(213,24)	0.84	(208,24)	0.83	(200,24)	0.72	(230,24)
2(515.88,3710.48)	0.99	(212,24)	0.97	(213,24)	0.72	(230,24)	0.58	(205,24)	0.52	(121,24)
3(515.78,3710.38) *	1.32	(212,24)	0.94	(213,24)	0.74	(205,24)	0.55	(121,24)	0.50	(200,24)
4(515.88,3710.38)	1.00	(212,24)	0.95	(213,24)	0.73	(230,24)	0.62	(205,24)	0.54	(121,24)
5(515.68,3710.38)	1.32	(212,24)	0.93	(213,24)	0.76	(205,24)	0.50	(200,24)	0.47	(248,24)
6(515.98,3710.38)	0.93	(213,24)	0.92	(200,24)	0.73	(327,24)	0.73	(230,24)	0.70	(208,24)
7(511.28,3709.38)	0.46	(206,24)	0.43	(360,24)	0.43	(137,24)	0.42	(263,24)	0.42	(183,24)
8(512.28,3709.38)	0.54	(211,24)	0.50	(261,24)	0.48	(206,24)	0.47	(264,24)	0.46	(200,24)
9(513.28,3709.38)	0.80	(211,24)	0.75	(261,24)	0.63	(248,24)	0.62	(200,24)	0.60	(136,24)
10(514.28,3709.38)	0.91	(264,24)	0.87	(262,24)	0.80	(248,24)	0.78	(261,24)	0.70	(260,24)
11(515.28,3709.38)	1.01	(212,24)	0.82	(205,24)	0.70	(213,24)	0.43	(19,24)	0.40	(327,24)
12(518.28,3709.38)	0.86	(89,24)	0.57	(88,24)	0.54	(108,24)	0.53	(310,24)	0.53	(58,24)
13(511.28,3708.38)	0.44	(261,24)	0.43	(211,24)	0.42	(360,24)	0.40	(136,24)	0.40	(260,24)
14(513.28,3708.38)	0.86	(260,24)	0.67	(262,24)	0.64	(261,24)	0.59	(264,24)	0.57	(248,24)
15(514.28,3708.38)	0.74	(212,24)	0.61	(213,24)	0.57	(262,24)	0.51	(211,24)	0.50	(260,24)
16(517.28,3708.38)	0.82	(129,24)	0.50	(274,24)	0.49	(316,24)	0.46	(225,24)	0.46	(10,24)
17(513.28,3707.38)	0.63	(260,24)	0.58	(262,24)	0.48	(248,24)	0.41	(259,24)	0.38	(212,24)
18(512.28,3707.38)	0.77	(260,24)	0.58	(248,24)	0.57	(262,24)	0.55	(261,24)	0.49	(211,24)
19(515.28,3707.38)	0.59	(326,24)	0.57	(10,24)	0.52	(19,24)	0.45	(51,24)	0.45	(325,24)
20(517.28,3707.38)	0.60	(129,24)	0.59	(10,24)	0.55	(30,24)	0.45	(274,24)	0.43	(19,24)
21(511.28,3706.38)	0.71	(260,24)	0.50	(261,24)	0.50	(262,24)	0.41	(296,24)	0.41	(14,24)
22(512.28,3706.38)	0.69	(260,24)	0.51	(262,24)	0.41	(263,24)	0.40	(321,24)	0.40	(297,24)
23(513.28,3706.38)	0.57	(297,24)	0.50	(212,24)	0.50	(260,24)	0.48	(272,24)	0.47	(259,24)
24(514.28,3706.38)	0.46	(326,24)	0.45	(212,24)	0.43	(259,24)	0.43	(297,24)	0.38	(213,24)
25(515.28,3706.38)	0.57	(10,24)	0.53	(65,24)	0.51	(150,24)	0.47	(326,24)	0.46	(66,24)

26(	517.28,3714.18)	0.88	(174,24)	0.68	(185,24)	0.66	(171,24)	0.59	(131,24)	0.53	(143,24)
27(	512.28,3715.18)	0.70	(251,24)	0.54	(109,24)	0.51	(39,24)	0.46	(350,24)	0.42	(98,24)
28(	514.28,3716.18)	0.68	(312,24)	0.61	(348,24)	0.59	(252,24)	0.48	(161,24)	0.46	(266,24)
29(	515.28,3716.18)	0.89	(111,24)	0.81	(160,24)	0.75	(116,24)	0.72	(319,24)	0.69	(117,24)
30(	513.28,3717.18)	0.68	(348,24)	0.64	(57,24)	0.63	(312,24)	0.59	(266,24)	0.55	(294,24)
31(	514.28,3717.18)	0.71	(117,24)	0.66	(160,24)	0.65	(312,24)	0.61	(319,24)	0.60	(116,24)
32(	512.28,3711.18)	0.51	(182,24)	0.51	(263,24)	0.49	(339,24)	0.48	(137,24)	0.48	(237,24)
33(	511.28,3709.38)	0.46	(206,24)	0.43	(360,24)	0.43	(137,24)	0.42	(263,24)	0.42	(183,24)
34(	511.28,3709.38)	0.46	(206,24)	0.43	(360,24)	0.43	(137,24)	0.42	(263,24)	0.42	(183,24)
35(	513.28,3709.38)	0.80	(211,24)	0.75	(261,24)	0.63	(248,24)	0.62	(200,24)	0.60	(136,24)
36(	514.28,3709.38)	0.91	(264,24)	0.87	(262,24)	0.80	(248,24)	0.78	(261,24)	0.70	(260,24)
37(	515.28,3709.38)	1.01	(212,24)	0.82	(205,24)	0.70	(213,24)	0.43	(19,24)	0.40	(327,24)
38(	511.28,3708.38)	0.44	(261,24)	0.43	(211,24)	0.42	(360,24)	0.40	(136,24)	0.40	(260,24)
39(	513.28,3708.38)	0.86	(260,24)	0.67	(262,24)	0.64	(261,24)	0.59	(264,24)	0.57	(248,24)
40(	514.28,3708.38)	0.74	(212,24)	0.61	(213,24)	0.57	(262,24)	0.51	(211,24)	0.50	(260,24)
41(	517.28,3708.38)	0.82	(129,24)	0.50	(274,24)	0.49	(316,24)	0.46	(225,24)	0.46	(10,24)
42(	513.28,3707.38)	0.63	(260,24)	0.58	(262,24)	0.48	(248,24)	0.41	(259,24)	0.38	(212,24)
43(	512.28,3707.38)	0.77	(260,24)	0.58	(248,24)	0.57	(262,24)	0.55	(261,24)	0.49	(211,24)
44(	515.28,3707.38)	0.59	(326,24)	0.57	(10,24)	0.52	(19,24)	0.45	(51,24)	0.45	(325,24)
45(	517.28,3707.38)	0.60	(129,24)	0.59	(10,24)	0.55	(30,24)	0.45	(274,24)	0.43	(19,24)
46(	511.28,3706.38)	0.71	(260,24)	0.50	(261,24)	0.50	(262,24)	0.41	(296,24)	0.41	(14,24)
47(	512.28,3706.38)	0.69	(260,24)	0.51	(262,24)	0.41	(263,24)	0.40	(321,24)	0.40	(297,24)
48(	513.28,3706.38)	0.57	(297,24)	0.50	(212,24)	0.50	(260,24)	0.48	(272,24)	0.47	(259,24)
49(	514.28,3706.38)	0.46	(326,24)	0.45	(212,24)	0.43	(259,24)	0.43	(297,24)	0.38	(213,24)
50(	515.28,3706.38)	0.57	(10,24)	0.53	(65,24)	0.51	(150,24)	0.47	(326,24)	0.46	(66,24)
51(	517.28,3714.18)	0.88	(174,24)	0.68	(185,24)	0.66	(171,24)	0.59	(131,24)	0.53	(143,24)
52(	512.28,3715.18)	0.70	(251,24)	0.54	(109,24)	0.51	(39,24)	0.46	(350,24)	0.42	(98,24)
53(	511.28,3716.18)	0.56	(251,24)	0.55	(350,24)	0.45	(39,24)	0.45	(349,24)	0.44	(98,24)
54(	514.28,3716.18)	0.68	(312,24)	0.61	(348,24)	0.59	(252,24)	0.48	(161,24)	0.46	(266,24)
55(	515.28,3716.18)	0.89	(111,24)	0.81	(160,24)	0.75	(116,24)	0.72	(319,24)	0.69	(117,24)
56(	513.28,3717.18)	0.68	(348,24)	0.64	(57,24)	0.63	(312,24)	0.59	(266,24)	0.55	(294,24)
57(	514.28,3717.18)	0.71	(117,24)	0.66	(160,24)	0.65	(312,24)	0.61	(319,24)	0.60	(116,24)
58(	512.28,3711.18)	0.51	(182,24)	0.51	(263,24)	0.49	(339,24)	0.48	(137,24)	0.48	(237,24)
59(	516.50,3708.10)	0.73	(10,24)	0.63	(150,24)	0.61	(151,24)	0.58	(65,24)	0.56	(66,24)
60(	518.10,3709.35)	0.98	(89,24)	0.59	(60,24)	0.55	(108,24)	0.54	(274,24)	0.53	(310,24)
61(	514.50,3708.80)	0.81	(212,24)	0.60	(262,24)	0.58	(213,24)	0.54	(211,24)	0.50	(260,24)
62(	517.30,3714.40)	0.89	(174,24)	0.79	(185,24)	0.60	(171,24)	0.57	(131,24)	0.53	(143,24)

Woodward-Clyde
Consultants

SECTION H.10

1985 MODELING OUTPUT FOR NOx COMPLEX I

COMPLEX I (DATED 90095)
BOWMAN ENVIRONMENTAL ENGINEERING VER. 6.27

SESSION INFORMATION

INPUT DATA FILE NAME : ICNOX85.DTA
OUTPUT LIST FILE NAME : ICNOX85.LST
MET DATA FILE NAME : c:\bee\shvggg85.bin

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
NOX SCREEN - 1985 SHREVEPORT/LONGVIEW BINARY MET. DATA

GENERAL INPUT INFORMATION

THIS RUN OF COMPLEX I -VERSION 2.0 IS FOR THE POLLUTANT PART FOR 365 24-HOUR PERIODS.
CONCENTRATION ESTIMATES BEGIN ON HOUR- 1,JULIAN DAY- 1, YEAR-1985.
A FACTOR OF 1.0000000 HAS BEEN SPECIFIED TO CONVERT USER LENGTH UNITS TO KILOMETERS.
0 SIGNIFICANT SOURCES ARE TO BE CONSIDERED.
THIS RUN WILL NOT CONSIDER ANY POLLUTANT LOSS.
HIGH-FIVE SUMMARY CONCENTRATION TABLES WILL BE OUTPUT FOR 4 AVERAGING PERIODS.
AVG TIMES OF 1,3,8, AND 24 HOURS ARE AUTOMATICALLY DISPLAYED.

OPTION	OPTION LIST	OPTION SPECIFICATION : 0= IGNORE OPTION 1= USE OPTION
	TECHNICAL OPTIONS	
1	TERRAIN ADJUSTMENTS	0
2	DO NOT INCLUDE STACK DOWNWASH CALCULATIONS	0
3	DO NOT INCLUDE GRADUAL PLUME RISE CALCULATIONS	1
4	CALCULATE INITIAL PLUME SIZE	1
	INPUT OPTIONS	
5	READ MET DATA FROM CARDS	0
6	READ HOURLY EMISSIONS	0
7	SPECIFY SIGNIFICANT SOURCES	0
8	READ RADIAL DISTANCES TO GENERATE RECEPTORS	0
	PRINTED OUTPUT OPTIONS	
9	DELETE EMISSIONS WITH HEIGHT TABLE	1
10	DELETE MET DATA SUMMARY FOR AVG PERIOD	1
11	DELETE HOURLY CONTRIBUTIONS	1
12	DELETE MET DATA ON HOURLY CONTRIBUTIONS	1
13	DELETE FINAL PLUME RISE CALC ON HRLY CONTRIBUTIONS	1
14	DELETE HOURLY SUMMARY	1
15	DELETE MET DATA ON HRLY SUMMARY	1
16	DELETE FINAL PLUME RISE CALC ON HRLY SUMMARY	1
17	DELETE AVG-PERIOD CONTRIBUTIONS	1
18	DELETE AVERAGING PERIOD SUMMARY	1
19	DELETE AVG CONCENTRATIONS AND HI-5 TABLES	0
	OTHER CONTROL AND OUTPUT OPTIONS	
20	RUN IS PART OF A SEGMENTED RUN	0
21	WRITE PARTIAL CONC TO DISK OR TAPE	0
22	WRITE HOURLY CONC TO DISK OR TAPE	0
23	WRITE AVG-PERIOD CONC TO DISK OR TAPE	0
24	PUNCH AVG-PERIOD CONC ONTO CARDS	0
25	COMPLEX TERRAIN OPTION	1
26	CALM PROCESSING OPTION	0
27	VALLEY SCREENING OPTION	0

ANEMOMETER HEIGHT= 10.00
WIND PROFILE WITH HEIGHT EXPONENTS CORRESPONDING TO STABILITY ARE AS FOLLOWS:
FOR STABILITY A: 0.07
STABILITY B: 0.07
STABILITY C: 0.10
STABILITY D: 0.15
STABILITY E: 0.35
STABILITY F: 0.55

POINT SOURCE INFORMATION

SOURCE		EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	SO2(G/SEC) EMISSIONS	PART(G/SEC) EMISSIONS	STACK HT(M)	STACK TEMP(K)	STACK DIAM(M)	STACK VEL(M/SEC)	POTEN. IMPACT (MICRO G/M**3)	EFF HT(M)	GRD-LVL ELEV USER HT UNITS	BUOY FLUX F M**4/S**3
1 1	COGEN	516.32	3711.89	0.00	10.43	22.9	427.6	3.4	16.6	8.07	283.88	34.40	150.19

ADDITIONAL INFORMATION ON SOURCES.

EMISSION INFORMATION FOR 1 (NPT) POINT SOURCES HAS BEEN INPUT
0 SIGNIFICANT POINT SOURCES(NSIGP) ARE TO BE USED FOR THIS RUN
THE ORDER OF SIGNIFICANCE(IMPS) FOR 25 OR LESS POINT SOURCES USED IN THIS RUN AS LISTED BY POINT SOURCE NUMBER:

SURFACE MET DATA FROM STATION(ISFCD) 13957, YEAR(ISFCYR) 1985
MIXING HEIGHT DATA FROM STATION(IMXD) 3951, YEAR(IMXYR) 1985

RECEPTOR INFORMATION

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)
1		515.977	3710.478	0.0	57.9
2		515.877	3710.478	0.0	57.9
3		515.777	3710.378	0.0	57.9
4		515.877	3710.378	0.0	57.9
5		515.677	3710.378	0.0	57.9
6		515.977	3710.378	0.0	57.9
7		511.277	3709.378	0.0	64.0
8		512.277	3709.378	0.0	61.0
9		513.277	3709.378	0.0	73.2
10		514.277	3709.378	0.0	64.0
11		515.277	3709.378	0.0	57.9
12		518.277	3709.378	0.0	61.0
13		511.277	3708.378	0.0	67.1
14		513.277	3708.378	0.0	76.2
15		514.277	3708.378	0.0	70.1
16		517.277	3708.378	0.0	64.0
17		513.277	3707.378	0.0	64.0
18		512.277	3707.378	0.0	67.1
19		515.277	3707.378	0.0	61.0
20		517.277	3707.378	0.0	67.1
21		511.277	3706.378	0.0	73.2
22		512.277	3706.378	0.0	73.2
23		513.277	3706.378	0.0	64.0
24		514.277	3706.378	0.0	64.0
25		515.277	3706.378	0.0	67.1
26		517.277	3714.176	0.0	70.1
27		512.277	3715.176	0.0	61.0
28		514.277	3716.176	0.0	61.0
29		515.277	3716.176	0.0	70.1
30		513.277	3717.176	0.0	61.0
31		514.277	3717.176	0.0	61.0
32		512.277	3711.176	0.0	64.0
33		511.277	3709.378	0.0	64.0
34		511.277	3709.378	0.0	61.0
35		513.277	3709.378	0.0	73.2
36		514.277	3709.378	0.0	64.0
37		515.277	3709.378	0.0	57.9
38		511.277	3708.378	0.0	67.1
39		513.277	3708.378	0.0	76.2
40		514.277	3708.378	0.0	70.1
41		517.277	3708.378	0.0	64.0
42		513.277	3707.378	0.0	64.0

43	512.277	3707.378	0.0	67.1
44	515.277	3707.378	0.0	61.0
45	517.277	3707.378	0.0	67.1
46	511.277	3706.378	0.0	73.2
47	512.277	3706.378	0.0	73.2
48	513.277	3706.378	0.0	64.0
49	514.277	3706.378	0.0	64.0
50	515.277	3706.378	0.0	67.1
51	517.277	3714.176	0.0	70.1
52	512.277	3715.176	0.0	61.0
53	511.277	3716.176	0.0	61.0
54	514.277	3716.176	0.0	61.0
55	515.277	3716.176	0.0	70.1
56	513.277	3717.176	0.0	61.0
57	514.277	3717.176	0.0	61.0
58	512.277	3711.176	0.0	64.0
59	516.500	3708.100	0.0	67.7
60	518.100	3709.350	0.0	79.3
61	514.500	3708.800	0.0	80.5
62	517.300	3714.400	0.0	76.2

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
NOX SCREEN - 1985 SHREVEPORT/LONGVIEW BINARY MET. DATA

RECEPTORS

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)	AVG CONC FOR PERIOD DAY 1.HR 1. TO DAY365.HR24. (MICROGRAMS/M**3)
1		515.98	3710.48	0.0	57.9	0.05
2		515.88	3710.48	0.0	57.9	0.04
3		515.78	3710.38	0.0	57.9	0.05
4		515.88	3710.38	0.0	57.9	0.05
5		515.68	3710.38	0.0	57.9	0.04
6		515.98	3710.38	0.0	57.9	0.05
7		511.28	3709.38	0.0	64.0	0.03
8		512.28	3709.38	0.0	61.0	0.04
9		513.28	3709.38	0.0	73.2	0.04
10		514.28	3709.38	0.0	64.0	0.04
11		515.28	3709.38	0.0	57.9	0.05
12		518.28	3709.38	0.0	61.0	0.07
13		511.28	3708.38	0.0	67.1	0.03
14		513.28	3708.38	0.0	76.2	0.04
15		514.28	3708.38	0.0	70.1	0.04
16		517.28	3708.38	0.0	64.0	0.06
17		513.28	3707.38	0.0	64.0	0.04
18		512.28	3707.38	0.0	67.1	0.03
19		515.28	3707.38	0.0	61.0	0.07
20		517.28	3707.38	0.0	67.1	0.06
21		511.28	3706.38	0.0	73.2	0.03
22		512.28	3706.38	0.0	73.2	0.03
23		513.28	3706.38	0.0	64.0	0.04
24		514.28	3706.38	0.0	64.0	0.05
25		515.28	3706.38	0.0	67.1	0.06
26		517.28	3714.18	0.0	70.1	0.06
27		512.28	3715.18	0.0	61.0	0.08
28		514.28	3716.18	0.0	61.0	0.08
29		515.28	3716.18	0.0	70.1	* 0.10
30		513.28	3717.18	0.0	61.0	0.08
31		514.28	3717.18	0.0	61.0	0.09
32		512.28	3711.18	0.0	64.0	0.03
33		511.28	3709.38	0.0	64.0	0.03

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APPENDIX H

MODELING OUTPUT

SECTION H.11

1981 MODELING OUTPUT FOR CO ISCST

ISCST (DATED 90346)
BOWMAN ENVIRONMENTAL ENGINEERING REV.6.96

SESSION INFORMATION

INPUT DATA FILE NAME : ISCC081.DTA
OUTPUT LIST FILE NAME : ISCC081.LST
MET DATA FILE NAME : SHVGGG81.BIN

NOTE THAT THE BUILDING DIMENSIONS ON CARD 6,1 FOR SOURCE NO. 1 DO NOT MEET THE SCHULMAN-SCIRE CRITERIA.
THEREFORE, DIRECTION SPECIFIC BUILDING DIMENSIONS WILL NOT BE USED BY THE MODEL.

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```
CALCULATE (CONCENTRATION=1,DEPOSITION=2)                          ISW(1) =   1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)           ISW(2) =   3
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1,POLAR=2)                  ISW(3) =   1
TERRAIN ELEVATIONS ARE READ (YES=1,NO=0)                          ISW(4) =   1
CALCULATIONS ARE WRITTEN TO TAPE (YES=1,NO=0)                     ISW(5) =   0
LIST ALL INPUT DATA (NO=0,YES=1,MET DATA ALSO=2)                  ISW(6) =   1

COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION)
WITH THE FOLLOWING TIME PERIODS:
  HOURLY (YES=1,NO=0)                                             ISW(7) =   1
  2-HOUR (YES=1,NO=0)                                             ISW(8) =   0
  3-HOUR (YES=1,NO=0)                                             ISW(9) =   0
  4-HOUR (YES=1,NO=0)                                            ISW(10) =   0
  6-HOUR (YES=1,NO=0)                                            ISW(11) =   0
  8-HOUR (YES=1,NO=0)                                            ISW(12) =   1
  12-HOUR (YES=1,NO=0)                                           ISW(13) =   0
  24-HOUR (YES=1,NO=0)                                           ISW(14) =   0
PRINT 'N'-DAY TABLE(S) (YES=1,NO=0)                              ISW(15) =   0

PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE
SPECIFIED BY ISW(7) THROUGH ISW(14):
  DAILY TABLES (YES=1,NO=0)                                      ISW(16) =   0
  HIGHEST & SECOND HIGHEST TABLES (YES=1,NO=0)                   ISW(17) =   1
  MAXIMUM 50 TABLES (YES=1,NO=0)                                 ISW(18) =   1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1,CARD=2)        ISW(19) =   1
RURAL-URBAN OPTION (RU.=0,UR. MODE 1=1,UR. MODE 2=2,UR. MODE 3=3) ISW(20) =   0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1,USER ENTERS=2,3)        ISW(21) =   1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1,USER ENTERS=2,3) ISW(22) =   1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0,YES>0)                ISW(23) =   0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1,NO=2)            ISW(24) =   1
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2,NO=1)      ISW(25) =   2
PROGRAM USES BUOYANCY INDUCED DISPERSION (YES=1,NO=2)            ISW(26) =   1
CONCENTRATIONS DURING CALM PERIODS SET = 0 (YES=1,NO=2)          ISW(27) =   1
REG. DEFAULT OPTION CHOSEN (YES=1,NO=2)                          ISW(28) =   1
TYPE OF POLLUTANT TO BE MODELLED (1=SO2,2=OTHER)                 ISW(29) =   2
DEBUG OPTION CHOSEN (YES=1,NO=2)                                 ISW(30) =   2
ABOVE GROUND (FLAGPOLE) RECEPTORS USED (YES=1,NO=0)              ISW(31) =   0

NUMBER OF INPUT SOURCES                                          NSOURC =   1
NUMBER OF SOURCE GROUPS (=0,ALL SOURCES)                         NGROUP =   0
TIME PERIOD INTERVAL TO BE PRINTED (=0,ALL INTERVALS)             IPERD =   0
NUMBER OF X (RANGE) GRID VALUES                                  NXPNTS =   0
NUMBER OF Y (THETA) GRID VALUES                                  NYPNTS =   0
NUMBER OF DISCRETE RECEPTORS                                     NXWYPT = 749
SOURCE EMISSION RATE UNITS CONVERSION FACTOR                         TK =.10000E+07
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED                 ZR =  10.00  METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA                         IMET =   9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION              DECAY =0.000000E+00
SURFACE STATION NO.                                                  ISS = 13957
YEAR OF SURFACE DATA                                                 ISY = 81
UPPER AIR STATION NO.                                                IUS =  3951
YEAR OF UPPER AIR DATA                                               IUY = 81
ALLOCATED DATA STORAGE                                            LIMIT =160000 WORDS
REQUIRED DATA STORAGE FOR THIS PROBLEM RUN                        MIMIT = 11924 WORDS
```

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*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

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*** X,Y COORDINATES OF DISCRETE RECEPTORS ***
(METERS)

(516276.8,3711378.0),	(516411.0,3712159.0),	(516679.3,3711159.0),	(516679.3,3711378.0),	(517079.3,3711378.0),
(517079.3,3711549.0),	(517530.5,3711488.0),	(517530.5,3711317.0),	(518743.9,3711171.0),	(518743.9,3711573.0),
(519914.6,3711573.0),	(519914.6,3711171.0),	(520304.8,3711171.0),	(520304.8,3711024.0),	(520707.2,3711024.0),
(520817.0,3711628.0),	(520402.3,3712176.0),	(518707.2,3712176.0),	(518707.2,3712030.0),	(518280.4,3712030.0),
(518280.4,3712250.0),	(518060.9,3712335.0),	(518060.9,3712878.0),	(517426.8,3712878.0),	(517426.8,3713079.0),
(516993.9,3713079.0),	(516993.9,3713280.0),	(516603.7,3713280.0),	(516603.7,3712884.0),	(516372.0,3712884.0),
(516372.0,3712798.0),	(516256.2,3712774.0),	(516276.8,3711378.0),	(516264.6,3712122.0),	(516264.6,3711598.0),
(516008.5,3712006.0),	(516008.5,3712122.0),	(516115.2,3712189.0),	(516179.3,3712061.0),	(516179.3,3712122.0),
(516264.6,3712122.0),	(515277.0,3711278.0),	(515377.0,3711278.0),	(515477.0,3711278.0),	(515577.0,3711278.0),
(515677.0,3711278.0),	(515777.0,3711278.0),	(515877.0,3711278.0),	(515977.0,3711278.0),	(516077.0,3711278.0),
(516177.0,3711278.0),	(516277.0,3711278.0),	(516377.0,3711278.0),	(516477.0,3711278.0),	(516577.0,3711278.0),
(516677.0,3711278.0),	(516777.0,3711278.0),	(516877.0,3711278.0),	(516977.0,3711278.0),	(517077.0,3711278.0),
(517177.0,3711278.0),	(515277.0,3711178.0),	(515377.0,3711178.0),	(515477.0,3711178.0),	(515577.0,3711178.0),
(515677.0,3711178.0),	(515777.0,3711178.0),	(515877.0,3711178.0),	(515977.0,3711178.0),	(516077.0,3711178.0),
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(516677.0,3711178.0),	(516777.0,3711178.0),	(516877.0,3711178.0),	(516977.0,3711178.0),	(517077.0,3711178.0),
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(515677.0,3711078.0),	(515777.0,3711078.0),	(515877.0,3711078.0),	(515977.0,3711078.0),	(516077.0,3711078.0),
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(516677.0,3711078.0),	(516777.0,3711078.0),	(516877.0,3711078.0),	(516977.0,3711078.0),	(517077.0,3711078.0),
(517177.0,3711078.0),	(515277.0,3710978.0),	(515377.0,3710978.0),	(515477.0,3710978.0),	(515577.0,3710978.0),
(515677.0,3710978.0),	(515777.0,3710978.0),	(515877.0,3710978.0),	(515977.0,3710978.0),	(516077.0,3710978.0),
(516177.0,3710978.0),	(516277.0,3710978.0),	(516377.0,3710978.0),	(516477.0,3710978.0),	(516577.0,3710978.0),
(516677.0,3710978.0),	(516777.0,3710978.0),	(516877.0,3710978.0),	(516977.0,3710978.0),	(517077.0,3710978.0),
(517177.0,3710978.0),	(515277.0,3710878.0),	(515377.0,3710878.0),	(515477.0,3710878.0),	(515577.0,3710878.0),
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(516677.0,3710878.0),	(516777.0,3710878.0),	(516877.0,3710878.0),	(516977.0,3710878.0),	(517077.0,3710878.0),
(517177.0,3710878.0),	(515277.0,3710778.0),	(515377.0,3710778.0),	(515477.0,3710778.0),	(515577.0,3710778.0),
(515677.0,3710778.0),	(515777.0,3710778.0),	(515877.0,3710778.0),	(515977.0,3710778.0),	(516077.0,3710778.0),
(516177.0,3710778.0),	(516277.0,3710778.0),	(516377.0,3710778.0),	(516477.0,3710778.0),	(516577.0,3710778.0),
(516677.0,3710778.0),	(516777.0,3710778.0),	(516877.0,3710778.0),	(516977.0,3710778.0),	(517077.0,3710778.0),
(517177.0,3710778.0),	(515277.0,3710678.0),	(515377.0,3710678.0),	(515477.0,3710678.0),	(515577.0,3710678.0),
(515677.0,3710678.0),	(515777.0,3710678.0),	(515877.0,3710678.0),	(515977.0,3710678.0),	(516077.0,3710678.0),
(516177.0,3710678.0),	(516277.0,3710678.0),	(516377.0,3710678.0),	(516477.0,3710678.0),	(516577.0,3710678.0),
(516677.0,3710678.0),	(516777.0,3710678.0),	(516877.0,3710678.0),	(516977.0,3710678.0),	(517077.0,3710678.0),
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(515677.0,3710478.0),	(515777.0,3710478.0),	(515877.0,3710478.0),	(515977.0,3710478.0),	(516077.0,3710478.0),
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(516177.0,3710378.0),	(516277.0,3710378.0),	(516377.0,3710378.0),	(516477.0,3710378.0),	(516577.0,3710378.0),
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*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
516276.8	3711378.0	34.43942	516411.0	3712159.0	34.43942	516679.3	3711159.0	34.43942
516679.3	3711378.0	34.43942	517079.3	3711378.0	34.43942	517079.3	3711549.0	34.43942
517530.5	3711488.0	34.43942	517530.5	3711317.0	34.43942	518743.9	3711171.0	34.43942
518743.9	3711573.0	34.43942	519914.6	3711573.0	34.43942	519914.6	3711171.0	34.43942
520304.8	3711171.0	34.43942	520304.8	3711024.0	34.43942	520707.2	3711024.0	34.43942
520817.0	3711628.0	34.43942	520402.3	3712176.0	34.43942	518707.2	3712176.0	34.43942
518707.2	3712030.0	34.43942	518280.4	3712030.0	34.43942	518280.4	3712250.0	34.43942
518060.9	3712335.0	34.43942	518060.9	3712878.0	34.43942	517426.8	3712878.0	34.43942
517426.8	3713079.0	34.43942	516993.9	3713079.0	34.43942	516993.9	3713280.0	34.43942
516603.7	3713280.0	34.43942	516603.7	3712884.0	34.43942	516372.0	3712884.0	34.43942
516372.0	3712798.0	34.43942	516256.2	3712774.0	34.43942	516276.8	3711378.0	34.43942
516264.6	3712122.0	34.43942	516264.6	3711598.0	34.43942	516008.5	3712006.0	34.43942
516008.5	3712122.0	34.43942	516115.2	3712189.0	34.43942	516179.3	3712061.0	34.43942
516179.3	3712122.0	34.43942	516264.6	3712122.0	34.43942	515277.0	3711278.0	39.62103
515377.0	3711278.0	39.62103	515477.0	3711278.0	39.62103	515577.0	3711278.0	39.62103
515677.0	3711278.0	39.62103	515777.0	3711278.0	39.62103	515877.0	3711278.0	39.62103
515977.0	3711278.0	39.62103	516077.0	3711278.0	39.62103	516177.0	3711278.0	39.62103
516277.0	3711278.0	36.57912	516377.0	3711278.0	39.62103	516477.0	3711278.0	39.62103
516577.0	3711278.0	39.62103	516677.0	3711278.0	33.53112	516777.0	3711278.0	33.53112
516877.0	3711278.0	30.48006	516977.0	3711278.0	30.48006	517077.0	3711278.0	33.53112
517177.0	3711278.0	33.53112	515277.0	3711178.0	39.62103	515377.0	3711178.0	42.66904
515477.0	3711178.0	39.62103	515577.0	3711178.0	39.62103	515677.0	3711178.0	42.66904
515777.0	3711178.0	42.66904	515877.0	3711178.0	42.66904	515977.0	3711178.0	39.62103
516077.0	3711178.0	39.62103	516177.0	3711178.0	36.57912	516277.0	3711178.0	36.57912
516377.0	3711178.0	36.57912	516477.0	3711178.0	36.57912	516577.0	3711178.0	36.57912
516677.0	3711178.0	33.53112	516777.0	3711178.0	33.53112	516877.0	3711178.0	33.53112
516977.0	3711178.0	33.53112	517077.0	3711178.0	33.53112	517177.0	3711178.0	33.53112
515277.0	3711078.0	45.72009	515377.0	3711078.0	42.66904	515477.0	3711078.0	36.57912
515577.0	3711078.0	42.66904	515677.0	3711078.0	45.72009	515777.0	3711078.0	45.72009
515877.0	3711078.0	45.72009	515977.0	3711078.0	42.66904	516077.0	3711078.0	39.62103
516177.0	3711078.0	39.62103	516277.0	3711078.0	36.57912	516377.0	3711078.0	36.57912
516477.0	3711078.0	36.57912	516577.0	3711078.0	39.62103	516677.0	3711078.0	33.53112
516777.0	3711078.0	33.53112	516877.0	3711078.0	33.53112	516977.0	3711078.0	36.57912
517077.0	3711078.0	33.53112	517177.0	3711078.0	33.53112	515277.0	3710978.0	45.72009
515377.0	3710978.0	42.66904	515477.0	3710978.0	36.57912	515577.0	3710978.0	42.66904
515677.0	3710978.0	45.72009	515777.0	3710978.0	48.77114	515877.0	3710978.0	45.72009
515977.0	3710978.0	45.72009	516077.0	3710978.0	45.72009	516177.0	3710978.0	42.66904
516277.0	3710978.0	42.66904	516377.0	3710978.0	39.62103	516477.0	3710978.0	36.57912

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
516577.0	3710978.0	36.57912	516677.0	3710978.0	39.62103	516777.0	3710978.0	36.57912
516877.0	3710978.0	36.57912	516977.0	3710978.0	36.57912	517077.0	3710978.0	36.57912
517177.0	3710978.0	33.53112	515277.0	3710878.0	45.72009	515377.0	3710878.0	39.62103
515477.0	3710878.0	39.62103	515577.0	3710878.0	42.66904	515677.0	3710878.0	48.77114
515777.0	3710878.0	51.81915	515877.0	3710878.0	48.77114	515977.0	3710878.0	48.77114
516077.0	3710878.0	51.81915	516177.0	3710878.0	45.72009	516277.0	3710878.0	42.66904
516377.0	3710878.0	39.62103	516477.0	3710878.0	39.62103	516577.0	3710878.0	42.66904
516677.0	3710878.0	45.72009	516777.0	3710878.0	45.72009	516877.0	3710878.0	39.62103
516977.0	3710878.0	39.62103	517077.0	3710878.0	36.57912	517177.0	3710878.0	36.57912
515277.0	3710778.0	45.72009	515377.0	3710778.0	39.62103	515477.0	3710778.0	45.72009
515577.0	3710778.0	42.66904	515677.0	3710778.0	48.77114	515777.0	3710778.0	54.86106
515877.0	3710778.0	51.81915	515977.0	3710778.0	51.81915	516077.0	3710778.0	54.86106
516177.0	3710778.0	45.72009	516277.0	3710778.0	45.72009	516377.0	3710778.0	42.66904
516477.0	3710778.0	45.72009	516577.0	3710778.0	45.72009	516677.0	3710778.0	51.81915
516777.0	3710778.0	51.81915	516877.0	3710778.0	48.77114	516977.0	3710778.0	48.77114
517077.0	3710778.0	45.72009	517177.0	3710778.0	36.57912	515277.0	3710678.0	42.66904
515377.0	3710678.0	42.66904	515477.0	3710678.0	45.72009	515577.0	3710678.0	45.72009
515677.0	3710678.0	45.72009	515777.0	3710678.0	48.77114	515877.0	3710678.0	51.81915
515977.0	3710678.0	54.86106	516077.0	3710678.0	54.86106	516177.0	3710678.0	48.77114
516277.0	3710678.0	45.72009	516377.0	3710678.0	45.72009	516477.0	3710678.0	45.72009
516577.0	3710678.0	48.77114	516677.0	3710678.0	51.81915	516777.0	3710678.0	51.81915
516877.0	3710678.0	48.77114	516977.0	3710678.0	45.72009	517077.0	3710678.0	42.66904
517177.0	3710678.0	36.57912	515277.0	3710578.0	45.72009	515377.0	3710578.0	45.72009
515477.0	3710578.0	51.81915	515577.0	3710578.0	51.81915	515677.0	3710578.0	48.77114
515777.0	3710578.0	54.86106	515877.0	3710578.0	54.86106	515977.0	3710578.0	54.86106
516077.0	3710578.0	51.81915	516177.0	3710578.0	51.81915	516277.0	3710578.0	48.77114
516377.0	3710578.0	51.81915	516477.0	3710578.0	51.81915	516577.0	3710578.0	51.81915
516677.0	3710578.0	51.81915	516777.0	3710578.0	45.72009	516877.0	3710578.0	45.72009
516977.0	3710578.0	39.62103	517077.0	3710578.0	39.62103	517177.0	3710578.0	36.57912
515277.0	3710478.0	45.72009	515377.0	3710478.0	51.81915	515477.0	3710478.0	54.86106
515577.0	3710478.0	54.86106	515677.0	3710478.0	51.81915	515777.0	3710478.0	54.86106
515877.0	3710478.0	57.90907	515977.0	3710478.0	57.90907	516077.0	3710478.0	54.86106
516177.0	3710478.0	54.86106	516277.0	3710478.0	51.81915	516377.0	3710478.0	51.81915
516477.0	3710478.0	51.81915	516577.0	3710478.0	51.81915	516677.0	3710478.0	51.81915
516777.0	3710478.0	48.77114	516877.0	3710478.0	45.72009	516977.0	3710478.0	45.72009
517077.0	3710478.0	39.62103	517177.0	3710478.0	36.57912	515277.0	3710378.0	45.72009
515377.0	3710378.0	48.77114	515477.0	3710378.0	51.81915	515577.0	3710378.0	54.86106
515677.0	3710378.0	57.90907	515777.0	3710378.0	57.90907	515877.0	3710378.0	57.90907

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* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
515977.0	3710378.0	57.90907	516077.0	3710378.0	51.81915	516177.0	3710378.0	51.81915
516277.0	3710378.0	48.77114	516377.0	3710378.0	48.77114	516477.0	3710378.0	45.72009
516577.0	3710378.0	48.77114	516677.0	3710378.0	48.77114	516777.0	3710378.0	48.77114
516877.0	3710378.0	51.81915	516977.0	3710378.0	45.72009	517077.0	3710378.0	39.62103
517177.0	3710378.0	36.57912	515277.0	3712276.0	30.48006	515377.0	3712276.0	30.48006
515477.0	3712276.0	30.48006	515577.0	3712276.0	30.48006	515677.0	3712276.0	33.53112
515777.0	3712276.0	30.48006	515877.0	3712276.0	30.48006	515977.0	3712276.0	30.48006
516077.0	3712276.0	30.48006	516177.0	3712276.0	33.53112	516277.0	3712276.0	33.53112
516377.0	3712276.0	30.48006	516477.0	3712276.0	30.48006	516577.0	3712276.0	30.48006
516677.0	3712276.0	30.48006	516777.0	3712276.0	27.42900	516877.0	3712276.0	33.53112
516977.0	3712276.0	30.48006	517077.0	3712276.0	27.42900	517177.0	3712276.0	27.42900
515277.0	3712376.0	30.48006	515377.0	3712376.0	30.48006	515477.0	3712376.0	30.48006
515577.0	3712376.0	30.48006	515677.0	3712376.0	33.53112	515777.0	3712376.0	33.53112
515877.0	3712376.0	33.53112	515977.0	3712376.0	36.57912	516077.0	3712376.0	36.57912
516177.0	3712376.0	36.57912	516277.0	3712376.0	33.53112	516377.0	3712376.0	30.48006
516477.0	3712376.0	30.48006	516577.0	3712376.0	30.48006	516677.0	3712376.0	27.42900
516777.0	3712376.0	27.42900	516877.0	3712376.0	27.42900	516977.0	3712376.0	27.42900
517077.0	3712376.0	27.42900	517177.0	3712376.0	30.48006	515277.0	3712476.0	33.53112
515377.0	3712476.0	33.53112	515477.0	3712476.0	30.48006	515577.0	3712476.0	30.48006
515677.0	3712476.0	33.53112	515777.0	3712476.0	33.53112	515877.0	3712476.0	33.53112
515977.0	3712476.0	33.53112	516077.0	3712476.0	36.57912	516177.0	3712476.0	36.57912
516277.0	3712476.0	33.53112	516377.0	3712476.0	30.48006	516477.0	3712476.0	30.48006
516577.0	3712476.0	30.48006	516677.0	3712476.0	30.48006	516777.0	3712476.0	27.42900
516877.0	3712476.0	27.42900	516977.0	3712476.0	24.38100	517077.0	3712476.0	27.42900
517177.0	3712476.0	27.42900	515277.0	3712576.0	33.53112	515377.0	3712576.0	33.53112
515477.0	3712576.0	30.48006	515577.0	3712576.0	30.48006	515677.0	3712576.0	33.53112
515777.0	3712576.0	33.53112	515877.0	3712576.0	33.53112	515977.0	3712576.0	33.53112
516077.0	3712576.0	36.57912	516177.0	3712576.0	33.53112	516277.0	3712576.0	33.53112
516377.0	3712576.0	30.48006	516477.0	3712576.0	30.48006	516577.0	3712576.0	30.48006
516677.0	3712576.0	30.48006	516777.0	3712576.0	27.42900	516877.0	3712576.0	27.42900
516977.0	3712576.0	27.42900	517077.0	3712576.0	24.38100	517177.0	3712576.0	27.42900
515277.0	3712676.0	30.48006	515377.0	3712676.0	30.48006	515477.0	3712676.0	33.53112
515577.0	3712676.0	33.53112	515677.0	3712676.0	33.53112	515777.0	3712676.0	33.53112
515877.0	3712676.0	33.53112	515977.0	3712676.0	33.53112	516077.0	3712676.0	33.53112
516177.0	3712676.0	36.57912	516277.0	3712676.0	33.53112	516377.0	3712676.0	30.48006
516477.0	3712676.0	30.48006	516577.0	3712676.0	30.48006	516677.0	3712676.0	30.48006
516777.0	3712676.0	27.42900	516877.0	3712676.0	24.38100	516977.0	3712676.0	27.42900
517077.0	3712676.0	27.42900	517177.0	3712676.0	27.42900	515277.0	3712776.0	27.42900

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* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
515377.0	3712776.0	27.42900	515477.0	3712776.0	27.42900	515577.0	3712776.0	33.53112
515677.0	3712776.0	33.53112	515777.0	3712776.0	27.42900	515877.0	3712776.0	33.53112
515977.0	3712776.0	33.53112	516077.0	3712776.0	33.53112	516177.0	3712776.0	33.53112
516277.0	3712776.0	30.48006	516377.0	3712776.0	30.48006	516477.0	3712776.0	27.42900
516577.0	3712776.0	27.42900	516677.0	3712776.0	27.42900	516777.0	3712776.0	27.42900
516877.0	3712776.0	27.42900	516977.0	3712776.0	27.42900	517077.0	3712776.0	30.48006
517177.0	3712776.0	30.48006	515277.0	3712876.0	27.42900	515377.0	3712876.0	27.42900
515477.0	3712876.0	27.42900	515577.0	3712876.0	27.42900	515677.0	3712876.0	33.53112
515777.0	3712876.0	27.42900	515877.0	3712876.0	30.48006	515977.0	3712876.0	30.48006
516077.0	3712876.0	33.53112	516177.0	3712876.0	30.48006	516277.0	3712876.0	27.42900
516377.0	3712876.0	27.42900	516477.0	3712876.0	27.42900	516577.0	3712876.0	27.42900
516677.0	3712876.0	27.42900	516777.0	3712876.0	30.48006	516877.0	3712876.0	30.48006
516977.0	3712876.0	27.42900	517077.0	3712876.0	30.48006	517177.0	3712876.0	30.48006
515277.0	3712976.0	27.42900	515377.0	3712976.0	27.42900	515477.0	3712976.0	27.42900
515577.0	3712976.0	27.42900	515677.0	3712976.0	27.42900	515777.0	3712976.0	27.42900
515877.0	3712976.0	33.53112	515977.0	3712976.0	33.53112	516077.0	3712976.0	33.53112
516177.0	3712976.0	33.53112	516277.0	3712976.0	27.42900	516377.0	3712976.0	27.42900
516477.0	3712976.0	27.42900	516577.0	3712976.0	27.42900	516677.0	3712976.0	27.42900
516777.0	3712976.0	30.48006	516877.0	3712976.0	30.48006	516977.0	3712976.0	30.48006
517077.0	3712976.0	27.42900	517177.0	3712976.0	27.42900	515277.0	3713076.0	27.42900
515377.0	3713076.0	27.42900	515477.0	3713076.0	27.42900	515577.0	3713076.0	27.42900
515677.0	3713076.0	27.42900	515777.0	3713076.0	27.42900	515877.0	3713076.0	27.42900
515977.0	3713076.0	27.42900	516077.0	3713076.0	27.42900	516177.0	3713076.0	27.42900
516277.0	3713076.0	27.42900	516377.0	3713076.0	24.38100	516477.0	3713076.0	27.42900
516577.0	3713076.0	27.42900	516677.0	3713076.0	30.48006	516777.0	3713076.0	33.53112
516877.0	3713076.0	30.48006	516977.0	3713076.0	30.48006	517077.0	3713076.0	30.48006
517177.0	3713076.0	30.48006	515277.0	3713176.0	27.42900	515377.0	3713176.0	27.42900
515477.0	3713176.0	27.42900	515577.0	3713176.0	27.42900	515677.0	3713176.0	27.42900
515777.0	3713176.0	30.48006	515877.0	3713176.0	30.48006	515977.0	3713176.0	27.42900
516077.0	3713176.0	30.48006	516177.0	3713176.0	27.42900	516277.0	3713176.0	27.42900
516377.0	3713176.0	27.42900	516477.0	3713176.0	27.42900	516577.0	3713176.0	27.42900
516677.0	3713176.0	27.42900	516777.0	3713176.0	30.48006	516877.0	3713176.0	33.53112
516977.0	3713176.0	27.42900	517077.0	3713176.0	30.48006	517177.0	3713176.0	42.66904
515277.0	3712176.0	33.53112	515377.0	3712176.0	30.48006	515477.0	3712176.0	33.53112
515577.0	3712176.0	30.48006	515677.0	3712176.0	30.48006	515777.0	3712176.0	30.48006
515877.0	3712176.0	30.48006	515977.0	3712176.0	30.48006	516077.0	3712176.0	33.53112
516177.0	3712176.0	33.53112	515277.0	3712076.0	30.48006	515377.0	3712076.0	30.48006
515477.0	3712076.0	33.53112	515577.0	3712076.0	30.48006	515677.0	3712076.0	33.53112

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
515777.0	3712076.0	33.53112	515877.0	3712076.0	33.53112	515977.0	3712076.0	33.53112
516077.0	3712076.0	30.48006	516177.0	3712076.0	33.53112	515277.0	3711976.0	33.53112
515377.0	3711976.0	33.53112	515477.0	3711976.0	30.48006	515577.0	3711976.0	30.48006
515677.0	3711976.0	33.53112	515777.0	3711976.0	33.53112	515877.0	3711976.0	33.53112
515977.0	3711976.0	33.53112	516077.0	3711976.0	33.53112	516177.0	3711976.0	30.48006
515277.0	3711876.0	36.57912	515377.0	3711876.0	30.48006	515477.0	3711876.0	33.53112
515577.0	3711876.0	33.53112	515677.0	3711876.0	33.53112	515777.0	3711876.0	33.53112
515877.0	3711876.0	33.53112	515977.0	3711876.0	33.53112	516077.0	3711876.0	33.53112
516177.0	3711876.0	33.53112	515277.0	3711776.0	36.57912	515377.0	3711776.0	33.53112
515477.0	3711776.0	33.53112	515577.0	3711776.0	33.53112	515677.0	3711776.0	33.53112
515777.0	3711776.0	33.53112	515877.0	3711776.0	33.53112	515977.0	3711776.0	33.53112
516077.0	3711776.0	33.53112	516177.0	3711776.0	33.53112	515277.0	3711676.0	39.62103
515377.0	3711676.0	36.57912	515477.0	3711676.0	36.57912	515577.0	3711676.0	36.57912
515677.0	3711676.0	36.57912	515777.0	3711676.0	33.53112	515877.0	3711676.0	33.53112
515977.0	3711676.0	33.53112	516077.0	3711676.0	33.53112	516177.0	3711676.0	36.57912
515277.0	3711576.0	39.62103	515377.0	3711576.0	39.62103	515477.0	3711576.0	39.62103
515577.0	3711576.0	39.62103	515677.0	3711576.0	36.57912	515777.0	3711576.0	33.53112
515877.0	3711576.0	36.57912	515977.0	3711576.0	36.57912	516077.0	3711576.0	36.57912
516177.0	3711576.0	39.62103	515277.0	3711476.0	39.62103	515377.0	3711476.0	39.62103
515477.0	3711476.0	39.62103	515577.0	3711476.0	36.57912	515677.0	3711476.0	36.57912
515777.0	3711476.0	39.62103	515877.0	3711476.0	39.62103	515977.0	3711476.0	39.62103
516077.0	3711476.0	39.62103	516177.0	3711476.0	39.62103	511277.0	3709378.0	64.01117
512277.0	3709378.0	60.96012	513277.0	3709378.0	73.14910	514277.0	3709378.0	64.01117
515277.0	3709378.0	57.90907	516277.0	3709378.0	45.72009	517277.0	3709378.0	42.66904
518277.0	3709378.0	60.96012	519277.0	3709378.0	30.48006	520277.0	3709378.0	30.48006
521277.0	3709378.0	30.48006	522277.0	3709378.0	27.42900	511277.0	3708378.0	67.05918
512277.0	3708378.0	48.77114	513277.0	3708378.0	76.20015	514277.0	3708378.0	70.10109
515277.0	3708378.0	48.77114	516277.0	3708378.0	36.57912	517277.0	3708378.0	64.01117
518277.0	3708378.0	48.77114	519277.0	3708378.0	30.48006	520277.0	3708378.0	30.48006
521277.0	3708378.0	27.42900	522277.0	3708378.0	27.42900	511277.0	3707378.0	54.86106
512277.0	3707378.0	67.05918	513277.0	3707378.0	64.01117	514277.0	3707378.0	54.86106
515277.0	3707378.0	60.96012	516277.0	3707378.0	48.77114	517277.0	3707378.0	67.05918
518277.0	3707378.0	48.77114	519277.0	3707378.0	33.53112	520277.0	3707378.0	27.42900
521277.0	3707378.0	27.42900	522277.0	3707378.0	27.42900	511277.0	3706378.0	73.14910
512277.0	3706378.0	73.14910	513277.0	3706378.0	64.01117	514277.0	3706378.0	64.01117
515277.0	3706378.0	67.05918	516277.0	3706378.0	48.77114	517277.0	3706378.0	48.77114
518277.0	3706378.0	54.86106	519277.0	3706378.0	36.57912	520277.0	3706378.0	30.48006
521277.0	3706378.0	30.48006	522277.0	3706378.0	27.42900	523277.0	3706378.0	27.42900

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
522402.0	3710378.0	27.42900	522402.0	3711378.0	30.48006	522402.0	3712378.0	30.48006
511277.0	3714176.0	36.57912	512277.0	3714176.0	36.57912	513277.0	3714176.0	33.53112
514277.0	3714176.0	30.48006	515277.0	3714176.0	48.77114	516277.0	3714176.0	48.77114
517277.0	3714176.0	70.10109	518277.0	3714176.0	33.53112	519277.0	3714176.0	27.42900
520277.0	3714176.0	30.48006	521277.0	3714176.0	30.48006	522277.0	3714176.0	30.48006
511277.0	3715176.0	45.72009	512277.0	3715176.0	60.96012	513277.0	3715176.0	39.62103
514277.0	3715176.0	51.81915	515277.0	3715176.0	54.86106	516277.0	3715176.0	39.62103
517277.0	3715176.0	30.48006	518277.0	3715176.0	30.48006	519277.0	3715176.0	27.42900
520277.0	3715176.0	24.38100	521277.0	3715176.0	30.48006	522277.0	3715176.0	30.48006
511277.0	3716176.0	60.96012	512277.0	3716176.0	39.62103	513277.0	3716176.0	51.81915
514277.0	3716176.0	60.96012	515277.0	3716176.0	70.10109	516277.0	3716176.0	24.38100
517277.0	3716176.0	30.48006	518277.0	3716176.0	30.48006	519277.0	3716176.0	30.48006
520277.0	3716176.0	33.53112	521277.0	3716176.0	27.42900	522277.0	3716176.0	27.42900
511277.0	3717176.0	48.77114	512277.0	3717176.0	54.86106	513277.0	3717176.0	60.96012
514277.0	3717176.0	60.96012	515277.0	3717176.0	42.66904	516277.0	3717176.0	30.48006
517277.0	3717176.0	30.48006	518277.0	3717176.0	33.53112	519277.0	3717176.0	36.57912
520277.0	3717176.0	30.48006	521277.0	3717176.0	27.42900	522277.0	3717176.0	27.42900
511277.0	3713176.0	42.66904	512277.0	3713176.0	36.57912	513277.0	3713176.0	36.57912
514277.0	3713176.0	36.57912	511277.0	3712176.0	36.57912	512277.0	3712176.0	39.62103
513277.0	3712176.0	39.62103	514277.0	3712176.0	33.53112	511277.0	3711176.0	48.77114
512277.0	3711176.0	64.01117	513277.0	3711176.0	39.62103	514277.0	3711176.0	45.72009
511277.0	3709378.0	64.01117	512277.0	3709378.0	60.96012	513277.0	3709378.0	73.14910
514277.0	3709378.0	64.01117	515277.0	3709378.0	57.90907	516277.0	3709378.0	45.72009
517277.0	3709378.0	42.66904	518277.0	3709378.0	60.96012	519277.0	3709378.0	30.48006
520277.0	3709378.0	30.48006	521277.0	3709378.0	30.48006	522277.0	3709378.0	27.42900
511277.0	3708378.0	67.05918	512277.0	3708378.0	48.77114	513277.0	3708378.0	76.20015
514277.0	3708378.0	70.10109	515277.0	3708378.0	48.77114	516277.0	3708378.0	36.57912
517277.0	3708378.0	64.01117	518277.0	3708378.0	48.77114	519277.0	3708378.0	30.48006
520277.0	3708378.0	30.48006	521277.0	3708378.0	27.42900	522277.0	3708378.0	27.42900
511277.0	3707378.0	54.86106	512277.0	3707378.0	67.05918	513277.0	3707378.0	64.01117
514277.0	3707378.0	54.86106	515277.0	3707378.0	60.96012	516277.0	3707378.0	48.77114
517277.0	3707378.0	67.05918	518277.0	3707378.0	48.77114	519277.0	3707378.0	33.53112
520277.0	3707378.0	27.42900	521277.0	3707378.0	27.42900	522277.0	3707378.0	27.42900
511277.0	3706378.0	73.14910	512277.0	3706378.0	73.14910	513277.0	3706378.0	64.01117
514277.0	3706378.0	64.01117	515277.0	3706378.0	67.05918	516277.0	3706378.0	48.77114
517277.0	3706378.0	48.77114	518277.0	3706378.0	54.86106	519277.0	3706378.0	36.57912
520277.0	3706378.0	30.48006	521277.0	3706378.0	30.48006	522277.0	3706378.0	27.42900
523277.0	3706378.0	27.42900	522402.0	3710378.0	27.42900	522402.0	3711378.0	30.48006

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
522402.0	3712378.0	30.48006	511277.0	3714176.0	36.57912	512277.0	3714176.0	36.57912
513277.0	3714176.0	33.53112	514277.0	3714176.0	30.48006	515277.0	3714176.0	48.77114
516277.0	3714176.0	48.77114	517277.0	3714176.0	70.10109	518277.0	3714176.0	33.53112
519277.0	3714176.0	27.42900	520277.0	3714176.0	30.48006	521277.0	3714176.0	30.48006
522277.0	3714176.0	30.48006	511277.0	3715176.0	45.72009	512277.0	3715176.0	60.96012
513277.0	3715176.0	39.62103	514277.0	3715176.0	51.81915	515277.0	3715176.0	54.86106
516277.0	3715176.0	39.62103	517277.0	3715176.0	30.48006	518277.0	3715176.0	30.48006
519277.0	3715176.0	27.42900	520277.0	3715176.0	24.38100	521277.0	3715176.0	30.48006
522277.0	3715176.0	30.48006	511277.0	3716176.0	60.96012	512277.0	3716176.0	39.62103
513277.0	3716176.0	51.81915	514277.0	3716176.0	60.96012	515277.0	3716176.0	70.10109
516277.0	3716176.0	24.38100	517277.0	3716176.0	30.48006	518277.0	3716176.0	30.48006
519277.0	3716176.0	30.48006	520277.0	3716176.0	33.53112	521277.0	3716176.0	27.42900
522277.0	3716176.0	27.42900	511277.0	3717176.0	48.77114	512277.0	3717176.0	54.86106
513277.0	3717176.0	60.96012	514277.0	3717176.0	60.96012	515277.0	3717176.0	42.66904
516277.0	3717176.0	30.48006	517277.0	3717176.0	30.48006	518277.0	3717176.0	33.53112
519277.0	3717176.0	36.57912	520277.0	3717176.0	30.48006	521277.0	3717176.0	27.42900
522277.0	3717176.0	27.42900	511277.0	3713176.0	42.66904	512277.0	3713176.0	36.57912
513277.0	3713176.0	36.57912	514277.0	3713176.0	36.57912	511277.0	3712176.0	36.57912
512277.0	3712176.0	39.62103	513277.0	3712176.0	39.62103	514277.0	3712176.0	33.53112
511277.0	3711176.0	48.77114	512277.0	3711176.0	64.01117	513277.0	3711176.0	39.62103
514277.0	3711176.0	45.72009	516500.0	3708100.0	67.66878	518100.0	3709350.0	79.25121
514500.0	3708800.0	80.47041	517300.0	3714400.0	76.20015			

*** I. P. - CANDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT.DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ.DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
1	0 0	0	0.65066E+01	516323.0	3711890.0	34.4	22.86	427.59	16.61	3.42	13.60	93.98	93.98

* CALM HOURS (=1) FOR DAY	2 *	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY	3 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY	6 *	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	
* CALM HOURS (=1) FOR DAY	7 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	
* CALM HOURS (=1) FOR DAY	8 *	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY	9 *	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY	10 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
* CALM HOURS (=1) FOR DAY	11 *	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	
* CALM HOURS (=1) FOR DAY	12 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	13 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	16 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	17 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
* CALM HOURS (=1) FOR DAY	18 *	1	1	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0	1	
* CALM HOURS (=1) FOR DAY	19 *	1	1	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	22 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
* CALM HOURS (=1) FOR DAY	23 *	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	
* CALM HOURS (=1) FOR DAY	24 *	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	26 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
* CALM HOURS (=1) FOR DAY	27 *	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	28 *	0	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	32 *	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	33 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
* CALM HOURS (=1) FOR DAY	34 *	0	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	35 *	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	37 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
* CALM HOURS (=1) FOR DAY	38 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	39 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	
* CALM HOURS (=1) FOR DAY	45 *	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	
* CALM HOURS (=1) FOR DAY	46 *	1	1	0	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	
* CALM HOURS (=1) FOR DAY	47 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	
* CALM HOURS (=1) FOR DAY	48 *	0	0	1	1	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	1	
* CALM HOURS (=1) FOR DAY	49 *	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	50 *	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	51 *	1	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	55 *	0	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	59 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
* CALM HOURS (=1) FOR DAY	61 *	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	
* CALM HOURS (=1) FOR DAY	65 *	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	68 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
* CALM HOURS (=1) FOR DAY	69 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
* CALM HOURS (=1) FOR DAY	71 *	1	1	0	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	
* CALM HOURS (=1) FOR DAY	72 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	73 *	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	75 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
* CALM HOURS (=1) FOR DAY	76 *	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	79 *	1	1	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	82 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
* CALM HOURS (=1) FOR DAY	83 *	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	
* CALM HOURS (=1) FOR DAY	84 *	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
* CALM HOURS (=1) FOR DAY	85 *	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY	91 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
* CALM HOURS (=1) FOR DAY	92 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

* CALM HOURS (=1) FOR DAY 96 *	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 99 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 102 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 106 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 107 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 108 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 111 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 113 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 114 *	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 115 *	0	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
* CALM HOURS (=1) FOR DAY 116 *	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 117 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 119 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 120 *	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1
* CALM HOURS (=1) FOR DAY 121 *	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 122 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 123 *	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 128 *	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 131 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 132 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 135 *	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 140 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 141 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 142 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 144 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 145 *	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 146 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 147 *	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 148 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 149 *	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 151 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 152 *	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 154 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 155 *	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 156 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 157 *	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
* CALM HOURS (=1) FOR DAY 159 *	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 168 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 169 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 170 *	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 173 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 174 *	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 175 *	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 176 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 177 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 178 *	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 179 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 180 *	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 181 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 182 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 183 *	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 189 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 190 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 191 *	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 192 *	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 193 *	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 197 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 198 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
* CALM HOURS (=1) FOR DAY 203 *	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 204 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 205 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 206 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 207 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 208 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 212 *	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 213 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1

* CALM HOURS (=1) FOR DAY 214 *	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 217 *	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 218 *	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 220 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 221 *	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 222 *	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 223 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 224 *	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 226 *	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 228 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 229 *	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 232 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 234 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 235 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 236 *	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 237 *	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 238 *	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 239 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 240 *	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 241 *	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 242 *	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 244 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 245 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 246 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 247 *	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 248 *	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 249 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 250 *	0	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 251 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 252 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 253 *	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 254 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 255 *	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
* CALM HOURS (=1) FOR DAY 256 *	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 257 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 261 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
* CALM HOURS (=1) FOR DAY 262 *	0	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 263 *	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 264 *	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 265 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 266 *	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 267 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 268 *	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 269 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 270 *	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 271 *	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 272 *	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 273 *	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 274 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 279 *	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 282 *	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 283 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 284 *	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 285 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 292 *	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 293 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 294 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 295 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 299 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 300 *	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 301 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0	0	1	1	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 302 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
* CALM HOURS (=1) FOR DAY 303 *	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 304 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 305 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 306 *	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0

* CALM HOURS (=1) FOR DAY 307 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 308 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0
* CALM HOURS (=1) FOR DAY 309 *	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 310 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 311 *	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 312 *	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 313 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 314 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 315 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 316 *	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 317 *	1	0	0	1	0	0	1	1	0	0	0	0	0	0	1	1	1	0	1	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 318 *	1	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 319 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 320 *	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 321 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 322 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 324 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 325 *	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 326 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 327 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 328 *	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 336 *	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 337 *	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 338 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 339 *	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 340 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 341 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 342 *	1	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1
* CALM HOURS (=1) FOR DAY 343 *	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 344 *	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 349 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 350 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 352 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	
* CALM HOURS (=1) FOR DAY 353 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 359 *	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 361 *	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 365 *	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516276.8	3711378.0	5.25497	(81, 9)	516411.0	3712159.0	25.08957	(93,12)
516679.3	3711159.0	7.82189	(236,11)	516679.3	3711378.0	10.91772	(32,18)
517079.3	3711378.0	6.87416	(130,14)	517079.3	3711549.0	7.16569	(356,16)
517530.5	3711488.0	6.30895	(157,13)	517530.5	3711317.0	7.91604	(157,15)
518743.9	3711171.0	5.80923	(202,15)	518743.9	3711573.0	5.89248	(158,14)
519914.6	3711573.0	4.85906	(95,15)	519914.6	3711171.0	4.78004	(183, 4)
520304.8	3711171.0	5.01845	(183, 4)	520304.8	3711024.0	4.78676	(335,19)
520707.2	3711024.0	5.53260	(183, 4)	520817.0	3711628.0	5.39254	(145,22)
520402.3	3712176.0	5.24821	(251, 3)	518707.2	3712176.0	6.18771	(158,15)
518707.2	3712030.0	6.71720	(74,15)	518280.4	3712030.0	7.13400	(74,15)
518280.4	3712250.0	6.91495	(200,14)	518060.9	3712335.0	7.33630	(273,12)
518060.9	3712878.0	9.19039	(90,12)	517426.8	3712878.0	6.91892	(202,13)
517426.8	3713079.0	7.52642	(355,15)	516993.9	3713079.0	8.66207	(160,12)
516993.9	3713280.0	8.14910	(160,14)	516603.7	3713280.0	8.70444	(100,13)
516603.7	3712884.0	10.53779	(93,12)	516372.0	3712884.0	9.99295	(164,13)
516372.0	3712798.0	9.78186	(164,13)	516256.2	3712774.0	9.89155	(97,12)
516276.8	3711378.0	5.25497	(81, 9)	516264.6	3712122.0	37.19962	(93,14)
516264.6	3711598.0	7.50163	(81,16)	516008.5	3712006.0	11.04385	(135,11)
516008.5	3712122.0	8.59098	(286,13)	516115.2	3712189.0	13.29042	(213,14)
516179.3	3712061.0	17.35900	(62,21)	516179.3	3712122.0	16.16771	(213,14)
516264.6	3712122.0	37.19962	(93,14)	515277.0	3711278.0	7.51005	(223,13)
515377.0	3711278.0	8.04777	(223,13)	515477.0	3711278.0	7.71739	(223,13)
515577.0	3711278.0	9.35021	(210,13)	515677.0	3711278.0	8.67641	(210,13)
515777.0	3711278.0	8.41173	(218,14)	515877.0	3711278.0	9.53184	(140,11)
515977.0	3711278.0	8.40812	(140,11)	516077.0	3711278.0	12.14461	(105,12)
516177.0	3711278.0	7.87932	(105,12)	516277.0	3711278.0	5.13960	(81, 9)
516377.0	3711278.0	9.00657	(81,13)	516477.0	3711278.0	11.60824	(238,17)
516577.0	3711278.0	6.02536	(236,11)	516677.0	3711278.0	8.06032	(190,12)
516777.0	3711278.0	9.05450	(32,18)	516877.0	3711278.0	7.56995	(220,13)
516977.0	3711278.0	7.23448	(213,11)	517077.0	3711278.0	8.32848	(130,14)
517177.0	3711278.0	8.02352	(130,14)	515277.0	3711178.0	7.61060	(223,13)
515377.0	3711178.0	8.24819	(210,13)	515477.0	3711178.0	9.77665	(210,13)
515577.0	3711178.0	8.93655	(210,13)	515677.0	3711178.0	7.93402	(233,11)
515777.0	3711178.0	8.11848	(140,11)	515877.0	3711178.0	9.72401	(120,10)
515977.0	3711178.0	8.59706	(208,13)	516077.0	3711178.0	11.06946	(105,12)
516177.0	3711178.0	6.51493	(234,12)	516277.0	3711178.0	6.24615	(131,11)
516377.0	3711178.0	6.55031	(114,11)	516477.0	3711178.0	7.25561	(250,13)
516577.0	3711178.0	6.92176	(236,11)	516677.0	3711178.0	7.78049	(236,11)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516777.0	3711178.0	7.80159	(190,12)	516877.0	3711178.0	7.98323	(88, 5)
516977.0	3711178.0	8.69132	(220,13)	517077.0	3711178.0	6.69228	(209,13)
517177.0	3711178.0	8.34774	(130,14)	515277.0	3711078.0	9.01169	(210,13)
515377.0	3711078.0	10.20046	(210,13)	515477.0	3711078.0	8.35201	(210,13)
515577.0	3711078.0	7.94578	(233,11)	515677.0	3711078.0	8.07506	(233,11)
515777.0	3711078.0	11.87102	(120,10)	515877.0	3711078.0	7.24366	(140,11)
515977.0	3711078.0	9.20529	(105,12)	516077.0	3711078.0	8.77720	(105,12)
516177.0	3711078.0	8.00559	(234,12)	516277.0	3711078.0	7.18214	(131,11)
516377.0	3711078.0	7.42046	(114,11)	516477.0	3711078.0	7.71813	(250,13)
516577.0	3711078.0	7.19498	(250,13)	516677.0	3711078.0	7.41044	(236,11)
516777.0	3711078.0	7.23663	(191,12)	516877.0	3711078.0	7.92070	(95,11)
516977.0	3711078.0	9.92865	(88, 5)	517077.0	3711078.0	8.98719	(220,13)
517177.0	3711078.0	6.91894	(209,13)	515277.0	3710978.0	10.16195	(210,13)
515377.0	3710978.0	8.84224	(210,13)	515477.0	3710978.0	7.21007	(233,11)
515577.0	3710978.0	7.78177	(233,11)	515677.0	3710978.0	11.27594	(120,10)
515777.0	3710978.0	9.99943	(120,10)	515877.0	3710978.0	6.86481	(105,12)
515977.0	3710978.0	11.23208	(105,12)	516077.0	3710978.0	8.27263	(234,12)
516177.0	3710978.0	8.59698	(234,12)	516277.0	3710978.0	7.91875	(220,11)
516377.0	3710978.0	7.41831	(240,12)	516477.0	3710978.0	7.11493	(250,13)
516577.0	3710978.0	6.90846	(127,14)	516677.0	3710978.0	6.82594	(127,12)
516777.0	3710978.0	7.74308	(191,12)	516877.0	3710978.0	7.38338	(191,12)
516977.0	3710978.0	8.83049	(95,11)	517077.0	3710978.0	9.86395	(88, 5)
517177.0	3710978.0	8.91495	(220,13)	515277.0	3710878.0	8.60346	(210,13)
515377.0	3710878.0	6.88245	(233,11)	515477.0	3710878.0	7.25864	(233,11)
515577.0	3710878.0	8.97681	(140,11)	515677.0	3710878.0	12.37322	(120,10)
515777.0	3710878.0	7.50800	(140,10)	515877.0	3710878.0	9.62458	(105,12)
515977.0	3710878.0	11.64685	(105,12)	516077.0	3710878.0	9.20565	(140,12)
516177.0	3710878.0	8.60451	(234,12)	516277.0	3710878.0	8.10616	(220,11)
516377.0	3710878.0	7.58012	(240,12)	516477.0	3710878.0	7.66377	(240,12)
516577.0	3710878.0	8.14648	(238,17)	516677.0	3710878.0	7.52007	(238,17)
516777.0	3710878.0	7.86211	(191,12)	516877.0	3710878.0	8.00430	(191,12)
516977.0	3710878.0	8.80468	(95,11)	517077.0	3710878.0	8.87661	(32,18)
517177.0	3710878.0	9.43089	(88, 5)	515277.0	3710778.0	7.09213	(183,14)
515377.0	3710778.0	6.76893	(233,11)	515477.0	3710778.0	8.34140	(140,11)
515577.0	3710778.0	10.47872	(120,10)	515677.0	3710778.0	8.56469	(140,11)
515777.0	3710778.0	8.05949	(127,13)	515877.0	3710778.0	11.31522	(105,12)
515977.0	3710778.0	10.87278	(105,12)	516077.0	3710778.0	10.61915	(140,12)
516177.0	3710778.0	8.03883	(234,12)	516277.0	3710778.0	8.26011	(220,11)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516377.0	3710778.0	7.70847	(240,12)	516477.0	3710778.0	8.25810	(240,12)
516577.0	3710778.0	7.76255	(238,17)	516677.0	3710778.0	12.31848	(238,17)
516777.0	3710778.0	8.30558	(291,10)	516877.0	3710778.0	8.23782	(191,12)
516977.0	3710778.0	7.89530	(95,11)	517077.0	3710778.0	9.86149	(95,11)
517177.0	3710778.0	9.21056	(32,18)	515277.0	3710678.0	6.87043	(183,14)
515377.0	3710678.0	7.71922	(140,14)	515477.0	3710678.0	11.03645	(120,10)
515577.0	3710678.0	9.46879	(120,10)	515677.0	3710678.0	7.06194	(127,13)
515777.0	3710678.0	8.24421	(105,12)	515877.0	3710678.0	11.34227	(105,12)
515977.0	3710678.0	9.48182	(105,12)	516077.0	3710678.0	10.82441	(140,12)
516177.0	3710678.0	8.99486	(260,12)	516277.0	3710678.0	7.94748	(220,11)
516377.0	3710678.0	7.58255	(240,12)	516477.0	3710678.0	8.27190	(81,13)
516577.0	3710678.0	7.95445	(174,14)	516677.0	3710678.0	13.23562	(238,17)
516777.0	3710678.0	8.70944	(134,16)	516877.0	3710678.0	7.90341	(291,10)
516977.0	3710678.0	7.81242	(78,17)	517077.0	3710678.0	8.09823	(220,14)
517177.0	3710678.0	8.45565	(220,14)	515277.0	3710578.0	7.76485	(140,14)
515377.0	3710578.0	9.84607	(120,10)	515477.0	3710578.0	12.58891	(120,10)
515577.0	3710578.0	8.44831	(140,10)	515677.0	3710578.0	7.65649	(127,13)
515777.0	3710578.0	9.91310	(105,12)	515877.0	3710578.0	10.93270	(105,12)
515977.0	3710578.0	10.44085	(239, 4)	516077.0	3710578.0	10.13743	(140,12)
516177.0	3710578.0	9.63250	(260,12)	516277.0	3710578.0	8.16650	(191,16)
516377.0	3710578.0	8.45197	(191,16)	516477.0	3710578.0	10.56652	(81,13)
516577.0	3710578.0	9.16906	(259,20)	516677.0	3710578.0	12.69763	(238,17)
516777.0	3710578.0	8.18887	(134,16)	516877.0	3710578.0	7.86586	(219,14)
516977.0	3710578.0	6.81057	(191,12)	517077.0	3710578.0	6.55354	(191,12)
517177.0	3710578.0	7.86712	(220,14)	515277.0	3710478.0	8.47292	(120,10)
515377.0	3710478.0	12.59288	(120,10)	515477.0	3710478.0	9.95189	(120,10)
515577.0	3710478.0	8.60872	(104,19)	515677.0	3710478.0	7.48544	(127,13)
515777.0	3710478.0	10.14036	(105,12)	515877.0	3710478.0	9.87949	(105,12)
515977.0	3710478.0	12.30198	(239, 4)	516077.0	3710478.0	10.14577	(140,12)
516177.0	3710478.0	9.97840	(260,12)	516277.0	3710478.0	8.78870	(191,16)
516377.0	3710478.0	8.62518	(191,16)	516477.0	3710478.0	10.35810	(81,13)
516577.0	3710478.0	9.49860	(259,20)	516677.0	3710478.0	11.27716	(238,17)
516777.0	3710478.0	10.34238	(238,17)	516877.0	3710478.0	7.67973	(219,14)
516977.0	3710478.0	7.58804	(219,14)	517077.0	3710478.0	6.64046	(324,11)
517177.0	3710478.0	6.51407	(220,14)	515277.0	3710378.0	10.23743	(120,10)
515377.0	3710378.0	9.92623	(120,10)	515477.0	3710378.0	7.96335	(140,10)
515577.0	3710378.0	8.33806	(127,13)	515677.0	3710378.0	8.86439	(351,15)
515777.0	3710378.0	9.96076	(105,12)	515877.0	3710378.0	8.56452	(81,14)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* 50 MAXIMUM 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	HOUR	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	HOUR	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	37.19962	14	93	516264.6	3712122.0	26	15.73098	8	121	516177.0	3711876.0
2	37.19962	14	93	516264.6	3712122.0	27	15.67114	23	133	516264.6	3712122.0
3	34.37752	18	93	516264.6	3712122.0	28	15.67114	23	133	516264.6	3712122.0
4	34.37752	18	93	516264.6	3712122.0	29	15.28223	12	97	516277.0	3712276.0
5	34.20538	10	120	516177.0	3711676.0	30	15.20035	13	97	516177.0	3712376.0
6	30.56290	10	356	516264.6	3712122.0	31	15.17673	12	137	516264.6	3712122.0
7	30.56290	10	356	516264.6	3712122.0	32	15.17673	12	137	516264.6	3712122.0
8	25.19146	8	129	516177.0	3712176.0	33	15.13126	18	93	516177.0	3712476.0
9	25.08957	12	93	516411.0	3712159.0	34	15.03730	18	93	516177.0	3712376.0
10	20.93085	13	97	516264.6	3712122.0	35	14.98895	12	93	516477.0	3712476.0
11	20.93085	13	97	516264.6	3712122.0	36	14.78255	12	97	516277.0	3712376.0
12	18.49965	8	129	516177.0	3712276.0	37	14.71363	12	93	516477.0	3712376.0
13	17.87246	8	129	516077.0	3712476.0	38	14.40787	13	97	516177.0	3712476.0
14	17.81149	12	105	516177.0	3711476.0	39	14.27376	12	137	516177.0	3712376.0
15	17.79573	8	129	516077.0	3712376.0	40	14.18494	15	93	516377.0	3712276.0
16	17.35900	21	62	516179.3	3712061.0	41	13.97189	15	93	516377.0	3712376.0
17	17.34572	12	92	516179.3	3712061.0	42	13.94862	14	93	516177.0	3712376.0
18	17.08415	11	140	516177.0	3711676.0	43	13.86312	12	92	516077.0	3712176.0
19	16.91264	10	135	516177.0	3711876.0	44	13.83977	10	120	516077.0	3711576.0
20	16.45482	12	105	516177.0	3711576.0	45	13.79642	23	286	516179.3	3712061.0
21	16.22727	14	93	516177.0	3712476.0	46	13.61640	10	356	516177.0	3712476.0
22	16.16771	14	213	516179.3	3712122.0	47	13.57229	22	87	516264.6	3712122.0
23	15.99334	10	120	516077.0	3711476.0	48	13.57229	22	87	516264.6	3712122.0
24	15.87625	21	62	516177.0	3712076.0	49	13.55134	12	97	516277.0	3712476.0
25	15.78018	12	92	516177.0	3712076.0	50	13.52413	10	356	516177.0	3712376.0

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516276.8	3711378.0	1.49036	(81, 2)	516411.0	3712159.0	3.21870	(93, 2)
516679.3	3711159.0	2.03320	(146, 2)	516679.3	3711378.0	2.92924	(41, 3)
517079.3	3711378.0	2.34260	(130, 2)	517079.3	3711549.0	1.53788	(53, 2)
517530.5	3711488.0	1.47362	(223, 2)	517530.5	3711317.0	1.92538	(356, 3)
518743.9	3711171.0	1.53690	(54, 2)	518743.9	3711573.0	1.43918	(158, 2)
519914.6	3711573.0	1.19368	(158, 2)	519914.6	3711171.0	1.66187	(54, 2)
520304.8	3711171.0	1.60894	(54, 2)	520304.8	3711024.0	1.60086	(54, 2)
520707.2	3711024.0	1.55154	(54, 2)	520817.0	3711628.0	1.14761	(335, 1)
520402.3	3712176.0	1.20048	(94, 2)	518707.2	3712176.0	2.12869	(227, 2)
518707.2	3712030.0	2.19150	(227, 2)	518280.4	3712030.0	2.53786	(227, 2)
518280.4	3712250.0	1.96186	(227, 2)	518060.9	3712335.0	2.23587	(200, 2)
518060.9	3712878.0	3.20538	(196, 2)	517426.8	3712878.0	2.83380	(195, 2)
517426.8	3713079.0	3.22769	(195, 2)	516993.9	3713079.0	2.89126	(160, 2)
516993.9	3713280.0	3.48620	(160, 2)	516603.7	3713280.0	3.59155	(100, 2)
516603.7	3712884.0	2.47706	(100, 2)	516372.0	3712884.0	3.72139	(93, 2)
516372.0	3712798.0	3.63617	(93, 2)	516256.2	3712774.0	3.04242	(97, 2)
516276.8	3711378.0	1.49036	(81, 2)	516264.6	3712122.0	6.85292	(87, 3)
516264.6	3711598.0	2.20421	(81, 2)	516008.5	3712006.0	2.10211	(135, 2)
516008.5	3712122.0	1.41342	(62, 3)	516115.2	3712189.0	3.78371	(286, 3)
516179.3	3712061.0	7.63305	(286, 3)	516179.3	3712122.0	3.42185	(87, 2)
516264.6	3712122.0	6.85292	(87, 3)	515277.0	3711278.0	2.22171	(177, 2)
515377.0	3711278.0	2.24261	(223, 2)	515477.0	3711278.0	2.21819	(223, 2)
515577.0	3711278.0	1.92770	(223, 2)	515677.0	3711278.0	1.40992	(233, 2)
515777.0	3711278.0	1.29422	(233, 2)	515877.0	3711278.0	1.85926	(140, 2)
515977.0	3711278.0	1.45612	(140, 2)	516077.0	3711278.0	1.55700	(105, 2)
516177.0	3711278.0	1.22633	(81, 2)	516277.0	3711278.0	1.45902	(81, 2)
516377.0	3711278.0	1.67190	(81, 2)	516477.0	3711278.0	1.93471C	(238, 3)
516577.0	3711278.0	1.19317	(146, 2)	516677.0	3711278.0	1.33189	(146, 2)
516777.0	3711278.0	1.78404	(41, 3)	516877.0	3711278.0	1.52696	(42, 1)
516977.0	3711278.0	1.77689	(130, 2)	517077.0	3711278.0	2.49193	(130, 2)
517177.0	3711278.0	2.65171	(130, 2)	515277.0	3711178.0	2.31505	(223, 2)
515377.0	3711178.0	2.34873	(223, 2)	515477.0	3711178.0	2.01511	(223, 2)
515577.0	3711178.0	1.84663	(342, 2)	515677.0	3711178.0	1.65696	(191, 2)
515777.0	3711178.0	2.15454	(140, 2)	515877.0	3711178.0	2.16178	(140, 2)
515977.0	3711178.0	1.07463	(208, 2)	516077.0	3711178.0	1.75619	(234, 2)
516177.0	3711178.0	1.62677	(234, 2)	516277.0	3711178.0	1.02409	(232, 2)
516377.0	3711178.0	0.98729	(250, 2)	516477.0	3711178.0	1.07122	(250, 2)
516577.0	3711178.0	1.57229	(146, 2)	516677.0	3711178.0	1.89349	(146, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516777.0	3711178.0	2.07538	(146, 2)	516877.0	3711178.0	2.01109	(146, 2)
516977.0	3711178.0	1.83079	(146, 2)	517077.0	3711178.0	2.23671	(130, 2)
517177.0	3711178.0	2.62125	(130, 2)	515277.0	3711078.0	2.33371	(223, 2)
515377.0	3711078.0	2.34206	(342, 2)	515477.0	3711078.0	2.10009	(342, 2)
515577.0	3711078.0	1.99053	(342, 2)	515677.0	3711078.0	2.40854	(140, 2)
515777.0	3711078.0	2.76050	(140, 2)	515877.0	3711078.0	1.93003	(140, 2)
515977.0	3711078.0	1.74461	(234, 2)	516077.0	3711078.0	2.37484	(234, 2)
516177.0	3711078.0	2.10009	(234, 2)	516277.0	3711078.0	1.57612	(232, 2)
516377.0	3711078.0	1.44721	(232, 2)	516477.0	3711078.0	1.26649	(250, 2)
516577.0	3711078.0	1.99005	(146, 2)	516677.0	3711078.0	2.29154	(146, 2)
516777.0	3711078.0	2.47248	(146, 2)	516877.0	3711078.0	2.40908	(146, 2)
516977.0	3711078.0	2.27674	(146, 2)	517077.0	3711078.0	1.94293	(146, 2)
517177.0	3711078.0	2.35182	(130, 2)	515277.0	3710978.0	2.86589	(342, 2)
515377.0	3710978.0	2.81394	(342, 2)	515477.0	3710978.0	2.06270	(342, 2)
515577.0	3710978.0	2.21661	(140, 2)	515677.0	3710978.0	2.91923	(140, 2)
515777.0	3710978.0	2.73585	(140, 2)	515877.0	3710978.0	1.57806	(131, 2)
515977.0	3710978.0	2.39597	(234, 2)	516077.0	3710978.0	2.99746	(234, 2)
516177.0	3710978.0	2.32083	(234, 2)	516277.0	3710978.0	2.28459	(232, 2)
516377.0	3710978.0	1.99409	(232, 2)	516477.0	3710978.0	1.43290	(232, 2)
516577.0	3710978.0	1.94539	(146, 2)	516677.0	3710978.0	2.66980	(146, 2)
516777.0	3710978.0	2.81520	(146, 2)	516877.0	3710978.0	2.79930	(146, 2)
516977.0	3710978.0	2.58540	(146, 2)	517077.0	3710978.0	2.27744	(146, 2)
517177.0	3710978.0	2.00608	(42, 1)	515277.0	3710878.0	3.27891	(342, 2)
515377.0	3710878.0	2.54566	(342, 2)	515477.0	3710878.0	2.08459	(191, 2)
515577.0	3710878.0	2.73210	(140, 2)	515677.0	3710878.0	3.08277	(140, 2)
515777.0	3710878.0	2.27831	(140, 2)	515877.0	3710878.0	1.90578	(234, 2)
515977.0	3710878.0	2.94381	(234, 2)	516077.0	3710878.0	3.41466	(234, 2)
516177.0	3710878.0	2.47323	(232, 2)	516277.0	3710878.0	2.55442	(232, 2)
516377.0	3710878.0	2.29146	(232, 2)	516477.0	3710878.0	1.80694	(232, 2)
516577.0	3710878.0	2.04465	(146, 2)	516677.0	3710878.0	2.86212	(146, 2)
516777.0	3710878.0	3.22002	(146, 2)	516877.0	3710878.0	3.04907	(146, 2)
516977.0	3710878.0	2.88161	(146, 2)	517077.0	3710878.0	2.50735	(146, 2)
517177.0	3710878.0	2.20405	(220, 2)	515277.0	3710778.0	3.12336	(342, 2)
515377.0	3710778.0	2.08019	(342, 2)	515477.0	3710778.0	2.74831	(140, 2)
515577.0	3710778.0	2.87503	(140, 2)	515677.0	3710778.0	2.63606	(140, 2)
515777.0	3710778.0	1.91194	(131, 2)	515877.0	3710778.0	2.42868	(234, 2)
515977.0	3710778.0	3.33974	(234, 2)	516077.0	3710778.0	3.49569	(234, 2)
516177.0	3710778.0	2.67115	(232, 2)	516277.0	3710778.0	2.89212	(232, 2)

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* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516377.0	3710778.0	2.64709	(232, 2)	516477.0	3710778.0	2.24261	(232, 2)
516577.0	3710778.0	2.30906	(259, 3)	516677.0	3710778.0	2.89440	(146, 2)
516777.0	3710778.0	3.33679	(146, 2)	516877.0	3710778.0	3.34529	(146, 2)
516977.0	3710778.0	3.21778	(146, 2)	517077.0	3710778.0	3.09794	(41, 3)
517177.0	3710778.0	2.34840	(146, 2)	515277.0	3710678.0	2.45561	(342, 2)
515377.0	3710678.0	2.45343	(140, 2)	515477.0	3710678.0	2.96916	(140, 2)
515577.0	3710678.0	2.77586	(140, 2)	515677.0	3710678.0	1.94243	(140, 2)
515777.0	3710678.0	1.99986	(131, 2)	515877.0	3710678.0	2.78154	(234, 2)
515977.0	3710678.0	3.57278	(234, 2)	516077.0	3710678.0	3.32727	(234, 2)
516177.0	3710678.0	2.92376	(232, 2)	516277.0	3710678.0	3.00975	(232, 2)
516377.0	3710678.0	2.92637	(232, 2)	516477.0	3710678.0	2.42920	(232, 2)
516577.0	3710678.0	3.03938	(259, 3)	516677.0	3710678.0	2.65736	(146, 2)
516777.0	3710678.0	3.15056	(146, 2)	516877.0	3710678.0	3.24372	(146, 2)
516977.0	3710678.0	3.11920	(146, 2)	517077.0	3710678.0	2.85807	(146, 2)
517177.0	3710678.0	2.46631	(146, 2)	515277.0	3710578.0	2.34922	(140, 2)
515377.0	3710578.0	2.81720	(140, 2)	515477.0	3710578.0	3.09285	(140, 2)
515577.0	3710578.0	2.50518	(140, 2)	515677.0	3710578.0	1.88961	(45, 2)
515777.0	3710578.0	2.47189	(259, 2)	515877.0	3710578.0	3.11197	(234, 2)
515977.0	3710578.0	3.54806	(234, 2)	516077.0	3710578.0	3.01167	(234, 2)
516177.0	3710578.0	3.09667	(232, 2)	516277.0	3710578.0	3.19042	(232, 2)
516377.0	3710578.0	3.24782	(232, 2)	516477.0	3710578.0	2.74740	(232, 2)
516577.0	3710578.0	3.67797	(259, 3)	516677.0	3710578.0	2.74604	(259, 3)
516777.0	3710578.0	2.78443	(146, 2)	516877.0	3710578.0	3.01675	(146, 2)
516977.0	3710578.0	2.90687	(146, 2)	517077.0	3710578.0	2.78857	(146, 2)
517177.0	3710578.0	2.52100	(146, 2)	515277.0	3710478.0	2.61762	(140, 2)
515377.0	3710478.0	3.01423	(140, 2)	515477.0	3710478.0	2.79994	(140, 2)
515577.0	3710478.0	2.21263	(16, 3)	515677.0	3710478.0	2.05096	(45, 2)
515777.0	3710478.0	2.58721	(259, 2)	515877.0	3710478.0	3.30750	(234, 2)
515977.0	3710478.0	3.50638	(234, 2)	516077.0	3710478.0	3.01109	(140, 2)
516177.0	3710478.0	3.19936	(232, 2)	516277.0	3710478.0	3.30082	(232, 2)
516377.0	3710478.0	3.25928	(232, 2)	516477.0	3710478.0	2.81641	(232, 2)
516577.0	3710478.0	3.66253	(259, 3)	516677.0	3710478.0	3.36780	(259, 3)
516777.0	3710478.0	2.62557	(146, 2)	516877.0	3710478.0	2.83815	(146, 2)
516977.0	3710478.0	2.90065	(146, 2)	517077.0	3710478.0	2.72337	(146, 2)
517177.0	3710478.0	2.51652	(146, 2)	515277.0	3710378.0	2.68899	(140, 2)
515377.0	3710378.0	2.67710	(140, 2)	515477.0	3710378.0	2.20950	(140, 2)
515577.0	3710378.0	2.42281	(16, 3)	515677.0	3710378.0	2.87543	(259, 2)
515777.0	3710378.0	2.71278	(234, 2)	515877.0	3710378.0	3.32689	(234, 2)

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* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515977.0	3710378.0	3.31590	(234, 2)	516077.0	3710378.0	2.80611	(140, 2)
516177.0	3710378.0	3.05015	(232, 2)	516277.0	3710378.0	3.15057	(232, 2)
516377.0	3710378.0	3.13369	(232, 2)	516477.0	3710378.0	2.68371	(232, 2)
516577.0	3710378.0	3.13149	(259, 3)	516677.0	3710378.0	3.29549	(259, 3)
516777.0	3710378.0	2.54267	(75, 2)	516877.0	3710378.0	2.75216	(146, 2)
516977.0	3710378.0	2.74678	(146, 2)	517077.0	3710378.0	2.62176	(146, 2)
517177.0	3710378.0	2.46582	(146, 2)	515277.0	3712276.0	1.64100	(141, 2)
515377.0	3712276.0	1.53783	(141, 2)	515477.0	3712276.0	1.41643	(141, 2)
515577.0	3712276.0	1.50006	(224, 2)	515677.0	3712276.0	1.42575	(224, 2)
515777.0	3712276.0	1.00243	(222, 2)	515877.0	3712276.0	0.80163	(62, 3)
515977.0	3712276.0	1.88269	(286, 3)	516077.0	3712276.0	1.47816	(286, 3)
516177.0	3712276.0	2.88668	(97, 2)	516277.0	3712276.0	6.43463	(97, 2)
516377.0	3712276.0	5.27618	(93, 2)	516477.0	3712276.0	1.98404	(160, 2)
516577.0	3712276.0	1.67107	(160, 2)	516677.0	3712276.0	2.34260	(74, 2)
516777.0	3712276.0	1.34359	(179, 2)	516877.0	3712276.0	2.11696	(179, 2)
516977.0	3712276.0	2.29239	(179, 2)	517077.0	3712276.0	2.12606	(196, 2)
517177.0	3712276.0	2.62164	(196, 2)	515277.0	3712376.0	1.84163	(141, 2)
515377.0	3712376.0	1.75772	(141, 2)	515477.0	3712376.0	1.59324	(141, 2)
515577.0	3712376.0	1.36559	(224, 2)	515677.0	3712376.0	1.17663	(224, 2)
515777.0	3712376.0	1.01915C	(114, 2)	515877.0	3712376.0	1.78158	(286, 3)
515977.0	3712376.0	2.85383	(286, 3)	516077.0	3712376.0	2.61073	(87, 2)
516177.0	3712376.0	3.44449	(97, 2)	516277.0	3712376.0	5.55891	(97, 2)
516377.0	3712376.0	5.08036	(93, 2)	516477.0	3712376.0	1.86742	(93, 2)
516577.0	3712376.0	2.18425	(160, 2)	516677.0	3712376.0	1.80990	(205, 2)
516777.0	3712376.0	1.97868	(179, 2)	516877.0	3712376.0	2.49031	(179, 2)
516977.0	3712376.0	2.59367	(179, 2)	517077.0	3712376.0	2.39821	(179, 2)
517177.0	3712376.0	2.68508	(196, 2)	515277.0	3712476.0	2.08567	(141, 2)
515377.0	3712476.0	1.92722	(141, 2)	515477.0	3712476.0	1.64367	(272, 2)
515577.0	3712476.0	1.56270	(272, 2)	515677.0	3712476.0	1.41088	(175, 2)
515777.0	3712476.0	1.28513	(92, 2)	515877.0	3712476.0	1.65976	(286, 3)
515977.0	3712476.0	1.33303	(87, 2)	516077.0	3712476.0	2.23836	(129, 1)
516177.0	3712476.0	3.23255	(97, 2)	516277.0	3712476.0	4.76894	(97, 2)
516377.0	3712476.0	4.65441	(93, 2)	516477.0	3712476.0	2.01893	(93, 2)
516577.0	3712476.0	2.12014	(205, 2)	516677.0	3712476.0	2.79483	(205, 2)
516777.0	3712476.0	2.57522	(205, 2)	516877.0	3712476.0	2.54834	(179, 2)
516977.0	3712476.0	2.57146	(179, 2)	517077.0	3712476.0	2.40759	(179, 2)
517177.0	3712476.0	2.11240	(179, 2)	515277.0	3712576.0	2.02292	(141, 2)
515377.0	3712576.0	2.09043	(272, 2)	515477.0	3712576.0	1.87063	(272, 2)

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* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
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* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515577.0	3712576.0	1.60738	(175, 2)	515677.0	3712576.0	1.74106	(175, 2)
515777.0	3712576.0	1.58603	(175, 2)	515877.0	3712576.0	1.38759	(285, 2)
515977.0	3712576.0	1.30029	(132, 2)	516077.0	3712576.0	2.93272	(137, 2)
516177.0	3712576.0	2.78295	(97, 2)	516277.0	3712576.0	4.11632	(97, 2)
516377.0	3712576.0	4.19552	(93, 2)	516477.0	3712576.0	2.30702	(206, 2)
516577.0	3712576.0	2.27406	(205, 2)	516677.0	3712576.0	2.91351	(205, 2)
516777.0	3712576.0	2.80098	(205, 2)	516877.0	3712576.0	2.72016	(215, 2)
516977.0	3712576.0	2.57512	(195, 2)	517077.0	3712576.0	2.34815	(195, 2)
517177.0	3712576.0	2.15616	(195, 2)	515277.0	3712676.0	2.19613	(272, 2)
515377.0	3712676.0	2.05573	(272, 2)	515477.0	3712676.0	1.87324	(175, 2)
515577.0	3712676.0	2.01851	(175, 2)	515677.0	3712676.0	1.95619	(175, 2)
515777.0	3712676.0	1.97198	(285, 2)	515877.0	3712676.0	1.66679	(285, 2)
515977.0	3712676.0	2.46605	(137, 2)	516077.0	3712676.0	3.11815	(137, 2)
516177.0	3712676.0	2.87318	(97, 2)	516277.0	3712676.0	3.17375	(97, 2)
516377.0	3712676.0	3.18555	(93, 2)	516477.0	3712676.0	2.61142	(206, 2)
516577.0	3712676.0	1.98833	(206, 2)	516677.0	3712676.0	2.53557	(205, 2)
516777.0	3712676.0	2.76957	(215, 2)	516877.0	3712676.0	2.85010	(215, 2)
516977.0	3712676.0	2.78677	(195, 2)	517077.0	3712676.0	2.85526	(195, 2)
517177.0	3712676.0	2.69284	(195, 2)	515277.0	3712776.0	2.05217	(272, 2)
515377.0	3712776.0	1.82173	(175, 2)	515477.0	3712776.0	1.99650	(175, 2)
515577.0	3712776.0	2.20208	(175, 2)	515677.0	3712776.0	2.32629	(285, 2)
515777.0	3712776.0	1.95362	(285, 2)	515877.0	3712776.0	1.78452	(137, 2)
515977.0	3712776.0	3.49676	(137, 2)	516077.0	3712776.0	3.27155	(137, 2)
516177.0	3712776.0	2.52393	(97, 2)	516277.0	3712776.0	2.70514	(206, 2)
516377.0	3712776.0	2.93227	(93, 2)	516477.0	3712776.0	2.51824	(206, 2)
516577.0	3712776.0	1.98377	(206, 2)	516677.0	3712776.0	2.40833	(160, 2)
516777.0	3712776.0	2.59634	(160, 2)	516877.0	3712776.0	2.88973	(215, 2)
516977.0	3712776.0	2.93214	(215, 2)	517077.0	3712776.0	3.10239	(195, 2)
517177.0	3712776.0	3.11665	(195, 2)	515277.0	3712876.0	1.85789	(175, 2)
515377.0	3712876.0	2.07943	(175, 2)	515477.0	3712876.0	2.15050	(175, 2)
515577.0	3712876.0	2.29930	(285, 2)	515677.0	3712876.0	2.57901	(285, 2)
515777.0	3712876.0	2.01165	(285, 2)	515877.0	3712876.0	2.65481	(137, 2)
515977.0	3712876.0	3.83294	(137, 2)	516077.0	3712876.0	3.13082	(137, 2)
516177.0	3712876.0	2.48035	(97, 2)	516277.0	3712876.0	2.49441	(206, 2)
516377.0	3712876.0	2.64055	(93, 2)	516477.0	3712876.0	2.32142	(206, 2)
516577.0	3712876.0	2.22800	(100, 2)	516677.0	3712876.0	2.36182	(160, 2)
516777.0	3712876.0	3.13652	(160, 2)	516877.0	3712876.0	2.76020	(215, 2)
516977.0	3712876.0	2.85680	(215, 2)	517077.0	3712876.0	2.98130	(195, 2)

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* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
517177.0	3712876.0	3.18866	(195, 2)	515277.0	3712976.0	2.09002	(175, 2)
515377.0	3712976.0	2.20981	(175, 2)	515477.0	3712976.0	2.39882	(285, 2)
515577.0	3712976.0	2.54516	(285, 2)	515677.0	3712976.0	2.39959	(285, 2)
515777.0	3712976.0	1.93964	(285, 2)	515877.0	3712976.0	3.79278	(137, 2)
515977.0	3712976.0	4.37342	(137, 2)	516077.0	3712976.0	3.09117	(142, 2)
516177.0	3712976.0	2.95028	(97, 2)	516277.0	3712976.0	2.56862	(164, 2)
516377.0	3712976.0	2.75562	(93, 2)	516477.0	3712976.0	2.27113	(100, 2)
516577.0	3712976.0	2.62338	(100, 2)	516677.0	3712976.0	2.44997	(169, 2)
516777.0	3712976.0	3.19018	(160, 2)	516877.0	3712976.0	3.14129	(160, 2)
516977.0	3712976.0	2.72258	(215, 2)	517077.0	3712976.0	2.74579	(215, 2)
517177.0	3712976.0	2.94640	(195, 2)	515277.0	3713076.0	2.20172	(175, 2)
515377.0	3713076.0	2.40993	(285, 2)	515477.0	3713076.0	2.62684	(285, 2)
515577.0	3713076.0	2.62792	(285, 2)	515677.0	3713076.0	2.32981	(285, 2)
515777.0	3713076.0	2.58361	(137, 2)	515877.0	3713076.0	3.91487	(137, 2)
515977.0	3713076.0	3.76581	(137, 2)	516077.0	3713076.0	2.93712	(142, 2)
516177.0	3713076.0	2.53015	(97, 2)	516277.0	3713076.0	2.76085	(166, 2)
516377.0	3713076.0	2.73204	(166, 2)	516477.0	3713076.0	2.31541	(100, 2)
516577.0	3713076.0	2.87826	(100, 2)	516677.0	3713076.0	2.59977	(169, 2)
516777.0	3713076.0	3.27183	(160, 2)	516877.0	3713076.0	3.36634	(160, 2)
516977.0	3713076.0	2.84320	(160, 2)	517077.0	3713076.0	2.61977	(215, 2)
517177.0	3713076.0	2.77422	(195, 2)	515277.0	3713176.0	2.36313	(285, 2)
515377.0	3713176.0	2.61153	(285, 2)	515477.0	3713176.0	2.71794	(285, 2)
515577.0	3713176.0	2.57373	(285, 2)	515677.0	3713176.0	2.16938	(285, 2)
515777.0	3713176.0	3.49386	(137, 2)	515877.0	3713176.0	4.44081	(137, 2)
515977.0	3713176.0	3.53773	(137, 2)	516077.0	3713176.0	3.34180	(142, 2)
516177.0	3713176.0	2.63256	(97, 2)	516277.0	3713176.0	2.96680	(166, 2)
516377.0	3713176.0	3.14618	(166, 2)	516477.0	3713176.0	2.55768	(166, 2)
516577.0	3713176.0	3.00868	(100, 2)	516677.0	3713176.0	2.54625	(100, 2)
516777.0	3713176.0	2.86600	(169, 2)	516877.0	3713176.0	3.57319	(160, 2)
516977.0	3713176.0	3.03413	(160, 2)	517077.0	3713176.0	2.43039	(160, 2)
517177.0	3713176.0	2.73478	(195, 2)	515277.0	3712176.0	1.62850	(141, 2)
515377.0	3712176.0	1.32994	(141, 2)	515477.0	3712176.0	1.27675	(141, 2)
515577.0	3712176.0	1.28393	(224, 2)	515677.0	3712176.0	1.29928	(224, 2)
515777.0	3712176.0	0.98988	(224, 2)	515877.0	3712176.0	0.62660C	(312, 3)
515977.0	3712176.0	1.00047	(62, 3)	516077.0	3712176.0	3.68118	(286, 3)
516177.0	3712176.0	3.44735	(87, 2)	515277.0	3712076.0	1.37866	(141, 2)
515377.0	3712076.0	1.18928	(141, 2)	515477.0	3712076.0	1.11961	(135, 2)
515577.0	3712076.0	1.14586	(135, 2)	515677.0	3712076.0	1.47671	(135, 2)

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* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515777.0	3712076.0	1.48728	(135, 2)	515877.0	3712076.0	1.32498	(135, 2)
515977.0	3712076.0	0.85145	(286, 2)	516077.0	3712076.0	1.23940	(62, 3)
516177.0	3712076.0	6.59162	(286, 3)	515277.0	3711976.0	1.39582	(235, 2)
515377.0	3711976.0	1.31440	(235, 2)	515477.0	3711976.0	1.21639	(168, 2)
515577.0	3711976.0	1.18507	(168, 2)	515677.0	3711976.0	1.00716	(168, 2)
515777.0	3711976.0	1.18268	(135, 2)	515877.0	3711976.0	1.66891	(135, 2)
515977.0	3711976.0	2.17810	(135, 2)	516077.0	3711976.0	2.34085	(135, 2)
516177.0	3711976.0	1.65371	(286, 2)	515277.0	3711876.0	1.90004	(235, 2)
515377.0	3711876.0	1.67462	(235, 2)	515477.0	3711876.0	1.69046	(235, 2)
515577.0	3711876.0	1.45830	(235, 2)	515677.0	3711876.0	1.06903	(235, 2)
515777.0	3711876.0	0.53243	(288, 3)	515877.0	3711876.0	0.63257	(288, 3)
515977.0	3711876.0	0.78687	(288, 3)	516077.0	3711876.0	1.05601	(288, 3)
516177.0	3711876.0	2.62183C	(121, 1)	515277.0	3711776.0	2.04406	(178, 2)
515377.0	3711776.0	1.81129	(178, 2)	515477.0	3711776.0	1.67218	(235, 2)
515577.0	3711776.0	1.50653	(235, 2)	515677.0	3711776.0	1.19513	(235, 2)
515777.0	3711776.0	0.72048C	(121, 1)	515877.0	3711776.0	0.78830	(280, 2)
515977.0	3711776.0	1.20772	(280, 2)	516077.0	3711776.0	2.47406	(280, 2)
516177.0	3711776.0	1.93643	(280, 2)	515277.0	3711676.0	2.74478	(178, 2)
515377.0	3711676.0	2.27253	(178, 2)	515477.0	3711676.0	1.86799	(178, 2)
515577.0	3711676.0	1.45362	(177, 2)	515677.0	3711676.0	1.01678	(235, 2)
515777.0	3711676.0	0.80920	(280, 2)	515877.0	3711676.0	1.34026	(280, 2)
515977.0	3711676.0	1.94268	(280, 2)	516077.0	3711676.0	1.64004	(210, 2)
516177.0	3711676.0	4.27567	(120, 2)	515277.0	3711576.0	2.56689	(177, 2)
515377.0	3711576.0	2.47108	(177, 2)	515477.0	3711576.0	2.28418	(177, 2)
515577.0	3711576.0	1.87728	(177, 2)	515677.0	3711576.0	1.11163	(177, 2)
515777.0	3711576.0	1.36100	(280, 2)	515877.0	3711576.0	1.22272	(280, 2)
515977.0	3711576.0	1.66481	(210, 2)	516077.0	3711576.0	1.96341	(296, 2)
516177.0	3711576.0	2.91515	(296, 2)	515277.0	3711476.0	2.80003	(177, 2)
515377.0	3711476.0	2.62834	(177, 2)	515477.0	3711476.0	2.27321	(177, 2)
515577.0	3711476.0	1.59427	(177, 2)	515677.0	3711476.0	1.39550	(249, 2)
515777.0	3711476.0	1.35579	(249, 2)	515877.0	3711476.0	1.53030	(210, 2)
515977.0	3711476.0	1.28659	(296, 2)	516077.0	3711476.0	2.21515	(296, 2)
516177.0	3711476.0	2.32235	(351, 2)	511277.0	3709378.0	2.32149	(346, 1)
512277.0	3709378.0	5.68377	(12, 1)	513277.0	3709378.0	3.56554	(105, 1)
514277.0	3709378.0	4.63977	(363, 1)	515277.0	3709378.0	3.20267	(259, 2)
516277.0	3709378.0	2.31216C	(229, 3)	517277.0	3709378.0	1.94748	(82, 2)
518277.0	3709378.0	5.65670	(1, 1)	519277.0	3709378.0	2.74337	(139, 2)
520277.0	3709378.0	1.84611	(77, 2)	521277.0	3709378.0	1.97922	(14, 3)

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* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3709378.0	1.17331	(53, 2)	511277.0	3708378.0	2.78011	(12, 1)
512277.0	3708378.0	2.50924	(105, 1)	513277.0	3708378.0	5.79672	(363, 1)
514277.0	3708378.0	2.13103	(358, 3)	515277.0	3708378.0	2.02055	(17, 1)
516277.0	3708378.0	1.99291C	(229, 3)	517277.0	3708378.0	3.59316	(259, 3)
518277.0	3708378.0	1.79514	(338, 2)	519277.0	3708378.0	1.76590	(1, 1)
520277.0	3708378.0	2.28462	(337, 3)	521277.0	3708378.0	1.52616	(139, 2)
522277.0	3708378.0	1.21798	(78, 1)	511277.0	3707378.0	2.20261	(105, 1)
512277.0	3707378.0	4.98858	(363, 1)	513277.0	3707378.0	2.24043	(358, 3)
514277.0	3707378.0	2.25758	(16, 3)	515277.0	3707378.0	2.76723C	(16, 1)
516277.0	3707378.0	3.27836C	(229, 3)	517277.0	3707378.0	4.05760	(259, 3)
518277.0	3707378.0	1.79179	(1, 3)	519277.0	3707378.0	1.43759	(33, 1)
520277.0	3707378.0	1.25483C	(32, 2)	521277.0	3707378.0	2.17526	(337, 3)
522277.0	3707378.0	1.72156	(139, 2)	511277.0	3706378.0	3.99097	(363, 1)
512277.0	3706378.0	1.88350C	(46, 3)	513277.0	3706378.0	2.47250	(122, 1)
514277.0	3706378.0	3.58694C	(359, 1)	515277.0	3706378.0	3.10052C	(16, 1)
516277.0	3706378.0	3.18445C	(229, 3)	517277.0	3706378.0	2.55127	(259, 3)
518277.0	3706378.0	2.30531	(351, 3)	519277.0	3706378.0	1.20685	(338, 2)
520277.0	3706378.0	2.21423	(1, 1)	521277.0	3706378.0	1.43961	(291, 3)
522277.0	3706378.0	2.11252	(337, 3)	523277.0	3706378.0	1.60969	(139, 2)
522402.0	3710378.0	1.11350	(54, 2)	522402.0	3711378.0	1.03543C	(250, 3)
522402.0	3712378.0	1.00850C	(317, 1)	511277.0	3714176.0	1.34924	(276, 3)
512277.0	3714176.0	1.85660	(316, 2)	513277.0	3714176.0	2.08631	(316, 2)
514277.0	3714176.0	2.09404	(286, 3)	515277.0	3714176.0	2.75037	(87, 2)
516277.0	3714176.0	4.06035	(165, 2)	517277.0	3714176.0	3.41403	(160, 2)
518277.0	3714176.0	2.65763	(290, 2)	519277.0	3714176.0	1.25123	(264, 2)
520277.0	3714176.0	1.37602	(334, 2)	521277.0	3714176.0	1.34401C	(182, 3)
522277.0	3714176.0	1.79208	(54, 1)	511277.0	3715176.0	1.96021	(316, 2)
512277.0	3715176.0	3.20500C	(306, 3)	513277.0	3715176.0	2.20863	(277, 1)
514277.0	3715176.0	2.93630	(28, 3)	515277.0	3715176.0	3.01837C	(226, 3)
516277.0	3715176.0	3.03455	(165, 2)	517277.0	3715176.0	1.74571	(172, 1)
518277.0	3715176.0	1.57353	(269, 2)	519277.0	3715176.0	2.40258	(290, 2)
520277.0	3715176.0	1.28770	(13, 3)	521277.0	3715176.0	1.38615	(334, 2)
522277.0	3715176.0	1.35070C	(226, 1)	511277.0	3716176.0	3.69245C	(306, 3)
512277.0	3716176.0	2.20469	(277, 1)	513277.0	3716176.0	2.61976	(110, 3)
514277.0	3716176.0	3.71680	(289, 3)	515277.0	3716176.0	4.08546	(277, 3)
516277.0	3716176.0	2.13938	(165, 2)	517277.0	3716176.0	1.63717	(100, 2)
518277.0	3716176.0	1.35357	(138, 2)	519277.0	3716176.0	1.33758	(278, 3)
520277.0	3716176.0	2.30899	(290, 2)	521277.0	3716176.0	1.49120	(13, 3)

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* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
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* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3716176.0	1.30972C	(35, 1)	511277.0	3717176.0	2.48184	(277, 1)
512277.0	3717176.0	3.09985C	(312, 1)	513277.0	3717176.0	3.91431	(28, 3)
514277.0	3717176.0	2.55895	(165, 3)	515277.0	3717176.0	2.65422	(277, 3)
516277.0	3717176.0	2.10245	(165, 2)	517277.0	3717176.0	1.62419	(102, 1)
518277.0	3717176.0	1.36189	(25, 3)	519277.0	3717176.0	2.18656	(194, 3)
520277.0	3717176.0	1.78806C	(3, 1)	521277.0	3717176.0	1.82591	(290, 2)
522277.0	3717176.0	1.47987C	(204, 1)	511277.0	3713176.0	1.84192C	(266, 3)
512277.0	3713176.0	1.16858	(111, 2)	513277.0	3713176.0	1.35637	(135, 2)
514277.0	3713176.0	3.00518	(297, 2)	511277.0	3712176.0	1.33179C	(267, 3)
512277.0	3712176.0	1.93002C	(267, 3)	513277.0	3712176.0	2.24311C	(267, 3)
514277.0	3712176.0	2.03793	(141, 2)	511277.0	3711176.0	1.55335	(297, 1)
512277.0	3711176.0	2.40587	(210, 3)	513277.0	3711176.0	1.93605	(178, 2)
514277.0	3711176.0	2.33919	(177, 2)	511277.0	3709378.0	2.32149	(346, 1)
512277.0	3709378.0	5.68377	(12, 1)	513277.0	3709378.0	3.56554	(105, 1)
514277.0	3709378.0	4.63977	(363, 1)	515277.0	3709378.0	3.20267	(259, 2)
516277.0	3709378.0	2.31216C	(229, 3)	517277.0	3709378.0	1.94748	(82, 2)
518277.0	3709378.0	5.65670	(1, 1)	519277.0	3709378.0	2.74337	(139, 2)
520277.0	3709378.0	1.84611	(77, 2)	521277.0	3709378.0	1.97922	(14, 3)
522277.0	3709378.0	1.17331	(53, 2)	511277.0	3708378.0	2.78011	(12, 1)
512277.0	3708378.0	2.50924	(105, 1)	513277.0	3708378.0	5.79672	(363, 1)
514277.0	3708378.0	2.13103	(358, 3)	515277.0	3708378.0	2.02055	(17, 1)
516277.0	3708378.0	1.99291C	(229, 3)	517277.0	3708378.0	3.59316	(259, 3)
518277.0	3708378.0	1.79514	(338, 2)	519277.0	3708378.0	1.76590	(1, 1)
520277.0	3708378.0	2.28462	(337, 3)	521277.0	3708378.0	1.52616	(139, 2)
522277.0	3708378.0	1.21798	(78, 1)	511277.0	3707378.0	2.20261	(105, 1)
512277.0	3707378.0	4.98858	(363, 1)	513277.0	3707378.0	2.24043	(358, 3)
514277.0	3707378.0	2.25758	(16, 3)	515277.0	3707378.0	2.76723C	(16, 1)
516277.0	3707378.0	3.27836C	(229, 3)	517277.0	3707378.0	4.05760	(259, 3)
518277.0	3707378.0	1.79179	(1, 3)	519277.0	3707378.0	1.43759	(33, 1)
520277.0	3707378.0	1.25483C	(32, 2)	521277.0	3707378.0	2.17526	(337, 3)
522277.0	3707378.0	1.72156	(139, 2)	511277.0	3706378.0	3.99097	(363, 1)
512277.0	3706378.0	1.88350C	(46, 3)	513277.0	3706378.0	2.47250	(122, 1)
514277.0	3706378.0	3.58694C	(359, 1)	515277.0	3706378.0	3.10052C	(16, 1)
516277.0	3706378.0	3.18445C	(229, 3)	517277.0	3706378.0	2.55127	(259, 3)
518277.0	3706378.0	2.30531	(351, 3)	519277.0	3706378.0	1.20685	(338, 2)
520277.0	3706378.0	2.21423	(1, 1)	521277.0	3706378.0	1.43961	(291, 3)
522277.0	3706378.0	2.11252	(337, 3)	523277.0	3706378.0	1.60969	(139, 2)
522402.0	3710378.0	1.11350	(54, 2)	522402.0	3711378.0	1.03543C	(250, 3)

HIGH
8-HR
SGROUP# 1

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522402.0	3712378.0	1.00850C	(317, 1)	511277.0	3714176.0	1.34924	(276, 3)
512277.0	3714176.0	1.85660	(316, 2)	513277.0	3714176.0	2.08631	(316, 2)
514277.0	3714176.0	2.09404	(286, 3)	515277.0	3714176.0	2.75037	(87, 2)
516277.0	3714176.0	4.06035	(165, 2)	517277.0	3714176.0	3.41403	(160, 2)
518277.0	3714176.0	2.65763	(290, 2)	519277.0	3714176.0	1.25123	(264, 2)
520277.0	3714176.0	1.37602	(334, 2)	521277.0	3714176.0	1.34401C	(182, 3)
522277.0	3714176.0	1.79208	(54, 1)	511277.0	3715176.0	1.96021	(316, 2)
512277.0	3715176.0	3.20500C	(306, 3)	513277.0	3715176.0	2.20863	(277, 1)
514277.0	3715176.0	2.93630	(28, 3)	515277.0	3715176.0	3.01837C	(226, 3)
516277.0	3715176.0	3.03455	(165, 2)	517277.0	3715176.0	1.74571	(172, 1)
518277.0	3715176.0	1.57353	(269, 2)	519277.0	3715176.0	2.40258	(290, 2)
520277.0	3715176.0	1.28770	(13, 3)	521277.0	3715176.0	1.38615	(334, 2)
522277.0	3715176.0	1.35070C	(226, 1)	511277.0	3716176.0	3.69245C	(306, 3)
512277.0	3716176.0	2.20469	(277, 1)	513277.0	3716176.0	2.61976	(110, 3)
514277.0	3716176.0	3.71680	(289, 3)	515277.0	3716176.0	4.08546	(277, 3)
516277.0	3716176.0	2.13938	(165, 2)	517277.0	3716176.0	1.63717	(100, 2)
518277.0	3716176.0	1.35357	(138, 2)	519277.0	3716176.0	1.33758	(278, 3)
520277.0	3716176.0	2.30899	(290, 2)	521277.0	3716176.0	1.49120	(13, 3)
522277.0	3716176.0	1.30972C	(35, 1)	511277.0	3717176.0	2.48184	(277, 1)
512277.0	3717176.0	3.09985C	(312, 1)	513277.0	3717176.0	3.91431	(28, 3)
514277.0	3717176.0	2.55895	(165, 3)	515277.0	3717176.0	2.65422	(277, 3)
516277.0	3717176.0	2.10245	(165, 2)	517277.0	3717176.0	1.62419	(102, 1)
518277.0	3717176.0	1.36189	(25, 3)	519277.0	3717176.0	2.18656	(194, 3)
520277.0	3717176.0	1.78806C	(3, 1)	521277.0	3717176.0	1.82591	(290, 2)
522277.0	3717176.0	1.47987C	(204, 1)	511277.0	3713176.0	1.84192C	(266, 3)
512277.0	3713176.0	1.16858	(111, 2)	513277.0	3713176.0	1.35637	(135, 2)
514277.0	3713176.0	3.00518	(297, 2)	511277.0	3712176.0	1.33179C	(267, 3)
512277.0	3712176.0	1.93002C	(267, 3)	513277.0	3712176.0	2.24311C	(267, 3)
514277.0	3712176.0	2.03793	(141, 2)	511277.0	3711176.0	1.55335	(297, 1)
512277.0	3711176.0	2.40587	(210, 3)	513277.0	3711176.0	1.93605	(178, 2)
514277.0	3711176.0	2.33919	(177, 2)	516500.0	3708100.0	6.61373	(260, 3)
518100.0	3709350.0	4.47605	(1, 1)	514500.0	3708800.0	2.27496	(358, 3)
517300.0	3714400.0	3.19120	(160, 2)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516276.8	3711378.0	0.80303	(260, 2)	516411.0	3712159.0	2.64955	(160, 2)
516679.3	3711159.0	1.44567	(127, 2)	516679.3	3711378.0	1.67839	(42, 1)
517079.3	3711378.0	1.55675	(335, 2)	517079.3	3711549.0	1.46710	(356, 3)
517530.5	3711488.0	1.43244	(53, 2)	517530.5	3711317.0	1.84939	(53, 2)
518743.9	3711171.0	1.36678	(53, 2)	518743.9	3711573.0	1.43111	(54, 2)
519914.6	3711573.0	1.00684	(23, 2)	519914.6	3711171.0	1.09992	(335, 2)
520304.8	3711171.0	0.99853	(335, 2)	520304.8	3711024.0	1.01889	(335, 2)
520707.2	3711024.0	0.98746	(335, 2)	520817.0	3711628.0	0.92144	(158, 2)
520402.3	3712176.0	1.17082	(64, 1)	518707.2	3712176.0	1.58127	(94, 2)
518707.2	3712030.0	1.76493	(94, 2)	518280.4	3712030.0	2.01314	(228, 2)
518280.4	3712250.0	1.96168	(200, 2)	518060.9	3712335.0	1.76008	(196, 2)
518060.9	3712878.0	2.00466	(198, 2)	517426.8	3712878.0	2.07094	(215, 2)
517426.8	3713079.0	2.62439	(204, 2)	516993.9	3713079.0	2.58274	(215, 2)
516993.9	3713280.0	2.95494	(169, 2)	516603.7	3713280.0	2.71509	(106, 2)
516603.7	3712884.0	2.38262	(169, 2)	516372.0	3712884.0	2.93900	(166, 2)
516372.0	3712798.0	2.86812	(206, 2)	516256.2	3712774.0	2.69259	(206, 2)
516276.8	3711378.0	0.80303	(260, 2)	516264.6	3712122.0	6.51689	(93, 2)
516264.6	3711598.0	1.29927	(351, 2)	516008.5	3712006.0	0.93272	(153, 2)
516008.5	3712122.0	1.36168	(286, 2)	516115.2	3712189.0	2.18420	(92, 2)
516179.3	3712061.0	3.60888	(92, 2)	516179.3	3712122.0	3.35745	(286, 3)
516264.6	3712122.0	6.51689	(93, 2)	515277.0	3711278.0	2.07295	(223, 2)
515377.0	3711278.0	1.83490	(177, 2)	515477.0	3711278.0	1.62527	(249, 2)
515577.0	3711278.0	1.58018	(249, 2)	515677.0	3711278.0	1.39352	(342, 2)
515777.0	3711278.0	1.29064	(191, 2)	515877.0	3711278.0	1.26247	(191, 2)
515977.0	3711278.0	1.25699	(296, 2)	516077.0	3711278.0	1.37203	(351, 2)
516177.0	3711278.0	1.22112	(234, 2)	516277.0	3711278.0	0.95067	(260, 2)
516377.0	3711278.0	1.11248	(1, 2)	516477.0	3711278.0	1.49474	(81, 2)
516577.0	3711278.0	1.08628	(127, 2)	516677.0	3711278.0	1.24026	(41, 3)
516777.0	3711278.0	1.50211	(146, 2)	516877.0	3711278.0	1.42051	(146, 2)
516977.0	3711278.0	1.41092	(146, 2)	517077.0	3711278.0	1.79837	(176, 2)
517177.0	3711278.0	1.79309	(176, 2)	515277.0	3711178.0	1.91909	(70, 2)
515377.0	3711178.0	1.85423	(67, 2)	515477.0	3711178.0	1.76840	(342, 2)
515577.0	3711178.0	1.57768	(233, 2)	515677.0	3711178.0	1.61448	(233, 2)
515777.0	3711178.0	1.84064	(191, 2)	515877.0	3711178.0	1.57624	(191, 2)
515977.0	3711178.0	1.06850	(105, 2)	516077.0	3711178.0	1.42106	(105, 2)
516177.0	3711178.0	0.97639	(131, 2)	516277.0	3711178.0	1.01332	(81, 2)
516377.0	3711178.0	0.93583C	(114, 2)	516477.0	3711178.0	1.03658	(259, 3)
516577.0	3711178.0	1.51465	(127, 2)	516677.0	3711178.0	1.31649	(127, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516777.0	3711178.0	1.43694	(41, 3)	516877.0	3711178.0	1.74984	(220, 2)
516977.0	3711178.0	1.67647	(220, 2)	517077.0	3711178.0	1.88073	(176, 2)
517177.0	3711178.0	2.14372	(176, 2)	515277.0	3711078.0	2.29112	(67, 2)
515377.0	3711078.0	2.05556	(67, 2)	515477.0	3711078.0	1.58319	(233, 2)
515577.0	3711078.0	1.79757	(191, 2)	515677.0	3711078.0	2.14800	(191, 2)
515777.0	3711078.0	2.06574	(191, 2)	515877.0	3711078.0	1.54843	(191, 2)
515977.0	3711078.0	1.48128	(131, 2)	516077.0	3711078.0	1.42741	(131, 2)
516177.0	3711078.0	1.51311	(232, 2)	516277.0	3711078.0	1.04208	(234, 2)
516377.0	3711078.0	1.20570	(250, 2)	516477.0	3711078.0	1.16074	(127, 2)
516577.0	3711078.0	1.94086	(127, 2)	516677.0	3711078.0	1.82470	(127, 2)
516777.0	3711078.0	1.36739	(127, 2)	516877.0	3711078.0	1.64194	(220, 2)
516977.0	3711078.0	2.14785	(220, 2)	517077.0	3711078.0	1.82496	(42, 1)
517177.0	3711078.0	2.17044	(176, 2)	515277.0	3710978.0	2.37212	(67, 2)
515377.0	3710978.0	1.81658	(67, 2)	515477.0	3710978.0	1.73710	(191, 2)
515577.0	3710978.0	2.15121	(191, 2)	515677.0	3710978.0	2.26737	(191, 2)
515777.0	3710978.0	1.99556	(191, 2)	515877.0	3710978.0	1.38609	(140, 2)
515977.0	3710978.0	1.78609	(131, 2)	516077.0	3710978.0	1.66205	(131, 2)
516177.0	3710978.0	2.05533	(232, 2)	516277.0	3710978.0	1.50449	(260, 2)
516377.0	3710978.0	1.31748	(250, 2)	516477.0	3710978.0	1.31833	(250, 2)
516577.0	3710978.0	1.92681	(127, 2)	516677.0	3710978.0	2.29427	(127, 2)
516777.0	3710978.0	1.86414	(127, 2)	516877.0	3710978.0	1.52074	(220, 2)
516977.0	3710978.0	2.07676	(220, 2)	517077.0	3710978.0	2.22243	(220, 2)
517177.0	3710978.0	1.93919	(146, 2)	515277.0	3710878.0	2.05263	(67, 2)
515377.0	3710878.0	1.78079	(191, 2)	515477.0	3710878.0	2.02011	(140, 2)
515577.0	3710878.0	2.26082	(191, 2)	515677.0	3710878.0	2.20036	(191, 2)
515777.0	3710878.0	1.74890	(191, 2)	515877.0	3710878.0	1.90417	(131, 2)
515977.0	3710878.0	1.96259	(131, 2)	516077.0	3710878.0	2.27810	(231, 2)
516177.0	3710878.0	2.37302	(234, 2)	516277.0	3710878.0	1.65784	(260, 2)
516377.0	3710878.0	1.32534	(15, 2)	516477.0	3710878.0	1.50210	(75, 2)
516577.0	3710878.0	2.01902	(127, 2)	516677.0	3710878.0	2.55855	(127, 2)
516777.0	3710878.0	2.39005	(127, 2)	516877.0	3710878.0	1.68602	(127, 2)
516977.0	3710878.0	2.15233	(41, 3)	517077.0	3710878.0	2.22636	(220, 2)
517177.0	3710878.0	2.18028	(146, 2)	515277.0	3710778.0	1.79925	(191, 2)
515377.0	3710778.0	2.02291	(191, 2)	515477.0	3710778.0	2.28471	(191, 2)
515577.0	3710778.0	2.15906	(191, 2)	515677.0	3710778.0	1.91098	(191, 2)
515777.0	3710778.0	1.87556	(16, 3)	515877.0	3710778.0	2.12169	(131, 2)
515977.0	3710778.0	2.04213	(131, 2)	516077.0	3710778.0	2.70279	(231, 2)
516177.0	3710778.0	2.24593	(234, 2)	516277.0	3710778.0	1.99368	(260, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516377.0	3710778.0	1.64157	(15, 2)	516477.0	3710778.0	1.90673	(259, 3)
516577.0	3710778.0	2.15331	(75, 2)	516677.0	3710778.0	2.62796	(127, 2)
516777.0	3710778.0	2.65996	(127, 2)	516877.0	3710778.0	2.13590	(127, 2)
516977.0	3710778.0	2.28303	(78, 2)	517077.0	3710778.0	2.86360	(146, 2)
517177.0	3710778.0	2.27018	(220, 2)	515277.0	3710678.0	1.96041	(191, 2)
515377.0	3710678.0	2.14506	(191, 2)	515477.0	3710678.0	2.19339	(191, 2)
515577.0	3710678.0	1.96711	(191, 2)	515677.0	3710678.0	1.62632	(27, 2)
515777.0	3710678.0	1.91935	(255, 2)	515877.0	3710678.0	2.18216	(131, 2)
515977.0	3710678.0	2.24403	(231, 2)	516077.0	3710678.0	2.87215	(140, 2)
516177.0	3710678.0	2.44346	(310, 2)	516277.0	3710678.0	2.07514	(260, 2)
516377.0	3710678.0	1.93742	(15, 2)	516477.0	3710678.0	1.86426	(144, 2)
516577.0	3710678.0	2.27812	(75, 2)	516677.0	3710678.0	2.64522	(75, 2)
516777.0	3710678.0	2.63011	(127, 2)	516877.0	3710678.0	2.29997	(127, 2)
516977.0	3710678.0	1.93372	(78, 2)	517077.0	3710678.0	2.33226	(41, 3)
517177.0	3710678.0	2.24255	(41, 3)	515277.0	3710578.0	2.05842	(191, 2)
515377.0	3710578.0	2.11424	(191, 2)	515477.0	3710578.0	2.63249	(296, 2)
515577.0	3710578.0	2.00334	(296, 2)	515677.0	3710578.0	1.82905	(255, 2)
515777.0	3710578.0	2.19988	(131, 2)	515877.0	3710578.0	2.21973	(131, 2)
515977.0	3710578.0	2.48099	(231, 2)	516077.0	3710578.0	2.80004	(140, 2)
516177.0	3710578.0	2.70488	(310, 2)	516277.0	3710578.0	2.36376	(260, 2)
516377.0	3710578.0	2.96153	(260, 3)	516477.0	3710578.0	2.40586	(259, 3)
516577.0	3710578.0	2.34807	(75, 2)	516677.0	3710578.0	2.62139	(75, 2)
516777.0	3710578.0	2.49517	(75, 2)	516877.0	3710578.0	2.30297	(127, 2)
516977.0	3710578.0	1.82586	(127, 2)	517077.0	3710578.0	1.83767	(78, 2)
517177.0	3710578.0	2.15578	(41, 3)	515277.0	3710478.0	2.00170	(191, 2)
515377.0	3710478.0	2.78528	(296, 2)	515477.0	3710478.0	2.57354	(296, 2)
515577.0	3710478.0	2.10432	(45, 2)	515677.0	3710478.0	2.04105	(259, 2)
515777.0	3710478.0	2.45471	(234, 2)	515877.0	3710478.0	2.18799	(131, 2)
515977.0	3710478.0	2.73291	(231, 2)	516077.0	3710478.0	2.85718	(234, 2)
516177.0	3710478.0	2.98918	(260, 2)	516277.0	3710478.0	2.63416	(260, 2)
516377.0	3710478.0	3.12531	(260, 3)	516477.0	3710478.0	2.46326	(1, 2)
516577.0	3710478.0	2.28235	(75, 2)	516677.0	3710478.0	2.55293	(75, 2)
516777.0	3710478.0	2.59725	(75, 2)	516877.0	3710478.0	2.32990	(75, 2)
516977.0	3710478.0	1.99380	(127, 2)	517077.0	3710478.0	1.73257	(78, 2)
517177.0	3710478.0	1.83239	(78, 2)	515277.0	3710378.0	2.30998	(296, 2)
515377.0	3710378.0	2.33604	(296, 2)	515477.0	3710378.0	2.05101	(27, 2)
515577.0	3710378.0	2.24837	(45, 2)	515677.0	3710378.0	2.18320	(255, 2)
515777.0	3710378.0	2.68371	(259, 2)	515877.0	3710378.0	2.16435	(231, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515977.0	3710378.0	2.80008	(231, 2)	516077.0	3710378.0	2.79342	(310, 2)
516177.0	3710378.0	2.81382	(260, 2)	516277.0	3710378.0	2.40480	(260, 2)
516377.0	3710378.0	2.65041	(260, 3)	516477.0	3710378.0	2.14718	(1, 2)
516577.0	3710378.0	2.19246	(144, 2)	516677.0	3710378.0	2.38012	(75, 2)
516777.0	3710378.0	2.52856	(82, 2)	516877.0	3710378.0	2.62675	(82, 2)
516977.0	3710378.0	2.02211	(75, 2)	517077.0	3710378.0	1.62462	(324, 2)
517177.0	3710378.0	1.78241	(78, 2)	515277.0	3712276.0	1.33188	(135, 2)
515377.0	3712276.0	1.22250	(224, 2)	515477.0	3712276.0	1.40742	(224, 2)
515577.0	3712276.0	1.19620	(141, 2)	515677.0	3712276.0	1.05588	(222, 2)
515777.0	3712276.0	0.98700	(224, 2)	515877.0	3712276.0	0.71297	(286, 2)
515977.0	3712276.0	1.57988	(92, 2)	516077.0	3712276.0	1.20226	(87, 2)
516177.0	3712276.0	2.31246	(129, 1)	516277.0	3712276.0	5.51427	(93, 2)
516377.0	3712276.0	2.77989	(76, 3)	516477.0	3712276.0	1.33777	(355, 3)
516577.0	3712276.0	1.53650	(355, 3)	516677.0	3712276.0	2.21716	(355, 2)
516777.0	3712276.0	0.98744	(74, 2)	516877.0	3712276.0	1.10212	(228, 2)
516977.0	3712276.0	1.40876	(196, 2)	517077.0	3712276.0	2.12413	(179, 2)
517177.0	3712276.0	1.81590	(179, 2)	515277.0	3712376.0	1.55799	(271, 2)
515377.0	3712376.0	1.56215	(271, 2)	515477.0	3712376.0	1.43105	(224, 2)
515577.0	3712376.0	1.31920	(141, 2)	515677.0	3712376.0	1.17048	(272, 2)
515777.0	3712376.0	0.92462	(222, 2)	515877.0	3712376.0	1.52232	(92, 2)
515977.0	3712376.0	1.88300	(92, 2)	516077.0	3712376.0	2.22509	(129, 1)
516177.0	3712376.0	2.49354	(87, 3)	516277.0	3712376.0	4.59069	(93, 2)
516377.0	3712376.0	2.18834	(330, 1)	516477.0	3712376.0	1.56198	(160, 2)
516577.0	3712376.0	1.69703	(355, 3)	516677.0	3712376.0	1.33598	(215, 2)
516777.0	3712376.0	1.75994	(205, 2)	516877.0	3712376.0	1.48445	(199, 2)
516977.0	3712376.0	1.34784	(199, 2)	517077.0	3712376.0	1.77950	(196, 2)
517177.0	3712376.0	2.08757	(179, 2)	515277.0	3712476.0	1.94788	(271, 2)
515377.0	3712476.0	1.77970	(271, 2)	515477.0	3712476.0	1.55021	(141, 2)
515577.0	3712476.0	1.30818	(175, 2)	515677.0	3712476.0	1.38666	(272, 2)
515777.0	3712476.0	1.27450	(175, 2)	515877.0	3712476.0	1.57370	(92, 2)
515977.0	3712476.0	1.25908	(132, 2)	516077.0	3712476.0	1.97818	(137, 2)
516177.0	3712476.0	2.83904	(87, 3)	516277.0	3712476.0	3.95470	(93, 2)
516377.0	3712476.0	1.90134	(330, 1)	516477.0	3712476.0	1.53383	(100, 2)
516577.0	3712476.0	2.07349	(160, 2)	516677.0	3712476.0	2.15931	(215, 2)
516777.0	3712476.0	2.30891	(215, 2)	516877.0	3712476.0	2.07513	(215, 2)
516977.0	3712476.0	1.94795	(195, 2)	517077.0	3712476.0	1.81121	(195, 2)
517177.0	3712476.0	1.87146	(196, 2)	515277.0	3712576.0	1.98107	(272, 2)
515377.0	3712576.0	1.77034	(248, 2)	515477.0	3712576.0	1.49868	(248, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515577.0	3712576.0	1.59885	(272, 2)	515677.0	3712576.0	1.38179	(285, 2)
515777.0	3712576.0	1.54369	(92, 2)	515877.0	3712576.0	1.32438	(163, 2)
515977.0	3712576.0	1.29698	(137, 2)	516077.0	3712576.0	1.98308	(97, 2)
516177.0	3712576.0	2.39673	(87, 3)	516277.0	3712576.0	3.47951	(93, 2)
516377.0	3712576.0	2.59096	(206, 2)	516477.0	3712576.0	1.98897	(93, 2)
516577.0	3712576.0	1.90753	(160, 2)	516677.0	3712576.0	2.40048	(215, 2)
516777.0	3712576.0	2.75321	(215, 2)	516877.0	3712576.0	2.46471	(195, 2)
516977.0	3712576.0	2.35171	(179, 2)	517077.0	3712576.0	2.20417	(179, 2)
517177.0	3712576.0	1.99273	(179, 2)	515277.0	3712676.0	1.80946	(248, 2)
515377.0	3712676.0	1.66554	(248, 2)	515477.0	3712676.0	1.87118	(272, 2)
515577.0	3712676.0	1.66413	(285, 2)	515677.0	3712676.0	1.89395	(285, 2)
515777.0	3712676.0	1.69557	(175, 2)	515877.0	3712676.0	1.47329	(163, 2)
515977.0	3712676.0	1.30226	(175, 2)	516077.0	3712676.0	1.70987	(97, 2)
516177.0	3712676.0	2.24291	(93, 2)	516277.0	3712676.0	2.76915	(206, 2)
516377.0	3712676.0	2.91638	(206, 2)	516477.0	3712676.0	1.99494	(100, 2)
516577.0	3712676.0	1.95776	(205, 2)	516677.0	3712676.0	2.52089	(160, 2)
516777.0	3712676.0	2.59460	(205, 2)	516877.0	3712676.0	2.40937	(195, 2)
516977.0	3712676.0	2.77174	(215, 2)	517077.0	3712676.0	2.39693	(204, 2)
517177.0	3712676.0	2.04081	(204, 2)	515277.0	3712776.0	1.69191	(248, 2)
515377.0	3712776.0	1.80722	(272, 2)	515477.0	3712776.0	1.66293	(285, 2)
515577.0	3712776.0	2.13056	(285, 2)	515677.0	3712776.0	1.99123	(175, 2)
515777.0	3712776.0	1.60922	(163, 2)	515877.0	3712776.0	1.69124	(285, 2)
515977.0	3712776.0	1.72194	(142, 2)	516077.0	3712776.0	2.22064	(142, 2)
516177.0	3712776.0	2.26611	(142, 2)	516277.0	3712776.0	2.47147	(97, 2)
516377.0	3712776.0	2.84333	(206, 2)	516477.0	3712776.0	1.98760	(100, 2)
516577.0	3712776.0	1.82838	(169, 2)	516677.0	3712776.0	2.02032	(215, 2)
516777.0	3712776.0	2.57324	(215, 2)	516877.0	3712776.0	2.37432	(195, 2)
516977.0	3712776.0	2.73112	(195, 2)	517077.0	3712776.0	2.78952	(204, 2)
517177.0	3712776.0	2.61752	(204, 2)	515277.0	3712876.0	1.82699	(272, 2)
515377.0	3712876.0	1.79708	(285, 2)	515477.0	3712876.0	2.06143	(285, 2)
515577.0	3712876.0	2.01258	(175, 2)	515677.0	3712876.0	1.94402	(163, 2)
515777.0	3712876.0	1.67640	(294, 2)	515877.0	3712876.0	1.73514	(294, 2)
515977.0	3712876.0	1.96920	(142, 2)	516077.0	3712876.0	2.69914	(142, 2)
516177.0	3712876.0	2.33891	(142, 2)	516277.0	3712876.0	2.34659	(164, 2)
516377.0	3712876.0	2.57533	(206, 2)	516477.0	3712876.0	2.16913	(100, 2)
516577.0	3712876.0	2.02853	(169, 2)	516677.0	3712876.0	2.28863	(169, 2)
516777.0	3712876.0	2.40888	(215, 2)	516877.0	3712876.0	2.66999	(160, 2)
516977.0	3712876.0	2.51186	(195, 2)	517077.0	3712876.0	2.89150	(215, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
517177.0	3712876.0	2.84167	(204, 2)	515277.0	3712976.0	1.87421	(285, 2)
515377.0	3712976.0	2.12876	(285, 2)	515477.0	3712976.0	2.13141	(175, 2)
515577.0	3712976.0	1.90525	(175, 2)	515677.0	3712976.0	1.80712	(163, 2)
515777.0	3712976.0	1.89752	(294, 2)	515877.0	3712976.0	2.02637	(142, 2)
515977.0	3712976.0	2.55376	(142, 2)	516077.0	3712976.0	2.82831	(137, 2)
516177.0	3712976.0	2.76358	(142, 2)	516277.0	3712976.0	2.49267	(166, 2)
516377.0	3712976.0	2.67239	(166, 2)	516477.0	3712976.0	2.21101	(106, 2)
516577.0	3712976.0	2.15789	(106, 2)	516677.0	3712976.0	2.22777	(160, 2)
516777.0	3712976.0	2.68077	(169, 2)	516877.0	3712976.0	2.50952	(215, 2)
516977.0	3712976.0	2.31624	(160, 2)	517077.0	3712976.0	2.61559	(195, 2)
517177.0	3712976.0	2.72429	(204, 2)	515277.0	3713076.0	2.13862	(285, 2)
515377.0	3713076.0	2.17588	(175, 2)	515477.0	3713076.0	1.98921	(175, 2)
515577.0	3713076.0	1.86665	(163, 2)	515677.0	3713076.0	1.98474	(294, 2)
515777.0	3713076.0	1.98784	(294, 2)	515877.0	3713076.0	2.03991	(142, 2)
515977.0	3713076.0	2.55845	(142, 2)	516077.0	3713076.0	2.15332	(137, 2)
516177.0	3713076.0	2.49571	(142, 2)	516277.0	3713076.0	2.72936	(164, 2)
516377.0	3713076.0	2.47824	(93, 2)	516477.0	3713076.0	2.30815	(106, 2)
516577.0	3713076.0	2.33665	(106, 2)	516677.0	3713076.0	2.27558	(100, 2)
516777.0	3713076.0	2.96232	(169, 2)	516877.0	3713076.0	2.73206	(169, 2)
516977.0	3713076.0	2.48722	(215, 2)	517077.0	3713076.0	2.37415	(195, 2)
517177.0	3713076.0	2.65178	(215, 2)	515277.0	3713176.0	2.16360	(175, 2)
515377.0	3713176.0	2.02101	(175, 2)	515477.0	3713176.0	1.82771	(163, 2)
515577.0	3713176.0	1.95362	(294, 2)	515677.0	3713176.0	2.12119	(294, 2)
515777.0	3713176.0	2.03648	(294, 2)	515877.0	3713176.0	2.44900	(142, 2)
515977.0	3713176.0	2.87393	(142, 2)	516077.0	3713176.0	2.20647	(97, 2)
516177.0	3713176.0	2.57408	(142, 2)	516277.0	3713176.0	2.83723	(164, 2)
516377.0	3713176.0	2.89232	(93, 2)	516477.0	3713176.0	2.53324	(101, 2)
516577.0	3713176.0	2.45750	(106, 2)	516677.0	3713176.0	2.47127	(169, 2)
516777.0	3713176.0	2.84313	(160, 2)	516877.0	3713176.0	3.04415	(169, 2)
516977.0	3713176.0	2.52868	(169, 2)	517077.0	3713176.0	2.40623	(215, 2)
517177.0	3713176.0	2.66119	(215, 2)	515277.0	3712176.0	1.45090	(135, 2)
515377.0	3712176.0	1.26865	(135, 2)	515477.0	3712176.0	1.24541	(135, 2)
515577.0	3712176.0	1.00169	(135, 2)	515677.0	3712176.0	0.79275	(222, 2)
515777.0	3712176.0	0.75390	(222, 2)	515877.0	3712176.0	0.57534	(286, 2)
515977.0	3712176.0	0.89425	(286, 2)	516077.0	3712176.0	2.44494	(92, 2)
516177.0	3712176.0	3.14908	(129, 1)	515277.0	3712076.0	1.15471	(235, 2)
515377.0	3712076.0	1.03580	(235, 2)	515477.0	3712076.0	1.07566	(141, 2)
515577.0	3712076.0	0.95708	(168, 2)	515677.0	3712076.0	0.87251	(224, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515777.0	3712076.0	0.64615	(224, 2)	515877.0	3712076.0	0.64991C	(244, 1)
515977.0	3712076.0	0.77577C	(312, 3)	516077.0	3712076.0	1.17865	(286, 2)
516177.0	3712076.0	3.18082	(92, 2)	515277.0	3711976.0	1.19508	(141, 2)
515377.0	3711976.0	1.19876	(168, 2)	515477.0	3711976.0	1.10872	(235, 2)
515577.0	3711976.0	0.95924	(234, 2)	515677.0	3711976.0	0.83908	(135, 2)
515777.0	3711976.0	0.52997	(168, 2)	515877.0	3711976.0	0.42951	(86, 3)
515977.0	3711976.0	0.66266	(86, 3)	516077.0	3711976.0	1.05033	(153, 2)
516177.0	3711976.0	1.60990C	(312, 3)	515277.0	3711876.0	1.31304	(168, 2)
515377.0	3711876.0	1.24196	(168, 2)	515477.0	3711876.0	1.26710	(168, 2)
515577.0	3711876.0	1.14754	(168, 2)	515677.0	3711876.0	0.92361	(234, 2)
515777.0	3711876.0	0.50860	(235, 2)	515877.0	3711876.0	0.47626	(135, 2)
515977.0	3711876.0	0.65521	(135, 2)	516077.0	3711876.0	1.03842	(135, 2)
516177.0	3711876.0	2.16230	(135, 2)	515277.0	3711776.0	1.84403	(235, 2)
515377.0	3711776.0	1.72856	(235, 2)	515477.0	3711776.0	1.63349	(178, 2)
515577.0	3711776.0	1.23047	(178, 2)	515677.0	3711776.0	0.99294C	(121, 1)
515777.0	3711776.0	0.64883	(235, 2)	515877.0	3711776.0	0.48747C	(121, 1)
515977.0	3711776.0	0.52839	(30, 3)	516077.0	3711776.0	1.08849C	(135, 1)
516177.0	3711776.0	1.61505C	(238, 3)	515277.0	3711676.0	2.28521	(177, 2)
515377.0	3711676.0	2.03637	(177, 2)	515477.0	3711676.0	1.84977	(177, 2)
515577.0	3711676.0	1.27563	(178, 2)	515677.0	3711676.0	0.96078	(177, 2)
515777.0	3711676.0	0.56689	(235, 2)	515877.0	3711676.0	0.60139C	(135, 1)
515977.0	3711676.0	0.81656C	(238, 3)	516077.0	3711676.0	0.78394	(136, 1)
516177.0	3711676.0	4.21476	(296, 2)	515277.0	3711576.0	2.06922	(178, 2)
515377.0	3711576.0	1.81050	(253, 2)	515477.0	3711576.0	1.62144	(253, 2)
515577.0	3711576.0	1.26350	(253, 2)	515677.0	3711576.0	0.93152	(280, 2)
515777.0	3711576.0	0.80686	(249, 2)	515877.0	3711576.0	1.03313	(210, 2)
515977.0	3711576.0	0.73775	(136, 1)	516077.0	3711576.0	1.72997	(120, 2)
516177.0	3711576.0	2.28032	(351, 2)	515277.0	3711476.0	1.94334	(253, 2)
515377.0	3711476.0	1.71427	(253, 2)	515477.0	3711476.0	1.41832	(223, 2)
515577.0	3711476.0	1.49190	(223, 2)	515677.0	3711476.0	1.38487	(223, 2)
515777.0	3711476.0	1.20629	(210, 2)	515877.0	3711476.0	0.94195	(249, 2)
515977.0	3711476.0	1.22999	(140, 2)	516077.0	3711476.0	1.99917	(120, 2)
516177.0	3711476.0	2.22686	(105, 2)	511277.0	3709378.0	1.87405	(233, 3)
512277.0	3709378.0	3.32358	(297, 1)	513277.0	3709378.0	2.27767	(30, 3)
514277.0	3709378.0	1.93210	(127, 1)	515277.0	3709378.0	1.94347	(16, 3)
516277.0	3709378.0	2.15404	(15, 2)	517277.0	3709378.0	1.78972	(351, 3)
518277.0	3709378.0	3.30360	(313, 2)	519277.0	3709378.0	1.95745	(299, 1)
520277.0	3709378.0	1.82327	(335, 2)	521277.0	3709378.0	1.34084	(78, 1)

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* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3709378.0	1.05038	(130, 3)	511277.0	3708378.0	2.63297	(275, 3)
512277.0	3708378.0	1.56439	(126, 3)	513277.0	3708378.0	1.84602C	(121, 1)
514277.0	3708378.0	1.93928	(233, 3)	515277.0	3708378.0	1.30855C	(10, 3)
516277.0	3708378.0	1.72739	(357, 1)	517277.0	3708378.0	1.85160	(291, 1)
518277.0	3708378.0	1.72246	(78, 2)	519277.0	3708378.0	1.73927	(313, 2)
520277.0	3708378.0	2.28257	(139, 2)	521277.0	3708378.0	1.45917	(77, 2)
522277.0	3708378.0	1.09905	(323, 2)	511277.0	3707378.0	2.05300	(126, 3)
512277.0	3707378.0	1.75652C	(249, 1)	513277.0	3707378.0	2.03193	(296, 2)
514277.0	3707378.0	2.25723	(177, 1)	515277.0	3707378.0	2.23190	(44, 3)
516277.0	3707378.0	2.47606C	(156, 3)	517277.0	3707378.0	3.27275C	(365, 3)
518277.0	3707378.0	1.72646	(351, 3)	519277.0	3707378.0	1.39950	(32, 1)
520277.0	3707378.0	1.24174	(1, 1)	521277.0	3707378.0	1.80165	(139, 2)
522277.0	3707378.0	1.39860	(77, 3)	511277.0	3706378.0	1.83125C	(249, 1)
512277.0	3706378.0	1.78037C	(352, 3)	513277.0	3706378.0	2.05412	(16, 3)
514277.0	3706378.0	3.33370C	(251, 3)	515277.0	3706378.0	2.01215	(16, 3)
516277.0	3706378.0	2.55845C	(156, 3)	517277.0	3706378.0	2.43102C	(73, 1)
518277.0	3706378.0	1.66975C	(176, 3)	519277.0	3706378.0	1.04359	(1, 3)
520277.0	3706378.0	1.45518	(7, 1)	521277.0	3706378.0	1.17464C	(32, 2)
522277.0	3706378.0	1.57299	(32, 3)	523277.0	3706378.0	1.18214	(299, 1)
522402.0	3710378.0	0.74823	(94, 3)	522402.0	3711378.0	0.93707C	(336, 1)
522402.0	3712378.0	0.99630	(64, 1)	511277.0	3714176.0	1.07667	(285, 3)
512277.0	3714176.0	1.55917	(297, 2)	513277.0	3714176.0	1.56083	(302, 2)
514277.0	3714176.0	1.71943	(286, 2)	515277.0	3714176.0	2.49061	(164, 3)
516277.0	3714176.0	3.94980	(166, 2)	517277.0	3714176.0	2.80575	(138, 2)
518277.0	3714176.0	2.01265	(195, 2)	519277.0	3714176.0	1.15181	(159, 2)
520277.0	3714176.0	1.29051	(158, 1)	521277.0	3714176.0	1.16247	(13, 2)
522277.0	3714176.0	1.44674	(53, 1)	511277.0	3715176.0	1.65807C	(302, 3)
512277.0	3715176.0	3.15623	(62, 1)	513277.0	3715176.0	1.95564	(188, 1)
514277.0	3715176.0	2.29615	(161, 3)	515277.0	3715176.0	2.64304	(137, 2)
516277.0	3715176.0	2.60256	(166, 2)	517277.0	3715176.0	1.52808	(100, 2)
518277.0	3715176.0	1.49862	(355, 3)	519277.0	3715176.0	1.23093	(74, 2)
520277.0	3715176.0	0.92919	(159, 2)	521277.0	3715176.0	1.37668	(158, 1)
522277.0	3715176.0	1.10052C	(205, 1)	511277.0	3716176.0	2.75891	(62, 1)
512277.0	3716176.0	2.02619	(188, 1)	513277.0	3716176.0	2.48024	(184, 3)
514277.0	3716176.0	3.63384	(166, 1)	515277.0	3716176.0	3.44906	(132, 3)
516277.0	3716176.0	1.77214	(143, 2)	517277.0	3716176.0	1.53648C	(151, 3)
518277.0	3716176.0	1.18247	(160, 2)	519277.0	3716176.0	1.20483	(34, 3)
520277.0	3716176.0	1.23354	(14, 1)	521277.0	3716176.0	1.23008C	(204, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1981 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3716176.0	1.30110	(182, 1)	511277.0	3717176.0	2.34092	(188, 1)
512277.0	3717176.0	2.79947	(110, 3)	513277.0	3717176.0	3.20839	(166, 1)
514277.0	3717176.0	2.43980	(164, 3)	515277.0	3717176.0	2.36088	(361, 3)
516277.0	3717176.0	1.91991	(172, 3)	517277.0	3717176.0	1.31217	(203, 3)
518277.0	3717176.0	1.19377	(89, 1)	519277.0	3717176.0	1.54775C	(265, 1)
520277.0	3717176.0	1.77535C	(35, 1)	521277.0	3717176.0	1.12020	(14, 1)
522277.0	3717176.0	1.35273	(13, 3)	511277.0	3713176.0	1.50793	(111, 2)
512277.0	3713176.0	1.14247	(43, 2)	513277.0	3713176.0	1.24384	(364, 2)
514277.0	3713176.0	2.16835	(271, 2)	511277.0	3712176.0	1.27147C	(266, 3)
512277.0	3712176.0	1.53679C	(266, 3)	513277.0	3712176.0	1.58594	(5, 2)
514277.0	3712176.0	1.64271C	(328, 2)	511277.0	3711176.0	1.34473C	(254, 3)
512277.0	3711176.0	1.98283	(275, 3)	513277.0	3711176.0	1.78506	(247, 2)
514277.0	3711176.0	1.96437	(363, 2)	511277.0	3709378.0	1.87405	(233, 3)
512277.0	3709378.0	3.32358	(297, 1)	513277.0	3709378.0	2.27767	(30, 3)
514277.0	3709378.0	1.93210	(127, 1)	515277.0	3709378.0	1.94347	(16, 3)
516277.0	3709378.0	2.15404	(15, 2)	517277.0	3709378.0	1.78972	(351, 3)
518277.0	3709378.0	3.30360	(313, 2)	519277.0	3709378.0	1.95745	(299, 1)
520277.0	3709378.0	1.82327	(335, 2)	521277.0	3709378.0	1.34084	(78, 1)
522277.0	3709378.0	1.05038	(130, 3)	511277.0	3708378.0	2.63297	(275, 3)
512277.0	3708378.0	1.56439	(126, 3)	513277.0	3708378.0	1.84602C	(121, 1)
514277.0	3708378.0	1.93928	(233, 3)	515277.0	3708378.0	1.30855C	(10, 3)
516277.0	3708378.0	1.72739	(357, 1)	517277.0	3708378.0	1.85160	(291, 1)
518277.0	3708378.0	1.72246	(78, 2)	519277.0	3708378.0	1.73927	(313, 2)
520277.0	3708378.0	2.28257	(139, 2)	521277.0	3708378.0	1.45917	(77, 2)
522277.0	3708378.0	1.09905	(323, 2)	511277.0	3707378.0	2.05300	(126, 3)
512277.0	3707378.0	1.75652C	(249, 1)	513277.0	3707378.0	2.03193	(296, 2)
514277.0	3707378.0	2.25723	(177, 1)	515277.0	3707378.0	2.23190	(44, 3)
516277.0	3707378.0	2.47606C	(156, 3)	517277.0	3707378.0	3.27275C	(365, 3)
518277.0	3707378.0	1.72646	(351, 3)	519277.0	3707378.0	1.39950	(32, 1)
520277.0	3707378.0	1.24174	(1, 1)	521277.0	3707378.0	1.80165	(139, 2)
522277.0	3707378.0	1.39860	(77, 3)	511277.0	3706378.0	1.83125C	(249, 1)
512277.0	3706378.0	1.78037C	(352, 3)	513277.0	3706378.0	2.05412	(16, 3)
514277.0	3706378.0	3.33370C	(251, 3)	515277.0	3706378.0	2.01215	(16, 3)
516277.0	3706378.0	2.55845C	(156, 3)	517277.0	3706378.0	2.43102C	(73, 1)
518277.0	3706378.0	1.66975C	(176, 3)	519277.0	3706378.0	1.04359	(1, 3)
520277.0	3706378.0	1.45518	(7, 1)	521277.0	3706378.0	1.17464C	(32, 2)
522277.0	3706378.0	1.57299	(32, 3)	523277.0	3706378.0	1.18214	(299, 1)
522402.0	3710378.0	0.74823	(94, 3)	522402.0	3711378.0	0.93707C	(336, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
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*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

*** X,Y COORDINATES OF DISCRETE RECEPTORS ***
(METERS)

(516276.8,3711378.0),	(516411.0,3712159.0),	(516679.3,3711159.0),	(516679.3,3711378.0),	(517079.3,3711378.0),
(517079.3,3711549.0),	(517530.5,3711488.0),	(517530.5,3711317.0),	(518743.9,3711171.0),	(518743.9,3711573.0),
(519914.6,3711573.0),	(519914.6,3711171.0),	(520304.8,3711171.0),	(520304.8,3711024.0),	(520707.2,3711024.0),
(520817.0,3711628.0),	(520402.3,3712176.0),	(518707.2,3712176.0),	(518707.2,3712030.0),	(518280.4,3712030.0),
(518280.4,3712250.0),	(518060.9,3712335.0),	(518060.9,3712878.0),	(517426.8,3712878.0),	(517426.8,3713079.0),
(516993.9,3713079.0),	(516993.9,3713280.0),	(516603.7,3713280.0),	(516603.7,3712884.0),	(516372.0,3712884.0),
(516372.0,3712798.0),	(516256.2,3712774.0),	(516276.8,3711378.0),	(516264.6,3712122.0),	(516264.6,3711598.0),
(516008.5,3712006.0),	(516008.5,3712122.0),	(516115.2,3712189.0),	(516179.3,3712061.0),	(516179.3,3712122.0),
(516264.6,3712122.0),	(515277.0,3711278.0),	(515377.0,3711278.0),	(515477.0,3711278.0),	(515577.0,3711278.0),
(515677.0,3711278.0),	(515777.0,3711278.0),	(515877.0,3711278.0),	(515977.0,3711278.0),	(516077.0,3711278.0),
(516177.0,3711278.0),	(516277.0,3711278.0),	(516377.0,3711278.0),	(516477.0,3711278.0),	(516577.0,3711278.0),
(516677.0,3711278.0),	(516777.0,3711278.0),	(516877.0,3711278.0),	(516977.0,3711278.0),	(517077.0,3711278.0),
(517177.0,3711278.0),	(515277.0,3711178.0),	(515377.0,3711178.0),	(515477.0,3711178.0),	(515577.0,3711178.0),
(515677.0,3711178.0),	(515777.0,3711178.0),	(515877.0,3711178.0),	(515977.0,3711178.0),	(516077.0,3711178.0),
(516177.0,3711178.0),	(516277.0,3711178.0),	(516377.0,3711178.0),	(516477.0,3711178.0),	(516577.0,3711178.0),
(516677.0,3711178.0),	(516777.0,3711178.0),	(516877.0,3711178.0),	(516977.0,3711178.0),	(517077.0,3711178.0),
(517177.0,3711178.0),	(515277.0,3711078.0),	(515377.0,3711078.0),	(515477.0,3711078.0),	(515577.0,3711078.0),
(515677.0,3711078.0),	(515777.0,3711078.0),	(515877.0,3711078.0),	(515977.0,3711078.0),	(516077.0,3711078.0),
(516177.0,3711078.0),	(516277.0,3711078.0),	(516377.0,3711078.0),	(516477.0,3711078.0),	(516577.0,3711078.0),
(516677.0,3711078.0),	(516777.0,3711078.0),	(516877.0,3711078.0),	(516977.0,3711078.0),	(517077.0,3711078.0),
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(516677.0,3710978.0),	(516777.0,3710978.0),	(516877.0,3710978.0),	(516977.0,3710978.0),	(517077.0,3710978.0),
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(516677.0,3710878.0),	(516777.0,3710878.0),	(516877.0,3710878.0),	(516977.0,3710878.0),	(517077.0,3710878.0),
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(516177.0,3710778.0),	(516277.0,3710778.0),	(516377.0,3710778.0),	(516477.0,3710778.0),	(516577.0,3710778.0),
(516677.0,3710778.0),	(516777.0,3710778.0),	(516877.0,3710778.0),	(516977.0,3710778.0),	(517077.0,3710778.0),
(517177.0,3710778.0),	(515277.0,3710678.0),	(515377.0,3710678.0),	(515477.0,3710678.0),	(515577.0,3710678.0),
(515677.0,3710678.0),	(515777.0,3710678.0),	(515877.0,3710678.0),	(515977.0,3710678.0),	(516077.0,3710678.0),
(516177.0,3710678.0),	(516277.0,3710678.0),	(516377.0,3710678.0),	(516477.0,3710678.0),	(516577.0,3710678.0),
(516677.0,3710678.0),	(516777.0,3710678.0),	(516877.0,3710678.0),	(516977.0,3710678.0),	(517077.0,3710678.0),
(517177.0,3710678.0),	(515277.0,3710578.0),	(515377.0,3710578.0),	(515477.0,3710578.0),	(515577.0,3710578.0),
(515677.0,3710578.0),	(515777.0,3710578.0),	(515877.0,3710578.0),	(515977.0,3710578.0),	(516077.0,3710578.0),
(516177.0,3710578.0),	(516277.0,3710578.0),	(516377.0,3710578.0),	(516477.0,3710578.0),	(516577.0,3710578.0),
(516677.0,3710578.0),	(516777.0,3710578.0),	(516877.0,3710578.0),	(516977.0,3710578.0),	(517077.0,3710578.0),
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(515677.0,3710478.0),	(515777.0,3710478.0),	(515877.0,3710478.0),	(515977.0,3710478.0),	(516077.0,3710478.0),
(516177.0,3710478.0),	(516277.0,3710478.0),	(516377.0,3710478.0),	(516477.0,3710478.0),	(516577.0,3710478.0),
(516677.0,3710478.0),	(516777.0,3710478.0),	(516877.0,3710478.0),	(516977.0,3710478.0),	(517077.0,3710478.0),
(517177.0,3710478.0),	(515277.0,3710378.0),	(515377.0,3710378.0),	(515477.0,3710378.0),	(515577.0,3710378.0),
(515677.0,3710378.0),	(515777.0,3710378.0),	(515877.0,3710378.0),	(515977.0,3710378.0),	(516077.0,3710378.0),
(516177.0,3710378.0),	(516277.0,3710378.0),	(516377.0,3710378.0),	(516477.0,3710378.0),	(516577.0,3710378.0),
(516677.0,3710378.0),	(516777.0,3710378.0),	(516877.0,3710378.0),	(516977.0,3710378.0),	(517077.0,3710378.0),
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*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
522402.0	3712378.0	30.48006	511277.0	3714176.0	36.57912	512277.0	3714176.0	36.57912
513277.0	3714176.0	33.53112	514277.0	3714176.0	30.48006	515277.0	3714176.0	48.77114
516277.0	3714176.0	48.77114	517277.0	3714176.0	70.10109	518277.0	3714176.0	33.53112
519277.0	3714176.0	27.42900	520277.0	3714176.0	30.48006	521277.0	3714176.0	30.48006
522277.0	3714176.0	30.48006	511277.0	3715176.0	45.72009	512277.0	3715176.0	60.96012
513277.0	3715176.0	39.62103	514277.0	3715176.0	51.81915	515277.0	3715176.0	54.86106
516277.0	3715176.0	39.62103	517277.0	3715176.0	30.48006	518277.0	3715176.0	30.48006
519277.0	3715176.0	27.42900	520277.0	3715176.0	24.38100	521277.0	3715176.0	30.48006
522277.0	3715176.0	30.48006	511277.0	3716176.0	60.96012	512277.0	3716176.0	39.62103
513277.0	3716176.0	51.81915	514277.0	3716176.0	60.96012	515277.0	3716176.0	70.10109
516277.0	3716176.0	24.38100	517277.0	3716176.0	30.48006	518277.0	3716176.0	30.48006
519277.0	3716176.0	30.48006	520277.0	3716176.0	33.53112	521277.0	3716176.0	27.42900
522277.0	3716176.0	27.42900	511277.0	3717176.0	48.77114	512277.0	3717176.0	54.86106
513277.0	3717176.0	60.96012	514277.0	3717176.0	60.96012	515277.0	3717176.0	42.66904
516277.0	3717176.0	30.48006	517277.0	3717176.0	30.48006	518277.0	3717176.0	33.53112
519277.0	3717176.0	36.57912	520277.0	3717176.0	30.48006	521277.0	3717176.0	27.42900
522277.0	3717176.0	27.42900	511277.0	3713176.0	42.66904	512277.0	3713176.0	36.57912
513277.0	3713176.0	36.57912	514277.0	3713176.0	36.57912	511277.0	3712176.0	36.57912
512277.0	3712176.0	39.62103	513277.0	3712176.0	39.62103	514277.0	3712176.0	33.53112
511277.0	3711176.0	48.77114	512277.0	3711176.0	64.01117	513277.0	3711176.0	39.62103
514277.0	3711176.0	45.72009	516500.0	3708100.0	67.66878	518100.0	3709350.0	79.25121
514500.0	3708800.0	80.47041	517300.0	3714400.0	76.20015			

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	VOLUME PARTICLE CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT.DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ.DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
1	0	0 0	0.65066E+01	516323.0	3711890.0	34.4	22.86	427.59	16.61	3.42	13.60	93.98	93.98

* CALM HOURS (=1) FOR DAY 2 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 4 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 6 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
* CALM HOURS (=1) FOR DAY 7 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 8 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	
* CALM HOURS (=1) FOR DAY 9 *	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	
* CALM HOURS (=1) FOR DAY 12 *	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 14 *	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	
* CALM HOURS (=1) FOR DAY 15 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	
* CALM HOURS (=1) FOR DAY 16 *	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 21 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 23 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
* CALM HOURS (=1) FOR DAY 24 *	1	1	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	
* CALM HOURS (=1) FOR DAY 26 *	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 28 *	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 31 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
* CALM HOURS (=1) FOR DAY 32 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 39 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 43 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 44 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	
* CALM HOURS (=1) FOR DAY 48 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 49 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	
* CALM HOURS (=1) FOR DAY 50 *	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	
* CALM HOURS (=1) FOR DAY 51 *	0	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 52 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	
* CALM HOURS (=1) FOR DAY 53 *	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 55 *	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 58 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
* CALM HOURS (=1) FOR DAY 59 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	
* CALM HOURS (=1) FOR DAY 60 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 61 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 66 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	
* CALM HOURS (=1) FOR DAY 73 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 75 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	
* CALM HOURS (=1) FOR DAY 76 *	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 77 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 83 *	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
* CALM HOURS (=1) FOR DAY 84 *	0	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 87 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	
* CALM HOURS (=1) FOR DAY 88 *	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 90 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	
* CALM HOURS (=1) FOR DAY 91 *	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 93 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	
* CALM HOURS (=1) FOR DAY 94 *	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 99 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	
* CALM HOURS (=1) FOR DAY 100 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
* CALM HOURS (=1) FOR DAY 101 *	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
* CALM HOURS (=1) FOR DAY 103 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
* CALM HOURS (=1) FOR DAY 104 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	
* CALM HOURS (=1) FOR DAY 113 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	
* CALM HOURS (=1) FOR DAY 114 *	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
* CALM HOURS (=1) FOR DAY 117 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	

* CALM HOURS (=1) FOR DAY 194 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 195 *	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 196 *	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 197 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 199 *	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 200 *	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 201 *	1	1	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 202 *	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 203 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 204 *	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 206 *	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 207 *	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 208 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 209 *	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 210 *	1	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 211 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 212 *	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 213 *	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 214 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 216 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 217 *	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 218 *	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 219 *	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 220 *	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 221 *	1	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 222 *	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 223 *	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 224 *	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 227 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 228 *	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 229 *	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 230 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 231 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 232 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 233 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 234 *	1	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
* CALM HOURS (=1) FOR DAY 239 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 240 *	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 241 *	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 242 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 243 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 244 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 245 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 246 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 247 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 248 *	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 249 *	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 250 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 251 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 252 *	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 253 *	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 257 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
* CALM HOURS (=1) FOR DAY 258 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 259 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 260 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 261 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 262 *	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 264 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 265 *	1	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 266 *	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 267 *	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	1	0	1	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 268 *	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 269 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 272 *	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 273 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 274 *	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0

* CALM HOURS (=1) FOR DAY 275 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 276 *	1	1	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 277 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 278 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 279 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 280 *	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 283 *	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
* CALM HOURS (=1) FOR DAY 284 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 286 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1
* CALM HOURS (=1) FOR DAY 287 *	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 288 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 289 *	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 290 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 293 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 297 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 298 *	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 299 *	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 300 *	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 302 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 303 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 308 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 309 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 310 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 311 *	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 312 *	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 313 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 314 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 317 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 319 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 320 *	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 322 *	1	0	0	0	0	1	1	1	1	0	0	1	1	1	0	0	0	0	0	1	0	0	1	1
* CALM HOURS (=1) FOR DAY 323 *	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 324 *	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 325 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1	0
* CALM HOURS (=1) FOR DAY 327 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 337 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 339 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 340 *	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 341 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 347 *	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 348 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 349 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 350 *	1	1	0	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 351 *	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 353 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 354 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 355 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 363 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 364 *	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 365 *	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516276.8	3711378.0	9.58725	(107,13)	516411.0	3712159.0	21.16797	(148,13)
516679.3	3711159.0	8.00842	(142,11)	516679.3	3711378.0	6.18517	(95,16)
517079.3	3711378.0	6.88355	(217,12)	517079.3	3711549.0	8.96824	(195,15)
517530.5	3711488.0	7.07101	(212,14)	517530.5	3711317.0	8.71054	(195,15)
518743.9	3711171.0	5.97550	(206,13)	518743.9	3711573.0	5.93144	(161,11)
519914.6	3711573.0	6.48039	(151, 7)	519914.6	3711171.0	4.60899	(123, 6)
520304.8	3711171.0	4.84568	(123, 6)	520304.8	3711024.0	5.06104	(218, 7)
520707.2	3711024.0	5.34928	(123, 6)	520817.0	3711628.0	5.62718	(151, 7)
520402.3	3712176.0	5.21873	(180, 1)	518707.2	3712176.0	6.06034	(218, 9)
518707.2	3712030.0	6.27172	(209,14)	518280.4	3712030.0	6.83785	(209,14)
518280.4	3712250.0	6.95753	(161,12)	518060.9	3712335.0	7.45217	(191,11)
518060.9	3712878.0	7.10182	(209,15)	517426.8	3712878.0	7.33468	(165,13)
517426.8	3713079.0	7.64720	(222,11)	516993.9	3713079.0	8.09962	(180,12)
516993.9	3713280.0	7.11024	(239,14)	516603.7	3713280.0	8.94554	(236,12)
516603.7	3712884.0	8.58339	(236,13)	516372.0	3712884.0	8.91751	(125,14)
516372.0	3712798.0	8.53775	(125,14)	516256.2	3712774.0	10.57817	(102,13)
516276.8	3711378.0	9.58725	(107,13)	516264.6	3712122.0	20.85358	(102,12)
516264.6	3711598.0	15.67996	(107,13)	516008.5	3712006.0	12.16926	(229,15)
516008.5	3712122.0	7.86585	(227,21)	516115.2	3712189.0	17.35140	(218,19)
516179.3	3712061.0	21.08109	(218,19)	516179.3	3712122.0	16.10753	(218,19)
516264.6	3712122.0	20.85358	(102,12)	515277.0	3711278.0	6.95966	(113,13)
515377.0	3711278.0	8.03278	(111,13)	515477.0	3711278.0	10.18913	(111,13)
515577.0	3711278.0	9.68781	(111,13)	515677.0	3711278.0	8.34403	(111,12)
515777.0	3711278.0	7.84684	(241,12)	515877.0	3711278.0	8.83701	(241,12)
515977.0	3711278.0	7.57999	(241,12)	516077.0	3711278.0	12.40656	(107,12)
516177.0	3711278.0	11.59414	(107,13)	516277.0	3711278.0	8.25325	(107,13)
516377.0	3711278.0	9.41118	(259,18)	516477.0	3711278.0	10.86505	(345,17)
516577.0	3711278.0	10.39023	(162,21)	516677.0	3711278.0	7.49246	(142,11)
516777.0	3711278.0	7.47921	(208,13)	516877.0	3711278.0	7.73254	(224,13)
516977.0	3711278.0	7.25723	(224,13)	517077.0	3711278.0	6.40994	(217,12)
517177.0	3711278.0	5.89788	(204,15)	515277.0	3711178.0	8.66485	(111,13)
515377.0	3711178.0	10.45969	(111,13)	515477.0	3711178.0	8.95647	(111,13)
515577.0	3711178.0	8.85643	(111,12)	515677.0	3711178.0	7.69728	(111,12)
515777.0	3711178.0	7.66955	(202,15)	515877.0	3711178.0	7.65439	(241,12)
515977.0	3711178.0	7.91358	(231,11)	516077.0	3711178.0	12.06289	(107,12)
516177.0	3711178.0	10.26399	(107,13)	516277.0	3711178.0	8.18464	(122,13)
516377.0	3711178.0	8.41700	(185,12)	516477.0	3711178.0	8.35160	(185,12)
516577.0	3711178.0	8.94916	(201,14)	516677.0	3711178.0	8.08495	(142,11)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516777.0	3711178.0	7.52409	(208,13)	516877.0	3711178.0	7.19716	(208,13)
516977.0	3711178.0	6.40563	(95,16)	517077.0	3711178.0	6.36168	(204,16)
517177.0	3711178.0	5.29618	(121,13)	515277.0	3711078.0	10.07836	(111,13)
515377.0	3711078.0	8.41313	(111,13)	515477.0	3711078.0	8.53025	(111,12)
515577.0	3711078.0	8.12056	(111,12)	515677.0	3711078.0	8.39058	(202,15)
515777.0	3711078.0	9.48573	(202,15)	515877.0	3711078.0	7.50977	(250,12)
515977.0	3711078.0	8.93904	(107,12)	516077.0	3711078.0	10.06775	(107,12)
516177.0	3711078.0	10.29353	(107,13)	516277.0	3711078.0	7.88479	(122,13)
516377.0	3711078.0	7.91653	(185,12)	516477.0	3711078.0	8.00286	(185,12)
516577.0	3711078.0	8.16004	(262,15)	516677.0	3711078.0	7.31085	(142,11)
516777.0	3711078.0	6.54667	(208,13)	516877.0	3711078.0	6.66883	(208,13)
516977.0	3711078.0	8.96161	(95,16)	517077.0	3711078.0	6.60297	(204,16)
517177.0	3711078.0	7.13957	(204,16)	515277.0	3710978.0	8.74442	(251,12)
515377.0	3710978.0	9.30014	(111,12)	515477.0	3710978.0	7.41734	(111,12)
515577.0	3710978.0	7.61784	(249,12)	515677.0	3710978.0	10.10965	(202,15)
515777.0	3710978.0	8.51562	(202,15)	515877.0	3710978.0	7.45989	(250,12)
515977.0	3710978.0	11.39513	(107,12)	516077.0	3710978.0	9.73677	(107,12)
516177.0	3710978.0	10.52420	(107,13)	516277.0	3710978.0	7.11795	(194,13)
516377.0	3710978.0	7.88604	(193,12)	516477.0	3710978.0	6.96772	(262,15)
516577.0	3710978.0	8.31334	(262,15)	516677.0	3710978.0	6.86412	(262,15)
516777.0	3710978.0	6.36251	(245,18)	516877.0	3710978.0	6.74873	(245,18)
516977.0	3710978.0	5.80234	(204,14)	517077.0	3710978.0	9.49079	(95,16)
517177.0	3710978.0	7.22153	(204,16)	515277.0	3710878.0	9.26170	(111,12)
515377.0	3710878.0	7.72023	(111,12)	515477.0	3710878.0	7.23851	(249,12)
515577.0	3710878.0	9.38301	(202,15)	515677.0	3710878.0	9.91735	(202,15)
515777.0	3710878.0	8.41507	(250,12)	515877.0	3710878.0	8.79170	(107,12)
515977.0	3710878.0	12.25789	(107,12)	516077.0	3710878.0	11.98441	(84,15)
516177.0	3710878.0	10.90670	(107,13)	516277.0	3710878.0	7.58087	(98,14)
516377.0	3710878.0	8.13733	(193,12)	516477.0	3710878.0	7.06141	(173,14)
516577.0	3710878.0	9.40681	(205,14)	516677.0	3710878.0	8.55139	(95,17)
516777.0	3710878.0	8.53558	(98,16)	516877.0	3710878.0	8.19238	(245,18)
516977.0	3710878.0	6.78342	(245,18)	517077.0	3710878.0	6.66870	(95,16)
517177.0	3710878.0	9.57529	(95,16)	515277.0	3710778.0	8.04226	(111,12)
515377.0	3710778.0	6.85533	(249,12)	515477.0	3710778.0	9.22798	(202,15)
515577.0	3710778.0	9.41176	(202,15)	515677.0	3710778.0	7.84545	(250,12)
515777.0	3710778.0	9.90616	(247,14)	515877.0	3710778.0	10.77810	(107,12)
515977.0	3710778.0	11.81586	(107,12)	516077.0	3710778.0	12.61458	(84,15)
516177.0	3710778.0	10.23213	(107,13)	516277.0	3710778.0	9.12041	(98,14)

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* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516377.0	3710778.0	8.34417	(193,12)	516477.0	3710778.0	7.69347	(173,14)
516577.0	3710778.0	10.13739	(205,14)	516677.0	3710778.0	11.76538	(95,17)
516777.0	3710778.0	11.96558	(162,21)	516877.0	3710778.0	9.19044	(245,18)
516977.0	3710778.0	9.74412	(245,18)	517077.0	3710778.0	8.05169	(204,14)
517177.0	3710778.0	7.76114	(95,16)	515277.0	3710678.0	7.07779	(230,10)
515377.0	3710678.0	8.04122	(202,15)	515477.0	3710678.0	9.72161	(202,15)
515577.0	3710678.0	8.35046	(202,15)	515677.0	3710678.0	7.60382	(247,14)
515777.0	3710678.0	9.05198	(247,14)	515877.0	3710678.0	11.22653	(107,12)
515977.0	3710678.0	11.85488	(84,15)	516077.0	3710678.0	11.86478	(107,13)
516177.0	3710678.0	9.99914	(84,14)	516277.0	3710678.0	9.34151	(98,14)
516377.0	3710678.0	9.17324	(230,11)	516477.0	3710678.0	8.20433	(259,18)
516577.0	3710678.0	10.20141	(205,14)	516677.0	3710678.0	10.73113	(95,17)
516777.0	3710678.0	11.11107	(162,21)	516877.0	3710678.0	9.56630	(98,16)
516977.0	3710678.0	9.43974	(245,18)	517077.0	3710678.0	7.98458	(245,18)
517177.0	3710678.0	7.17620	(204,14)	515277.0	3710578.0	7.44862	(202,15)
515377.0	3710578.0	9.17027	(202,15)	515477.0	3710578.0	9.46490	(202,15)
515577.0	3710578.0	8.05553	(289,11)	515677.0	3710578.0	8.92949	(247,14)
515777.0	3710578.0	9.34049	(230,13)	515877.0	3710578.0	11.17730	(107,12)
515977.0	3710578.0	12.90961	(84,15)	516077.0	3710578.0	11.09724	(107,13)
516177.0	3710578.0	11.45202	(84,14)	516277.0	3710578.0	10.61453	(98,14)
516377.0	3710578.0	10.34251	(289, 5)	516477.0	3710578.0	10.86571	(259,18)
516577.0	3710578.0	9.79495	(205,14)	516677.0	3710578.0	10.92018	(205,14)
516777.0	3710578.0	9.09832	(95,17)	516877.0	3710578.0	9.31521	(162,21)
516977.0	3710578.0	7.82410	(245,18)	517077.0	3710578.0	8.43651	(245,18)
517177.0	3710578.0	6.89013	(204,14)	515277.0	3710478.0	8.42607	(202,15)
515377.0	3710478.0	9.33370	(202,15)	515477.0	3710478.0	7.96390	(289,11)
515577.0	3710478.0	8.57559	(247,14)	515677.0	3710478.0	9.37717	(247,14)
515777.0	3710478.0	9.58856	(107,12)	515877.0	3710478.0	10.50865	(193,14)
515977.0	3710478.0	13.87049	(84,15)	516077.0	3710478.0	10.91444	(107,13)
516177.0	3710478.0	12.60097	(84,14)	516277.0	3710478.0	11.74224	(98,14)
516377.0	3710478.0	10.13034	(230,11)	516477.0	3710478.0	10.99475	(259,18)
516577.0	3710478.0	8.81436	(208,16)	516677.0	3710478.0	10.72942	(205,14)
516777.0	3710478.0	10.49380	(95,17)	516877.0	3710478.0	9.43753	(162,21)
516977.0	3710478.0	8.28906	(98,16)	517077.0	3710478.0	8.30873	(245,18)
517177.0	3710478.0	7.45980	(245,18)	515277.0	3710378.0	8.40695	(202,15)
515377.0	3710378.0	7.76269	(202,15)	515477.0	3710378.0	8.00177	(289,11)
515577.0	3710378.0	9.19883	(247,14)	515677.0	3710378.0	9.36843	(262,16)
515777.0	3710378.0	9.72588	(107,12)	515877.0	3710378.0	10.97511	(84,15)

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* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515977.0	3710378.0	12.98372	(84,15)	516077.0	3710378.0	9.88642	(107,13)
516177.0	3710378.0	11.20492	(84,14)	516277.0	3710378.0	10.51734	(98,14)
516377.0	3710378.0	9.49186	(230,11)	516477.0	3710378.0	8.93361	(259,18)
516577.0	3710378.0	8.56223	(208,16)	516677.0	3710378.0	9.83969	(205,14)
516777.0	3710378.0	9.84936	(95,17)	516877.0	3710378.0	10.08875	(162,21)
516977.0	3710378.0	9.23492	(98,16)	517077.0	3710378.0	7.49410	(245,18)
517177.0	3710378.0	7.82666	(245,18)	515277.0	3712276.0	6.10441	(229,15)
515377.0	3712276.0	5.58095	(203,11)	515477.0	3712276.0	6.80870	(203,11)
515577.0	3712276.0	7.63148	(203,11)	515677.0	3712276.0	8.47646	(231,13)
515777.0	3712276.0	8.06242	(231,13)	515877.0	3712276.0	5.12159	(231,13)
515977.0	3712276.0	6.00948	(29,21)	516077.0	3712276.0	7.59325	(218,19)
516177.0	3712276.0	10.76179	(30,14)	516277.0	3712276.0	18.47735	(30,13)
516377.0	3712276.0	11.02683	(102,11)	516477.0	3712276.0	15.38724	(148,13)
516577.0	3712276.0	9.80026	(180,12)	516677.0	3712276.0	7.39177	(352,12)
516777.0	3712276.0	5.78895	(232,11)	516877.0	3712276.0	8.30875	(245,12)
516977.0	3712276.0	8.26864	(245,12)	517077.0	3712276.0	6.83740	(245,12)
517177.0	3712276.0	6.61783	(233,13)	515277.0	3712376.0	5.62979	(128,16)
515377.0	3712376.0	5.85008	(203,11)	515477.0	3712376.0	6.75544	(203,11)
515577.0	3712376.0	7.55094	(217,13)	515677.0	3712376.0	8.14127	(231,13)
515777.0	3712376.0	7.83490	(156,12)	515877.0	3712376.0	7.76716	(156,12)
515977.0	3712376.0	12.65676	(218,19)	516077.0	3712376.0	7.41107	(132,12)
516177.0	3712376.0	15.15353	(102,12)	516277.0	3712376.0	16.47210	(102,13)
516377.0	3712376.0	9.66506	(102,11)	516477.0	3712376.0	12.30903	(148,13)
516577.0	3712376.0	8.03376	(148,13)	516677.0	3712376.0	6.51442	(180,12)
516777.0	3712376.0	7.77696	(225,13)	516877.0	3712376.0	8.26942	(232,11)
516977.0	3712376.0	7.94161	(245,12)	517077.0	3712376.0	7.19544	(245,12)
517177.0	3712376.0	7.00722	(228,11)	515277.0	3712476.0	6.00303	(174,13)
515377.0	3712476.0	6.62073	(174,13)	515477.0	3712476.0	6.32223	(108,12)
515577.0	3712476.0	6.93932	(206,11)	515677.0	3712476.0	7.05173	(156,12)
515777.0	3712476.0	8.21725	(156,12)	515877.0	3712476.0	8.39010	(156,13)
515977.0	3712476.0	7.70554	(156,13)	516077.0	3712476.0	7.41624	(30,14)
516177.0	3712476.0	14.36527	(102,12)	516277.0	3712476.0	14.70133	(102,13)
516377.0	3712476.0	8.19909	(102,11)	516477.0	3712476.0	8.29264	(236,13)
516577.0	3712476.0	11.44318	(148,13)	516677.0	3712476.0	8.35294	(180,12)
516777.0	3712476.0	7.81038	(225,13)	516877.0	3712476.0	8.13433	(225,13)
516977.0	3712476.0	7.19024	(232,11)	517077.0	3712476.0	6.48795	(232,11)
517177.0	3712476.0	5.99716	(174,14)	515277.0	3712576.0	6.87112	(174,13)
515377.0	3712576.0	6.85521	(108,12)	515477.0	3712576.0	7.11767	(153,12)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515577.0	3712576.0	6.75392	(153,12)	515677.0	3712576.0	6.84350	(144,11)
515777.0	3712576.0	7.22070	(156,13)	515877.0	3712576.0	8.00605	(156,13)
515977.0	3712576.0	7.01896	(156,13)	516077.0	3712576.0	8.58914	(231,12)
516177.0	3712576.0	10.87906	(102,12)	516277.0	3712576.0	12.94854	(102,13)
516377.0	3712576.0	7.92768	(125,14)	516477.0	3712576.0	8.21492	(236,12)
516577.0	3712576.0	11.06876	(148,13)	516677.0	3712576.0	7.64540	(217,11)
516777.0	3712576.0	6.64348	(180,12)	516877.0	3712576.0	7.05770	(225,13)
516977.0	3712576.0	6.72330	(201,15)	517077.0	3712576.0	6.80551	(201,15)
517177.0	3712576.0	6.39061	(216,13)	515277.0	3712676.0	6.54798	(108,12)
515377.0	3712676.0	7.07129	(153,12)	515477.0	3712676.0	7.09391	(144,11)
515577.0	3712676.0	7.20396	(144,11)	515677.0	3712676.0	7.22972	(174,11)
515777.0	3712676.0	6.71408	(174,11)	515877.0	3712676.0	6.74340	(245,13)
515977.0	3712676.0	6.83863	(231,12)	516077.0	3712676.0	8.59618	(102,12)
516177.0	3712676.0	9.53479	(102,12)	516277.0	3712676.0	11.38728	(102,13)
516377.0	3712676.0	7.55938	(125,14)	516477.0	3712676.0	7.81571	(236,12)
516577.0	3712676.0	8.89520	(148,13)	516677.0	3712676.0	8.57318	(148,13)
516777.0	3712676.0	6.67256	(180,12)	516877.0	3712676.0	6.41176	(183,13)
516977.0	3712676.0	6.25583	(190,13)	517077.0	3712676.0	7.08486	(201,15)
517177.0	3712676.0	7.20067	(201,15)	515277.0	3712776.0	6.59258	(153,12)
515377.0	3712776.0	6.55915	(144,11)	515477.0	3712776.0	6.74598	(144,11)
515577.0	3712776.0	7.17518	(174,11)	515677.0	3712776.0	7.23955	(174,11)
515777.0	3712776.0	6.36224	(245,13)	515877.0	3712776.0	6.38674	(245,13)
515977.0	3712776.0	6.48173	(169,14)	516077.0	3712776.0	9.25476	(102,12)
516177.0	3712776.0	7.64923	(223,17)	516277.0	3712776.0	9.50366	(102,13)
516377.0	3712776.0	7.41504	(125,14)	516477.0	3712776.0	7.24199	(241,11)
516577.0	3712776.0	7.26731	(228,14)	516677.0	3712776.0	9.27800	(148,13)
516777.0	3712776.0	6.76476	(190,12)	516877.0	3712776.0	7.72466	(180,12)
516977.0	3712776.0	6.82974	(183,13)	517077.0	3712776.0	6.71512	(190,13)
517177.0	3712776.0	7.34134	(187,11)	515277.0	3712876.0	6.23583	(144,11)
515377.0	3712876.0	6.48947	(144,11)	515477.0	3712876.0	6.47463	(174,11)
515577.0	3712876.0	6.84534	(174,11)	515677.0	3712876.0	6.37504	(174,11)
515777.0	3712876.0	6.40191	(136,11)	515877.0	3712876.0	6.60976	(135,11)
515977.0	3712876.0	6.46470	(229,14)	516077.0	3712876.0	9.65178	(102,12)
516177.0	3712876.0	7.39202	(102,13)	516277.0	3712876.0	8.86780	(102,13)
516377.0	3712876.0	7.44025	(125,14)	516477.0	3712876.0	7.51924	(102,11)
516577.0	3712876.0	6.70309	(236,12)	516677.0	3712876.0	9.17338	(148,13)
516777.0	3712876.0	8.12641	(148,13)	516877.0	3712876.0	7.66083	(180,12)
516977.0	3712876.0	7.76976	(180,12)	517077.0	3712876.0	7.50636	(255,12)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
517177.0	3712876.0	6.97236	(222,11)	515277.0	3712976.0	6.09206	(144,11)
515377.0	3712976.0	6.24059	(130,14)	515477.0	3712976.0	6.57968	(174,11)
515577.0	3712976.0	6.21417	(174,11)	515677.0	3712976.0	6.62211	(136,11)
515777.0	3712976.0	6.27868	(136,11)	515877.0	3712976.0	7.24279	(135,11)
515977.0	3712976.0	7.86607	(102,12)	516077.0	3712976.0	9.35981	(102,12)
516177.0	3712976.0	8.30351	(102,13)	516277.0	3712976.0	8.70230	(102,13)
516377.0	3712976.0	7.81772	(125,14)	516477.0	3712976.0	7.72015	(102,11)
516577.0	3712976.0	7.64959	(236,12)	516677.0	3712976.0	8.56558	(236,13)
516777.0	3712976.0	9.22744	(148,13)	516877.0	3712976.0	7.08676	(190,12)
516977.0	3712976.0	8.40221	(180,12)	517077.0	3712976.0	7.27146	(255,12)
517177.0	3712976.0	6.99948	(255,12)	515277.0	3713076.0	5.94436	(130,14)
515377.0	3713076.0	6.14064	(174,11)	515477.0	3713076.0	6.13292	(185,13)
515577.0	3713076.0	6.17970	(136,11)	515677.0	3713076.0	7.07872	(136,11)
515777.0	3713076.0	6.93076	(135,11)	515877.0	3713076.0	6.92392	(134,14)
515977.0	3713076.0	7.82020	(102,12)	516077.0	3713076.0	8.16291	(223,17)
516177.0	3713076.0	7.69151	(102,13)	516277.0	3713076.0	8.39832	(102,13)
516377.0	3713076.0	7.55815	(125,14)	516477.0	3713076.0	7.64885	(102,11)
516577.0	3713076.0	8.14442	(236,12)	516677.0	3713076.0	8.38938	(236,13)
516777.0	3713076.0	9.66589	(148,13)	516877.0	3713076.0	7.17250	(148,13)
516977.0	3713076.0	7.30914	(180,12)	517077.0	3713076.0	8.31956	(180,12)
517177.0	3713076.0	7.89258	(255,12)	515277.0	3713176.0	6.03874	(153,11)
515377.0	3713176.0	6.16564	(172,14)	515477.0	3713176.0	5.82176	(172,14)
515577.0	3713176.0	7.06762	(136,11)	515677.0	3713176.0	6.63503	(136,11)
515777.0	3713176.0	7.39547	(135,11)	515877.0	3713176.0	7.45944	(134,14)
515977.0	3713176.0	8.07579	(102,12)	516077.0	3713176.0	8.41057	(223,17)
516177.0	3713176.0	7.72290	(102,13)	516277.0	3713176.0	8.01474	(102,13)
516377.0	3713176.0	8.01733	(125,14)	516477.0	3713176.0	7.39594	(102,11)
516577.0	3713176.0	8.26509	(236,12)	516677.0	3713176.0	7.04296	(236,13)
516777.0	3713176.0	8.80713	(236,13)	516877.0	3713176.0	8.34609	(148,13)
516977.0	3713176.0	6.39752	(184,14)	517077.0	3713176.0	7.85859	(180,12)
517177.0	3713176.0	9.03695	(148,12)	515277.0	3712176.0	9.51073	(229,15)
515377.0	3712176.0	8.38545	(229,15)	515477.0	3712176.0	7.57654	(229,15)
515577.0	3712176.0	6.52353	(203,11)	515677.0	3712176.0	6.37067	(231,13)
515777.0	3712176.0	6.07497	(231,13)	515877.0	3712176.0	3.38453	(231,13)
515977.0	3712176.0	5.56423	(203,20)	516077.0	3712176.0	10.40932	(29,21)
516177.0	3712176.0	9.68652	(132,12)	515277.0	3712076.0	6.85116	(130,13)
515377.0	3712076.0	7.09687	(229,15)	515477.0	3712076.0	8.15626	(229,15)
515577.0	3712076.0	8.63451	(229,15)	515677.0	3712076.0	10.50812	(229,15)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515777.0	3712076.0	9.96000	(229,15)	515877.0	3712076.0	6.72207	(229,15)
515977.0	3712076.0	6.61205	(133,21)	516077.0	3712076.0	6.59502	(227,21)
516177.0	3712076.0	23.04195	(218,19)	515277.0	3711976.0	6.80543	(130,13)
515377.0	3711976.0	7.07508	(229,13)	515477.0	3711976.0	7.66416	(229,13)
515577.0	3711976.0	7.44517	(229,13)	515677.0	3711976.0	6.31962	(123,12)
515777.0	3711976.0	7.90433	(229,15)	515877.0	3711976.0	11.21237	(229,15)
515977.0	3711976.0	14.77358	(229,15)	516077.0	3711976.0	13.44750	(229,15)
516177.0	3711976.0	10.17301	(133,21)	515277.0	3711876.0	9.33661	(247,12)
515377.0	3711876.0	7.76929	(247,12)	515477.0	3711876.0	7.99189	(247,12)
515577.0	3711876.0	8.79760	(247,12)	515677.0	3711876.0	9.71196	(247,12)
515777.0	3711876.0	10.73018	(247,12)	515877.0	3711876.0	11.80855	(247,12)
515977.0	3711876.0	12.79267	(247,12)	516077.0	3711876.0	13.20175	(247,12)
516177.0	3711876.0	18.61227	(86,12)	515277.0	3711776.0	6.64744	(205,11)
515377.0	3711776.0	6.77277	(224,11)	515477.0	3711776.0	7.30034	(224,11)
515577.0	3711776.0	6.97339	(224,11)	515677.0	3711776.0	5.63448	(123,12)
515777.0	3711776.0	4.75816	(86,12)	515877.0	3711776.0	6.50301	(110,12)
515977.0	3711776.0	6.54681	(56, 7)	516077.0	3711776.0	8.87736	(111,10)
516177.0	3711776.0	18.45790	(111,13)	515277.0	3711676.0	7.27061	(128,11)
515377.0	3711676.0	7.01293	(128,11)	515477.0	3711676.0	6.57993	(128,11)
515577.0	3711676.0	5.42899	(128,11)	515677.0	3711676.0	4.57081	(56, 7)
515777.0	3711676.0	3.57668	(261,21)	515877.0	3711676.0	5.08315	(111,10)
515977.0	3711676.0	11.48374	(111,13)	516077.0	3711676.0	14.38029	(111,13)
516177.0	3711676.0	10.60609	(56,11)	515277.0	3711576.0	7.21128	(128,11)
515377.0	3711576.0	6.64466	(128,11)	515477.0	3711576.0	6.15473	(128,14)
515577.0	3711576.0	5.15280	(128,14)	515677.0	3711576.0	4.27668	(113,13)
515777.0	3711576.0	6.47676	(111,13)	515877.0	3711576.0	14.46787	(111,13)
515977.0	3711576.0	12.37276	(111,13)	516077.0	3711576.0	6.97790	(111,12)
516177.0	3711576.0	16.15864	(107,12)	515277.0	3711476.0	7.02417	(128,14)
515377.0	3711476.0	6.55795	(128,14)	515477.0	3711476.0	6.82794	(113,13)
515577.0	3711476.0	6.05579	(113,13)	515677.0	3711476.0	8.82429	(111,13)
515777.0	3711476.0	13.69833	(111,13)	515877.0	3711476.0	11.64421	(111,12)
515977.0	3711476.0	8.52579	(111,12)	516077.0	3711476.0	6.12478	(56,11)
516177.0	3711476.0	19.60714	(107,12)	511277.0	3709378.0	11.26468	(204, 5)
512277.0	3709378.0	10.70556	(82, 4)	513277.0	3709378.0	11.27712	(231, 5)
514277.0	3709378.0	10.78908	(48,18)	515277.0	3709378.0	10.06708	(122, 1)
516277.0	3709378.0	8.00124	(98,14)	517277.0	3709378.0	6.98092	(162,21)
518277.0	3709378.0	10.36227	(59,23)	519277.0	3709378.0	4.38174	(3,23)
520277.0	3709378.0	5.23994	(66, 8)	521277.0	3709378.0	4.83443	(116,19)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522277.0	3709378.0	4.55264	(52, 7)	511277.0	3708378.0	10.87643	(122, 6)
512277.0	3708378.0	8.33824	(260, 3)	513277.0	3708378.0	11.94574	(167,20)
514277.0	3708378.0	11.04314	(113, 2)	515277.0	3708378.0	8.20754	(263, 2)
516277.0	3708378.0	6.18742	(316,20)	517277.0	3708378.0	10.73718	(9,24)
518277.0	3708378.0	7.73531	(362,18)	519277.0	3708378.0	6.27777	(353, 9)
520277.0	3708378.0	5.12731	(164, 6)	521277.0	3708378.0	4.65349	(286,18)
522277.0	3708378.0	4.58868	(127, 4)	511277.0	3707378.0	10.42520	(364,18)
512277.0	3707378.0	11.54159	(264,20)	513277.0	3707378.0	11.17837	(121, 3)
514277.0	3707378.0	10.18433	(100, 2)	515277.0	3707378.0	11.34967	(208,20)
516277.0	3707378.0	8.17772	(296,18)	517277.0	3707378.0	11.75916	(259, 2)
518277.0	3707378.0	8.69444	(127,19)	519277.0	3707378.0	5.66787	(208, 6)
520277.0	3707378.0	5.25753	(353, 9)	521277.0	3707378.0	5.13659	(164, 6)
522277.0	3707378.0	4.47280	(163, 3)	511277.0	3706378.0	10.87545	(265, 2)
512277.0	3706378.0	11.79109	(163,22)	513277.0	3706378.0	10.13389	(122, 4)
514277.0	3706378.0	11.47822	(90,19)	515277.0	3706378.0	11.55222	(121, 5)
516277.0	3706378.0	8.29717	(37,20)	517277.0	3706378.0	8.23598	(263, 4)
518277.0	3706378.0	9.46738	(308, 5)	519277.0	3706378.0	5.02679	(362,18)
520277.0	3706378.0	5.86784	(316,10)	521277.0	3706378.0	4.98603	(261, 8)
522277.0	3706378.0	5.19883	(294,24)	523277.0	3706378.0	4.61054	(163, 3)
522402.0	3710378.0	4.76182	(218, 7)	522402.0	3711378.0	5.47884	(160,20)
522402.0	3712378.0	5.16785	(180, 1)	511277.0	3714176.0	6.25733	(207, 2)
512277.0	3714176.0	5.95538	(210,22)	513277.0	3714176.0	4.87317	(177,20)
514277.0	3714176.0	5.15680	(29,21)	515277.0	3714176.0	8.29960	(256,21)
516277.0	3714176.0	8.55509	(301,12)	517277.0	3714176.0	10.53906	(150, 6)
518277.0	3714176.0	5.85884	(352,12)	519277.0	3714176.0	4.59111	(54, 9)
520277.0	3714176.0	5.74615	(210,10)	521277.0	3714176.0	5.20755	(134, 2)
522277.0	3714176.0	5.22710	(170,20)	511277.0	3715176.0	7.82708	(271, 5)
512277.0	3715176.0	11.82557	(272,20)	513277.0	3715176.0	6.36754	(50,18)
514277.0	3715176.0	9.45723	(178, 4)	515277.0	3715176.0	10.01628	(306, 2)
516277.0	3715176.0	6.03213	(358,17)	517277.0	3715176.0	5.38799	(102,15)
518277.0	3715176.0	4.59392	(318,11)	519277.0	3715176.0	4.14003	(183, 6)
520277.0	3715176.0	4.15321	(189, 7)	521277.0	3715176.0	5.47875	(210,10)
522277.0	3715176.0	5.70634	(185, 7)	511277.0	3716176.0	11.66505	(196, 1)
512277.0	3716176.0	6.88195	(229, 4)	513277.0	3716176.0	9.48643	(118, 5)
514277.0	3716176.0	11.31367	(275,19)	515277.0	3716176.0	11.72888	(149,20)
516277.0	3716176.0	4.86072	(219,17)	517277.0	3716176.0	5.96123	(324, 9)
518277.0	3716176.0	4.98684	(191,20)	519277.0	3716176.0	4.81176	(236, 2)
520277.0	3716176.0	5.82329	(352,18)	521277.0	3716176.0	4.84843	(227, 6)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522277.0	3716176.0	5.31612	(137,21)	511277.0	3717176.0	8.74939	(229, 4)
512277.0	3717176.0	10.50802	(177,21)	513277.0	3717176.0	11.63069	(305, 2)
514277.0	3717176.0	11.91923	(194,22)	515277.0	3717176.0	7.38582	(213, 3)
516277.0	3717176.0	5.22481	(211,20)	517277.0	3717176.0	5.69705	(324, 9)
518277.0	3717176.0	5.71035	(212, 5)	519277.0	3717176.0	5.86664	(236,21)
520277.0	3717176.0	5.66681	(208, 4)	521277.0	3717176.0	5.23775	(352,18)
522277.0	3717176.0	5.68481	(227, 6)	511277.0	3713176.0	7.44565	(205, 6)
512277.0	3713176.0	5.74778	(248,19)	513277.0	3713176.0	4.75451	(72,23)
514277.0	3713176.0	6.10072	(273,13)	511277.0	3712176.0	6.19207	(204,23)
512277.0	3712176.0	6.12337	(143,21)	513277.0	3712176.0	5.92968	(253,18)
514277.0	3712176.0	6.50829	(275,14)	511277.0	3711176.0	8.26464	(277,18)
512277.0	3711176.0	11.85017	(205,23)	513277.0	3711176.0	5.43424	(251,19)
514277.0	3711176.0	6.35726	(259, 9)	511277.0	3709378.0	11.26468	(204, 5)
512277.0	3709378.0	10.70556	(82, 4)	513277.0	3709378.0	11.27712	(231, 5)
514277.0	3709378.0	10.78908	(48,18)	515277.0	3709378.0	10.06708	(122, 1)
516277.0	3709378.0	8.00124	(98,14)	517277.0	3709378.0	6.98092	(162,21)
518277.0	3709378.0	10.36227	(59,23)	519277.0	3709378.0	4.38174	(3,23)
520277.0	3709378.0	5.23994	(66, 8)	521277.0	3709378.0	4.83443	(116,19)
522277.0	3709378.0	4.55264	(52, 7)	511277.0	3708378.0	10.87643	(122, 6)
512277.0	3708378.0	8.33824	(260, 3)	513277.0	3708378.0	11.94574	(167,20)
514277.0	3708378.0	11.04314	(113, 2)	515277.0	3708378.0	8.20754	(263, 2)
516277.0	3708378.0	6.18742	(316,20)	517277.0	3708378.0	10.73718	(9,24)
518277.0	3708378.0	7.73531	(362,18)	519277.0	3708378.0	5.27777	(353, 9)
520277.0	3708378.0	5.12731	(164, 6)	521277.0	3708378.0	4.65349	(286,18)
522277.0	3708378.0	4.58868	(127, 4)	511277.0	3707378.0	10.42520	(364,18)
512277.0	3707378.0	11.54159	(264,20)	513277.0	3707378.0	11.17837	(121, 3)
514277.0	3707378.0	10.18433	(100, 2)	515277.0	3707378.0	11.34967	(208,20)
516277.0	3707378.0	8.17772	(296,18)	517277.0	3707378.0	11.75916	(259, 2)
518277.0	3707378.0	8.69444	(127,19)	519277.0	3707378.0	5.66787	(208, 6)
520277.0	3707378.0	5.25753	(353, 9)	521277.0	3707378.0	5.13659	(164, 6)
522277.0	3707378.0	4.47280	(163, 3)	511277.0	3706378.0	10.87545	(265, 2)
512277.0	3706378.0	11.79109	(163,22)	513277.0	3706378.0	10.13389	(122, 4)
514277.0	3706378.0	11.47822	(90,19)	515277.0	3706378.0	11.55222	(121, 5)
516277.0	3706378.0	8.29717	(37,20)	517277.0	3706378.0	8.23598	(263, 4)
518277.0	3706378.0	9.46738	(308, 5)	519277.0	3706378.0	5.02679	(362,18)
520277.0	3706378.0	5.86784	(316,10)	521277.0	3706378.0	4.98603	(261, 8)
522277.0	3706378.0	5.19883	(294,24)	523277.0	3706378.0	4.61054	(163, 3)
522402.0	3710378.0	4.76182	(218, 7)	522402.0	3711378.0	5.47884	(160,20)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522402.0	3712378.0	5.16785	(180, 1)	511277.0	3714176.0	6.25733	(207, 2)
512277.0	3714176.0	5.95538	(210,22)	513277.0	3714176.0	4.87317	(177,20)
514277.0	3714176.0	5.15680	(29,21)	515277.0	3714176.0	8.29960	(256,21)
516277.0	3714176.0	8.55509	(301,12)	517277.0	3714176.0	10.53906	(150, 6)
518277.0	3714176.0	5.85884	(352,12)	519277.0	3714176.0	4.59111	(54, 9)
520277.0	3714176.0	5.74615	(210,10)	521277.0	3714176.0	5.20755	(134, 2)
522277.0	3714176.0	5.22710	(170,20)	511277.0	3715176.0	7.82708	(271, 5)
512277.0	3715176.0	11.82557	(272,20)	513277.0	3715176.0	6.36754	(50,18)
514277.0	3715176.0	9.45723	(178, 4)	515277.0	3715176.0	10.01628	(306, 2)
516277.0	3715176.0	6.03213	(358,17)	517277.0	3715176.0	5.38799	(102,15)
518277.0	3715176.0	4.59392	(318,11)	519277.0	3715176.0	4.14003	(183, 6)
520277.0	3715176.0	4.15321	(189, 7)	521277.0	3715176.0	5.47875	(210,10)
522277.0	3715176.0	5.70634	(185, 7)	511277.0	3716176.0	11.66505	(196, 1)
512277.0	3716176.0	6.88195	(229, 4)	513277.0	3716176.0	9.48643	(118, 5)
514277.0	3716176.0	11.31367	(275,19)	515277.0	3716176.0	11.72888	(149,20)
516277.0	3716176.0	4.86072	(219,17)	517277.0	3716176.0	5.96123	(324, 9)
518277.0	3716176.0	4.98684	(191,20)	519277.0	3716176.0	4.81176	(236, 2)
520277.0	3716176.0	5.82329	(352,18)	521277.0	3716176.0	4.84843	(227, 6)
522277.0	3716176.0	5.31612	(137,21)	511277.0	3717176.0	8.74939	(229, 4)
512277.0	3717176.0	10.50802	(177,21)	513277.0	3717176.0	11.63069	(305, 2)
514277.0	3717176.0	11.91923	(194,22)	515277.0	3717176.0	7.38582	(213, 3)
516277.0	3717176.0	5.22481	(211,20)	517277.0	3717176.0	5.69705	(324, 9)
518277.0	3717176.0	5.71035	(212, 5)	519277.0	3717176.0	5.86664	(236,21)
520277.0	3717176.0	5.66681	(208, 4)	521277.0	3717176.0	5.23775	(352,18)
522277.0	3717176.0	5.68481	(227, 6)	511277.0	3713176.0	7.44565	(205, 6)
512277.0	3713176.0	5.74778	(248,19)	513277.0	3713176.0	4.75451	(72,23)
514277.0	3713176.0	6.10072	(273,13)	511277.0	3712176.0	6.19207	(204,23)
512277.0	3712176.0	6.12337	(143,21)	513277.0	3712176.0	5.92968	(253,18)
514277.0	3712176.0	6.50829	(275,14)	511277.0	3711176.0	8.26464	(277,18)
512277.0	3711176.0	11.85017	(205,23)	513277.0	3711176.0	5.43424	(251,19)
514277.0	3711176.0	6.35726	(259, 9)	516500.0	3708100.0	13.00972	(289, 5)
518100.0	3709350.0	10.52223	(151,22)	514500.0	3708800.0	10.98060	(246, 5)
517300.0	3714400.0	10.58225	(239, 2)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516276.8	3711378.0	8.61326	(84,14)	516411.0	3712159.0	18.55573	(102,15)
516679.3	3711159.0	7.38634	(201,14)	516679.3	3711378.0	5.99492	(293, 1)
517079.3	3711378.0	6.25275	(233,11)	517079.3	3711549.0	8.25258	(95,13)
517530.5	3711488.0	7.01017	(234,11)	517530.5	3711317.0	8.28932	(95,13)
518743.9	3711171.0	5.73120	(234,15)	518743.9	3711573.0	5.31015	(208,15)
519914.6	3711573.0	4.45731	(148, 5)	519914.6	3711171.0	4.55370	(47,19)
520304.8	3711171.0	4.77451	(151, 7)	520304.8	3711024.0	4.98253	(47,19)
520707.2	3711024.0	4.90559	(47,19)	520817.0	3711628.0	5.41779	(160,20)
520402.3	3712176.0	4.81276	(137,23)	518707.2	3712176.0	6.03230	(245, 9)
518707.2	3712030.0	5.99476	(223,11)	518280.4	3712030.0	6.35928	(223,11)
518280.4	3712250.0	6.81889	(178,13)	518060.9	3712335.0	6.90965	(178,13)
518060.9	3712878.0	6.92018	(184,11)	517426.8	3712878.0	7.03178	(187,11)
517426.8	3713079.0	7.51562	(183,16)	516993.9	3713079.0	7.47800	(236,15)
516993.9	3713280.0	6.90093	(216,14)	516603.7	3713280.0	7.84069	(102,11)
516603.7	3712884.0	7.36269	(148,13)	516372.0	3712884.0	7.60677	(242,12)
516372.0	3712798.0	7.29616	(242,12)	516256.2	3712774.0	7.91419	(221,15)
516276.8	3711378.0	8.61326	(84,14)	516264.6	3712122.0	19.49486	(336,17)
516264.6	3711598.0	13.73777	(84,15)	516008.5	3712006.0	7.59817	(133,19)
516008.5	3712122.0	6.78965	(203,20)	516115.2	3712189.0	10.78919	(126, 9)
516179.3	3712061.0	19.28407	(29,21)	516179.3	3712122.0	15.10766	(126, 9)
516264.6	3712122.0	19.49486	(336,17)	515277.0	3711278.0	6.52997	(142,13)
515377.0	3711278.0	6.42727	(142,13)	515477.0	3711278.0	7.25768	(230,14)
515577.0	3711278.0	7.91847	(230,14)	515677.0	3711278.0	7.13763	(230,14)
515777.0	3711278.0	7.84193	(232,13)	515877.0	3711278.0	7.70093	(232,13)
515977.0	3711278.0	6.83749	(231,11)	516077.0	3711278.0	8.09211	(205,12)
516177.0	3711278.0	11.05296	(84,15)	516277.0	3711278.0	7.99557	(84,14)
516377.0	3711278.0	7.19440	(84,17)	516477.0	3711278.0	8.96229	(98,15)
516577.0	3711278.0	9.66024	(98,16)	516677.0	3711278.0	6.37024	(208,13)
516777.0	3711278.0	6.74733	(224,13)	516877.0	3711278.0	7.09200	(233,11)
516977.0	3711278.0	7.18704	(233,11)	517077.0	3711278.0	6.32478	(233,11)
517177.0	3711278.0	5.62184	(228,10)	515277.0	3711178.0	6.89597	(250,14)
515377.0	3711178.0	7.63268	(230,14)	515477.0	3711178.0	8.01237	(230,14)
515577.0	3711178.0	7.41199	(230,14)	515677.0	3711178.0	7.06849	(249,12)
515777.0	3711178.0	7.60617	(232,13)	515877.0	3711178.0	7.21406	(231,11)
515977.0	3711178.0	7.29892	(205,12)	516077.0	3711178.0	8.87851	(205,12)
516177.0	3711178.0	8.08439	(248,12)	516277.0	3711178.0	6.59312	(107,13)
516377.0	3711178.0	6.14941	(122,13)	516477.0	3711178.0	7.96489	(201,14)
516577.0	3711178.0	8.08703	(142,11)	516677.0	3711178.0	7.38453	(201,14)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516777.0	3711178.0	6.38916	(142,11)	516877.0	3711178.0	6.62943	(95,16)
516977.0	3711178.0	6.23839	(224,13)	517077.0	3711178.0	5.59766	(224,13)
517177.0	3711178.0	5.08967	(204,15)	515277.0	3711078.0	7.52964	(251,12)
515377.0	3711078.0	8.04069	(111,12)	515477.0	3711078.0	7.01285	(230,14)
515577.0	3711078.0	7.33835	(249,12)	515677.0	3711078.0	7.71479	(249,12)
515777.0	3711078.0	7.94368	(117,12)	515877.0	3711078.0	7.24991	(231,11)
515977.0	3711078.0	7.68747	(230,12)	516077.0	3711078.0	7.98475	(205,12)
516177.0	3711078.0	7.64942	(122,13)	516277.0	3711078.0	5.88433	(185,12)
516377.0	3711078.0	6.80501	(193,12)	516477.0	3711078.0	7.08794	(262,15)
516577.0	3711078.0	8.04380	(201,14)	516677.0	3711078.0	7.13963	(201,14)
516777.0	3711078.0	6.31422	(142,11)	516877.0	3711078.0	4.58682	(142,11)
516977.0	3711078.0	5.88135	(208,13)	517077.0	3711078.0	6.33898	(95,16)
517177.0	3711078.0	5.83974	(121,13)	515277.0	3710978.0	8.39430	(111,12)
515377.0	3710978.0	7.25290	(251,12)	515477.0	3710978.0	6.81899	(249,12)
515577.0	3710978.0	7.42833	(202,15)	515677.0	3710978.0	7.99890	(117,12)
515777.0	3710978.0	8.19746	(233,12)	515877.0	3710978.0	7.33419	(247,14)
515977.0	3710978.0	8.51088	(230,12)	516077.0	3710978.0	8.57086	(84,15)
516177.0	3710978.0	6.76016	(122,13)	516277.0	3710978.0	7.08578	(98,14)
516377.0	3710978.0	7.67052	(168,14)	516477.0	3710978.0	6.94417	(185,12)
516577.0	3710978.0	7.57649	(229,12)	516677.0	3710978.0	6.59642	(152,14)
516777.0	3710978.0	5.68129	(142,11)	516877.0	3710978.0	5.65713	(208,13)
516977.0	3710978.0	5.44850	(228,15)	517077.0	3710978.0	6.16316	(240,13)
517177.0	3710978.0	6.25539	(240,13)	515277.0	3710878.0	7.64540	(251,12)
515377.0	3710878.0	6.94595	(230,10)	515477.0	3710878.0	6.50141	(117,15)
515577.0	3710878.0	7.38503	(117,12)	515677.0	3710878.0	8.13748	(233,12)
515777.0	3710878.0	8.00841	(247,14)	515877.0	3710878.0	8.39002	(247,14)
515977.0	3710878.0	8.53799	(230,12)	516077.0	3710878.0	10.59483	(107,13)
516177.0	3710878.0	7.41549	(84,14)	516277.0	3710878.0	7.57858	(194,13)
516377.0	3710878.0	7.94752	(168,14)	516477.0	3710878.0	6.85322	(229,12)
516577.0	3710878.0	8.80707	(262,15)	516677.0	3710878.0	8.07110	(262,15)
516777.0	3710878.0	8.02079	(162,21)	516877.0	3710878.0	5.77397	(151,17)
516977.0	3710878.0	6.33195	(204,14)	517077.0	3710878.0	6.29589	(204,14)
517177.0	3710878.0	6.39368	(240,13)	515277.0	3710778.0	7.92028	(230,10)
515377.0	3710778.0	6.44413	(230,10)	515477.0	3710778.0	7.06220	(249,15)
515577.0	3710778.0	7.27482	(233,12)	515677.0	3710778.0	7.77155	(233,12)
515777.0	3710778.0	8.82852	(246,14)	515877.0	3710778.0	8.57208	(230,12)
515977.0	3710778.0	9.70924	(193,14)	516077.0	3710778.0	11.81357	(107,13)
516177.0	3710778.0	8.28449	(84,14)	516277.0	3710778.0	8.00022	(194,13)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516377.0	3710778.0	8.29032	(230,11)	516477.0	3710778.0	7.51192	(259,18)
516577.0	3710778.0	8.62871	(345,17)	516677.0	3710778.0	9.62923	(205,14)
516777.0	3710778.0	11.36557	(98,16)	516877.0	3710778.0	8.41237	(151,17)
516977.0	3710778.0	7.51437	(151,17)	517077.0	3710778.0	7.74136	(293, 1)
517177.0	3710778.0	6.40319	(204,14)	515277.0	3710678.0	6.73701	(296,11)
515377.0	3710678.0	6.84016	(328,13)	515477.0	3710678.0	6.91476	(249,15)
515577.0	3710678.0	7.31621	(233,12)	515677.0	3710678.0	7.42737	(250,12)
515777.0	3710678.0	8.35969	(262,16)	515877.0	3710678.0	8.57840	(193,14)
515977.0	3710678.0	10.60447	(107,12)	516077.0	3710678.0	10.92958	(84,15)
516177.0	3710678.0	9.85727	(107,13)	516277.0	3710678.0	7.91334	(194,13)
516377.0	3710678.0	8.56452	(261,14)	516477.0	3710678.0	7.69957	(286,14)
516577.0	3710678.0	9.45717	(345,17)	516677.0	3710678.0	10.60353	(205,14)
516777.0	3710678.0	9.56567	(95,17)	516877.0	3710678.0	8.59521	(162,21)
516977.0	3710678.0	8.19662	(151,17)	517077.0	3710678.0	6.84049	(204,14)
517177.0	3710678.0	6.17443	(228,15)	515277.0	3710578.0	7.23497	(328,13)
515377.0	3710578.0	6.59218	(249,15)	515477.0	3710578.0	7.15517	(268,10)
515577.0	3710578.0	8.05551	(107,11)	515677.0	3710578.0	8.22802	(246,14)
515777.0	3710578.0	9.23385	(247,14)	515877.0	3710578.0	9.91711	(193,14)
515977.0	3710578.0	9.69886	(193,14)	516077.0	3710578.0	8.78035	(230,15)
516177.0	3710578.0	9.67132	(107, 9)	516277.0	3710578.0	7.85786	(194,13)
516377.0	3710578.0	10.28260	(230,11)	516477.0	3710578.0	9.15505	(84,17)
516577.0	3710578.0	9.59345	(345,17)	516677.0	3710578.0	10.18403	(84,16)
516777.0	3710578.0	7.80360	(170,16)	516877.0	3710578.0	9.30647	(98,16)
516977.0	3710578.0	6.47544	(240,14)	517077.0	3710578.0	6.07714	(325,14)
517177.0	3710578.0	6.34845	(245,18)	515277.0	3710478.0	6.55949	(328,13)
515377.0	3710478.0	7.39232	(268,10)	515477.0	3710478.0	7.96383	(107,11)
515577.0	3710478.0	8.29047	(289,11)	515677.0	3710478.0	8.88675	(262,16)
515777.0	3710478.0	9.25505	(230,13)	515877.0	3710478.0	10.40485	(107,12)
515977.0	3710478.0	9.31064	(261,11)	516077.0	3710478.0	9.30507	(162,22)
516177.0	3710478.0	10.62081	(10, 9)	516277.0	3710478.0	8.32430	(107,15)
516377.0	3710478.0	10.10387	(289, 5)	516477.0	3710478.0	9.27287	(261,14)
516577.0	3710478.0	8.75241	(205,14)	516677.0	3710478.0	10.45382	(98,15)
516777.0	3710478.0	8.57335	(127,14)	516877.0	3710478.0	8.56970	(98,16)
516977.0	3710478.0	7.80430	(211,14)	517077.0	3710478.0	6.83271	(151,17)
517177.0	3710478.0	6.14273	(325,14)	515277.0	3710378.0	6.79438	(268,10)
515377.0	3710378.0	6.74254	(284,10)	515477.0	3710378.0	8.00156	(107,11)
515577.0	3710378.0	8.78657	(246,14)	515677.0	3710378.0	9.32768	(277,13)
515777.0	3710378.0	9.20401	(263,15)	515877.0	3710378.0	10.22240	(193,14)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515977.0	3710378.0	9.52527	(261,11)	516077.0	3710378.0	8.96392	(205,16)
516177.0	3710378.0	9.47038	(10, 9)	516277.0	3710378.0	8.00149	(107,15)
516377.0	3710378.0	8.89281	(261,14)	516477.0	3710378.0	8.57571	(261,14)
516577.0	3710378.0	8.22606	(286,14)	516677.0	3710378.0	9.77796	(98,15)
516777.0	3710378.0	8.80781	(205,14)	516877.0	3710378.0	9.74621	(95,17)
516977.0	3710378.0	8.84599	(162,21)	517077.0	3710378.0	6.84628	(240,14)
517177.0	3710378.0	6.03450	(325,14)	515277.0	3712276.0	5.55559	(171,10)
515377.0	3712276.0	5.20215	(171,10)	515477.0	3712276.0	5.99927	(217,13)
515577.0	3712276.0	7.17950	(217,13)	515677.0	3712276.0	7.65834	(217,13)
515777.0	3712276.0	6.07466	(217,13)	515877.0	3712276.0	4.93926	(156,12)
515977.0	3712276.0	4.06310	(335,18)	516077.0	3712276.0	6.58044	(126, 9)
516177.0	3712276.0	9.72694	(102,12)	516277.0	3712276.0	17.65425	(102,13)
516377.0	3712276.0	9.66893	(236,12)	516477.0	3712276.0	11.04627	(236,13)
516577.0	3712276.0	6.48147	(166,12)	516677.0	3712276.0	5.16581	(352,14)
516777.0	3712276.0	5.20836	(245,12)	516877.0	3712276.0	7.85196	(232,11)
516977.0	3712276.0	6.97239	(232,11)	517077.0	3712276.0	6.28632	(233,13)
517177.0	3712276.0	6.57160	(226,14)	515277.0	3712376.0	5.55329	(174, 9)
515377.0	3712376.0	5.42020	(217,13)	515477.0	3712376.0	6.65693	(217,13)
515577.0	3712376.0	7.35005	(231,13)	515677.0	3712376.0	7.73576	(206,11)
515777.0	3712376.0	7.42586	(231,13)	515877.0	3712376.0	6.62492	(156,13)
515977.0	3712376.0	7.25361	(126, 9)	516077.0	3712376.0	6.84693	(336, 7)
516177.0	3712376.0	10.99716	(30,11)	516277.0	3712376.0	14.91710	(30,13)
516377.0	3712376.0	8.05521	(357,12)	516477.0	3712376.0	10.94928	(236,13)
516577.0	3712376.0	7.52042	(180,12)	516677.0	3712376.0	5.54178	(78,15)
516777.0	3712376.0	6.43316	(232,11)	516877.0	3712376.0	7.68675	(225,13)
516977.0	3712376.0	7.92431	(232,11)	517077.0	3712376.0	6.48079	(232,11)
517177.0	3712376.0	6.54573	(174,14)	515277.0	3712476.0	5.84126	(174, 9)
515377.0	3712476.0	5.83350	(108,12)	515477.0	3712476.0	6.31564	(174,13)
515577.0	3712476.0	6.83618	(168,11)	515677.0	3712476.0	7.04201	(206,11)
515777.0	3712476.0	6.93861	(156,13)	515877.0	3712476.0	7.74822	(156,12)
515977.0	3712476.0	5.19175	(126, 9)	516077.0	3712476.0	6.94859	(231,12)
516177.0	3712476.0	11.15920	(223,17)	516277.0	3712476.0	11.83324	(30,13)
516377.0	3712476.0	8.10845	(125,14)	516477.0	3712476.0	7.86215	(148,13)
516577.0	3712476.0	7.89945	(236,13)	516677.0	3712476.0	6.19155	(217,11)
516777.0	3712476.0	5.10639	(232,11)	516877.0	3712476.0	6.93786	(232,11)
516977.0	3712476.0	6.85892	(225,13)	517077.0	3712476.0	6.27170	(245,12)
517177.0	3712476.0	5.58153	(245,12)	515277.0	3712576.0	6.58874	(273,13)
515377.0	3712576.0	6.73332	(174,13)	515477.0	3712576.0	6.48418	(108,12)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515577.0	3712576.0	6.69647	(144,11)	515677.0	3712576.0	6.68448	(156,12)
515777.0	3712576.0	7.05747	(156,12)	515877.0	3712576.0	6.18739	(245,13)
515977.0	3712576.0	6.58672	(231,12)	516077.0	3712576.0	8.04482	(102,12)
516177.0	3712576.0	9.36867	(223,17)	516277.0	3712576.0	9.48899	(30,13)
516377.0	3712576.0	6.92420	(102,11)	516477.0	3712576.0	7.43002	(102,11)
516577.0	3712576.0	9.00910	(236,13)	516677.0	3712576.0	6.39753	(148,13)
516777.0	3712576.0	6.25607	(225,13)	516877.0	3712576.0	5.46268	(190,13)
516977.0	3712576.0	6.60074	(225,13)	517077.0	3712576.0	6.13617	(201,13)
517177.0	3712576.0	6.24494	(201,13)	515277.0	3712676.0	6.50196	(153,12)
515377.0	3712676.0	6.35997	(108,12)	515477.0	3712676.0	7.00319	(153,12)
515577.0	3712676.0	6.60186	(130,14)	515677.0	3712676.0	6.21984	(130,14)
515777.0	3712676.0	6.54873	(245,13)	515877.0	3712676.0	6.60502	(156,13)
515977.0	3712676.0	5.92015	(169,14)	516077.0	3712676.0	8.11586	(231,12)
516177.0	3712676.0	9.07576	(223,17)	516277.0	3712676.0	7.76673	(221,14)
516377.0	3712676.0	7.07340	(241,11)	516477.0	3712676.0	7.59791	(102,11)
516577.0	3712676.0	8.32017	(236,13)	516677.0	3712676.0	7.47659	(217,11)
516777.0	3712676.0	6.43126	(239,12)	516877.0	3712676.0	6.18633	(239,12)
516977.0	3712676.0	5.98451	(214,14)	517077.0	3712676.0	6.27130	(187,11)
517177.0	3712676.0	6.75477	(201,13)	515277.0	3712776.0	5.85567	(108,12)
515377.0	3712776.0	6.36391	(153,12)	515477.0	3712776.0	6.35111	(130,14)
515577.0	3712776.0	6.67141	(130,14)	515677.0	3712776.0	6.88202	(218,19)
515777.0	3712776.0	5.51375	(101,13)	515877.0	3712776.0	6.18895	(136,11)
515977.0	3712776.0	6.40375	(229,14)	516077.0	3712776.0	7.22477	(223,17)
516177.0	3712776.0	7.29208	(221,14)	516277.0	3712776.0	7.30269	(221,15)
516377.0	3712776.0	6.82490	(241,11)	516477.0	3712776.0	7.11627	(236,12)
516577.0	3712776.0	7.17217	(236,13)	516677.0	3712776.0	7.43278	(236,13)
516777.0	3712776.0	6.09031	(184,14)	516877.0	3712776.0	7.11179	(239,12)
516977.0	3712776.0	6.68287	(255,12)	517077.0	3712776.0	6.38882	(214,14)
517177.0	3712776.0	7.18631	(201,15)	515277.0	3712876.0	5.96134	(153,12)
515377.0	3712876.0	6.26055	(130,14)	515477.0	3712876.0	6.38139	(130,14)
515577.0	3712876.0	6.01727	(185,13)	515677.0	3712876.0	6.15079	(101,13)
515777.0	3712876.0	6.02368	(157,13)	515877.0	3712876.0	6.27020	(157,14)
515977.0	3712876.0	6.44482	(134,14)	516077.0	3712876.0	8.43069	(223,17)
516177.0	3712876.0	7.23275	(221,15)	516277.0	3712876.0	7.22476	(221,15)
516377.0	3712876.0	6.92431	(242,12)	516477.0	3712876.0	7.33177	(236,12)
516577.0	3712876.0	6.53978	(141,13)	516677.0	3712876.0	8.48675	(236,13)
516777.0	3712876.0	7.37493	(190,12)	516877.0	3712876.0	7.08850	(239,12)
516977.0	3712876.0	7.06152	(183,13)	517077.0	3712876.0	7.42943	(158,13)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
517177.0	3712876.0	6.57285	(188,15)	515277.0	3712976.0	5.98798	(130,14)
515377.0	3712976.0	6.01597	(174,11)	515477.0	3712976.0	6.03579	(185,13)
515577.0	3712976.0	6.07397	(185,13)	515677.0	3712976.0	6.34680	(157,13)
515777.0	3712976.0	6.07854	(135,11)	515877.0	3712976.0	7.05802	(134,14)
515977.0	3712976.0	6.94615	(134,14)	516077.0	3712976.0	9.01615	(223,17)
516177.0	3712976.0	7.61749	(221,15)	516277.0	3712976.0	7.19068	(221,15)
516377.0	3712976.0	7.13452	(242,12)	516477.0	3712976.0	7.21388	(236,12)
516577.0	3712976.0	6.88371	(141,13)	516677.0	3712976.0	8.16087	(148,13)
516777.0	3712976.0	7.56210	(236,13)	516877.0	3712976.0	6.83952	(184,14)
516977.0	3712976.0	7.15262	(239,12)	517077.0	3712976.0	7.21893	(180,12)
517177.0	3712976.0	6.93634	(158,13)	515277.0	3713076.0	5.82502	(153,11)
515377.0	3713076.0	5.81905	(185,13)	515477.0	3713076.0	6.09085	(174,11)
515577.0	3713076.0	6.10545	(215,15)	515677.0	3713076.0	6.85204	(157,13)
515777.0	3713076.0	6.74380	(157,14)	515877.0	3713076.0	6.64927	(229,14)
515977.0	3713076.0	6.46505	(141,12)	516077.0	3713076.0	7.85017	(102,12)
516177.0	3713076.0	7.17487	(156,11)	516277.0	3713076.0	7.15923	(125,14)
516377.0	3713076.0	6.91255	(242,12)	516477.0	3713076.0	6.88735	(157,12)
516577.0	3713076.0	6.93169	(102,11)	516677.0	3713076.0	7.11644	(148,13)
516777.0	3713076.0	8.97902	(236,13)	516877.0	3713076.0	7.06192	(190,12)
516977.0	3713076.0	6.82968	(236,15)	517077.0	3713076.0	7.47024	(148,12)
517177.0	3713076.0	7.82779	(158,13)	515277.0	3713176.0	5.89827	(129,11)
515377.0	3713176.0	6.13743	(218,19)	515477.0	3713176.0	5.77241	(185,13)
515577.0	3713176.0	6.93667	(157,13)	515677.0	3713176.0	6.48410	(157,13)
515777.0	3713176.0	7.27448	(157,14)	515877.0	3713176.0	6.62582	(135,12)
515977.0	3713176.0	7.12137	(223,17)	516077.0	3713176.0	7.46364	(102,12)
516177.0	3713176.0	6.91047	(156,11)	516277.0	3713176.0	7.21383	(125,14)
516377.0	3713176.0	6.93583	(242,12)	516477.0	3713176.0	7.09784	(159,12)
516577.0	3713176.0	7.38239	(102,11)	516677.0	3713176.0	6.23427	(236,12)
516777.0	3713176.0	8.55775	(148,13)	516877.0	3713176.0	6.92201	(236,13)
516977.0	3713176.0	6.34885	(190,12)	517077.0	3713176.0	7.18693	(236,15)
517177.0	3713176.0	8.92335	(180,12)	515277.0	3712176.0	6.40652	(254,12)
515377.0	3712176.0	5.04936	(254,12)	515477.0	3712176.0	5.67492	(203,11)
515577.0	3712176.0	5.41114	(229,15)	515677.0	3712176.0	6.35910	(203,11)
515777.0	3712176.0	4.33875	(203,11)	515877.0	3712176.0	3.12615	(253,17)
515977.0	3712176.0	3.26378	(88,15)	516077.0	3712176.0	9.30828	(218,19)
516177.0	3712176.0	8.78249	(336, 7)	515277.0	3712076.0	6.39747	(229,15)
515377.0	3712076.0	6.38124	(130,13)	515477.0	3712076.0	6.43777	(229,13)
515577.0	3712076.0	5.89828	(229,13)	515677.0	3712076.0	4.15624	(229,13)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515777.0	3712076.0	4.58992	(133,19)	515877.0	3712076.0	3.67047	(133,12)
515977.0	3712076.0	5.83901	(253,17)	516077.0	3712076.0	6.22675	(203,20)
516177.0	3712076.0	13.94044	(29,21)	515277.0	3711976.0	6.09181	(229,13)
515377.0	3711976.0	6.67880	(130,13)	515477.0	3711976.0	6.96548	(123,12)
515577.0	3711976.0	7.34156	(123,12)	515677.0	3711976.0	5.58441	(229,13)
515777.0	3711976.0	5.36215	(253,16)	515877.0	3711976.0	5.36281	(253,16)
515977.0	3711976.0	5.99610	(108,10)	516077.0	3711976.0	9.63414	(133,19)
516177.0	3711976.0	9.85548	(253,17)	515277.0	3711876.0	7.06907	(250,13)
515377.0	3711876.0	6.81473	(123,14)	515477.0	3711876.0	7.71325	(123,12)
515577.0	3711876.0	8.35975	(123,12)	515677.0	3711876.0	7.32434	(123,12)
515777.0	3711876.0	3.82994	(254,14)	515877.0	3711876.0	4.79160	(254,14)
515977.0	3711876.0	6.39443	(254,14)	516077.0	3711876.0	9.55109	(254,14)
516177.0	3711876.0	17.52840	(254,14)	515277.0	3711776.0	6.44622	(247,12)
515377.0	3711776.0	6.62228	(123,14)	515477.0	3711776.0	7.10020	(123,14)
515577.0	3711776.0	6.80678	(123,12)	515677.0	3711776.0	4.95827	(224,11)
515777.0	3711776.0	4.29698	(110,12)	515877.0	3711776.0	3.88355	(56, 7)
515977.0	3711776.0	6.47317	(110,12)	516077.0	3711776.0	8.62074	(261,21)
516177.0	3711776.0	13.79262	(80,18)	515277.0	3711676.0	6.11807	(250,11)
515377.0	3711676.0	5.56210	(224,11)	515477.0	3711676.0	5.75988	(224,11)
515577.0	3711676.0	5.19940	(224,11)	515677.0	3711676.0	4.27646	(110,12)
515777.0	3711676.0	3.51638	(86, 4)	515877.0	3711676.0	4.59922	(261,21)
515977.0	3711676.0	7.91495	(205,17)	516077.0	3711676.0	10.98511	(111,12)
516177.0	3711676.0	8.66412	(110,11)	515277.0	3711576.0	6.32448	(231,10)
515377.0	3711576.0	6.42978	(128,14)	515477.0	3711576.0	5.59929	(128,11)
515577.0	3711576.0	5.12121	(113,13)	515677.0	3711576.0	3.60622	(111,10)
515777.0	3711576.0	5.74676	(205,17)	515877.0	3711576.0	6.17715	(189,14)
515977.0	3711576.0	12.06621	(111,12)	516077.0	3711576.0	6.95607	(57, 6)
516177.0	3711576.0	10.02794	(111, 7)	515277.0	3711476.0	6.32985	(202,14)
515377.0	3711476.0	6.45721	(113,13)	515477.0	3711476.0	5.86350	(202,14)
515577.0	3711476.0	4.51189	(142,14)	515677.0	3711476.0	4.50787	(113,13)
515777.0	3711476.0	6.09294	(111,12)	515877.0	3711476.0	10.14429	(111,13)
515977.0	3711476.0	6.87334	(57, 6)	516077.0	3711476.0	5.37252	(57,12)
516177.0	3711476.0	8.21436	(84,15)	511277.0	3709378.0	10.78500	(112,23)
512277.0	3709378.0	10.54463	(38, 4)	513277.0	3709378.0	11.26644	(251,20)
514277.0	3709378.0	10.63077	(359, 7)	515277.0	3709378.0	9.91142	(260, 4)
516277.0	3709378.0	7.18600	(212,15)	517277.0	3709378.0	6.61326	(11, 9)
518277.0	3709378.0	9.88600	(295, 1)	519277.0	3709378.0	4.33267	(208, 2)
520277.0	3709378.0	4.71714	(6,23)	521277.0	3709378.0	4.72983	(63,12)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522277.0	3709378.0	4.18195	(93, 2)	511277.0	3708378.0	10.12803	(251, 3)
512277.0	3708378.0	8.17196	(261,20)	513277.0	3708378.0	11.15753	(103,21)
514277.0	3708378.0	10.51387	(246, 5)	515277.0	3708378.0	8.04683	(168, 7)
516277.0	3708378.0	5.40043	(98,14)	517277.0	3708378.0	10.71232	(284, 2)
518277.0	3708378.0	7.71681	(286, 4)	519277.0	3708378.0	4.54459	(294,22)
520277.0	3708378.0	4.93625	(283, 4)	521277.0	3708378.0	4.36261	(349,18)
522277.0	3708378.0	4.35584	(116, 5)	511277.0	3707378.0	10.28854	(48,20)
512277.0	3707378.0	11.42558	(265, 2)	513277.0	3707378.0	10.98817	(42, 3)
514277.0	3707378.0	9.83617	(155,24)	515277.0	3707378.0	11.11420	(49, 1)
516277.0	3707378.0	8.16857	(37,20)	517277.0	3707378.0	11.30407	(306,21)
518277.0	3707378.0	8.14481	(284, 4)	519277.0	3707378.0	5.39405	(338,15)
520277.0	3707378.0	4.16299	(31,18)	521277.0	3707378.0	4.82719	(294,24)
522277.0	3707378.0	4.46995	(286,18)	511277.0	3706378.0	10.76855	(264,20)
512277.0	3706378.0	10.52051	(329, 5)	513277.0	3706378.0	9.63425	(120, 4)
514277.0	3706378.0	11.20949	(306,22)	515277.0	3706378.0	11.28501	(269, 4)
516277.0	3706378.0	7.96301	(296,18)	517277.0	3706378.0	7.94481	(240, 3)
518277.0	3706378.0	9.44578	(363,22)	519277.0	3706378.0	4.57466	(363, 4)
520277.0	3706378.0	4.75636	(47,21)	521277.0	3706378.0	4.73319	(52, 4)
522277.0	3706378.0	5.08909	(164, 6)	523277.0	3706378.0	4.20751	(349,20)
522402.0	3710378.0	4.59236	(308,18)	522402.0	3711378.0	5.19321	(151, 7)
522402.0	3712378.0	4.53563	(4, 7)	511277.0	3714176.0	5.79270	(253,22)
512277.0	3714176.0	5.83873	(165, 2)	513277.0	3714176.0	4.83881	(173,20)
514277.0	3714176.0	4.97270	(274,14)	515277.0	3714176.0	7.97659	(336, 7)
516277.0	3714176.0	8.48352	(358,17)	517277.0	3714176.0	10.14118	(239, 3)
518277.0	3714176.0	5.35389	(78,12)	519277.0	3714176.0	4.23199	(244,11)
520277.0	3714176.0	4.50618	(176,20)	521277.0	3714176.0	5.20162	(188,20)
522277.0	3714176.0	5.02321	(265,20)	511277.0	3715176.0	7.15724	(273,18)
512277.0	3715176.0	10.99089	(233,19)	513277.0	3715176.0	6.35584	(108, 4)
514277.0	3715176.0	9.30007	(326, 1)	515277.0	3715176.0	10.01517	(135, 6)
516277.0	3715176.0	5.93733	(166,17)	517277.0	3715176.0	4.89343	(54,13)
518277.0	3715176.0	4.43927	(78,11)	519277.0	3715176.0	4.11433	(154, 4)
520277.0	3715176.0	3.99751	(135, 2)	521277.0	3715176.0	5.31195	(269,20)
522277.0	3715176.0	5.46977	(288, 8)	511277.0	3716176.0	11.58435	(278,21)
512277.0	3716176.0	6.86817	(178, 3)	513277.0	3716176.0	9.41261	(195,21)
514277.0	3716176.0	11.17805	(355,18)	515277.0	3716176.0	11.64061	(186, 1)
516277.0	3716176.0	4.11781	(166,17)	517277.0	3716176.0	4.73220	(239,19)
518277.0	3716176.0	4.85977	(150, 7)	519277.0	3716176.0	4.80244	(191, 1)
520277.0	3716176.0	5.73233	(154, 3)	521277.0	3716176.0	4.70615	(189, 7)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522277.0	3716176.0	5.07877	(176,21)	511277.0	3717176.0	8.73469	(178, 3)
512277.0	3717176.0	10.28861	(224,22)	513277.0	3717176.0	11.44456	(304, 2)
514277.0	3717176.0	11.76555	(304,19)	515277.0	3717176.0	7.36444	(324, 5)
516277.0	3717176.0	5.19140	(237,19)	517277.0	3717176.0	5.24845	(209,24)
518277.0	3717176.0	5.59558	(327, 4)	519277.0	3717176.0	5.64886	(332, 8)
520277.0	3717176.0	5.40460	(79,19)	521277.0	3717176.0	5.05645	(154, 3)
522277.0	3717176.0	4.65609	(92,23)	511277.0	3713176.0	7.19957	(355, 6)
512277.0	3713176.0	5.62852	(253,20)	513277.0	3713176.0	4.74237	(253, 9)
514277.0	3713176.0	6.07715	(231,15)	511277.0	3712176.0	5.69914	(329,18)
512277.0	3712176.0	6.03188	(108, 5)	513277.0	3712176.0	5.28259	(205, 1)
514277.0	3712176.0	6.06332	(113,11)	511277.0	3711176.0	7.91508	(341,18)
512277.0	3711176.0	11.71582	(257,22)	513277.0	3711176.0	5.20422	(250,21)
514277.0	3711176.0	6.18383	(85,17)	511277.0	3709378.0	10.78500	(112,23)
512277.0	3709378.0	10.54463	(38, 4)	513277.0	3709378.0	11.26644	(251,20)
514277.0	3709378.0	10.63077	(359, 7)	515277.0	3709378.0	9.91142	(260, 4)
516277.0	3709378.0	7.18600	(212,15)	517277.0	3709378.0	6.61326	(11, 9)
518277.0	3709378.0	9.88600	(295, 1)	519277.0	3709378.0	4.33267	(208, 2)
520277.0	3709378.0	4.71714	(6,23)	521277.0	3709378.0	4.72983	(63,12)
522277.0	3709378.0	4.18195	(93, 2)	511277.0	3708378.0	10.12803	(251, 3)
512277.0	3708378.0	8.17196	(261,20)	513277.0	3708378.0	11.15753	(103,21)
514277.0	3708378.0	10.51387	(246, 5)	515277.0	3708378.0	8.04683	(168, 7)
516277.0	3708378.0	5.40043	(98,14)	517277.0	3708378.0	10.71232	(284, 2)
518277.0	3708378.0	7.71681	(286, 4)	519277.0	3708378.0	4.54459	(294,22)
520277.0	3708378.0	4.93625	(283, 4)	521277.0	3708378.0	4.36261	(349,18)
522277.0	3708378.0	4.35584	(116, 5)	511277.0	3707378.0	10.28854	(48,20)
512277.0	3707378.0	11.42558	(265, 2)	513277.0	3707378.0	10.98817	(42, 3)
514277.0	3707378.0	9.83617	(155,24)	515277.0	3707378.0	11.11420	(49, 1)
516277.0	3707378.0	8.16857	(37,20)	517277.0	3707378.0	11.30407	(306,21)
518277.0	3707378.0	8.14481	(284, 4)	519277.0	3707378.0	5.39405	(338,15)
520277.0	3707378.0	4.16299	(31,18)	521277.0	3707378.0	4.82719	(294,24)
522277.0	3707378.0	4.46995	(286,18)	511277.0	3706378.0	10.76855	(264,20)
512277.0	3706378.0	10.52051	(329, 5)	513277.0	3706378.0	9.63425	(120, 4)
514277.0	3706378.0	11.20949	(306,22)	515277.0	3706378.0	11.28501	(269, 4)
516277.0	3706378.0	7.96301	(296,18)	517277.0	3706378.0	7.94481	(240, 3)
518277.0	3706378.0	9.44578	(363,22)	519277.0	3706378.0	4.57466	(363, 4)
520277.0	3706378.0	4.75636	(47,21)	521277.0	3706378.0	4.73319	(52, 4)
522277.0	3706378.0	5.08909	(164, 6)	523277.0	3706378.0	4.20751	(349,20)
522402.0	3710378.0	4.59236	(308,18)	522402.0	3711378.0	5.19321	(151, 7)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522402.0	3712378.0	4.53563	(4, 7)	511277.0	3714176.0	5.79270	(253,22)
512277.0	3714176.0	5.83873	(165, 2)	513277.0	3714176.0	4.83881	(173,20)
514277.0	3714176.0	4.97270	(274,14)	515277.0	3714176.0	7.97659	(336, 7)
516277.0	3714176.0	8.48352	(358,17)	517277.0	3714176.0	10.14118	(239, 3)
518277.0	3714176.0	5.35389	(78,12)	519277.0	3714176.0	4.23199	(244,11)
520277.0	3714176.0	4.50618	(176,20)	521277.0	3714176.0	5.20162	(188,20)
522277.0	3714176.0	5.02321	(265,20)	511277.0	3715176.0	7.15724	(273,18)
512277.0	3715176.0	10.99089	(233,19)	513277.0	3715176.0	6.35584	(108, 4)
514277.0	3715176.0	9.30007	(326, 1)	515277.0	3715176.0	10.01517	(135, 6)
516277.0	3715176.0	5.93733	(166,17)	517277.0	3715176.0	4.89343	(54,13)
518277.0	3715176.0	4.43927	(78,11)	519277.0	3715176.0	4.11433	(154, 4)
520277.0	3715176.0	3.99751	(135, 2)	521277.0	3715176.0	5.31195	(269,20)
522277.0	3715176.0	5.46977	(288, 8)	511277.0	3716176.0	11.58435	(278,21)
512277.0	3716176.0	6.86817	(178, 3)	513277.0	3716176.0	9.41261	(195,21)
514277.0	3716176.0	11.17805	(355,18)	515277.0	3716176.0	11.64061	(186, 1)
516277.0	3716176.0	4.11781	(166,17)	517277.0	3716176.0	4.73220	(239,19)
518277.0	3716176.0	4.85977	(150, 7)	519277.0	3716176.0	4.80244	(191, 1)
520277.0	3716176.0	5.73233	(154, 3)	521277.0	3716176.0	4.70615	(189, 7)
522277.0	3716176.0	5.07877	(176,21)	511277.0	3717176.0	8.73469	(178, 3)
512277.0	3717176.0	10.28861	(224,22)	513277.0	3717176.0	11.44456	(304, 2)
514277.0	3717176.0	11.76555	(304,19)	515277.0	3717176.0	7.36444	(324, 5)
516277.0	3717176.0	5.19140	(237,19)	517277.0	3717176.0	5.24845	(209,24)
518277.0	3717176.0	5.59558	(327, 4)	519277.0	3717176.0	5.64886	(332, 8)
520277.0	3717176.0	5.40460	(79,19)	521277.0	3717176.0	5.05645	(154, 3)
522277.0	3717176.0	4.65609	(92,23)	511277.0	3713176.0	7.19957	(355, 6)
512277.0	3713176.0	5.62852	(253,20)	513277.0	3713176.0	4.74237	(253, 9)
514277.0	3713176.0	6.07715	(231,15)	511277.0	3712176.0	5.69914	(329,18)
512277.0	3712176.0	6.03188	(108, 5)	513277.0	3712176.0	5.28259	(205, 1)
514277.0	3712176.0	6.06332	(113,11)	511277.0	3711176.0	7.91508	(341,18)
512277.0	3711176.0	11.71582	(257,22)	513277.0	3711176.0	5.20422	(250,21)
514277.0	3711176.0	6.18383	(85,17)	516500.0	3708100.0	10.77136	(122, 3)
518100.0	3709350.0	10.02998	(287, 1)	514500.0	3708800.0	10.51588	(113, 2)
517300.0	3714400.0	10.50825	(222,23)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* 50 MAXIMUM 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	HOUR	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	HOUR	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	23.04195	19	218	516177.0	3712076.0	26	15.38724	13	148	516477.0	3712276.0
2	21.16797	13	148	516411.0	3712159.0	27	15.23697	20	336	516264.6	3712122.0
3	21.08109	19	218	516179.3	3712061.0	28	15.23697	20	336	516264.6	3712122.0
4	20.85358	12	102	516264.6	3712122.0	29	15.15353	12	102	516177.0	3712376.0
5	20.85358	12	102	516264.6	3712122.0	30	15.15113	12	30	516264.6	3712122.0
6	19.60714	12	107	516177.0	3711476.0	31	15.15113	12	30	516264.6	3712122.0
7	19.49486	17	336	516264.6	3712122.0	32	15.10766	9	126	516179.3	3712122.0
8	19.49486	17	336	516264.6	3712122.0	33	14.94641	12	74	516264.6	3712122.0
9	19.42350	13	357	516264.6	3712122.0	34	14.94641	12	74	516264.6	3712122.0
10	19.42350	13	357	516264.6	3712122.0	35	14.91710	13	30	516277.0	3712376.0
11	19.28407	21	29	516179.3	3712061.0	36	14.89959	11	30	516264.6	3712122.0
12	18.61227	12	86	516177.0	3711876.0	37	14.89959	11	30	516264.6	3712122.0
13	18.55573	15	102	516411.0	3712159.0	38	14.88223	17	223	516264.6	3712122.0
14	18.47735	13	30	516277.0	3712276.0	39	14.88223	17	223	516264.6	3712122.0
15	18.45790	13	111	516177.0	3711776.0	40	14.79225	24	29	516264.6	3712122.0
16	17.65425	13	102	516277.0	3712276.0	41	14.79225	24	29	516264.6	3712122.0
17	17.52840	14	254	516177.0	3711876.0	42	14.77358	15	229	515977.0	3711976.0
18	17.38645	13	236	516411.0	3712159.0	43	14.70133	13	102	516277.0	3712476.0
19	17.35140	19	218	516115.2	3712189.0	44	14.46787	13	111	515877.0	3711576.0
20	17.18606	11	358	516264.6	3712122.0	45	14.38029	13	111	516077.0	3711676.0
21	17.18606	11	358	516264.6	3712122.0	46	14.36527	12	102	516177.0	3712476.0
22	16.47210	13	102	516277.0	3712376.0	47	14.08171	17	105	516179.3	3712122.0
23	16.15864	12	107	516177.0	3711576.0	48	14.01128	10	343	516177.0	3711876.0
24	16.10753	19	218	516179.3	3712122.0	49	13.97525	16	27	516264.6	3712122.0
25	15.67996	13	107	516264.6	3711598.0	50	13.97525	16	27	516264.6	3712122.0

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516276.8	3711378.0	2.31244	(107, 2)	516411.0	3712159.0	4.62170	(102, 2)
516679.3	3711159.0	1.23334C	(201, 2)	516679.3	3711378.0	2.33376	(31, 2)
517079.3	3711378.0	1.49426	(217, 2)	517079.3	3711549.0	1.59116	(217, 2)
517530.5	3711488.0	1.64542	(234, 2)	517530.5	3711317.0	1.35261	(208, 2)
518743.9	3711171.0	1.26251	(234, 2)	518743.9	3711573.0	1.50582	(234, 2)
519914.6	3711573.0	1.24839C	(178, 3)	519914.6	3711171.0	1.51284C	(123, 1)
520304.8	3711171.0	1.57172C	(123, 1)	520304.8	3711024.0	1.40043C	(123, 1)
520707.2	3711024.0	1.81628C	(123, 1)	520817.0	3711628.0	1.05331C	(178, 3)
520402.3	3712176.0	1.51185	(212, 2)	518707.2	3712176.0	2.66329	(212, 2)
518707.2	3712030.0	2.50174	(212, 2)	518280.4	3712030.0	2.84847	(212, 2)
518280.4	3712250.0	2.71329	(226, 2)	518060.9	3712335.0	3.47968	(226, 2)
518060.9	3712878.0	3.14069	(207, 2)	517426.8	3712878.0	2.24517C	(201, 2)
517426.8	3713079.0	2.55059	(352, 2)	516993.9	3713079.0	4.13037	(183, 2)
516993.9	3713280.0	2.69421	(183, 2)	516603.7	3713280.0	2.43212	(141, 2)
516603.7	3712884.0	2.21253	(236, 2)	516372.0	3712884.0	2.58643	(242, 2)
516372.0	3712798.0	2.39198	(242, 2)	516256.2	3712774.0	2.30600	(102, 2)
516276.8	3711378.0	2.31244	(107, 2)	516264.6	3712122.0	9.64118	(30, 2)
516264.6	3711598.0	4.21452	(107, 2)	516008.5	3712006.0	1.52121	(229, 2)
516008.5	3712122.0	1.36535C	(227, 3)	516115.2	3712189.0	2.47879C	(218, 3)
516179.3	3712061.0	3.62842	(132, 1)	516179.3	3712122.0	2.44852	(336, 1)
516264.6	3712122.0	9.64118	(30, 2)	515277.0	3711278.0	1.65242	(113, 2)
515377.0	3711278.0	1.86100	(56, 1)	515477.0	3711278.0	1.75371	(111, 2)
515577.0	3711278.0	2.03689	(111, 2)	515677.0	3711278.0	1.85071	(111, 2)
515777.0	3711278.0	1.47524	(117, 2)	515877.0	3711278.0	1.27003	(241, 2)
515977.0	3711278.0	1.12708	(205, 2)	516077.0	3711278.0	1.91070	(107, 2)
516177.0	3711278.0	3.08282	(107, 2)	516277.0	3711278.0	2.08240	(107, 2)
516377.0	3711278.0	2.95017	(95, 3)	516477.0	3711278.0	2.80407	(95, 3)
516577.0	3711278.0	1.70984	(151, 3)	516677.0	3711278.0	1.15763	(31, 2)
516777.0	3711278.0	1.37212	(31, 2)	516877.0	3711278.0	1.22836	(204, 2)
516977.0	3711278.0	1.63621	(204, 2)	517077.0	3711278.0	1.76429	(204, 2)
517177.0	3711278.0	1.57553	(204, 2)	515277.0	3711178.0	2.13831	(56, 1)
515377.0	3711178.0	2.08052	(56, 1)	515477.0	3711178.0	2.04433	(111, 2)
515577.0	3711178.0	1.88340	(111, 2)	515677.0	3711178.0	1.90986	(117, 2)
515777.0	3711178.0	1.77752	(117, 2)	515877.0	3711178.0	1.32893	(117, 2)
515977.0	3711178.0	1.55001	(205, 2)	516077.0	3711178.0	2.11107	(107, 2)
516177.0	3711178.0	2.42792	(107, 2)	516277.0	3711178.0	1.66301	(107, 2)
516377.0	3711178.0	1.57757	(95, 3)	516477.0	3711178.0	1.56675	(95, 3)
516577.0	3711178.0	1.50175C	(201, 2)	516677.0	3711178.0	1.23242C	(201, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516777.0	3711178.0	1.16904	(31, 2)	516877.0	3711178.0	1.20699	(204, 2)
516977.0	3711178.0	1.87329	(204, 2)	517077.0	3711178.0	2.21713	(204, 2)
517177.0	3711178.0	2.15313	(204, 2)	515277.0	3711078.0	2.33889	(56, 1)
515377.0	3711078.0	2.08851	(251, 2)	515477.0	3711078.0	1.83532	(117, 2)
515577.0	3711078.0	2.05203	(117, 2)	515677.0	3711078.0	2.07655	(117, 2)
515777.0	3711078.0	1.76328	(117, 2)	515877.0	3711078.0	1.75599	(230, 2)
515977.0	3711078.0	2.20444	(230, 2)	516077.0	3711078.0	2.08265	(205, 2)
516177.0	3711078.0	2.46054	(107, 2)	516277.0	3711078.0	1.64232C	(193, 2)
516377.0	3711078.0	1.52409	(168, 2)	516477.0	3711078.0	1.37636	(168, 2)
516577.0	3711078.0	1.52514	(95, 3)	516677.0	3711078.0	1.19722C	(201, 2)
516777.0	3711078.0	0.87301C	(201, 2)	516877.0	3711078.0	1.21377	(31, 2)
516977.0	3711078.0	1.74135	(204, 2)	517077.0	3711078.0	2.24122	(204, 2)
517177.0	3711078.0	2.52820	(204, 2)	515277.0	3710978.0	2.31720	(251, 2)
515377.0	3710978.0	1.99019	(117, 2)	515477.0	3710978.0	1.95825	(117, 2)
515577.0	3710978.0	2.07837	(117, 2)	515677.0	3710978.0	1.94266	(117, 2)
515777.0	3710978.0	1.60678	(230, 2)	515877.0	3710978.0	2.34257	(230, 2)
515977.0	3710978.0	2.65418	(230, 2)	516077.0	3710978.0	2.47898	(107, 2)
516177.0	3710978.0	2.63453	(107, 2)	516277.0	3710978.0	2.25352C	(193, 2)
516377.0	3710978.0	1.86226	(168, 2)	516477.0	3710978.0	1.66502	(168, 2)
516577.0	3710978.0	1.31934	(127, 2)	516677.0	3710978.0	1.50593	(127, 2)
516777.0	3710978.0	1.14089	(127, 2)	516877.0	3710978.0	1.31855	(31, 2)
516977.0	3710978.0	1.62386	(31, 2)	517077.0	3710978.0	2.06569	(204, 2)
517177.0	3710978.0	2.49491	(204, 2)	515277.0	3710878.0	1.99030	(117, 2)
515377.0	3710878.0	2.01413	(328, 2)	515477.0	3710878.0	2.00841	(328, 2)
515577.0	3710878.0	1.94404	(117, 2)	515677.0	3710878.0	1.75229	(52, 2)
515777.0	3710878.0	2.25803	(230, 2)	515877.0	3710878.0	2.93051	(230, 2)
515977.0	3710878.0	2.87690	(230, 2)	516077.0	3710878.0	3.11038C	(193, 2)
516177.0	3710878.0	2.97080	(107, 2)	516277.0	3710878.0	2.43478C	(193, 2)
516377.0	3710878.0	2.01429	(117, 2)	516477.0	3710878.0	2.10707	(286, 2)
516577.0	3710878.0	1.88778	(95, 3)	516677.0	3710878.0	2.01795	(127, 2)
516777.0	3710878.0	1.94405	(127, 2)	516877.0	3710878.0	1.37660	(151, 3)
516977.0	3710878.0	1.92654	(31, 2)	517077.0	3710878.0	1.72202	(31, 2)
517177.0	3710878.0	2.28862	(204, 2)	515277.0	3710778.0	2.37587	(328, 2)
515377.0	3710778.0	2.19592	(328, 2)	515477.0	3710778.0	2.01026	(328, 2)
515577.0	3710778.0	1.70096	(117, 2)	515677.0	3710778.0	1.92239	(52, 2)
515777.0	3710778.0	2.91059	(230, 2)	515877.0	3710778.0	3.28050	(230, 2)
515977.0	3710778.0	2.92509	(230, 2)	516077.0	3710778.0	3.69833C	(193, 2)
516177.0	3710778.0	3.10325C	(193, 2)	516277.0	3710778.0	2.69309	(117, 2)

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* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516377.0	3710778.0	2.39599	(117, 2)	516477.0	3710778.0	2.66177	(286, 2)
516577.0	3710778.0	2.24067	(95, 3)	516677.0	3710778.0	2.97189	(95, 3)
516777.0	3710778.0	2.49001	(127, 2)	516877.0	3710778.0	2.07139	(151, 3)
516977.0	3710778.0	2.40615	(31, 2)	517077.0	3710778.0	2.82035	(31, 2)
517177.0	3710778.0	1.85854	(204, 2)	515277.0	3710678.0	2.45533	(328, 2)
515377.0	3710678.0	2.11412	(328, 2)	515477.0	3710678.0	1.76410	(249, 2)
515577.0	3710678.0	1.95668	(52, 2)	515677.0	3710678.0	2.10138	(230, 2)
515777.0	3710678.0	2.97183	(230, 2)	515877.0	3710678.0	3.24511	(230, 2)
515977.0	3710678.0	3.03087C	(193, 2)	516077.0	3710678.0	3.90296C	(193, 2)
516177.0	3710678.0	3.36136C	(193, 2)	516277.0	3710678.0	2.86965	(117, 2)
516377.0	3710678.0	2.70592	(117, 2)	516477.0	3710678.0	2.84502	(286, 2)
516577.0	3710678.0	2.65936	(95, 3)	516677.0	3710678.0	3.04290	(95, 3)
516777.0	3710678.0	2.53180	(127, 2)	516877.0	3710678.0	2.28331	(127, 2)
516977.0	3710678.0	1.91172	(151, 3)	517077.0	3710678.0	2.27347	(31, 2)
517177.0	3710678.0	2.03012	(31, 2)	515277.0	3710578.0	2.41277	(328, 2)
515377.0	3710578.0	1.74980	(328, 2)	515477.0	3710578.0	2.36109	(7, 3)
515577.0	3710578.0	2.26434	(297, 2)	515677.0	3710578.0	2.58636	(230, 2)
515777.0	3710578.0	3.36228	(230, 2)	515877.0	3710578.0	3.20968	(230, 2)
515977.0	3710578.0	3.32316C	(193, 2)	516077.0	3710578.0	3.76026C	(193, 2)
516177.0	3710578.0	3.51543C	(193, 2)	516277.0	3710578.0	3.08644	(117, 2)
516377.0	3710578.0	3.12082	(25, 3)	516477.0	3710578.0	3.47103	(95, 3)
516577.0	3710578.0	3.13928	(95, 3)	516677.0	3710578.0	2.99191	(95, 3)
516777.0	3710578.0	2.26771	(127, 2)	516877.0	3710578.0	2.22517	(127, 2)
516977.0	3710578.0	1.65182	(127, 2)	517077.0	3710578.0	1.62778	(31, 2)
517177.0	3710578.0	2.03132	(31, 2)	515277.0	3710478.0	1.95958	(328, 2)
515377.0	3710478.0	2.21237	(7, 3)	515477.0	3710478.0	3.01766	(7, 3)
515577.0	3710478.0	2.67823	(297, 2)	515677.0	3710478.0	2.94094	(230, 2)
515777.0	3710478.0	3.29955	(230, 2)	515877.0	3710478.0	3.65025	(264, 1)
515977.0	3710478.0	3.68790C	(193, 2)	516077.0	3710478.0	3.99137C	(193, 2)
516177.0	3710478.0	3.58036C	(193, 2)	516277.0	3710478.0	3.23860	(25, 3)
516377.0	3710478.0	3.35342	(25, 3)	516477.0	3710478.0	3.48605	(95, 3)
516577.0	3710478.0	3.27176	(95, 3)	516677.0	3710478.0	2.93264	(95, 3)
516777.0	3710478.0	2.65297	(95, 3)	516877.0	3710478.0	2.25467	(127, 2)
516977.0	3710478.0	2.14874	(127, 2)	517077.0	3710478.0	1.61365	(66, 2)
517177.0	3710478.0	1.78274	(31, 2)	515277.0	3710378.0	1.77384	(52, 2)
515377.0	3710378.0	2.38391	(7, 3)	515477.0	3710378.0	2.50928	(297, 2)
515577.0	3710378.0	2.84159	(297, 2)	515677.0	3710378.0	3.21111	(230, 2)
515777.0	3710378.0	3.20740	(230, 2)	515877.0	3710378.0	3.74560	(264, 1)

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* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515977.0	3710378.0	3.81657C	(193, 2)	516077.0	3710378.0	3.72703C	(193, 2)
516177.0	3710378.0	3.30097C	(193, 2)	516277.0	3710378.0	3.11638	(117, 2)
516377.0	3710378.0	2.99907	(117, 2)	516477.0	3710378.0	3.06821	(286, 2)
516577.0	3710378.0	3.04406	(95, 3)	516677.0	3710378.0	2.62897	(95, 3)
516777.0	3710378.0	2.70601	(95, 3)	516877.0	3710378.0	2.64413	(293, 1)
516977.0	3710378.0	2.22223	(127, 2)	517077.0	3710378.0	1.70950	(66, 2)
517177.0	3710378.0	1.63225C	(170, 3)	515277.0	3712276.0	1.08161	(254, 2)
515377.0	3712276.0	0.98684	(290, 2)	515477.0	3712276.0	1.01785	(174, 2)
515577.0	3712276.0	1.04026	(231, 2)	515677.0	3712276.0	1.19626	(231, 2)
515777.0	3712276.0	1.11671C	(156, 2)	515877.0	3712276.0	1.15847C	(156, 2)
515977.0	3712276.0	0.89989	(132, 1)	516077.0	3712276.0	1.08508C	(218, 3)
516177.0	3712276.0	4.04639	(30, 2)	516277.0	3712276.0	4.38788	(102, 2)
516377.0	3712276.0	2.83221	(102, 2)	516477.0	3712276.0	1.92515	(148, 2)
516577.0	3712276.0	2.22333	(78, 2)	516677.0	3712276.0	2.53721	(352, 2)
516777.0	3712276.0	0.91544	(236, 2)	516877.0	3712276.0	1.23278	(225, 2)
516977.0	3712276.0	1.81223	(225, 2)	517077.0	3712276.0	2.43087	(225, 2)
517177.0	3712276.0	3.01446	(226, 2)	515277.0	3712376.0	1.34631	(290, 2)
515377.0	3712376.0	1.38079	(174, 2)	515477.0	3712376.0	1.42226	(174, 2)
515577.0	3712376.0	1.35159	(174, 2)	515677.0	3712376.0	1.51310C	(156, 2)
515777.0	3712376.0	2.02470C	(156, 2)	515877.0	3712376.0	2.17971C	(156, 2)
515977.0	3712376.0	1.82970C	(218, 3)	516077.0	3712376.0	2.17380	(336, 1)
516177.0	3712376.0	5.28814	(30, 2)	516277.0	3712376.0	3.94256	(102, 2)
516377.0	3712376.0	2.59051	(102, 2)	516477.0	3712376.0	2.15141	(102, 2)
516577.0	3712376.0	1.53226	(78, 2)	516677.0	3712376.0	1.57995	(78, 2)
516777.0	3712376.0	1.69310	(352, 2)	516877.0	3712376.0	1.44189C	(201, 2)
516977.0	3712376.0	1.52779C	(201, 2)	517077.0	3712376.0	1.87078	(225, 2)
517177.0	3712376.0	2.62730	(225, 2)	515277.0	3712476.0	1.66675	(174, 2)
515377.0	3712476.0	1.73059	(174, 2)	515477.0	3712476.0	1.62105	(174, 2)
515577.0	3712476.0	1.47838	(174, 2)	515677.0	3712476.0	2.04335C	(156, 2)
515777.0	3712476.0	2.48598C	(156, 2)	515877.0	3712476.0	2.52615C	(156, 2)
515977.0	3712476.0	1.97197C	(156, 2)	516077.0	3712476.0	2.29117	(30, 2)
516177.0	3712476.0	4.02079	(30, 2)	516277.0	3712476.0	3.49201	(102, 2)
516377.0	3712476.0	2.41003	(102, 2)	516477.0	3712476.0	2.35063	(102, 2)
516577.0	3712476.0	1.52206	(148, 2)	516677.0	3712476.0	1.54567	(183, 2)
516777.0	3712476.0	1.65666	(183, 2)	516877.0	3712476.0	1.64896C	(201, 2)
516977.0	3712476.0	1.91425C	(201, 2)	517077.0	3712476.0	1.95907C	(201, 2)
517177.0	3712476.0	1.86249	(216, 2)	515277.0	3712576.0	1.83994	(174, 2)
515377.0	3712576.0	1.82463	(174, 2)	515477.0	3712576.0	1.66221	(174, 2)

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* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515577.0	3712576.0	1.78322C	(156, 2)	515677.0	3712576.0	2.24630C	(156, 2)
515777.0	3712576.0	2.47700C	(156, 2)	515877.0	3712576.0	2.34604C	(156, 2)
515977.0	3712576.0	1.86236C	(156, 2)	516077.0	3712576.0	2.62072	(30, 2)
516177.0	3712576.0	2.63706	(336, 3)	516277.0	3712576.0	3.09212	(102, 2)
516377.0	3712576.0	2.23692	(102, 2)	516477.0	3712576.0	1.88032	(102, 2)
516577.0	3712576.0	1.73505	(236, 2)	516677.0	3712576.0	1.88744	(183, 2)
516777.0	3712576.0	2.57480	(183, 2)	516877.0	3712576.0	2.44053	(183, 2)
516977.0	3712576.0	2.02540C	(201, 2)	517077.0	3712576.0	2.19288C	(201, 2)
517177.0	3712576.0	2.17056C	(201, 2)	515277.0	3712676.0	1.80834	(174, 2)
515377.0	3712676.0	1.74463	(174, 2)	515477.0	3712676.0	1.88596	(108, 2)
515577.0	3712676.0	1.99599	(153, 2)	515677.0	3712676.0	2.16844C	(156, 2)
515777.0	3712676.0	2.18018C	(156, 2)	515877.0	3712676.0	1.97450C	(156, 2)
515977.0	3712676.0	1.72518	(270, 2)	516077.0	3712676.0	2.08434	(30, 2)
516177.0	3712676.0	2.17916	(102, 2)	516277.0	3712676.0	2.55330	(102, 2)
516377.0	3712676.0	1.89405	(102, 2)	516477.0	3712676.0	1.61569	(102, 2)
516577.0	3712676.0	1.83592	(236, 2)	516677.0	3712676.0	1.84619	(183, 2)
516777.0	3712676.0	2.83839	(183, 2)	516877.0	3712676.0	3.07663	(183, 2)
516977.0	3712676.0	2.78266	(183, 2)	517077.0	3712676.0	2.18439C	(201, 2)
517177.0	3712676.0	2.35940C	(201, 2)	515277.0	3712776.0	1.71933	(108, 2)
515377.0	3712776.0	1.82794	(108, 2)	515477.0	3712776.0	1.95895	(153, 2)
515577.0	3712776.0	2.15945	(153, 2)	515677.0	3712776.0	1.92028C	(156, 2)
515777.0	3712776.0	1.75464C	(156, 2)	515877.0	3712776.0	2.17194	(270, 2)
515977.0	3712776.0	2.01292	(270, 2)	516077.0	3712776.0	1.93326	(30, 2)
516177.0	3712776.0	1.89979	(102, 2)	516277.0	3712776.0	2.08591	(242, 2)
516377.0	3712776.0	2.16667	(242, 2)	516477.0	3712776.0	1.70966	(242, 2)
516577.0	3712776.0	1.76829	(236, 2)	516677.0	3712776.0	1.73533	(236, 2)
516777.0	3712776.0	2.60416	(183, 2)	516877.0	3712776.0	3.64725	(183, 2)
516977.0	3712776.0	3.73165	(183, 2)	517077.0	3712776.0	3.12698	(183, 2)
517177.0	3712776.0	2.25946C	(201, 2)	515277.0	3712876.0	1.92502	(108, 2)
515377.0	3712876.0	2.09793	(153, 2)	515477.0	3712876.0	2.14634	(153, 2)
515577.0	3712876.0	1.70229C	(156, 2)	515677.0	3712876.0	1.76671	(129, 2)
515777.0	3712876.0	1.92984	(270, 2)	515877.0	3712876.0	2.40163	(270, 2)
515977.0	3712876.0	1.88337	(270, 2)	516077.0	3712876.0	1.94563	(30, 2)
516177.0	3712876.0	1.99074	(242, 2)	516277.0	3712876.0	2.23676	(242, 2)
516377.0	3712876.0	2.31442	(242, 2)	516477.0	3712876.0	2.00267	(242, 2)
516577.0	3712876.0	1.82092	(141, 2)	516677.0	3712876.0	1.94754	(236, 2)
516777.0	3712876.0	2.31862	(183, 2)	516877.0	3712876.0	3.63256	(183, 2)
516977.0	3712876.0	4.16105	(183, 2)	517077.0	3712876.0	4.10182	(183, 2)

*** I. P. - CANDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
517177.0	3712876.0	3.11283	(183, 2)	515277.0	3712976.0	2.17249	(153, 2)
515377.0	3712976.0	2.31902	(153, 2)	515477.0	3712976.0	2.00324	(153, 2)
515577.0	3712976.0	1.66714	(129, 2)	515677.0	3712976.0	1.93755	(270, 2)
515777.0	3712976.0	2.47102	(270, 2)	515877.0	3712976.0	2.82155	(270, 2)
515977.0	3712976.0	2.43582	(30, 2)	516077.0	3712976.0	2.02555	(336, 3)
516177.0	3712976.0	2.31192	(242, 2)	516277.0	3712976.0	2.41813	(242, 2)
516377.0	3712976.0	2.48319	(242, 2)	516477.0	3712976.0	2.20905	(242, 2)
516577.0	3712976.0	2.00843	(141, 2)	516677.0	3712976.0	2.02742	(236, 2)
516777.0	3712976.0	2.09620	(236, 2)	516877.0	3712976.0	3.07018	(183, 2)
516977.0	3712976.0	4.25375	(183, 2)	517077.0	3712976.0	4.38588	(183, 2)
517177.0	3712976.0	3.83504	(183, 2)	515277.0	3713076.0	2.41480	(153, 2)
515377.0	3713076.0	2.22623	(153, 2)	515477.0	3713076.0	1.76010	(129, 2)
515577.0	3713076.0	1.87323	(270, 2)	515677.0	3713076.0	2.52035	(270, 2)
515777.0	3713076.0	2.82368	(270, 2)	515877.0	3713076.0	2.43867	(270, 2)
515977.0	3713076.0	1.88307	(30, 2)	516077.0	3713076.0	1.84767	(242, 2)
516177.0	3713076.0	2.26959	(182, 2)	516277.0	3713076.0	2.52319	(242, 2)
516377.0	3713076.0	2.48689	(242, 2)	516477.0	3713076.0	2.33467	(242, 2)
516577.0	3713076.0	2.09495	(141, 2)	516677.0	3713076.0	2.16628	(141, 2)
516777.0	3713076.0	2.32572	(236, 2)	516877.0	3713076.0	2.46717	(183, 2)
516977.0	3713076.0	3.71596	(183, 2)	517077.0	3713076.0	4.59762	(183, 2)
517177.0	3713076.0	4.58808	(183, 2)	515277.0	3713176.0	2.36857	(153, 2)
515377.0	3713176.0	1.87956	(153, 2)	515477.0	3713176.0	1.89798	(129, 2)
515577.0	3713176.0	2.43355	(270, 2)	515677.0	3713176.0	2.96952	(270, 2)
515777.0	3713176.0	3.15715	(270, 2)	515877.0	3713176.0	2.47778	(270, 2)
515977.0	3713176.0	1.89442	(30, 2)	516077.0	3713176.0	2.05711	(242, 2)
516177.0	3713176.0	2.37671	(182, 2)	516277.0	3713176.0	2.56586	(242, 2)
516377.0	3713176.0	2.59689	(242, 2)	516477.0	3713176.0	2.39275	(242, 2)
516577.0	3713176.0	2.09993	(141, 2)	516677.0	3713176.0	2.26168	(141, 2)
516777.0	3713176.0	2.20175	(236, 2)	516877.0	3713176.0	2.26384	(236, 2)
516977.0	3713176.0	2.93277	(183, 2)	517077.0	3713176.0	4.16862	(183, 2)
517177.0	3713176.0	5.48995	(183, 2)	515277.0	3712176.0	1.69275	(229, 2)
515377.0	3712176.0	1.58367	(229, 2)	515477.0	3712176.0	1.47983	(229, 2)
515577.0	3712176.0	1.11964	(229, 2)	515677.0	3712176.0	0.83561	(231, 2)
515777.0	3712176.0	0.78507	(231, 2)	515877.0	3712176.0	0.43097	(231, 2)
515977.0	3712176.0	0.92737C	(203, 3)	516077.0	3712176.0	1.75981	(132, 1)
516177.0	3712176.0	2.92480	(336, 1)	515277.0	3712076.0	1.47145	(229, 2)
515377.0	3712076.0	1.64385	(229, 2)	515477.0	3712076.0	1.82426	(229, 2)
515577.0	3712076.0	1.81661	(229, 2)	515677.0	3712076.0	1.83306	(229, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3709378.0	0.80127	(98, 2)	511277.0	3708378.0	2.53438C	(289, 3)
512277.0	3708378.0	2.19115	(246, 3)	513277.0	3708378.0	2.74253	(246, 3)
514277.0	3708378.0	3.59623	(7, 3)	515277.0	3708378.0	2.98425	(264, 1)
516277.0	3708378.0	2.99540	(25, 3)	517277.0	3708378.0	3.17823	(307, 3)
518277.0	3708378.0	1.99889	(65, 3)	519277.0	3708378.0	1.27182	(31, 2)
520277.0	3708378.0	1.75968C	(14, 1)	521277.0	3708378.0	1.54467C	(349, 3)
522277.0	3708378.0	1.10219	(338, 1)	511277.0	3707378.0	2.27511	(246, 3)
512277.0	3707378.0	2.84815	(246, 3)	513277.0	3707378.0	2.59953	(121, 1)
514277.0	3707378.0	1.84438C	(100, 1)	515277.0	3707378.0	4.46156C	(121, 3)
516277.0	3707378.0	4.20806	(25, 3)	517277.0	3707378.0	2.89508	(307, 3)
518277.0	3707378.0	1.91628C	(284, 1)	519277.0	3707378.0	1.72851	(31, 2)
520277.0	3707378.0	1.15913	(327, 3)	521277.0	3707378.0	1.53205C	(14, 1)
522277.0	3707378.0	1.57501C	(349, 3)	511277.0	3706378.0	2.69729C	(284, 3)
512277.0	3706378.0	3.26719C	(120, 1)	513277.0	3706378.0	2.35166	(16, 3)
514277.0	3706378.0	3.03627C	(100, 1)	515277.0	3706378.0	5.96128C	(121, 3)
516277.0	3706378.0	3.91702	(25, 3)	517277.0	3706378.0	2.57612	(363, 1)
518277.0	3706378.0	3.30778C	(308, 1)	519277.0	3706378.0	1.37809	(65, 3)
520277.0	3706378.0	1.37543	(31, 2)	521277.0	3706378.0	1.12932	(363, 1)
522277.0	3706378.0	1.38952C	(14, 1)	523277.0	3706378.0	1.44372	(353, 1)
522402.0	3710378.0	0.89751	(116, 1)	522402.0	3711378.0	1.09675C	(178, 3)
522402.0	3712378.0	1.16045	(31, 1)	511277.0	3714176.0	1.36089	(253, 3)
512277.0	3714176.0	1.76910	(253, 3)	513277.0	3714176.0	1.67803	(271, 3)
514277.0	3714176.0	1.87219	(153, 2)	515277.0	3714176.0	3.99519	(270, 2)
516277.0	3714176.0	4.97826	(92, 2)	517277.0	3714176.0	3.79591C	(150, 1)
518277.0	3714176.0	2.33453	(352, 2)	519277.0	3714176.0	1.45812	(236, 2)
520277.0	3714176.0	1.38107	(207, 2)	521277.0	3714176.0	1.19091	(225, 2)
522277.0	3714176.0	1.01673	(145, 2)	511277.0	3715176.0	1.80622	(278, 3)
512277.0	3715176.0	3.59407C	(129, 3)	513277.0	3715176.0	2.23778C	(123, 3)
514277.0	3715176.0	2.39043	(348, 1)	515277.0	3715176.0	4.17795	(30, 2)
516277.0	3715176.0	3.59447	(92, 2)	517277.0	3715176.0	1.68689	(141, 2)
518277.0	3715176.0	1.93179	(78, 2)	519277.0	3715176.0	1.97826	(352, 2)
520277.0	3715176.0	1.50997	(236, 2)	521277.0	3715176.0	1.60433C	(242, 1)
522277.0	3715176.0	1.18371	(176, 3)	511277.0	3716176.0	3.74355C	(272, 3)
512277.0	3716176.0	2.15105C	(123, 3)	513277.0	3716176.0	2.42512	(301, 1)
514277.0	3716176.0	3.30751	(355, 3)	515277.0	3716176.0	3.63205	(356, 3)
516277.0	3716176.0	2.46420	(92, 2)	517277.0	3716176.0	1.54051	(279, 2)
518277.0	3716176.0	1.36806	(19, 1)	519277.0	3716176.0	1.69287	(180, 2)
520277.0	3716176.0	1.79371	(352, 2)	521277.0	3716176.0	1.61176	(158, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3716176.0	0.99224	(354, 2)	511277.0	3717176.0	2.76245C	(323, 3)
512277.0	3717176.0	2.79497	(270, 1)	513277.0	3717176.0	3.05983	(315, 1)
514277.0	3717176.0	3.73658C	(135, 1)	515277.0	3717176.0	2.73336	(19, 3)
516277.0	3717176.0	2.38870	(92, 2)	517277.0	3717176.0	1.37898	(67, 3)
518277.0	3717176.0	1.86867	(333, 1)	519277.0	3717176.0	1.45038	(78, 2)
520277.0	3717176.0	1.29936	(180, 2)	521277.0	3717176.0	1.38989	(352, 2)
522277.0	3717176.0	1.66708	(158, 1)	511277.0	3713176.0	1.41060C	(232, 3)
512277.0	3713176.0	1.18672	(72, 3)	513277.0	3713176.0	1.42648	(290, 2)
514277.0	3713176.0	2.10679	(273, 2)	511277.0	3712176.0	2.05307	(97, 1)
512277.0	3712176.0	1.97335	(97, 1)	513277.0	3712176.0	1.47270	(253, 2)
514277.0	3712176.0	1.63721	(253, 2)	511277.0	3711176.0	1.42184	(262, 1)
512277.0	3711176.0	2.54353	(204, 3)	513277.0	3711176.0	1.50016	(250, 2)
514277.0	3711176.0	2.19100	(86, 2)	511277.0	3709378.0	3.59081	(120, 3)
512277.0	3709378.0	3.37276	(17, 1)	513277.0	3709378.0	3.41882C	(231, 1)
514277.0	3709378.0	2.71280	(342, 3)	515277.0	3709378.0	2.45775	(297, 2)
516277.0	3709378.0	3.62515	(25, 3)	517277.0	3709378.0	2.13217	(293, 1)
518277.0	3709378.0	2.91717	(31, 2)	519277.0	3709378.0	1.66239C	(14, 1)
520277.0	3709378.0	1.18453	(127, 1)	521277.0	3709378.0	1.40910C	(60, 1)
522277.0	3709378.0	0.80127	(98, 2)	511277.0	3708378.0	2.53438C	(289, 3)
512277.0	3708378.0	2.19115	(246, 3)	513277.0	3708378.0	2.74253	(246, 3)
514277.0	3708378.0	3.59623	(7, 3)	515277.0	3708378.0	2.98425	(264, 1)
516277.0	3708378.0	2.99540	(25, 3)	517277.0	3708378.0	3.17823	(307, 3)
518277.0	3708378.0	1.99889	(65, 3)	519277.0	3708378.0	1.27182	(31, 2)
520277.0	3708378.0	1.75968C	(14, 1)	521277.0	3708378.0	1.54467C	(349, 3)
522277.0	3708378.0	1.10219	(338, 1)	511277.0	3707378.0	2.27511	(246, 3)
512277.0	3707378.0	2.84815	(246, 3)	513277.0	3707378.0	2.59953	(121, 1)
514277.0	3707378.0	1.84438C	(100, 1)	515277.0	3707378.0	4.46156C	(121, 3)
516277.0	3707378.0	4.20806	(25, 3)	517277.0	3707378.0	2.89508	(307, 3)
518277.0	3707378.0	1.91628C	(284, 1)	519277.0	3707378.0	1.72851	(31, 2)
520277.0	3707378.0	1.15913	(327, 3)	521277.0	3707378.0	1.53205C	(14, 1)
522277.0	3707378.0	1.57501C	(349, 3)	511277.0	3706378.0	2.69729C	(284, 3)
512277.0	3706378.0	3.26719C	(120, 1)	513277.0	3706378.0	2.35166	(16, 3)
514277.0	3706378.0	3.03627C	(100, 1)	515277.0	3706378.0	5.96128C	(121, 3)
516277.0	3706378.0	3.91702	(25, 3)	517277.0	3706378.0	2.57612	(363, 1)
518277.0	3706378.0	3.30778C	(308, 1)	519277.0	3706378.0	1.37809	(65, 3)
520277.0	3706378.0	1.37543	(31, 2)	521277.0	3706378.0	1.12932	(363, 1)
522277.0	3706378.0	1.38952C	(14, 1)	523277.0	3706378.0	1.44372	(353, 1)
522402.0	3710378.0	0.89751	(116, 1)	522402.0	3711378.0	1.09675C	(178, 3)

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* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522402.0	3712378.0	1.16045	(31, 1)	511277.0	3714176.0	1.36089	(253, 3)
512277.0	3714176.0	1.76910	(253, 3)	513277.0	3714176.0	1.67803	(271, 3)
514277.0	3714176.0	1.87219	(153, 2)	515277.0	3714176.0	3.99519	(270, 2)
516277.0	3714176.0	4.97826	(92, 2)	517277.0	3714176.0	3.79591C	(150, 1)
518277.0	3714176.0	2.33453	(352, 2)	519277.0	3714176.0	1.45812	(236, 2)
520277.0	3714176.0	1.38107	(207, 2)	521277.0	3714176.0	1.19091	(225, 2)
522277.0	3714176.0	1.01673	(145, 2)	511277.0	3715176.0	1.80622	(278, 3)
512277.0	3715176.0	3.59407C	(129, 3)	513277.0	3715176.0	2.23778C	(123, 3)
514277.0	3715176.0	2.39043	(348, 1)	515277.0	3715176.0	4.17795	(30, 2)
516277.0	3715176.0	3.59447	(92, 2)	517277.0	3715176.0	1.68689	(141, 2)
518277.0	3715176.0	1.93179	(78, 2)	519277.0	3715176.0	1.97826	(352, 2)
520277.0	3715176.0	1.50997	(236, 2)	521277.0	3715176.0	1.60433C	(242, 1)
522277.0	3715176.0	1.18371	(176, 3)	511277.0	3716176.0	3.74355C	(272, 3)
512277.0	3716176.0	2.15105C	(123, 3)	513277.0	3716176.0	2.42512	(301, 1)
514277.0	3716176.0	3.30751	(355, 3)	515277.0	3716176.0	3.63205	(356, 3)
516277.0	3716176.0	2.46420	(92, 2)	517277.0	3716176.0	1.54051	(279, 2)
518277.0	3716176.0	1.36806	(19, 1)	519277.0	3716176.0	1.69287	(180, 2)
520277.0	3716176.0	1.79371	(352, 2)	521277.0	3716176.0	1.61176	(158, 1)
522277.0	3716176.0	0.99224	(354, 2)	511277.0	3717176.0	2.76245C	(323, 3)
512277.0	3717176.0	2.79497	(270, 1)	513277.0	3717176.0	3.05983	(315, 1)
514277.0	3717176.0	3.73658C	(135, 1)	515277.0	3717176.0	2.73336	(19, 3)
516277.0	3717176.0	2.38870	(92, 2)	517277.0	3717176.0	1.37898	(67, 3)
518277.0	3717176.0	1.86867	(333, 1)	519277.0	3717176.0	1.45038	(78, 2)
520277.0	3717176.0	1.29936	(180, 2)	521277.0	3717176.0	1.38989	(352, 2)
522277.0	3717176.0	1.66708	(158, 1)	511277.0	3713176.0	1.41060C	(232, 3)
512277.0	3713176.0	1.18672	(72, 3)	513277.0	3713176.0	1.42648	(290, 2)
514277.0	3713176.0	2.10679	(273, 2)	511277.0	3712176.0	2.05307	(97, 1)
512277.0	3712176.0	1.97335	(97, 1)	513277.0	3712176.0	1.47270	(253, 2)
514277.0	3712176.0	1.63721	(253, 2)	511277.0	3711176.0	1.42184	(262, 1)
512277.0	3711176.0	2.54353	(204, 3)	513277.0	3711176.0	1.50016	(250, 2)
514277.0	3711176.0	2.19100	(86, 2)	516500.0	3708100.0	5.06653C	(363, 3)
518100.0	3709350.0	3.55915	(31, 2)	514500.0	3708800.0	3.86524	(7, 3)
517300.0	3714400.0	4.23999	(333, 1)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516276.8	3711378.0	1.82806	(10, 2)	516411.0	3712159.0	3.31666	(236, 2)
516679.3	3711159.0	1.02581	(142, 2)	516679.3	3711378.0	0.91598	(151, 3)
517079.3	3711378.0	1.19614	(204, 2)	517079.3	3711549.0	1.21548	(195, 2)
517530.5	3711488.0	1.30244	(168, 2)	517530.5	3711317.0	1.26992	(195, 2)
518743.9	3711171.0	1.00633	(168, 2)	518743.9	3711573.0	0.88540C	(178, 3)
519914.6	3711573.0	1.02630	(234, 2)	519914.6	3711171.0	1.05469	(47, 3)
520304.8	3711171.0	1.06120	(47, 3)	520304.8	3711024.0	1.20526	(116, 1)
520707.2	3711024.0	1.13277	(47, 3)	520817.0	3711628.0	0.90296C	(160, 3)
520402.3	3712176.0	1.41970	(31, 1)	518707.2	3712176.0	1.87216	(226, 2)
518707.2	3712030.0	1.48522	(226, 2)	518280.4	3712030.0	1.93841	(226, 2)
518280.4	3712250.0	2.40953	(212, 2)	518060.9	3712335.0	2.67918	(227, 2)
518060.9	3712878.0	2.54633	(225, 2)	517426.8	3712878.0	2.19868	(236, 2)
517426.8	3713079.0	2.52603	(183, 2)	516993.9	3713079.0	2.23262	(239, 2)
516993.9	3713280.0	2.13254	(236, 2)	516603.7	3713280.0	2.19724	(149, 2)
516603.7	3712884.0	2.09511	(141, 2)	516372.0	3712884.0	2.18510	(102, 2)
516372.0	3712798.0	2.08384	(102, 2)	516256.2	3712774.0	2.17731	(242, 2)
516276.8	3711378.0	1.82806	(10, 2)	516264.6	3712122.0	8.26379	(336, 3)
516264.6	3711598.0	3.02486	(10, 2)	516008.5	3712006.0	1.15875	(133, 3)
516008.5	3712122.0	1.13161C	(203, 3)	516115.2	3712189.0	1.82278	(132, 1)
516179.3	3712061.0	3.06278	(29, 3)	516179.3	3712122.0	2.30108C	(218, 3)
516264.6	3712122.0	8.26379	(336, 3)	515277.0	3711278.0	1.61929	(142, 2)
515377.0	3711278.0	1.55152	(232, 2)	515477.0	3711278.0	1.74907	(56, 1)
515577.0	3711278.0	1.47134	(251, 2)	515677.0	3711278.0	1.52572	(117, 2)
515777.0	3711278.0	1.37157	(249, 2)	515877.0	3711278.0	1.20809	(117, 2)
515977.0	3711278.0	0.98809	(241, 2)	516077.0	3711278.0	1.48646	(205, 2)
516177.0	3711278.0	1.70797	(84, 2)	516277.0	3711278.0	1.64931	(10, 2)
516377.0	3711278.0	1.63092	(307, 2)	516477.0	3711278.0	1.99773	(345, 3)
516577.0	3711278.0	1.41398C	(201, 2)	516677.0	3711278.0	1.04558C	(201, 2)
516777.0	3711278.0	0.93674	(208, 2)	516877.0	3711278.0	0.99503	(95, 2)
516977.0	3711278.0	1.12744	(217, 2)	517077.0	3711278.0	1.18959	(217, 2)
517177.0	3711278.0	1.12993	(217, 2)	515277.0	3711178.0	1.67879	(251, 2)
515377.0	3711178.0	1.94261	(251, 2)	515477.0	3711178.0	1.75643	(251, 2)
515577.0	3711178.0	1.77662	(117, 2)	515677.0	3711178.0	1.77801	(249, 2)
515777.0	3711178.0	1.68403	(249, 2)	515877.0	3711178.0	1.20517	(249, 2)
515977.0	3711178.0	1.47020	(230, 2)	516077.0	3711178.0	1.89004	(205, 2)
516177.0	3711178.0	1.58536	(205, 2)	516277.0	3711178.0	1.23824	(122, 2)
516377.0	3711178.0	1.12202	(168, 2)	516477.0	3711178.0	1.36139C	(201, 2)
516577.0	3711178.0	1.25585	(95, 3)	516677.0	3711178.0	1.03029	(142, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516777.0	3711178.0	0.94100	(208, 2)	516877.0	3711178.0	1.04939	(31, 2)
516977.0	3711178.0	1.24736	(127, 2)	517077.0	3711178.0	1.34300	(116, 2)
517177.0	3711178.0	1.35309	(116, 2)	515277.0	3711078.0	2.29832	(251, 2)
515377.0	3711078.0	2.07917	(111, 2)	515477.0	3711078.0	1.75307	(111, 2)
515577.0	3711078.0	1.93381	(249, 2)	515677.0	3711078.0	2.01166	(249, 2)
515777.0	3711078.0	1.67022	(249, 2)	515877.0	3711078.0	1.32031	(205, 2)
515977.0	3711078.0	1.83945	(205, 2)	516077.0	3711078.0	2.07653	(107, 2)
516177.0	3711078.0	1.82540C	(193, 2)	516277.0	3711078.0	1.54273	(107, 2)
516377.0	3711078.0	1.41620C	(193, 2)	516477.0	3711078.0	1.34468	(95, 3)
516577.0	3711078.0	1.37442C	(201, 2)	516677.0	3711078.0	0.98238	(127, 2)
516777.0	3711078.0	0.83490	(151, 3)	516877.0	3711078.0	0.98567	(121, 2)
516977.0	3711078.0	1.34567	(121, 2)	517077.0	3711078.0	1.51355	(127, 2)
517177.0	3711078.0	1.55434	(116, 2)	515277.0	3710978.0	2.04339	(111, 2)
515377.0	3710978.0	1.88752	(111, 2)	515477.0	3710978.0	1.86947	(249, 2)
515577.0	3710978.0	2.04555	(249, 2)	515677.0	3710978.0	1.89934	(249, 2)
515777.0	3710978.0	1.56496	(52, 2)	515877.0	3710978.0	1.50274	(205, 2)
515977.0	3710978.0	2.03772	(205, 2)	516077.0	3710978.0	2.32936	(205, 2)
516177.0	3710978.0	2.45132C	(193, 2)	516277.0	3710978.0	1.98619	(117, 2)
516377.0	3710978.0	1.76441C	(193, 2)	516477.0	3710978.0	1.66116	(286, 2)
516577.0	3710978.0	1.31857	(95, 3)	516677.0	3710978.0	1.15848	(152, 2)
516777.0	3710978.0	1.06323	(151, 3)	516877.0	3710978.0	1.06282	(151, 3)
516977.0	3710978.0	1.36216	(204, 2)	517077.0	3710978.0	1.63022	(127, 2)
517177.0	3710978.0	1.72220	(127, 2)	515277.0	3710878.0	1.90196	(251, 2)
515377.0	3710878.0	1.97924	(117, 2)	515477.0	3710878.0	2.00773	(117, 2)
515577.0	3710878.0	1.94047	(249, 2)	515677.0	3710878.0	1.72085	(117, 2)
515777.0	3710878.0	1.83048	(297, 2)	515877.0	3710878.0	1.76888	(107, 2)
515977.0	3710878.0	2.26937	(107, 2)	516077.0	3710878.0	2.92158	(107, 2)
516177.0	3710878.0	2.94267C	(193, 2)	516277.0	3710878.0	2.31223	(117, 2)
516377.0	3710878.0	1.99631	(286, 2)	516477.0	3710878.0	1.91930	(168, 2)
516577.0	3710878.0	1.73601	(286, 2)	516677.0	3710878.0	1.99472	(95, 3)
516777.0	3710878.0	1.62827	(151, 3)	516877.0	3710878.0	1.24483	(66, 2)
516977.0	3710878.0	1.29300	(121, 2)	517077.0	3710878.0	1.64915	(204, 2)
517177.0	3710878.0	1.86698	(127, 2)	515277.0	3710778.0	1.97276	(117, 2)
515377.0	3710778.0	1.95305	(249, 2)	515477.0	3710778.0	1.99320	(249, 2)
515577.0	3710778.0	1.69716	(249, 2)	515677.0	3710778.0	1.77240	(297, 2)
515777.0	3710778.0	2.28892	(297, 2)	515877.0	3710778.0	2.01573	(107, 2)
515977.0	3710778.0	2.52679	(264, 1)	516077.0	3710778.0	3.16664	(107, 2)
516177.0	3710778.0	2.99123	(107, 2)	516277.0	3710778.0	2.66631C	(193, 2)

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* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515977.0	3710378.0	3.54127C	(121, 3)	516077.0	3710378.0	3.07105	(107, 2)
516177.0	3710378.0	3.19394	(107, 2)	516277.0	3710378.0	2.87317	(25, 3)
516377.0	3710378.0	2.98185	(25, 3)	516477.0	3710378.0	2.78039	(95, 3)
516577.0	3710378.0	2.82812	(286, 2)	516677.0	3710378.0	2.40533	(293, 2)
516777.0	3710378.0	2.37214	(127, 2)	516877.0	3710378.0	2.47834	(127, 2)
516977.0	3710378.0	2.03505	(66, 2)	517077.0	3710378.0	1.70051	(127, 2)
517177.0	3710378.0	1.53290	(66, 2)	515277.0	3712276.0	1.08140	(229, 2)
515377.0	3712276.0	0.94965	(278, 2)	515477.0	3712276.0	0.87963	(290, 2)
515577.0	3712276.0	1.01996	(174, 2)	515677.0	3712276.0	0.95729	(217, 2)
515777.0	3712276.0	1.06260	(231, 2)	515877.0	3712276.0	0.74920C	(203, 3)
515977.0	3712276.0	0.82707	(29, 3)	516077.0	3712276.0	0.85955	(336, 1)
516177.0	3712276.0	2.40273	(336, 1)	516277.0	3712276.0	4.08429	(336, 2)
516377.0	3712276.0	1.83910	(73, 2)	516477.0	3712276.0	1.75050	(236, 2)
516577.0	3712276.0	1.33460	(5, 2)	516677.0	3712276.0	1.21525	(78, 2)
516777.0	3712276.0	0.80912	(352, 2)	516877.0	3712276.0	1.15308	(245, 2)
516977.0	3712276.0	1.36350	(226, 2)	517077.0	3712276.0	2.23601	(226, 2)
517177.0	3712276.0	2.97172	(225, 2)	515277.0	3712376.0	1.25964	(174, 2)
515377.0	3712376.0	1.17610	(290, 2)	515477.0	3712376.0	1.04908	(176, 2)
515577.0	3712376.0	1.15593	(231, 2)	515677.0	3712376.0	1.19910	(174, 2)
515777.0	3712376.0	1.00716	(231, 2)	515877.0	3712376.0	0.84917	(132, 1)
515977.0	3712376.0	1.69934C	(156, 2)	516077.0	3712376.0	1.09133	(256, 3)
516177.0	3712376.0	3.45671	(336, 3)	516277.0	3712376.0	3.36253	(335, 2)
516377.0	3712376.0	2.02985	(73, 2)	516477.0	3712376.0	2.13928	(236, 2)
516577.0	3712376.0	1.28057	(166, 2)	516677.0	3712376.0	0.89797	(180, 2)
516777.0	3712376.0	1.00828	(225, 2)	516877.0	3712376.0	1.17162	(225, 2)
516977.0	3712376.0	1.40662	(225, 2)	517077.0	3712376.0	1.68424	(216, 2)
517177.0	3712376.0	2.25856	(226, 2)	515277.0	3712476.0	1.52540	(176, 2)
515377.0	3712476.0	1.40911	(273, 2)	515477.0	3712476.0	1.22206	(273, 2)
515577.0	3712476.0	1.44866C	(156, 2)	515677.0	3712476.0	1.35416	(174, 2)
515777.0	3712476.0	1.21866	(153, 2)	515877.0	3712476.0	1.07320C	(218, 3)
515977.0	3712476.0	0.94805	(336, 1)	516077.0	3712476.0	2.14952	(336, 1)
516177.0	3712476.0	3.58667	(336, 3)	516277.0	3712476.0	2.94743	(335, 2)
516377.0	3712476.0	2.02889	(73, 2)	516477.0	3712476.0	2.04322	(236, 2)
516577.0	3712476.0	1.34023	(236, 2)	516677.0	3712476.0	1.42137	(78, 2)
516777.0	3712476.0	1.07454	(78, 2)	516877.0	3712476.0	1.25351	(183, 2)
516977.0	3712476.0	1.16821	(216, 2)	517077.0	3712476.0	1.63205	(216, 2)
517177.0	3712476.0	1.76495	(207, 2)	515277.0	3712576.0	1.68055	(273, 2)
515377.0	3712576.0	1.61487	(273, 2)	515477.0	3712576.0	1.50359	(108, 2)

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* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515577.0	3712576.0	1.55144	(108, 2)	515677.0	3712576.0	1.69803	(153, 2)
515777.0	3712576.0	1.36163	(153, 2)	515877.0	3712576.0	0.95242	(174, 2)
515977.0	3712576.0	1.06859	(270, 2)	516077.0	3712576.0	1.31818	(336, 1)
516177.0	3712576.0	2.54399	(30, 2)	516277.0	3712576.0	2.58300	(335, 2)
516377.0	3712576.0	1.94787	(73, 2)	516477.0	3712576.0	1.78257	(236, 2)
516577.0	3712576.0	1.49157	(148, 2)	516677.0	3712576.0	1.23831	(217, 2)
516777.0	3712576.0	1.37207	(180, 2)	516877.0	3712576.0	1.55339	(190, 2)
516977.0	3712576.0	1.63860	(183, 2)	517077.0	3712576.0	1.39700	(190, 2)
517177.0	3712576.0	1.77117	(216, 2)	515277.0	3712676.0	1.69715	(273, 2)
515377.0	3712676.0	1.68085	(108, 2)	515477.0	3712676.0	1.72514	(153, 2)
515577.0	3712676.0	1.95298C	(156, 2)	515677.0	3712676.0	1.80411	(153, 2)
515777.0	3712676.0	1.28095	(129, 2)	515877.0	3712676.0	1.53271	(270, 2)
515977.0	3712676.0	1.62175C	(156, 2)	516077.0	3712676.0	1.27752C	(156, 2)
516177.0	3712676.0	2.14593	(336, 3)	516277.0	3712676.0	1.85452	(221, 2)
516377.0	3712676.0	1.73309	(242, 2)	516477.0	3712676.0	1.50193	(236, 2)
516577.0	3712676.0	1.23812	(148, 2)	516677.0	3712676.0	1.52309	(236, 2)
516777.0	3712676.0	1.41339	(239, 2)	516877.0	3712676.0	1.59006	(190, 2)
516977.0	3712676.0	1.87346	(190, 2)	517077.0	3712676.0	1.86912	(190, 2)
517177.0	3712676.0	1.71033	(190, 2)	515277.0	3712776.0	1.70760	(174, 2)
515377.0	3712776.0	1.66895	(153, 2)	515477.0	3712776.0	1.70679C	(156, 2)
515577.0	3712776.0	1.90998C	(156, 2)	515677.0	3712776.0	1.53250	(153, 2)
515777.0	3712776.0	1.31919	(270, 2)	515877.0	3712776.0	1.59105C	(156, 2)
515977.0	3712776.0	1.52866	(30, 2)	516077.0	3712776.0	1.45294	(336, 3)
516177.0	3712776.0	1.80433	(242, 2)	516277.0	3712776.0	2.06288	(102, 2)
516377.0	3712776.0	1.74102	(102, 2)	516477.0	3712776.0	1.36454	(141, 2)
516577.0	3712776.0	1.52528	(141, 2)	516677.0	3712776.0	1.49906	(183, 2)
516777.0	3712776.0	1.56441	(239, 2)	516877.0	3712776.0	1.86311	(180, 2)
516977.0	3712776.0	1.94626	(190, 2)	517077.0	3712776.0	2.19384	(190, 2)
517177.0	3712776.0	2.13719	(190, 2)	515277.0	3712876.0	1.74045	(153, 2)
515377.0	3712876.0	1.79953	(108, 2)	515477.0	3712876.0	1.71396C	(156, 2)
515577.0	3712876.0	1.69582	(153, 2)	515677.0	3712876.0	1.62043C	(156, 2)
515777.0	3712876.0	1.54383	(129, 2)	515877.0	3712876.0	1.49033	(157, 2)
515977.0	3712876.0	1.78853	(30, 2)	516077.0	3712876.0	1.79275	(336, 3)
516177.0	3712876.0	1.93649	(182, 2)	516277.0	3712876.0	2.10418	(182, 2)
516377.0	3712876.0	1.79847	(182, 2)	516477.0	3712876.0	1.45355	(141, 2)
516577.0	3712876.0	1.79828	(236, 2)	516677.0	3712876.0	1.41469	(148, 2)
516777.0	3712876.0	1.86092	(236, 2)	516877.0	3712876.0	1.92426	(239, 2)
516977.0	3712876.0	2.21327	(180, 2)	517077.0	3712876.0	2.20328	(190, 2)

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* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
517177.0	3712876.0	2.29392	(190, 2)	515277.0	3712976.0	1.88989	(108, 2)
515377.0	3712976.0	1.63411C	(156, 2)	515477.0	3712976.0	1.61761C	(156, 2)
515577.0	3712976.0	1.49558C	(156, 2)	515677.0	3712976.0	1.72672	(129, 2)
515777.0	3712976.0	1.69978	(129, 2)	515877.0	3712976.0	1.55300	(135, 2)
515977.0	3712976.0	1.95495	(270, 2)	516077.0	3712976.0	1.92861	(30, 2)
516177.0	3712976.0	2.29019	(182, 2)	516277.0	3712976.0	2.28636	(182, 2)
516377.0	3712976.0	1.95828	(182, 2)	516477.0	3712976.0	1.70201	(157, 2)
516577.0	3712976.0	1.74986	(236, 2)	516677.0	3712976.0	1.74057	(141, 2)
516777.0	3712976.0	1.87129	(183, 2)	516877.0	3712976.0	1.98447	(239, 2)
516977.0	3712976.0	2.23270	(180, 2)	517077.0	3712976.0	2.41772	(180, 2)
517177.0	3712976.0	2.18252	(190, 2)	515277.0	3713076.0	1.68492	(108, 2)
515377.0	3713076.0	1.59845	(129, 2)	515477.0	3713076.0	1.61793	(153, 2)
515577.0	3713076.0	1.83857	(129, 2)	515677.0	3713076.0	1.89597	(129, 2)
515777.0	3713076.0	1.73746	(129, 2)	515877.0	3713076.0	1.59748	(30, 2)
515977.0	3713076.0	1.53384	(270, 2)	516077.0	3713076.0	1.69674	(182, 2)
516177.0	3713076.0	2.26304	(242, 2)	516277.0	3713076.0	2.38940	(182, 2)
516377.0	3713076.0	1.98399	(292, 2)	516477.0	3713076.0	1.92934	(157, 2)
516577.0	3713076.0	1.79282	(242, 2)	516677.0	3713076.0	2.12437	(236, 2)
516777.0	3713076.0	1.78571	(215, 2)	516877.0	3713076.0	2.02447	(236, 2)
516977.0	3713076.0	2.11566	(239, 2)	517077.0	3713076.0	2.58053	(180, 2)
517177.0	3713076.0	2.67229	(180, 2)	515277.0	3713176.0	1.60196	(129, 2)
515377.0	3713176.0	1.80091	(129, 2)	515477.0	3713176.0	1.78138	(270, 2)
515577.0	3713176.0	1.98644	(129, 2)	515677.0	3713176.0	1.98748	(129, 2)
515777.0	3713176.0	1.76910	(272, 2)	515877.0	3713176.0	2.27977	(30, 2)
515977.0	3713176.0	1.59059	(242, 2)	516077.0	3713176.0	1.96112	(182, 2)
516177.0	3713176.0	2.35518	(242, 2)	516277.0	3713176.0	2.42775	(182, 2)
516377.0	3713176.0	2.41854	(292, 2)	516477.0	3713176.0	2.10560	(157, 2)
516577.0	3713176.0	1.91594	(242, 2)	516677.0	3713176.0	1.93203	(236, 2)
516777.0	3713176.0	1.79443	(141, 2)	516877.0	3713176.0	2.01291	(183, 2)
516977.0	3713176.0	2.01545	(239, 2)	517077.0	3713176.0	2.22389	(180, 2)
517177.0	3713176.0	3.53604	(180, 2)	515277.0	3712176.0	1.18532	(254, 2)
515377.0	3712176.0	0.98384	(254, 2)	515477.0	3712176.0	0.91210	(254, 2)
515577.0	3712176.0	0.81544	(203, 2)	515677.0	3712176.0	0.79489	(203, 2)
515777.0	3712176.0	0.54234	(203, 2)	515877.0	3712176.0	0.39966	(253, 3)
515977.0	3712176.0	0.62232C	(227, 3)	516077.0	3712176.0	1.53540	(29, 3)
516177.0	3712176.0	1.44529	(132, 2)	515277.0	3712076.0	1.46989C	(123, 2)
515377.0	3712076.0	1.52182C	(123, 2)	515477.0	3712076.0	1.52373C	(123, 2)
515577.0	3712076.0	1.27423C	(123, 2)	515677.0	3712076.0	0.84664C	(123, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515777.0	3712076.0	0.61887	(133, 3)	515877.0	3712076.0	0.68114	(133, 3)
515977.0	3712076.0	0.75427	(253, 3)	516077.0	3712076.0	1.03779C	(203, 3)
516177.0	3712076.0	3.14247	(132, 1)	515277.0	3711976.0	1.64962	(250, 2)
515377.0	3711976.0	1.40463	(250, 2)	515477.0	3711976.0	1.29778	(229, 2)
515577.0	3711976.0	1.38523	(229, 2)	515677.0	3711976.0	1.39501	(229, 2)
515777.0	3711976.0	0.69240	(253, 2)	515877.0	3711976.0	0.67411	(253, 2)
515977.0	3711976.0	0.76066	(108, 2)	516077.0	3711976.0	1.39537	(133, 3)
516177.0	3711976.0	1.23196	(253, 3)	515277.0	3711876.0	1.82319C	(123, 2)
515377.0	3711876.0	2.05179C	(123, 2)	515477.0	3711876.0	1.88663	(250, 2)
515577.0	3711876.0	1.30421	(250, 2)	515677.0	3711876.0	1.21400	(247, 2)
515777.0	3711876.0	0.89057	(254, 2)	515877.0	3711876.0	1.06577	(254, 2)
515977.0	3711876.0	1.34622	(254, 2)	516077.0	3711876.0	1.65022	(247, 2)
516177.0	3711876.0	2.51896	(86, 2)	515277.0	3711776.0	1.60008C	(123, 2)
515377.0	3711776.0	1.82113C	(123, 2)	515477.0	3711776.0	1.95825	(250, 2)
515577.0	3711776.0	1.30165	(250, 2)	515677.0	3711776.0	0.69872	(86, 2)
515777.0	3711776.0	0.62437C	(123, 2)	515877.0	3711776.0	0.81289	(110, 2)
515977.0	3711776.0	0.84032	(56, 1)	516077.0	3711776.0	1.62429	(111, 2)
516177.0	3711776.0	3.57742	(111, 2)	515277.0	3711676.0	1.61523C	(128, 2)
515377.0	3711676.0	1.60334C	(128, 2)	515477.0	3711676.0	1.39525C	(123, 2)
515577.0	3711676.0	1.27125C	(123, 2)	515677.0	3711676.0	0.94121C	(128, 2)
515777.0	3711676.0	0.84090	(35, 2)	515877.0	3711676.0	1.04255	(111, 2)
515977.0	3711676.0	2.07437	(111, 2)	516077.0	3711676.0	2.67924	(56, 1)
516177.0	3711676.0	1.08302	(110, 2)	515277.0	3711576.0	1.38506	(250, 2)
515377.0	3711576.0	1.08228	(120, 2)	515477.0	3711576.0	0.95307	(120, 2)
515577.0	3711576.0	0.97018	(35, 2)	515677.0	3711576.0	0.78164	(111, 2)
515777.0	3711576.0	1.26413	(111, 2)	515877.0	3711576.0	2.48080	(111, 2)
515977.0	3711576.0	2.21691	(56, 1)	516077.0	3711576.0	0.87228	(57, 1)
516177.0	3711576.0	2.25840	(107, 2)	515277.0	3711476.0	1.39385	(120, 2)
515377.0	3711476.0	1.22181	(120, 2)	515477.0	3711476.0	1.27875C	(128, 2)
515577.0	3711476.0	1.10388	(142, 2)	515677.0	3711476.0	1.45215	(111, 2)
515777.0	3711476.0	2.35546	(56, 1)	515877.0	3711476.0	1.97176	(56, 1)
515977.0	3711476.0	1.12377	(56, 1)	516077.0	3711476.0	0.76606	(56, 2)
516177.0	3711476.0	1.61444	(264, 1)	511277.0	3709378.0	2.80026	(247, 3)
512277.0	3709378.0	2.69887	(329, 1)	513277.0	3709378.0	2.51765	(246, 3)
514277.0	3709378.0	2.57502C	(120, 1)	515277.0	3709378.0	2.42349C	(100, 1)
516277.0	3709378.0	2.52456	(345, 2)	517277.0	3709378.0	1.77678	(66, 2)
518277.0	3709378.0	2.47332	(282, 3)	519277.0	3709378.0	1.63241	(34, 1)
520277.0	3709378.0	1.13473	(282, 2)	521277.0	3709378.0	1.17514	(338, 1)

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* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3709378.0	0.69517	(47, 2)	511277.0	3708378.0	2.40179	(343, 3)
512277.0	3708378.0	1.83763C	(231, 1)	513277.0	3708378.0	2.42161	(342, 3)
514277.0	3708378.0	2.82660	(16, 3)	515277.0	3708378.0	2.36248	(264, 2)
516277.0	3708378.0	2.19456	(316, 3)	517277.0	3708378.0	2.88306	(36, 3)
518277.0	3708378.0	1.98629	(23, 1)	519277.0	3708378.0	1.22341	(327, 3)
520277.0	3708378.0	1.68523	(34, 1)	521277.0	3708378.0	1.11626	(353, 1)
522277.0	3708378.0	1.04402	(127, 1)	511277.0	3707378.0	1.90174C	(364, 3)
512277.0	3707378.0	2.41318C	(284, 3)	513277.0	3707378.0	2.57785	(7, 3)
514277.0	3707378.0	1.80526	(7, 3)	515277.0	3707378.0	3.48909C	(269, 1)
516277.0	3707378.0	2.95816	(297, 1)	517277.0	3707378.0	2.62052	(36, 3)
518277.0	3707378.0	1.75503	(362, 3)	519277.0	3707378.0	1.28451	(23, 1)
520277.0	3707378.0	1.01534C	(31, 3)	521277.0	3707378.0	1.50425	(34, 1)
522277.0	3707378.0	1.43310	(353, 1)	511277.0	3706378.0	2.62225	(246, 3)
512277.0	3706378.0	2.58522C	(364, 1)	513277.0	3706378.0	2.20142	(7, 3)
514277.0	3706378.0	2.03614	(230, 1)	515277.0	3706378.0	3.08981C	(269, 1)
516277.0	3706378.0	3.02980	(297, 1)	517277.0	3706378.0	2.13894	(43, 3)
518277.0	3706378.0	2.17394	(63, 3)	519277.0	3706378.0	1.21422	(37, 1)
520277.0	3706378.0	1.13968	(362, 2)	521277.0	3706378.0	1.05109	(327, 3)
522277.0	3706378.0	1.35571	(34, 1)	523277.0	3706378.0	1.38576C	(14, 1)
522402.0	3710378.0	0.81763	(47, 3)	522402.0	3711378.0	0.91314C	(160, 3)
522402.0	3712378.0	0.90017	(4, 1)	511277.0	3714176.0	1.17975	(32, 3)
512277.0	3714176.0	1.49339C	(300, 1)	513277.0	3714176.0	1.41100C	(310, 3)
514277.0	3714176.0	1.43415C	(123, 3)	515277.0	3714176.0	3.01422	(336, 1)
516277.0	3714176.0	3.85154	(335, 2)	517277.0	3714176.0	3.69983	(333, 1)
518277.0	3714176.0	1.90812	(183, 2)	519277.0	3714176.0	1.23804	(145, 2)
520277.0	3714176.0	1.12529	(176, 3)	521277.0	3714176.0	1.11243	(192, 2)
522277.0	3714176.0	0.96624	(3, 3)	511277.0	3715176.0	1.32649C	(129, 3)
512277.0	3715176.0	3.43143	(291, 1)	513277.0	3715176.0	2.02426C	(309, 3)
514277.0	3715176.0	2.26581	(196, 3)	515277.0	3715176.0	3.46503C	(135, 1)
516277.0	3715176.0	2.64942	(166, 3)	517277.0	3715176.0	1.53997	(154, 1)
518277.0	3715176.0	1.81293	(183, 2)	519277.0	3715176.0	1.52063	(19, 2)
520277.0	3715176.0	1.22017	(19, 2)	521277.0	3715176.0	1.29173	(210, 2)
522277.0	3715176.0	1.17937C	(200, 1)	511277.0	3716176.0	3.31171C	(129, 3)
512277.0	3716176.0	2.08119C	(323, 3)	513277.0	3716176.0	2.21290	(131, 3)
514277.0	3716176.0	2.55635	(132, 3)	515277.0	3716176.0	3.61378	(19, 3)
516277.0	3716176.0	1.80534	(166, 3)	517277.0	3716176.0	1.52395	(103, 1)
518277.0	3716176.0	1.36354	(333, 1)	519277.0	3716176.0	1.68470	(78, 2)
520277.0	3716176.0	1.43125	(19, 2)	521277.0	3716176.0	1.34892	(236, 2)

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* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3716176.0	0.90746C	(242, 1)	511277.0	3717176.0	2.49116C	(123, 3)
512277.0	3717176.0	2.31461	(67, 1)	513277.0	3717176.0	2.45577	(27, 1)
514277.0	3717176.0	3.66748	(355, 3)	515277.0	3717176.0	2.43146C	(157, 3)
516277.0	3717176.0	2.04722	(333, 3)	517277.0	3717176.0	1.32292	(106, 2)
518277.0	3717176.0	1.52630C	(150, 1)	519277.0	3717176.0	1.24257C	(6, 3)
520277.0	3717176.0	1.18820	(78, 2)	521277.0	3717176.0	1.16715	(154, 1)
522277.0	3717176.0	1.10654	(236, 2)	511277.0	3713176.0	1.21084C	(355, 1)
512277.0	3713176.0	1.05856C	(248, 3)	513277.0	3713176.0	1.19320	(253, 3)
514277.0	3713176.0	1.73927	(290, 2)	511277.0	3712176.0	1.58591	(162, 1)
512277.0	3712176.0	1.55605	(162, 1)	513277.0	3712176.0	1.34774	(96, 3)
514277.0	3712176.0	1.57722C	(171, 1)	511277.0	3711176.0	1.38819C	(341, 3)
512277.0	3711176.0	2.20780C	(66, 3)	513277.0	3711176.0	1.22006	(82, 2)
514277.0	3711176.0	1.84233	(120, 2)	511277.0	3709378.0	2.80026	(247, 3)
512277.0	3709378.0	2.69887	(329, 1)	513277.0	3709378.0	2.51765	(246, 3)
514277.0	3709378.0	2.57502C	(120, 1)	515277.0	3709378.0	2.42349C	(100, 1)
516277.0	3709378.0	2.52456	(345, 2)	517277.0	3709378.0	1.77678	(66, 2)
518277.0	3709378.0	2.47332	(282, 3)	519277.0	3709378.0	1.63241	(34, 1)
520277.0	3709378.0	1.13473	(282, 2)	521277.0	3709378.0	1.17514	(338, 1)
522277.0	3709378.0	0.69517	(47, 2)	511277.0	3708378.0	2.40179	(343, 3)
512277.0	3708378.0	1.83763C	(231, 1)	513277.0	3708378.0	2.42161	(342, 3)
514277.0	3708378.0	2.82660	(16, 3)	515277.0	3708378.0	2.36248	(264, 2)
516277.0	3708378.0	2.19456	(316, 3)	517277.0	3708378.0	2.88306	(36, 3)
518277.0	3708378.0	1.98629	(23, 1)	519277.0	3708378.0	1.22341	(327, 3)
520277.0	3708378.0	1.68523	(34, 1)	521277.0	3708378.0	1.11626	(353, 1)
522277.0	3708378.0	1.04402	(127, 1)	511277.0	3707378.0	1.90174C	(364, 3)
512277.0	3707378.0	2.41318C	(284, 3)	513277.0	3707378.0	2.57785	(7, 3)
514277.0	3707378.0	1.80526	(7, 3)	515277.0	3707378.0	3.48909C	(269, 1)
516277.0	3707378.0	2.95816	(297, 1)	517277.0	3707378.0	2.62052	(36, 3)
518277.0	3707378.0	1.75503	(362, 3)	519277.0	3707378.0	1.28451	(23, 1)
520277.0	3707378.0	1.01534C	(31, 3)	521277.0	3707378.0	1.50425	(34, 1)
522277.0	3707378.0	1.43310	(353, 1)	511277.0	3706378.0	2.62225	(246, 3)
512277.0	3706378.0	2.58522C	(364, 1)	513277.0	3706378.0	2.20142	(7, 3)
514277.0	3706378.0	2.03614	(230, 1)	515277.0	3706378.0	3.08981C	(269, 1)
516277.0	3706378.0	3.02980	(297, 1)	517277.0	3706378.0	2.13894	(43, 3)
518277.0	3706378.0	2.17394	(63, 3)	519277.0	3706378.0	1.21422	(37, 1)
520277.0	3706378.0	1.13968	(362, 2)	521277.0	3706378.0	1.05109	(327, 3)
522277.0	3706378.0	1.35571	(34, 1)	523277.0	3706378.0	1.38576C	(14, 1)
522402.0	3710378.0	0.81763	(47, 3)	522402.0	3711378.0	0.91314C	(160, 3)

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* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522402.0	3712378.0	0.90017	(4, 1)	511277.0	3714176.0	1.17975	(32, 3)
512277.0	3714176.0	1.49339C	(300, 1)	513277.0	3714176.0	1.41100C	(310, 3)
514277.0	3714176.0	1.43415C	(123, 3)	515277.0	3714176.0	3.01422	(336, 1)
516277.0	3714176.0	3.85154	(335, 2)	517277.0	3714176.0	3.69983	(333, 1)
518277.0	3714176.0	1.90812	(183, 2)	519277.0	3714176.0	1.23804	(145, 2)
520277.0	3714176.0	1.12529	(176, 3)	521277.0	3714176.0	1.11243	(192, 2)
522277.0	3714176.0	0.96624	(3, 3)	511277.0	3715176.0	1.32649C	(129, 3)
512277.0	3715176.0	3.43143	(291, 1)	513277.0	3715176.0	2.02426C	(309, 3)
514277.0	3715176.0	2.26581	(196, 3)	515277.0	3715176.0	3.46503C	(135, 1)
516277.0	3715176.0	2.64942	(166, 3)	517277.0	3715176.0	1.53997	(154, 1)
518277.0	3715176.0	1.81293	(183, 2)	519277.0	3715176.0	1.52063	(19, 2)
520277.0	3715176.0	1.22017	(19, 2)	521277.0	3715176.0	1.29173	(210, 2)
522277.0	3715176.0	1.17937C	(200, 1)	511277.0	3716176.0	3.31171C	(129, 3)
512277.0	3716176.0	2.08119C	(323, 3)	513277.0	3716176.0	2.21290	(131, 3)
514277.0	3716176.0	2.55635	(132, 3)	515277.0	3716176.0	3.61378	(19, 3)
516277.0	3716176.0	1.80534	(166, 3)	517277.0	3716176.0	1.52395	(103, 1)
518277.0	3716176.0	1.36354	(333, 1)	519277.0	3716176.0	1.68470	(78, 2)
520277.0	3716176.0	1.43125	(19, 2)	521277.0	3716176.0	1.34892	(236, 2)
522277.0	3716176.0	0.90746C	(242, 1)	511277.0	3717176.0	2.49116C	(123, 3)
512277.0	3717176.0	2.31461	(67, 1)	513277.0	3717176.0	2.45577	(27, 1)
514277.0	3717176.0	3.66748	(355, 3)	515277.0	3717176.0	2.43146C	(157, 3)
516277.0	3717176.0	2.04722	(333, 3)	517277.0	3717176.0	1.32292	(106, 2)
518277.0	3717176.0	1.52630C	(150, 1)	519277.0	3717176.0	1.24257C	(6, 3)
520277.0	3717176.0	1.18820	(78, 2)	521277.0	3717176.0	1.16715	(154, 1)
522277.0	3717176.0	1.10654	(236, 2)	511277.0	3713176.0	1.21084C	(355, 1)
512277.0	3713176.0	1.05856C	(248, 3)	513277.0	3713176.0	1.19320	(253, 3)
514277.0	3713176.0	1.73927	(290, 2)	511277.0	3712176.0	1.58591	(162, 1)
512277.0	3712176.0	1.55605	(162, 1)	513277.0	3712176.0	1.34774	(96, 3)
514277.0	3712176.0	1.57722C	(171, 1)	511277.0	3711176.0	1.38819C	(341, 3)
512277.0	3711176.0	2.20780C	(66, 3)	513277.0	3711176.0	1.22006	(82, 2)
514277.0	3711176.0	1.84233	(120, 2)	516500.0	3708100.0	4.33548	(25, 3)
518100.0	3709350.0	2.64577	(362, 2)	514500.0	3708800.0	2.84273	(16, 3)
517300.0	3714400.0	3.69177C	(150, 1)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1982 BINARY ***

* 50 MAXIMUM 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	9.64118	2	30	516264.6	3712122.0	26	4.17795	2	30	515277.0	3715176.0
2	9.64118	2	30	516264.6	3712122.0	27	4.17795	2	30	515277.0	3715176.0
3	8.26379	3	336	516264.6	3712122.0	28	4.16862	2	183	517077.0	3713176.0
4	8.26379	3	336	516264.6	3712122.0	29	4.16105	2	183	516977.0	3712876.0
5	6.39611	1	56	516177.0	3711776.0	30	4.13037	2	183	516993.9	3713079.0
6	5.96128C	3	121	515277.0	3706378.0	31	4.11305	3	316	516500.0	3708100.0
7	5.96128C	3	121	515277.0	3706378.0	32	4.10675	3	29	516264.6	3712122.0
8	5.48995	2	183	517177.0	3713176.0	33	4.10675	3	29	516264.6	3712122.0
9	5.28814	2	30	516177.0	3712376.0	34	4.10182	2	183	517077.0	3712876.0
10	5.06653C	3	363	516500.0	3708100.0	35	4.08429	2	336	516277.0	3712276.0
11	4.97826	2	92	516277.0	3714176.0	36	4.04639	2	30	516177.0	3712276.0
12	4.97826	2	92	516277.0	3714176.0	37	4.02079	2	30	516177.0	3712476.0
13	4.62170	2	102	516411.0	3712159.0	38	3.99519	2	270	515277.0	3714176.0
14	4.59762	2	183	517077.0	3713076.0	39	3.99519	2	270	515277.0	3714176.0
15	4.58808	2	183	517177.0	3713076.0	40	3.99137C	2	193	516077.0	3710478.0
16	4.46156C	3	121	515277.0	3707378.0	41	3.94256	2	102	516277.0	3712376.0
17	4.46156C	3	121	515277.0	3707378.0	42	3.91702	3	25	516277.0	3706378.0
18	4.38788	2	102	516277.0	3712276.0	43	3.91702	3	25	516277.0	3706378.0
19	4.38588	2	183	517077.0	3712976.0	44	3.90678	2	74	516264.6	3712122.0
20	4.33548	3	25	516500.0	3708100.0	45	3.90678	2	74	516264.6	3712122.0
21	4.25375	2	183	516977.0	3712976.0	46	3.90296C	2	193	516077.0	3710678.0
22	4.23999	1	333	517300.0	3714400.0	47	3.86524	3	7	514500.0	3708800.0
23	4.21452	2	107	516264.6	3711598.0	48	3.85154	2	335	516277.0	3714176.0
24	4.20806	3	25	516277.0	3707378.0	49	3.85154	2	335	516277.0	3714176.0
25	4.20806	3	25	516277.0	3707378.0	50	3.83826	2	102	516264.6	3712122.0

SECTION H.13

1983 MODELING OUTPUT FOR CO ISCST

ISCST (DATED 90346)
BOWMAN ENVIRONMENTAL ENGINEERING REV.6.96

SESSION INFORMATION

INPUT DATA FILE NAME : ISCC083.DTA
OUTPUT LIST FILE NAME : ISCC083.LST
MET DATA FILE NAME : SHVGGG83.BIN

NOTE THAT THE BUILDING DIMENSIONS ON CARD 6,1 FOR SOURCE NO. 1 DO NOT MEET THE SCHULMAN-SCIRE CRITERIA.
THEREFORE, DIRECTION SPECIFIC BUILDING DIMENSIONS WILL NOT BE USED BY THE MODEL.

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CALCULATE (CONCENTRATION=1,DEPOSITION=2)                          ISW(1) =   1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)           ISW(2) =   3
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1,POLAR=2)                  ISW(3) =   1
TERRAIN ELEVATIONS ARE READ (YES=1,NO=0)                          ISW(4) =   1
CALCULATIONS ARE WRITTEN TO TAPE (YES=1,NO=0)                     ISW(5) =   0
LIST ALL INPUT DATA (NO=0,YES=1,MET DATA ALSO=2)                  ISW(6) =   1

COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION)
WITH THE FOLLOWING TIME PERIODS:
  HOURLY (YES=1,NO=0)                                             ISW(7) =   1
  2-HOUR (YES=1,NO=0)                                             ISW(8) =   0
  3-HOUR (YES=1,NO=0)                                             ISW(9) =   0
  4-HOUR (YES=1,NO=0)                                            ISW(10) =   0
  6-HOUR (YES=1,NO=0)                                            ISW(11) =   0
  8-HOUR (YES=1,NO=0)                                            ISW(12) =   1
  12-HOUR (YES=1,NO=0)                                           ISW(13) =   0
  24-HOUR (YES=1,NO=0)                                           ISW(14) =   0
PRINT 'N'-DAY TABLE(S) (YES=1,NO=0)                              ISW(15) =   0

PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE
SPECIFIED BY ISW(7) THROUGH ISW(14):
  DAILY TABLES (YES=1,NO=0)                                      ISW(16) =   0
  HIGHEST & SECOND HIGHEST TABLES (YES=1,NO=0)                   ISW(17) =   1
  MAXIMUM 50 TABLES (YES=1,NO=0)                                 ISW(18) =   1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1,CARD=2)        ISW(19) =   1
RURAL-URBAN OPTION (RU.=0,UR. MODE 1=1,UR. MODE 2=2,UR. MODE 3=3) ISW(20) =   0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1,USER ENTERS=2,3)        ISW(21) =   1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1,USER ENTERS=2,3) ISW(22) =   1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0,YES>0)                ISW(23) =   0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1,NO=2)            ISW(24) =   1
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2,NO=1)      ISW(25) =   2
PROGRAM USES BUOYANCY INDUCED DISPERSION (YES=1,NO=2)            ISW(26) =   1
CONCENTRATIONS DURING CALM PERIODS SET = 0 (YES=1,NO=2)          ISW(27) =   1
REG. DEFAULT OPTION CHOSEN (YES=1,NO=2)                          ISW(28) =   1
TYPE OF POLLUTANT TO BE MODELLED (1=SO2,2=OTHER)                 ISW(29) =   2
DEBUG OPTION CHOSEN (YES=1,NO=2)                                 ISW(30) =   2
ABOVE GROUND (FLAGPOLE) RECEPTORS USED (YES=1,NO=0)              ISW(31) =   0

NUMBER OF INPUT SOURCES                                          NSOURC =   1
NUMBER OF SOURCE GROUPS (=0,ALL SOURCES)                         NGROUP =   0
TIME PERIOD INTERVAL TO BE PRINTED (=0,ALL INTERVALS)             IPERD =   0
NUMBER OF X (RANGE) GRID VALUES                                  NXPNTS =   0
NUMBER OF Y (THETA) GRID VALUES                                  NYPNTS =   0
NUMBER OF DISCRETE RECEPTORS                                     NXWYPT = 749
SOURCE EMISSION RATE UNITS CONVERSION FACTOR                         TK =.10000E+07
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED                 ZR =  10.00  METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA                         IMET =   9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION              DECAY =0.000000E+00
SURFACE STATION NO.                                                  ISS = 13957
YEAR OF SURFACE DATA                                                 ISY = 83
UPPER AIR STATION NO.                                                IUS =  3951
YEAR OF UPPER AIR DATA                                               IUY = 83
ALLOCATED DATA STORAGE                                            LIMIT =160000 WORDS
REQUIRED DATA STORAGE FOR THIS PROBLEM RUN                        MIMIT = 11924 WORDS
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*** I. P. - CANDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
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*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** X,Y COORDINATES OF DISCRETE RECEPTORS ***
(METERS)

(516276.8,3711378.0), (516411.0,3712159.0), (516679.3,3711159.0), (516679.3,3711378.0), (517079.3,3711378.0),
(517079.3,3711549.0), (517530.5,3711488.0), (517530.5,3711317.0), (518743.9,3711171.0), (518743.9,3711573.0),
(519914.6,3711573.0), (519914.6,3711171.0), (520304.8,3711171.0), (520304.8,3711024.0), (520707.2,3711024.0),
(520817.0,3711628.0), (520402.3,3712176.0), (518707.2,3712176.0), (518707.2,3712030.0), (518280.4,3712030.0),
(518280.4,3712250.0), (518060.9,3712335.0), (518060.9,3712878.0), (517426.8,3712878.0), (517426.8,3713079.0),
(516993.9,3713079.0), (516993.9,3713280.0), (516603.7,3713280.0), (516603.7,3712884.0), (516372.0,3712884.0),
(516372.0,3712798.0), (516256.2,3712774.0), (516276.8,3711378.0), (516264.6,3712122.0), (516264.6,3711598.0),
(516008.5,3712006.0), (516008.5,3712122.0), (516115.2,3712189.0), (516179.3,3712061.0), (516179.3,3712122.0),
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*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
516276.8	3711378.0	34.43942	516411.0	3712159.0	34.43942	516679.3	3711159.0	34.43942
516679.3	3711378.0	34.43942	517079.3	3711378.0	34.43942	517079.3	3711549.0	34.43942
517530.5	3711488.0	34.43942	517530.5	3711317.0	34.43942	518743.9	3711171.0	34.43942
518743.9	3711573.0	34.43942	519914.6	3711573.0	34.43942	519914.6	3711171.0	34.43942
520304.8	3711171.0	34.43942	520304.8	3711024.0	34.43942	520707.2	3711024.0	34.43942
520817.0	3711628.0	34.43942	520402.3	3712176.0	34.43942	518707.2	3712176.0	34.43942
518707.2	3712030.0	34.43942	518280.4	3712030.0	34.43942	518280.4	3712250.0	34.43942
518060.9	3712335.0	34.43942	518060.9	3712878.0	34.43942	517426.8	3712878.0	34.43942
517426.8	3713079.0	34.43942	516993.9	3713079.0	34.43942	516993.9	3713280.0	34.43942
516603.7	3713280.0	34.43942	516603.7	3712884.0	34.43942	516372.0	3712884.0	34.43942
516372.0	3712798.0	34.43942	516256.2	3712774.0	34.43942	516276.8	3711378.0	34.43942
516264.6	3712122.0	34.43942	516264.6	3711598.0	34.43942	516008.5	3712006.0	34.43942
516008.5	3712122.0	34.43942	516115.2	3712189.0	34.43942	516179.3	3712061.0	34.43942
516179.3	3712122.0	34.43942	516264.6	3712122.0	34.43942	515277.0	3711278.0	39.62103
515377.0	3711278.0	39.62103	515477.0	3711278.0	39.62103	515577.0	3711278.0	39.62103
515677.0	3711278.0	39.62103	515777.0	3711278.0	39.62103	515877.0	3711278.0	39.62103
515977.0	3711278.0	39.62103	516077.0	3711278.0	39.62103	516177.0	3711278.0	39.62103
516277.0	3711278.0	36.57912	516377.0	3711278.0	39.62103	516477.0	3711278.0	39.62103
516577.0	3711278.0	39.62103	516677.0	3711278.0	33.53112	516777.0	3711278.0	33.53112
516877.0	3711278.0	30.48006	516977.0	3711278.0	30.48006	517077.0	3711278.0	33.53112
517177.0	3711278.0	33.53112	515277.0	3711178.0	39.62103	515377.0	3711178.0	42.66904
515477.0	3711178.0	39.62103	515577.0	3711178.0	39.62103	515677.0	3711178.0	42.66904
515777.0	3711178.0	42.66904	515877.0	3711178.0	42.66904	515977.0	3711178.0	39.62103
516077.0	3711178.0	39.62103	516177.0	3711178.0	36.57912	516277.0	3711178.0	36.57912
516377.0	3711178.0	36.57912	516477.0	3711178.0	36.57912	516577.0	3711178.0	36.57912
516677.0	3711178.0	33.53112	516777.0	3711178.0	33.53112	516877.0	3711178.0	33.53112
516977.0	3711178.0	33.53112	517077.0	3711178.0	33.53112	517177.0	3711178.0	33.53112
515277.0	3711078.0	45.72009	515377.0	3711078.0	42.66904	515477.0	3711078.0	36.57912
515577.0	3711078.0	42.66904	515677.0	3711078.0	45.72009	515777.0	3711078.0	45.72009
515877.0	3711078.0	45.72009	515977.0	3711078.0	42.66904	516077.0	3711078.0	39.62103
516177.0	3711078.0	39.62103	516277.0	3711078.0	36.57912	516377.0	3711078.0	36.57912
516477.0	3711078.0	36.57912	516577.0	3711078.0	39.62103	516677.0	3711078.0	33.53112
516777.0	3711078.0	33.53112	516877.0	3711078.0	33.53112	516977.0	3711078.0	36.57912
517077.0	3711078.0	33.53112	517177.0	3711078.0	33.53112	515277.0	3710978.0	45.72009
515377.0	3710978.0	42.66904	515477.0	3710978.0	36.57912	515577.0	3710978.0	42.66904
515677.0	3710978.0	45.72009	515777.0	3710978.0	48.77114	515877.0	3710978.0	45.72009
515977.0	3710978.0	45.72009	516077.0	3710978.0	45.72009	516177.0	3710978.0	42.66904
516277.0	3710978.0	42.66904	516377.0	3710978.0	39.62103	516477.0	3710978.0	36.57912

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
516577.0	3710978.0	36.57912	516677.0	3710978.0	39.62103	516777.0	3710978.0	36.57912
516877.0	3710978.0	36.57912	516977.0	3710978.0	36.57912	517077.0	3710978.0	36.57912
517177.0	3710978.0	33.53112	515277.0	3710878.0	45.72009	515377.0	3710878.0	39.62103
515477.0	3710878.0	39.62103	515577.0	3710878.0	42.66904	515677.0	3710878.0	48.77114
515777.0	3710878.0	51.81915	515877.0	3710878.0	48.77114	515977.0	3710878.0	48.77114
516077.0	3710878.0	51.81915	516177.0	3710878.0	45.72009	516277.0	3710878.0	42.66904
516377.0	3710878.0	39.62103	516477.0	3710878.0	39.62103	516577.0	3710878.0	42.66904
516677.0	3710878.0	45.72009	516777.0	3710878.0	45.72009	516877.0	3710878.0	39.62103
516977.0	3710878.0	39.62103	517077.0	3710878.0	36.57912	517177.0	3710878.0	36.57912
515277.0	3710778.0	45.72009	515377.0	3710778.0	39.62103	515477.0	3710778.0	45.72009
515577.0	3710778.0	42.66904	515677.0	3710778.0	48.77114	515777.0	3710778.0	54.86106
515877.0	3710778.0	51.81915	515977.0	3710778.0	51.81915	516077.0	3710778.0	54.86106
516177.0	3710778.0	45.72009	516277.0	3710778.0	45.72009	516377.0	3710778.0	42.66904
516477.0	3710778.0	45.72009	516577.0	3710778.0	45.72009	516677.0	3710778.0	51.81915
516777.0	3710778.0	51.81915	516877.0	3710778.0	48.77114	516977.0	3710778.0	48.77114
517077.0	3710778.0	45.72009	517177.0	3710778.0	36.57912	515277.0	3710678.0	42.66904
515377.0	3710678.0	42.66904	515477.0	3710678.0	45.72009	515577.0	3710678.0	45.72009
515677.0	3710678.0	45.72009	515777.0	3710678.0	48.77114	515877.0	3710678.0	51.81915
515977.0	3710678.0	54.86106	516077.0	3710678.0	54.86106	516177.0	3710678.0	48.77114
516277.0	3710678.0	45.72009	516377.0	3710678.0	45.72009	516477.0	3710678.0	45.72009
516577.0	3710678.0	48.77114	516677.0	3710678.0	51.81915	516777.0	3710678.0	51.81915
516877.0	3710678.0	48.77114	516977.0	3710678.0	45.72009	517077.0	3710678.0	42.66904
517177.0	3710678.0	36.57912	515277.0	3710578.0	45.72009	515377.0	3710578.0	45.72009
515477.0	3710578.0	51.81915	515577.0	3710578.0	51.81915	515677.0	3710578.0	48.77114
515777.0	3710578.0	54.86106	515877.0	3710578.0	54.86106	515977.0	3710578.0	54.86106
516077.0	3710578.0	51.81915	516177.0	3710578.0	51.81915	516277.0	3710578.0	48.77114
516377.0	3710578.0	51.81915	516477.0	3710578.0	51.81915	516577.0	3710578.0	51.81915
516677.0	3710578.0	51.81915	516777.0	3710578.0	45.72009	516877.0	3710578.0	45.72009
516977.0	3710578.0	39.62103	517077.0	3710578.0	39.62103	517177.0	3710578.0	36.57912
515277.0	3710478.0	45.72009	515377.0	3710478.0	51.81915	515477.0	3710478.0	54.86106
515577.0	3710478.0	54.86106	515677.0	3710478.0	51.81915	515777.0	3710478.0	54.86106
515877.0	3710478.0	57.90907	515977.0	3710478.0	57.90907	516077.0	3710478.0	54.86106
516177.0	3710478.0	54.86106	516277.0	3710478.0	51.81915	516377.0	3710478.0	51.81915
516477.0	3710478.0	51.81915	516577.0	3710478.0	51.81915	516677.0	3710478.0	51.81915
516777.0	3710478.0	48.77114	516877.0	3710478.0	45.72009	516977.0	3710478.0	45.72009
517077.0	3710478.0	39.62103	517177.0	3710478.0	36.57912	515277.0	3710378.0	45.72009
515377.0	3710378.0	48.77114	515477.0	3710378.0	51.81915	515577.0	3710378.0	54.86106
515677.0	3710378.0	57.90907	515777.0	3710378.0	57.90907	515877.0	3710378.0	57.90907

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* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
515977.0	3710378.0	57.90907	516077.0	3710378.0	51.81915	516177.0	3710378.0	51.81915
516277.0	3710378.0	48.77114	516377.0	3710378.0	48.77114	516477.0	3710378.0	45.72009
516577.0	3710378.0	48.77114	516677.0	3710378.0	48.77114	516777.0	3710378.0	48.77114
516877.0	3710378.0	51.81915	516977.0	3710378.0	45.72009	517077.0	3710378.0	39.62103
517177.0	3710378.0	36.57912	515277.0	3712276.0	30.48006	515377.0	3712276.0	30.48006
515477.0	3712276.0	30.48006	515577.0	3712276.0	30.48006	515677.0	3712276.0	33.53112
515777.0	3712276.0	30.48006	515877.0	3712276.0	30.48006	515977.0	3712276.0	30.48006
516077.0	3712276.0	30.48006	516177.0	3712276.0	33.53112	516277.0	3712276.0	33.53112
516377.0	3712276.0	30.48006	516477.0	3712276.0	30.48006	516577.0	3712276.0	30.48006
516677.0	3712276.0	30.48006	516777.0	3712276.0	27.42900	516877.0	3712276.0	33.53112
516977.0	3712276.0	30.48006	517077.0	3712276.0	27.42900	517177.0	3712276.0	27.42900
515277.0	3712376.0	30.48006	515377.0	3712376.0	30.48006	515477.0	3712376.0	30.48006
515577.0	3712376.0	30.48006	515677.0	3712376.0	33.53112	515777.0	3712376.0	33.53112
515877.0	3712376.0	33.53112	515977.0	3712376.0	36.57912	516077.0	3712376.0	36.57912
516177.0	3712376.0	36.57912	516277.0	3712376.0	33.53112	516377.0	3712376.0	30.48006
516477.0	3712376.0	30.48006	516577.0	3712376.0	30.48006	516677.0	3712376.0	27.42900
516777.0	3712376.0	27.42900	516877.0	3712376.0	27.42900	516977.0	3712376.0	27.42900
517077.0	3712376.0	27.42900	517177.0	3712376.0	30.48006	515277.0	3712476.0	33.53112
515377.0	3712476.0	33.53112	515477.0	3712476.0	30.48006	515577.0	3712476.0	30.48006
515677.0	3712476.0	33.53112	515777.0	3712476.0	33.53112	515877.0	3712476.0	33.53112
515977.0	3712476.0	33.53112	516077.0	3712476.0	36.57912	516177.0	3712476.0	36.57912
516277.0	3712476.0	33.53112	516377.0	3712476.0	30.48006	516477.0	3712476.0	30.48006
516577.0	3712476.0	30.48006	516677.0	3712476.0	30.48006	516777.0	3712476.0	27.42900
516877.0	3712476.0	27.42900	516977.0	3712476.0	24.38100	517077.0	3712476.0	27.42900
517177.0	3712476.0	27.42900	515277.0	3712576.0	33.53112	515377.0	3712576.0	33.53112
515477.0	3712576.0	30.48006	515577.0	3712576.0	30.48006	515677.0	3712576.0	33.53112
515777.0	3712576.0	33.53112	515877.0	3712576.0	33.53112	515977.0	3712576.0	33.53112
516077.0	3712576.0	36.57912	516177.0	3712576.0	33.53112	516277.0	3712576.0	33.53112
516377.0	3712576.0	30.48006	516477.0	3712576.0	30.48006	516577.0	3712576.0	30.48006
516677.0	3712576.0	30.48006	516777.0	3712576.0	27.42900	516877.0	3712576.0	27.42900
516977.0	3712576.0	27.42900	517077.0	3712576.0	24.38100	517177.0	3712576.0	27.42900
515277.0	3712676.0	30.48006	515377.0	3712676.0	30.48006	515477.0	3712676.0	33.53112
515577.0	3712676.0	33.53112	515677.0	3712676.0	33.53112	515777.0	3712676.0	33.53112
515877.0	3712676.0	33.53112	515977.0	3712676.0	33.53112	516077.0	3712676.0	33.53112
516177.0	3712676.0	36.57912	516277.0	3712676.0	33.53112	516377.0	3712676.0	30.48006
516477.0	3712676.0	30.48006	516577.0	3712676.0	30.48006	516677.0	3712676.0	30.48006
516777.0	3712676.0	27.42900	516877.0	3712676.0	24.38100	516977.0	3712676.0	27.42900
517077.0	3712676.0	27.42900	517177.0	3712676.0	27.42900	515277.0	3712776.0	27.42900

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* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
515377.0	3712776.0	27.42900	515477.0	3712776.0	27.42900	515577.0	3712776.0	33.53112
515677.0	3712776.0	33.53112	515777.0	3712776.0	27.42900	515877.0	3712776.0	33.53112
515977.0	3712776.0	33.53112	516077.0	3712776.0	33.53112	516177.0	3712776.0	33.53112
516277.0	3712776.0	30.48006	516377.0	3712776.0	30.48006	516477.0	3712776.0	27.42900
516577.0	3712776.0	27.42900	516677.0	3712776.0	27.42900	516777.0	3712776.0	27.42900
516877.0	3712776.0	27.42900	516977.0	3712776.0	27.42900	517077.0	3712776.0	30.48006
517177.0	3712776.0	30.48006	515277.0	3712876.0	27.42900	515377.0	3712876.0	27.42900
515477.0	3712876.0	27.42900	515577.0	3712876.0	27.42900	515677.0	3712876.0	33.53112
515777.0	3712876.0	27.42900	515877.0	3712876.0	30.48006	515977.0	3712876.0	30.48006
516077.0	3712876.0	33.53112	516177.0	3712876.0	30.48006	516277.0	3712876.0	27.42900
516377.0	3712876.0	27.42900	516477.0	3712876.0	27.42900	516577.0	3712876.0	27.42900
516677.0	3712876.0	27.42900	516777.0	3712876.0	30.48006	516877.0	3712876.0	30.48006
516977.0	3712876.0	27.42900	517077.0	3712876.0	30.48006	517177.0	3712876.0	30.48006
515277.0	3712976.0	27.42900	515377.0	3712976.0	27.42900	515477.0	3712976.0	27.42900
515577.0	3712976.0	27.42900	515677.0	3712976.0	27.42900	515777.0	3712976.0	27.42900
515877.0	3712976.0	33.53112	515977.0	3712976.0	33.53112	516077.0	3712976.0	33.53112
516177.0	3712976.0	33.53112	516277.0	3712976.0	27.42900	516377.0	3712976.0	27.42900
516477.0	3712976.0	27.42900	516577.0	3712976.0	27.42900	516677.0	3712976.0	27.42900
516777.0	3712976.0	30.48006	516877.0	3712976.0	30.48006	516977.0	3712976.0	30.48006
517077.0	3712976.0	27.42900	517177.0	3712976.0	27.42900	515277.0	3713076.0	27.42900
515377.0	3713076.0	27.42900	515477.0	3713076.0	27.42900	515577.0	3713076.0	27.42900
515677.0	3713076.0	27.42900	515777.0	3713076.0	27.42900	515877.0	3713076.0	27.42900
515977.0	3713076.0	27.42900	516077.0	3713076.0	27.42900	516177.0	3713076.0	27.42900
516277.0	3713076.0	27.42900	516377.0	3713076.0	24.38100	516477.0	3713076.0	27.42900
516577.0	3713076.0	27.42900	516677.0	3713076.0	30.48006	516777.0	3713076.0	33.53112
516877.0	3713076.0	30.48006	516977.0	3713076.0	30.48006	517077.0	3713076.0	30.48006
517177.0	3713076.0	30.48006	515277.0	3713176.0	27.42900	515377.0	3713176.0	27.42900
515477.0	3713176.0	27.42900	515577.0	3713176.0	27.42900	515677.0	3713176.0	27.42900
515777.0	3713176.0	30.48006	515877.0	3713176.0	30.48006	515977.0	3713176.0	27.42900
516077.0	3713176.0	30.48006	516177.0	3713176.0	27.42900	516277.0	3713176.0	27.42900
516377.0	3713176.0	27.42900	516477.0	3713176.0	27.42900	516577.0	3713176.0	27.42900
516677.0	3713176.0	27.42900	516777.0	3713176.0	30.48006	516877.0	3713176.0	33.53112
516977.0	3713176.0	27.42900	517077.0	3713176.0	30.48006	517177.0	3713176.0	42.66904
515277.0	3712176.0	33.53112	515377.0	3712176.0	30.48006	515477.0	3712176.0	33.53112
515577.0	3712176.0	30.48006	515677.0	3712176.0	30.48006	515777.0	3712176.0	30.48006
515877.0	3712176.0	30.48006	515977.0	3712176.0	30.48006	516077.0	3712176.0	33.53112
516177.0	3712176.0	33.53112	515277.0	3712076.0	30.48006	515377.0	3712076.0	30.48006
515477.0	3712076.0	33.53112	515577.0	3712076.0	30.48006	515677.0	3712076.0	33.53112

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
515777.0	3712076.0	33.53112	515877.0	3712076.0	33.53112	515977.0	3712076.0	33.53112
516077.0	3712076.0	30.48006	516177.0	3712076.0	33.53112	515277.0	3711976.0	33.53112
515377.0	3711976.0	33.53112	515477.0	3711976.0	30.48006	515577.0	3711976.0	30.48006
515677.0	3711976.0	33.53112	515777.0	3711976.0	33.53112	515877.0	3711976.0	33.53112
515977.0	3711976.0	33.53112	516077.0	3711976.0	33.53112	516177.0	3711976.0	30.48006
515277.0	3711876.0	36.57912	515377.0	3711876.0	30.48006	515477.0	3711876.0	33.53112
515577.0	3711876.0	33.53112	515677.0	3711876.0	33.53112	515777.0	3711876.0	33.53112
515877.0	3711876.0	33.53112	515977.0	3711876.0	33.53112	516077.0	3711876.0	33.53112
516177.0	3711876.0	33.53112	515277.0	3711776.0	36.57912	515377.0	3711776.0	33.53112
515477.0	3711776.0	33.53112	515577.0	3711776.0	33.53112	515677.0	3711776.0	33.53112
515777.0	3711776.0	33.53112	515877.0	3711776.0	33.53112	515977.0	3711776.0	33.53112
516077.0	3711776.0	33.53112	516177.0	3711776.0	33.53112	515277.0	3711676.0	39.62103
515377.0	3711676.0	36.57912	515477.0	3711676.0	36.57912	515577.0	3711676.0	36.57912
515677.0	3711676.0	36.57912	515777.0	3711676.0	33.53112	515877.0	3711676.0	33.53112
515977.0	3711676.0	33.53112	516077.0	3711676.0	33.53112	516177.0	3711676.0	36.57912
515277.0	3711576.0	39.62103	515377.0	3711576.0	39.62103	515477.0	3711576.0	39.62103
515577.0	3711576.0	39.62103	515677.0	3711576.0	36.57912	515777.0	3711576.0	33.53112
515877.0	3711576.0	36.57912	515977.0	3711576.0	36.57912	516077.0	3711576.0	36.57912
516177.0	3711576.0	39.62103	515277.0	3711476.0	39.62103	515377.0	3711476.0	39.62103
515477.0	3711476.0	39.62103	515577.0	3711476.0	36.57912	515677.0	3711476.0	36.57912
515777.0	3711476.0	39.62103	515877.0	3711476.0	39.62103	515977.0	3711476.0	39.62103
516077.0	3711476.0	39.62103	516177.0	3711476.0	39.62103	511277.0	3709378.0	64.01117
512277.0	3709378.0	60.96012	513277.0	3709378.0	73.14910	514277.0	3709378.0	64.01117
515277.0	3709378.0	57.90907	516277.0	3709378.0	45.72009	517277.0	3709378.0	42.66904
518277.0	3709378.0	60.96012	519277.0	3709378.0	30.48006	520277.0	3709378.0	30.48006
521277.0	3709378.0	30.48006	522277.0	3709378.0	27.42900	511277.0	3708378.0	67.05918
512277.0	3708378.0	48.77114	513277.0	3708378.0	76.20015	514277.0	3708378.0	70.10109
515277.0	3708378.0	48.77114	516277.0	3708378.0	36.57912	517277.0	3708378.0	64.01117
518277.0	3708378.0	48.77114	519277.0	3708378.0	30.48006	520277.0	3708378.0	30.48006
521277.0	3708378.0	27.42900	522277.0	3708378.0	27.42900	511277.0	3707378.0	54.86106
512277.0	3707378.0	67.05918	513277.0	3707378.0	64.01117	514277.0	3707378.0	54.86106
515277.0	3707378.0	60.96012	516277.0	3707378.0	48.77114	517277.0	3707378.0	67.05918
518277.0	3707378.0	48.77114	519277.0	3707378.0	33.53112	520277.0	3707378.0	27.42900
521277.0	3707378.0	27.42900	522277.0	3707378.0	27.42900	511277.0	3706378.0	73.14910
512277.0	3706378.0	73.14910	513277.0	3706378.0	64.01117	514277.0	3706378.0	64.01117
515277.0	3706378.0	67.05918	516277.0	3706378.0	48.77114	517277.0	3706378.0	48.77114
518277.0	3706378.0	54.86106	519277.0	3706378.0	36.57912	520277.0	3706378.0	30.48006
521277.0	3706378.0	30.48006	522277.0	3706378.0	27.42900	523277.0	3706378.0	27.42900

*** I. P. - CAMDEN - CO SCREEN - BHV/LONG 1983 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
522402.0	3710378.0	27.42900	522402.0	3711378.0	30.48006	522402.0	3712378.0	30.48006
511277.0	3714176.0	36.57912	512277.0	3714176.0	36.57912	513277.0	3714176.0	33.53112
514277.0	3714176.0	30.48006	515277.0	3714176.0	48.77114	516277.0	3714176.0	48.77114
517277.0	3714176.0	70.10109	518277.0	3714176.0	33.53112	519277.0	3714176.0	27.42900
520277.0	3714176.0	30.48006	521277.0	3714176.0	30.48006	522277.0	3714176.0	30.48006
511277.0	3715176.0	45.72009	512277.0	3715176.0	60.96012	513277.0	3715176.0	39.62103
514277.0	3715176.0	51.81915	515277.0	3715176.0	54.86106	516277.0	3715176.0	39.62103
517277.0	3715176.0	30.48006	518277.0	3715176.0	30.48006	519277.0	3715176.0	27.42900
520277.0	3715176.0	24.38100	521277.0	3715176.0	30.48006	522277.0	3715176.0	30.48006
511277.0	3716176.0	60.96012	512277.0	3716176.0	39.62103	513277.0	3716176.0	51.81915
514277.0	3716176.0	60.96012	515277.0	3716176.0	70.10109	516277.0	3716176.0	24.38100
517277.0	3716176.0	30.48006	518277.0	3716176.0	30.48006	519277.0	3716176.0	30.48006
520277.0	3716176.0	33.53112	521277.0	3716176.0	27.42900	522277.0	3716176.0	27.42900
511277.0	3717176.0	48.77114	512277.0	3717176.0	54.86106	513277.0	3717176.0	60.96012
514277.0	3717176.0	60.96012	515277.0	3717176.0	42.66904	516277.0	3717176.0	30.48006
517277.0	3717176.0	30.48006	518277.0	3717176.0	33.53112	519277.0	3717176.0	36.57912
520277.0	3717176.0	30.48006	521277.0	3717176.0	27.42900	522277.0	3717176.0	27.42900
511277.0	3713176.0	42.66904	512277.0	3713176.0	36.57912	513277.0	3713176.0	36.57912
514277.0	3713176.0	36.57912	511277.0	3712176.0	36.57912	512277.0	3712176.0	39.62103
513277.0	3712176.0	39.62103	514277.0	3712176.0	33.53112	511277.0	3711176.0	48.77114
512277.0	3711176.0	64.01117	513277.0	3711176.0	39.62103	514277.0	3711176.0	45.72009
511277.0	3709378.0	64.01117	512277.0	3709378.0	60.96012	513277.0	3709378.0	73.14910
514277.0	3709378.0	64.01117	515277.0	3709378.0	57.90907	516277.0	3709378.0	45.72009
517277.0	3709378.0	42.66904	518277.0	3709378.0	60.96012	519277.0	3709378.0	30.48006
520277.0	3709378.0	30.48006	521277.0	3709378.0	30.48006	522277.0	3709378.0	27.42900
511277.0	3708378.0	67.05918	512277.0	3708378.0	48.77114	513277.0	3708378.0	76.20015
514277.0	3708378.0	70.10109	515277.0	3708378.0	48.77114	516277.0	3708378.0	36.57912
517277.0	3708378.0	64.01117	518277.0	3708378.0	48.77114	519277.0	3708378.0	30.48006
520277.0	3708378.0	30.48006	521277.0	3708378.0	27.42900	522277.0	3708378.0	27.42900
511277.0	3707378.0	54.86106	512277.0	3707378.0	67.05918	513277.0	3707378.0	64.01117
514277.0	3707378.0	54.86106	515277.0	3707378.0	60.96012	516277.0	3707378.0	48.77114
517277.0	3707378.0	67.05918	518277.0	3707378.0	48.77114	519277.0	3707378.0	33.53112
520277.0	3707378.0	27.42900	521277.0	3707378.0	27.42900	522277.0	3707378.0	27.42900
511277.0	3706378.0	73.14910	512277.0	3706378.0	73.14910	513277.0	3706378.0	64.01117
514277.0	3706378.0	64.01117	515277.0	3706378.0	67.05918	516277.0	3706378.0	48.77114
517277.0	3706378.0	48.77114	518277.0	3706378.0	54.86106	519277.0	3706378.0	36.57912
520277.0	3706378.0	30.48006	521277.0	3706378.0	30.48006	522277.0	3706378.0	27.42900
523277.0	3706378.0	27.42900	522402.0	3710378.0	27.42900	522402.0	3711378.0	30.48006

*** I. P. - CANDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
522402.0	3712378.0	30.48006	511277.0	3714176.0	36.57912	512277.0	3714176.0	36.57912
513277.0	3714176.0	33.53112	514277.0	3714176.0	30.48006	515277.0	3714176.0	48.77114
516277.0	3714176.0	48.77114	517277.0	3714176.0	70.10109	518277.0	3714176.0	33.53112
519277.0	3714176.0	27.42900	520277.0	3714176.0	30.48006	521277.0	3714176.0	30.48006
522277.0	3714176.0	30.48006	511277.0	3715176.0	45.72009	512277.0	3715176.0	60.96012
513277.0	3715176.0	39.62103	514277.0	3715176.0	51.81915	515277.0	3715176.0	54.86106
516277.0	3715176.0	39.62103	517277.0	3715176.0	30.48006	518277.0	3715176.0	30.48006
519277.0	3715176.0	27.42900	520277.0	3715176.0	24.38100	521277.0	3715176.0	30.48006
522277.0	3715176.0	30.48006	511277.0	3716176.0	60.96012	512277.0	3716176.0	39.62103
513277.0	3716176.0	51.81915	514277.0	3716176.0	60.96012	515277.0	3716176.0	70.10109
516277.0	3716176.0	24.38100	517277.0	3716176.0	30.48006	518277.0	3716176.0	30.48006
519277.0	3716176.0	30.48006	520277.0	3716176.0	33.53112	521277.0	3716176.0	27.42900
522277.0	3716176.0	27.42900	511277.0	3717176.0	48.77114	512277.0	3717176.0	54.86106
513277.0	3717176.0	60.96012	514277.0	3717176.0	60.96012	515277.0	3717176.0	42.66904
516277.0	3717176.0	30.48006	517277.0	3717176.0	30.48006	518277.0	3717176.0	33.53112
519277.0	3717176.0	36.57912	520277.0	3717176.0	30.48006	521277.0	3717176.0	27.42900
522277.0	3717176.0	27.42900	511277.0	3713176.0	42.66904	512277.0	3713176.0	36.57912
513277.0	3713176.0	36.57912	514277.0	3713176.0	36.57912	511277.0	3712176.0	36.57912
512277.0	3712176.0	39.62103	513277.0	3712176.0	39.62103	514277.0	3712176.0	33.53112
511277.0	3711176.0	48.77114	512277.0	3711176.0	64.01117	513277.0	3711176.0	39.62103
514277.0	3711176.0	45.72009	516500.0	3708100.0	67.66878	518100.0	3709350.0	79.25121
514500.0	3708800.0	80.47041	517300.0	3714400.0	76.20015			

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT.DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ.DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
1	0 0 0	0.65066E+01	516323.0	3711890.0	34.4	22.86	427.59	16.61	3.42	13.60	93.98	93.98

* CALM HOURS (=1) FOR DAY 3 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 4 *	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 5 *	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 6 *	1	1	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 7 *	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 8 *	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 9 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 10 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 11 *	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 12 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 13 *	0	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 15 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 16 *	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 17 *	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 22 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
* CALM HOURS (=1) FOR DAY 23 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 24 *	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 25 *	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 26 *	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 30 *	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 38 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 39 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 41 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 42 *	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 43 *	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 44 *	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	1	0	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 45 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 46 *	0	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 47 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 48 *	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 49 *	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 50 *	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 51 *	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 53 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
* CALM HOURS (=1) FOR DAY 54 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1
* CALM HOURS (=1) FOR DAY 55 *	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 59 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 60 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 61 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 65 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 66 *	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 67 *	1	1	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 69 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 70 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
* CALM HOURS (=1) FOR DAY 71 *	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 72 *	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 73 *	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 74 *	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 78 *	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 79 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 80 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 81 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0

* CALM HOURS (=1) FOR DAY 83 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 87 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 89 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 90 *	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 93 *	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 94 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 95 *	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 98 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 99 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 100 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 101 *	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 102 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 106 *	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 110 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 111 *	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 112 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 113 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 114 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 115 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 124 *	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 125 *	1	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 129 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 132 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 136 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 139 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 142 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 143 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 144 *	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 145 *	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 146 *	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 147 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 148 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 150 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 151 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 154 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 156 *	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 158 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 159 *	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 160 *	1	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 161 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 163 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 165 *	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 166 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 167 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 168 *	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 169 *	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 170 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	
* CALM HOURS (=1) FOR DAY 171 *	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
* CALM HOURS (=1) FOR DAY 172 *	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 173 *	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 174 *	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 175 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	
* CALM HOURS (=1) FOR DAY 176 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 177 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 182 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 183 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 189 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 190 *	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 191 *	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
* CALM HOURS (=1) FOR DAY 192 *	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 193 *	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	
* CALM HOURS (=1) FOR DAY 194 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 195 *	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 196 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 197 *	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 198 *	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	

* CALM HOURS (=1) FOR DAY 199 *	1	1	1	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 200 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 201 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 202 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 203 *	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 204 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 205 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 207 *	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 208 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 209 *	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 210 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 211 *	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 212 *	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 213 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 214 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 216 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 217 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 218 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 219 *	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 220 *	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 221 *	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 222 *	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 224 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 225 *	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 226 *	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 227 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 228 *	0	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 229 *	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 231 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 232 *	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 233 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 234 *	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 235 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 236 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 237 *	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 238 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 239 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 240 *	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 241 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 242 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 243 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 246 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 248 *	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 251 *	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 252 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 253 *	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 254 *	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 255 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 257 *	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 258 *	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 259 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 260 *	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 264 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 265 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	0	1	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 266 *	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 267 *	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 268 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 269 *	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	1	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 270 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 271 *	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 272 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 273 *	1	1	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 274 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 275 *	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 277 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 278 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1

* CALM HOURS (=1) FOR DAY 279 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 280 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0
* CALM HOURS (=1) FOR DAY 281 *	0	1	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	1	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 282 *	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 283 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 284 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 286 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	1
* CALM HOURS (=1) FOR DAY 287 *	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 288 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 289 *	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 290 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 291 *	1	1	1	1	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 296 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 297 *	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
* CALM HOURS (=1) FOR DAY 298 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 299 *	0	1	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 300 *	1	1	0	0	1	1	1	1	0	0	0	0	0	1	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 301 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 302 *	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 303 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 304 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 305 *	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 306 *	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 307 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 308 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 309 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 310 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 312 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 313 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 315 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 317 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 318 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 320 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	0
* CALM HOURS (=1) FOR DAY 323 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 328 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 329 *	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 332 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 333 *	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 336 *	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 337 *	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 338 *	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 340 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 341 *	0	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 342 *	0	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 343 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 346 *	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 347 *	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 348 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 355 *	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 359 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 360 *	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 361 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 364 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 365 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516777.0	3711178.0	8.16025	(114,13)	516877.0	3711178.0	7.47141	(114,12)
516977.0	3711178.0	8.67837	(123,14)	517077.0	3711178.0	7.41293	(123,14)
517177.0	3711178.0	7.30856	(92, 9)	515277.0	3711078.0	7.90437	(144,10)
515377.0	3711078.0	7.67419	(245,13)	515477.0	3711078.0	7.39926	(213,14)
515577.0	3711078.0	8.31551	(213,11)	515677.0	3711078.0	8.06816	(213,11)
515777.0	3711078.0	6.42054	(167,14)	515877.0	3711078.0	8.25887	(245,12)
515977.0	3711078.0	8.68405	(243,13)	516077.0	3711078.0	11.09150	(243,13)
516177.0	3711078.0	8.13355	(241,12)	516277.0	3711078.0	8.34155	(238,12)
516377.0	3711078.0	8.15864	(242,12)	516477.0	3711078.0	7.94378	(242,12)
516577.0	3711078.0	7.81815	(143,12)	516677.0	3711078.0	7.63924	(241,13)
516777.0	3711078.0	8.03023	(114,13)	516877.0	3711078.0	7.40903	(114,13)
516977.0	3711078.0	8.35584	(114,12)	517077.0	3711078.0	8.96245	(123,14)
517177.0	3711078.0	7.57937	(123,14)	515277.0	3710978.0	8.02571	(128,14)
515377.0	3710978.0	7.58365	(213,14)	515477.0	3710978.0	7.53443	(213,11)
515577.0	3710978.0	7.79145	(213,11)	515677.0	3710978.0	6.61543	(159,12)
515777.0	3710978.0	7.75244	(245,12)	515877.0	3710978.0	8.73529	(245,12)
515977.0	3710978.0	11.61594	(243,13)	516077.0	3710978.0	11.59503	(243,13)
516177.0	3710978.0	7.26237	(158,14)	516277.0	3710978.0	7.58182	(144,12)
516377.0	3710978.0	7.55066	(238,13)	516477.0	3710978.0	6.91568	(242,12)
516577.0	3710978.0	7.04902	(149,14)	516677.0	3710978.0	6.77883	(241,13)
516777.0	3710978.0	7.01442	(114,13)	516877.0	3710978.0	9.32147	(114,13)
516977.0	3710978.0	8.65891	(114,12)	517077.0	3710978.0	8.11349	(114,12)
517177.0	3710978.0	8.88262	(123,14)	515277.0	3710878.0	7.27028	(213,14)
515377.0	3710878.0	7.17876	(213,11)	515477.0	3710878.0	7.28303	(213,11)
515577.0	3710878.0	6.67748	(244,13)	515677.0	3710878.0	7.85096	(255,15)
515777.0	3710878.0	8.66279	(245,12)	515877.0	3710878.0	8.60528	(245,12)
515977.0	3710878.0	13.01149	(243,13)	516077.0	3710878.0	10.82738	(243,13)
516177.0	3710878.0	8.05000	(114,11)	516277.0	3710878.0	7.81112	(144,12)
516377.0	3710878.0	6.95262	(242,11)	516477.0	3710878.0	6.60446	(217,14)
516577.0	3710878.0	7.16732	(158,13)	516677.0	3710878.0	7.01241	(15,14)
516777.0	3710878.0	8.42493	(104,12)	516877.0	3710878.0	9.13645	(114,13)
516977.0	3710878.0	9.27550	(114,13)	517077.0	3710878.0	8.85304	(114,12)
517177.0	3710878.0	8.13966	(123,14)	515277.0	3710778.0	6.95321	(227,12)
515377.0	3710778.0	6.90725	(244,13)	515477.0	3710778.0	6.77535	(244,13)
515577.0	3710778.0	7.32696	(255,15)	515677.0	3710778.0	7.31148	(245,12)
515777.0	3710778.0	8.75907	(245,12)	515877.0	3710778.0	10.38383	(243,13)
515977.0	3710778.0	12.99133	(243,13)	516077.0	3710778.0	9.03495	(243,13)
516177.0	3710778.0	8.70199	(114,11)	516277.0	3710778.0	8.00538	(144,12)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516377.0	3710778.0	7.70358	(226,14)	516477.0	3710778.0	6.79452	(200,15)
516577.0	3710778.0	7.48760	(158,13)	516677.0	3710778.0	7.89166	(15,14)
516777.0	3710778.0	9.56461	(319,15)	516877.0	3710778.0	9.68985	(319,14)
516977.0	3710778.0	10.79542	(114,13)	517077.0	3710778.0	8.85805	(114,12)
517177.0	3710778.0	8.59992	(114,12)	515277.0	3710678.0	6.87570	(188,17)
515377.0	3710678.0	6.61530	(281,14)	515477.0	3710678.0	7.64423	(255,15)
515577.0	3710678.0	7.78129	(255,15)	515677.0	3710678.0	7.38534	(245,12)
515777.0	3710678.0	7.93388	(243,12)	515877.0	3710678.0	11.26393	(243,13)
515977.0	3710678.0	12.03006	(243,13)	516077.0	3710678.0	8.03899	(237,13)
516177.0	3710678.0	9.57137	(114,11)	516277.0	3710678.0	7.73592	(144,12)
516377.0	3710678.0	8.67472	(226,14)	516477.0	3710678.0	7.05050	(200,15)
516577.0	3710678.0	7.95350	(264,16)	516677.0	3710678.0	9.14952	(345,21)
516777.0	3710678.0	10.02788	(319,15)	516877.0	3710678.0	9.18563	(319,14)
516977.0	3710678.0	9.03843	(114,13)	517077.0	3710678.0	9.31581	(114,13)
517177.0	3710678.0	8.03155	(114,12)	515277.0	3710578.0	7.10816	(188,17)
515377.0	3710578.0	7.21048	(255,15)	515477.0	3710578.0	8.83537	(255,15)
515577.0	3710578.0	7.57098	(264,12)	515677.0	3710578.0	7.28669	(245,12)
515777.0	3710578.0	9.49190	(243,12)	515877.0	3710578.0	11.61002	(243,13)
515977.0	3710578.0	10.27136	(243,13)	516077.0	3710578.0	7.61605	(237,13)
516177.0	3710578.0	10.08698	(114,11)	516277.0	3710578.0	8.38383	(105,10)
516377.0	3710578.0	9.89952	(226,14)	516477.0	3710578.0	8.86244	(128, 1)
516577.0	3710578.0	8.82383	(264,16)	516677.0	3710578.0	9.68157	(345,21)
516777.0	3710578.0	7.81120	(15,14)	516877.0	3710578.0	8.51198	(104,12)
516977.0	3710578.0	7.84031	(66,12)	517077.0	3710578.0	8.59142	(114,13)
517177.0	3710578.0	7.75596	(114,13)	515277.0	3710478.0	6.78333	(56,10)
515377.0	3710478.0	8.59693	(255,15)	515477.0	3710478.0	8.54343	(255,15)
515577.0	3710478.0	8.22320	(264,12)	515677.0	3710478.0	8.21796	(243,12)
515777.0	3710478.0	9.39326	(243,12)	515877.0	3710478.0	11.15320	(243,13)
515977.0	3710478.0	9.67642	(213,12)	516077.0	3710478.0	8.23355	(114,11)
516177.0	3710478.0	10.30283	(114,11)	516277.0	3710478.0	8.84194	(105,10)
516377.0	3710478.0	9.86674	(226,14)	516477.0	3710478.0	8.81558	(128, 1)
516577.0	3710478.0	8.28234	(264,16)	516677.0	3710478.0	9.40932	(345,21)
516777.0	3710478.0	7.72806	(15,14)	516877.0	3710478.0	8.17811	(319,15)
516977.0	3710478.0	8.48284	(319,14)	517077.0	3710478.0	7.65230	(66,12)
517177.0	3710478.0	7.95911	(114,13)	515277.0	3710378.0	7.54755	(255,15)
515377.0	3710378.0	8.12873	(255,15)	515477.0	3710378.0	7.63718	(264,12)
515577.0	3710378.0	7.80263	(264,12)	515677.0	3710378.0	9.41639	(243,12)
515777.0	3710378.0	10.57674	(243,14)	515877.0	3710378.0	10.21901	(52, 8)

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* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515977.0	3710378.0	9.15736	(213,12)	516077.0	3710378.0	8.16093	(114,11)
516177.0	3710378.0	9.54480	(114,11)	516277.0	3710378.0	8.37934	(105,10)
516377.0	3710378.0	9.32141	(226,14)	516477.0	3710378.0	7.70135	(128,15)
516577.0	3710378.0	7.42607	(358, 6)	516677.0	3710378.0	8.38088	(188,14)
516777.0	3710378.0	8.18133	(256,13)	516877.0	3710378.0	9.79081	(319,15)
516977.0	3710378.0	8.18552	(104,12)	517077.0	3710378.0	7.64758	(66,12)
517177.0	3710378.0	7.37381	(114,13)	515277.0	3712276.0	7.38015	(211,12)
515377.0	3712276.0	7.33242	(210,14)	515477.0	3712276.0	7.03650	(160,14)
515577.0	3712276.0	7.28764	(160,14)	515677.0	3712276.0	8.22410	(199,14)
515777.0	3712276.0	11.56900	(36, 6)	515877.0	3712276.0	14.33998	(230,14)
515977.0	3712276.0	10.03802	(230,12)	516077.0	3712276.0	9.69597	(162,13)
516177.0	3712276.0	17.74573	(122,13)	516277.0	3712276.0	23.41272	(156,15)
516377.0	3712276.0	12.91257	(126,13)	516477.0	3712276.0	15.92566	(251,17)
516577.0	3712276.0	5.40025	(121,11)	516677.0	3712276.0	6.11751	(85,17)
516777.0	3712276.0	5.68116	(194,11)	516877.0	3712276.0	7.52983	(194,11)
516977.0	3712276.0	8.27773	(194,14)	517077.0	3712276.0	7.69583	(194,12)
517177.0	3712276.0	7.00917	(200,12)	515277.0	3712376.0	7.01021	(210,14)
515377.0	3712376.0	6.99525	(109,12)	515477.0	3712376.0	6.66260	(161,13)
515577.0	3712376.0	7.50470	(227,13)	515677.0	3712376.0	10.70828	(230,14)
515777.0	3712376.0	12.87644	(230,14)	515877.0	3712376.0	9.37449	(230,12)
515977.0	3712376.0	12.29867	(230,13)	516077.0	3712376.0	16.93696	(122,13)
516177.0	3712376.0	14.22098	(122,12)	516277.0	3712376.0	18.57950	(156,15)
516377.0	3712376.0	13.19864	(126,13)	516477.0	3712376.0	7.96197	(251,17)
516577.0	3712376.0	5.38058	(251,17)	516677.0	3712376.0	4.94147	(205,12)
516777.0	3712376.0	7.21756	(150,13)	516877.0	3712376.0	8.25474	(194,11)
516977.0	3712376.0	7.74171	(194,11)	517077.0	3712376.0	6.72961	(194,14)
517177.0	3712376.0	6.31315	(233,12)	515277.0	3712476.0	7.64592	(109,12)
515377.0	3712476.0	7.33848	(161,13)	515477.0	3712476.0	7.27457	(252,13)
515577.0	3712476.0	10.18543	(230,14)	515677.0	3712476.0	10.80986	(230,14)
515777.0	3712476.0	7.69957	(230,12)	515877.0	3712476.0	10.05864	(230,13)
515977.0	3712476.0	9.36694	(162,13)	516077.0	3712476.0	15.87169	(122,13)
516177.0	3712476.0	14.09554	(126,14)	516277.0	3712476.0	14.65259	(156,15)
516377.0	3712476.0	12.44507	(126,13)	516477.0	3712476.0	4.96608	(327, 2)
516577.0	3712476.0	10.51997	(251,17)	516677.0	3712476.0	8.01230	(205,12)
516777.0	3712476.0	6.93297	(209,13)	516877.0	3712476.0	7.79484	(150,13)
516977.0	3712476.0	7.24385	(194,11)	517077.0	3712476.0	6.78906	(145,11)
517177.0	3712476.0	6.53503	(145,11)	515277.0	3712576.0	7.22548	(252,13)
515377.0	3712576.0	8.76260	(36, 6)	515477.0	3712576.0	10.07947	(230,14)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515577.0	3712576.0	9.55865	(230,14)	515677.0	3712576.0	7.60879	(62,12)
515777.0	3712576.0	9.19930	(230,13)	515877.0	3712576.0	8.12887	(220,13)
515977.0	3712576.0	11.14575	(122,13)	516077.0	3712576.0	11.16180	(122,13)
516177.0	3712576.0	12.86152	(126,14)	516277.0	3712576.0	11.68440	(156,15)
516377.0	3712576.0	11.36673	(126,13)	516477.0	3712576.0	4.85634	(327, 2)
516577.0	3712576.0	7.71429	(251,17)	516677.0	3712576.0	8.44816	(205,12)
516777.0	3712576.0	7.37310	(205,12)	516877.0	3712576.0	7.28787	(209,13)
516977.0	3712576.0	6.94756	(209,13)	517077.0	3712576.0	7.20561	(145,11)
517177.0	3712576.0	7.29572	(145,11)	515277.0	3712676.0	7.94141	(230,14)
515377.0	3712676.0	9.52599	(230,14)	515477.0	3712676.0	9.21045	(230,14)
515577.0	3712676.0	8.16123	(62,12)	515677.0	3712676.0	9.57510	(230,12)
515777.0	3712676.0	8.32303	(230,13)	515877.0	3712676.0	7.95050	(162,13)
515977.0	3712676.0	10.99565	(122,13)	516077.0	3712676.0	8.17993	(122,12)
516177.0	3712676.0	12.84963	(126,14)	516277.0	3712676.0	9.46133	(156,15)
516377.0	3712676.0	10.25563	(126,13)	516477.0	3712676.0	5.26940	(126,13)
516577.0	3712676.0	6.09637	(205,12)	516677.0	3712676.0	7.37090	(205,12)
516777.0	3712676.0	7.19459	(205,13)	516877.0	3712676.0	6.40747	(205,13)
516977.0	3712676.0	6.21743	(209,13)	517077.0	3712676.0	7.04398	(208,13)
517177.0	3712676.0	7.29700	(145,11)	515277.0	3712776.0	8.46983	(230,14)
515377.0	3712776.0	7.65729	(230,14)	515477.0	3712776.0	7.47720	(62,12)
515577.0	3712776.0	9.45148	(230,12)	515677.0	3712776.0	9.25878	(230,13)
515777.0	3712776.0	7.58519	(162,13)	515877.0	3712776.0	9.65128	(122,13)
515977.0	3712776.0	9.80163	(122,13)	516077.0	3712776.0	8.95001	(122,12)
516177.0	3712776.0	11.00396	(126,14)	516277.0	3712776.0	7.62340	(156,15)
516377.0	3712776.0	9.53922	(126,13)	516477.0	3712776.0	5.60534	(126,13)
516577.0	3712776.0	6.39267	(203,11)	516677.0	3712776.0	6.51978	(251,17)
516777.0	3712776.0	6.82891	(205,13)	516877.0	3712776.0	7.46304	(205,13)
516977.0	3712776.0	6.22247	(205,13)	517077.0	3712776.0	6.41720	(208,13)
517177.0	3712776.0	7.17477	(208,13)	515277.0	3712876.0	7.30099	(62,12)
515377.0	3712876.0	7.52344	(62,12)	515477.0	3712876.0	8.19048	(230,12)
515577.0	3712876.0	8.55304	(230,13)	515677.0	3712876.0	8.31572	(162,13)
515777.0	3712876.0	7.43927	(162,13)	515877.0	3712876.0	9.79755	(122,13)
515977.0	3712876.0	7.32851	(122,13)	516077.0	3712876.0	9.43501	(122,12)
516177.0	3712876.0	9.85238	(126,14)	516277.0	3712876.0	7.54024	(126,12)
516377.0	3712876.0	8.98877	(126,13)	516477.0	3712876.0	6.54771	(126,13)
516577.0	3712876.0	6.38490	(145,12)	516677.0	3712876.0	6.41930	(203,11)
516777.0	3712876.0	6.76340	(204,14)	516877.0	3712876.0	7.52117	(205,13)
516977.0	3712876.0	7.02858	(205,13)	517077.0	3712876.0	6.48709	(107,14)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
517177.0	3712876.0	6.32993	(208,13)	515277.0	3712976.0	7.38868	(62,12)
515377.0	3712976.0	7.72740	(230,12)	515477.0	3712976.0	8.42901	(230,13)
515577.0	3712976.0	7.14080	(230,13)	515677.0	3712976.0	8.00935	(162,13)
515777.0	3712976.0	7.98492	(122,13)	515877.0	3712976.0	9.50925	(122,13)
515977.0	3712976.0	7.78362	(122,12)	516077.0	3712976.0	9.25635	(126,14)
516177.0	3712976.0	9.75202	(126,11)	516277.0	3712976.0	7.89485	(126,12)
516377.0	3712976.0	8.89798	(126,13)	516477.0	3712976.0	7.17140	(126,13)
516577.0	3712976.0	6.13490	(145,12)	516677.0	3712976.0	6.30858	(145,12)
516777.0	3712976.0	8.14455	(251,17)	516877.0	3712976.0	6.77692	(181,14)
516977.0	3712976.0	7.24316	(205,13)	517077.0	3712976.0	6.81295	(107,14)
517177.0	3712976.0	5.96988	(107,14)	515277.0	3713076.0	7.17889	(230,12)
515377.0	3713076.0	8.03160	(230,13)	515477.0	3713076.0	7.50802	(230,13)
515577.0	3713076.0	7.77674	(162,13)	515677.0	3713076.0	7.33244	(162,13)
515777.0	3713076.0	8.43611	(122,13)	515877.0	3713076.0	7.32574	(122,13)
515977.0	3713076.0	7.77074	(122,12)	516077.0	3713076.0	8.60154	(126,14)
516177.0	3713076.0	8.50804	(126,11)	516277.0	3713076.0	8.05274	(126,12)
516377.0	3713076.0	8.21825	(126,13)	516477.0	3713076.0	7.51614	(126,13)
516577.0	3713076.0	6.29880	(233,13)	516677.0	3713076.0	6.51292	(233,13)
516777.0	3713076.0	9.10383	(251,17)	516877.0	3713076.0	7.14763	(184,12)
516977.0	3713076.0	6.80189	(181,14)	517077.0	3713076.0	6.65152	(107,14)
517177.0	3713076.0	7.27627	(107,14)	515277.0	3713176.0	7.60165	(230,12)
515377.0	3713176.0	7.51445	(230,13)	515477.0	3713176.0	7.09851	(162,13)
515577.0	3713176.0	7.71518	(162,13)	515677.0	3713176.0	7.11949	(122,13)
515777.0	3713176.0	8.27823	(122,13)	515877.0	3713176.0	7.10657	(163,11)
515977.0	3713176.0	8.07749	(122,12)	516077.0	3713176.0	8.82148	(126,14)
516177.0	3713176.0	8.14753	(126,11)	516277.0	3713176.0	8.05946	(126,12)
516377.0	3713176.0	8.29709	(126,13)	516477.0	3713176.0	7.63981	(126,13)
516577.0	3713176.0	6.42942	(153,12)	516677.0	3713176.0	6.82125	(233,13)
516777.0	3713176.0	6.76557	(251,17)	516877.0	3713176.0	8.87866	(251,17)
516977.0	3713176.0	6.30299	(181,14)	517077.0	3713176.0	6.47248	(247,13)
517177.0	3713176.0	8.40350	(107,14)	515277.0	3712176.0	7.58972	(212,11)
515377.0	3712176.0	7.03501	(212,11)	515477.0	3712176.0	7.03314	(211,12)
515577.0	3712176.0	7.32975	(160,14)	515677.0	3712176.0	6.54510	(160,14)
515777.0	3712176.0	7.87168	(109,12)	515877.0	3712176.0	10.69192	(36, 6)
515977.0	3712176.0	17.05320	(230,14)	516077.0	3712176.0	14.37273	(230,12)
516177.0	3712176.0	20.59201	(122,13)	515277.0	3712076.0	6.31996	(212,11)
515377.0	3712076.0	6.48382	(212,11)	515477.0	3712076.0	6.62557	(212,11)
515577.0	3712076.0	5.62454	(160,14)	515677.0	3712076.0	4.92754	(160,14)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515777.0	3712076.0	4.19409	(215,11)	515877.0	3712076.0	7.39338	(109,12)
515977.0	3712076.0	11.03934	(109,12)	516077.0	3712076.0	22.71900	(36, 6)
516177.0	3712076.0	23.09657	(230,15)	515277.0	3711976.0	6.80599	(109,13)
515377.0	3711976.0	6.35946	(192,11)	515477.0	3711976.0	5.66914	(152,13)
515577.0	3711976.0	5.42884	(109,13)	515677.0	3711976.0	5.79307	(109,13)
515777.0	3711976.0	5.39713	(214,17)	515877.0	3711976.0	5.90774	(214,17)
515977.0	3711976.0	7.21595	(215,11)	516077.0	3711976.0	8.76641	(215,11)
516177.0	3711976.0	21.30906	(36, 6)	515277.0	3711876.0	10.43259	(230,11)
515377.0	3711876.0	9.11280	(230,11)	515477.0	3711876.0	9.50788	(230,11)
515577.0	3711876.0	10.62981	(230,11)	515677.0	3711876.0	11.94494	(230,11)
515777.0	3711876.0	13.47339	(230,11)	515877.0	3711876.0	15.19714	(230,11)
515977.0	3711876.0	16.96687	(230,11)	516077.0	3711876.0	18.19234	(230,11)
516177.0	3711876.0	16.67784	(230,11)	515277.0	3711776.0	8.32273	(230,11)
515377.0	3711776.0	7.23810	(230,11)	515477.0	3711776.0	7.84622	(236,12)
515577.0	3711776.0	8.75652	(236,12)	515677.0	3711776.0	8.12657	(236,12)
515777.0	3711776.0	4.80746	(236,12)	515877.0	3711776.0	2.86791	(82, 7)
515977.0	3711776.0	7.04429	(82, 7)	516077.0	3711776.0	8.65456	(57,16)
516177.0	3711776.0	10.24151	(31,20)	515277.0	3711676.0	6.19277	(217,11)
515377.0	3711676.0	6.87424	(238,11)	515477.0	3711676.0	7.69064	(238,11)
515577.0	3711676.0	8.00000	(144,13)	515677.0	3711676.0	7.51409	(235,11)
515777.0	3711676.0	5.69101	(235,11)	515877.0	3711676.0	5.19934	(57,16)
515977.0	3711676.0	5.94846	(57,13)	516077.0	3711676.0	6.36334	(31,20)
516177.0	3711676.0	13.83824	(264,10)	515277.0	3711576.0	6.29394	(193,12)
515377.0	3711576.0	7.03451	(193,12)	515477.0	3711576.0	7.58242	(234,12)
515577.0	3711576.0	8.33977	(235,11)	515677.0	3711576.0	8.76219	(235,11)
515777.0	3711576.0	7.28615	(228,12)	515877.0	3711576.0	4.57404	(57,13)
515977.0	3711576.0	5.68814	(31,20)	516077.0	3711576.0	5.81056	(264,10)
516177.0	3711576.0	15.02194	(243,13)	515277.0	3711476.0	7.89079	(193,12)
515377.0	3711476.0	8.01844	(193,12)	515477.0	3711476.0	7.58489	(188,11)
515577.0	3711476.0	7.85356	(228,12)	515677.0	3711476.0	8.20177	(228,12)
515777.0	3711476.0	8.76383	(190,14)	515877.0	3711476.0	7.27725	(218,13)
515977.0	3711476.0	3.94986	(218,13)	516077.0	3711476.0	6.81647	(264,10)
516177.0	3711476.0	20.49447	(243,13)	511277.0	3709378.0	11.22363	(188, 1)
512277.0	3709378.0	11.14980	(171, 5)	513277.0	3709378.0	11.14960	(214, 3)
514277.0	3709378.0	10.18657	(257, 5)	515277.0	3709378.0	10.58718	(186,20)
516277.0	3709378.0	7.17194	(55,21)	517277.0	3709378.0	6.98708	(319,15)
518277.0	3709378.0	10.86268	(220, 5)	519277.0	3709378.0	6.18699	(349, 9)
520277.0	3709378.0	5.60118	(345,11)	521277.0	3709378.0	4.76855	(299, 7)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522277.0	3709378.0	4.82362	(77,19)	511277.0	3708378.0	11.66903	(188, 2)
512277.0	3708378.0	8.30557	(283, 1)	513277.0	3708378.0	10.80991	(297,22)
514277.0	3708378.0	11.66836	(245, 2)	515277.0	3708378.0	8.27543	(243,23)
516277.0	3708378.0	5.25504	(55,21)	517277.0	3708378.0	11.04207	(298,22)
518277.0	3708378.0	8.37926	(123, 4)	519277.0	3708378.0	4.31640	(105, 3)
520277.0	3708378.0	5.24184	(349, 9)	521277.0	3708378.0	4.72306	(51,21)
522277.0	3708378.0	6.13866	(345,11)	511277.0	3707378.0	10.04314	(46, 5)
512277.0	3707378.0	11.03578	(188, 6)	513277.0	3707378.0	11.90473	(214, 4)
514277.0	3707378.0	10.02983	(236,19)	515277.0	3707378.0	11.57605	(147, 2)
516277.0	3707378.0	8.38211	(27,18)	517277.0	3707378.0	11.04055	(105, 2)
518277.0	3707378.0	8.23356	(158,20)	519277.0	3707378.0	6.97567	(75,17)
520277.0	3707378.0	4.53421	(10, 5)	521277.0	3707378.0	4.37569	(349, 9)
522277.0	3707378.0	5.18999	(67,23)	511277.0	3706378.0	10.17077	(188, 6)
512277.0	3706378.0	10.78288	(172, 6)	513277.0	3706378.0	10.13017	(245, 2)
514277.0	3706378.0	11.79499	(243,24)	515277.0	3706378.0	11.28855	(144, 3)
516277.0	3706378.0	8.49319	(27,18)	517277.0	3706378.0	9.03484	(167,20)
518277.0	3706378.0	9.79794	(167, 4)	519277.0	3706378.0	5.94122	(95,12)
520277.0	3706378.0	4.09037	(362, 9)	521277.0	3706378.0	5.49634	(10, 5)
522277.0	3706378.0	4.67226	(55,19)	523277.0	3706378.0	4.68870	(242, 6)
522402.0	3710378.0	4.97545	(44,19)	522402.0	3711378.0	5.16481	(34,24)
522402.0	3712378.0	5.19654	(53,21)	511277.0	3714176.0	6.24410	(191, 7)
512277.0	3714176.0	5.95830	(176,20)	513277.0	3714176.0	4.99580	(141,14)
514277.0	3714176.0	5.47487	(365,10)	515277.0	3714176.0	8.10953	(62, 9)
516277.0	3714176.0	9.35022	(91,13)	517277.0	3714176.0	10.79040	(251,17)
518277.0	3714176.0	5.25693	(85,17)	519277.0	3714176.0	4.65811	(208, 8)
520277.0	3714176.0	6.39807	(206, 7)	521277.0	3714176.0	5.18418	(54,19)
522277.0	3714176.0	5.05700	(23, 5)	511277.0	3715176.0	7.83092	(196, 5)
512277.0	3715176.0	11.96862	(194, 1)	513277.0	3715176.0	6.59790	(240, 6)
514277.0	3715176.0	9.39800	(288,20)	515277.0	3715176.0	9.94660	(153, 4)
516277.0	3715176.0	6.20403	(103,12)	517277.0	3715176.0	7.05127	(195,10)
518277.0	3715176.0	4.88070	(121,11)	519277.0	3715176.0	4.21987	(85,17)
520277.0	3715176.0	4.05188	(219, 3)	521277.0	3715176.0	5.53482	(290,18)
522277.0	3715176.0	5.88669	(234,19)	511277.0	3716176.0	11.77383	(195,24)
512277.0	3716176.0	7.29024	(240, 6)	513277.0	3716176.0	9.98615	(260, 7)
514277.0	3716176.0	11.62170	(239,21)	515277.0	3716176.0	11.82076	(240, 1)
516277.0	3716176.0	4.66336	(338,10)	517277.0	3716176.0	5.26263	(141,16)
518277.0	3716176.0	5.20658	(165, 9)	519277.0	3716176.0	4.98586	(307,24)
520277.0	3716176.0	5.14319	(222, 2)	521277.0	3716176.0	5.01972	(221,21)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516276.8	3711378.0	5.09185	(358, 4)	516411.0	3712159.0	10.87724	(134,11)
516679.3	3711159.0	7.83048	(225,13)	516679.3	3711378.0	9.29107	(114,12)
517079.3	3711378.0	7.01007	(124,11)	517079.3	3711549.0	7.44208	(149,13)
517530.5	3711488.0	6.06694	(108, 9)	517530.5	3711317.0	6.34277	(155,12)
518743.9	3711171.0	5.44497	(55,14)	518743.9	3711573.0	5.79425	(155,11)
519914.6	3711573.0	5.22504	(91,16)	519914.6	3711171.0	4.56492	(75, 4)
520304.8	3711171.0	4.71716	(75, 4)	520304.8	3711024.0	4.41246	(86,15)
520707.2	3711024.0	5.12429	(75, 4)	520817.0	3711628.0	5.28071	(152, 6)
520402.3	3712176.0	5.02877	(53,21)	518707.2	3712176.0	5.23583	(65,15)
518707.2	3712030.0	5.80989	(61,12)	518280.4	3712030.0	6.19655	(99,13)
518280.4	3712250.0	5.97737	(249,12)	518060.9	3712335.0	5.72472	(224,12)
518060.9	3712878.0	6.61957	(148,11)	517426.8	3712878.0	6.49905	(222,15)
517426.8	3713079.0	6.61150	(276,10)	516993.9	3713079.0	6.92899	(205,13)
516993.9	3713280.0	6.77633	(154,16)	516603.7	3713280.0	7.31312	(233,13)
516603.7	3712884.0	6.53118	(145,12)	516372.0	3712884.0	7.57896	(126,12)
516372.0	3712798.0	7.17320	(126,12)	516256.2	3712774.0	8.18966	(156,15)
516276.8	3711378.0	5.09185	(358, 4)	516264.6	3712122.0	23.03844	(126,14)
516264.6	3711598.0	6.64073	(52, 8)	516008.5	3712006.0	6.66796	(109,12)
516008.5	3712122.0	19.59957	(230,14)	516115.2	3712189.0	13.19738	(230,12)
516179.3	3712061.0	22.75091	(85, 6)	516179.3	3712122.0	14.74747	(162,13)
516264.6	3712122.0	23.03844	(126,14)	515277.0	3711278.0	6.93207	(229,14)
515377.0	3711278.0	6.94001	(171,16)	515477.0	3711278.0	6.69056	(188,12)
515577.0	3711278.0	6.88157	(237,11)	515677.0	3711278.0	7.53282	(218,13)
515777.0	3711278.0	7.99690	(218,13)	515877.0	3711278.0	8.60478	(221,11)
515977.0	3711278.0	8.53529	(221,11)	516077.0	3711278.0	8.01051	(246,12)
516177.0	3711278.0	7.79639	(191,14)	516277.0	3711278.0	7.14735	(241,12)
516377.0	3711278.0	7.40383	(242,12)	516477.0	3711278.0	7.36565	(150,12)
516577.0	3711278.0	7.63436	(143,12)	516677.0	3711278.0	6.85863	(202,11)
516777.0	3711278.0	8.34258	(201,11)	516877.0	3711278.0	7.85872	(123,14)
516977.0	3711278.0	6.66441	(142,13)	517077.0	3711278.0	7.06367	(92, 9)
517177.0	3711278.0	6.31701	(142,11)	515277.0	3711178.0	7.44093	(213,13)
515377.0	3711178.0	7.28828	(188,12)	515477.0	3711178.0	7.16642	(188,12)
515577.0	3711178.0	7.24075	(213,11)	515677.0	3711178.0	7.42203	(227,12)
515777.0	3711178.0	7.29549	(156,14)	515877.0	3711178.0	7.94473	(156,14)
515977.0	3711178.0	8.04585	(246,13)	516077.0	3711178.0	8.54743	(191,14)
516177.0	3711178.0	8.43633	(241,12)	516277.0	3711178.0	8.65190	(241,12)
516377.0	3711178.0	7.40213	(238,13)	516477.0	3711178.0	8.26596	(242,12)
516577.0	3711178.0	7.78614	(150,12)	516677.0	3711178.0	7.81018	(225,13)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516777.0	3711178.0	7.16459	(225,13)	516877.0	3711178.0	7.26215	(202,11)
516977.0	3711178.0	7.20447	(166,14)	517077.0	3711178.0	7.06016	(91,18)
517177.0	3711178.0	6.88987	(123,13)	515277.0	3711078.0	7.37290	(188,12)
515377.0	3711078.0	7.29040	(188,12)	515477.0	3711078.0	6.98143	(245,13)
515577.0	3711078.0	7.77905	(227,12)	515677.0	3711078.0	7.65224	(244,13)
515777.0	3711078.0	6.39076	(221,11)	515877.0	3711078.0	7.32594	(246,13)
515977.0	3711078.0	7.72135	(245,12)	516077.0	3711078.0	7.95869	(191,14)
516177.0	3711078.0	7.88800	(159,13)	516277.0	3711078.0	8.10000	(241,12)
516377.0	3711078.0	8.03061	(238,13)	516477.0	3711078.0	7.78177	(150,12)
516577.0	3711078.0	7.72996	(149,14)	516677.0	3711078.0	7.32120	(225,13)
516777.0	3711078.0	7.12928	(225,13)	516877.0	3711078.0	7.23560	(114,12)
516977.0	3711078.0	7.48989	(123,14)	517077.0	3711078.0	7.43273	(166,14)
517177.0	3711078.0	7.20366	(91,18)	515277.0	3710978.0	7.65754	(144,10)
515377.0	3710978.0	7.12411	(245,13)	515477.0	3710978.0	7.29138	(227,12)
515577.0	3710978.0	7.60196	(244,13)	515677.0	3710978.0	6.57110	(244,13)
515777.0	3710978.0	6.76484	(255,15)	515877.0	3710978.0	7.92728	(211,14)
515977.0	3710978.0	7.48459	(212,14)	516077.0	3710978.0	6.88376	(191,14)
516177.0	3710978.0	7.06830	(241,12)	516277.0	3710978.0	7.35619	(143,13)
516377.0	3710978.0	7.36488	(253,12)	516477.0	3710978.0	6.82266	(217,14)
516577.0	3710978.0	6.94238	(150,14)	516677.0	3710978.0	6.32836	(149,14)
516777.0	3710978.0	6.43303	(167,15)	516877.0	3710978.0	7.00703	(167,15)
516977.0	3710978.0	7.56565	(33,21)	517077.0	3710978.0	8.00811	(123,14)
517177.0	3710978.0	7.24468	(166,14)	515277.0	3710878.0	7.05659	(128,14)
515377.0	3710878.0	7.17238	(227,12)	515477.0	3710878.0	7.26102	(244,13)
515577.0	3710878.0	6.65292	(159,12)	515677.0	3710878.0	6.52215	(159,12)
515777.0	3710878.0	7.98080	(211,14)	515877.0	3710878.0	8.41787	(212,14)
515977.0	3710878.0	8.26446	(188,13)	516077.0	3710878.0	7.70797	(213,12)
516177.0	3710878.0	7.96198	(158,14)	516277.0	3710878.0	7.42125	(246,14)
516377.0	3710878.0	6.55344	(238,13)	516477.0	3710878.0	5.97603	(220,12)
516577.0	3710878.0	6.35584	(186,16)	516677.0	3710878.0	6.79425	(319,15)
516777.0	3710878.0	7.53889	(319,14)	516877.0	3710878.0	7.34714	(167,15)
516977.0	3710878.0	7.60882	(108,12)	517077.0	3710878.0	8.16526	(33,21)
517177.0	3710878.0	7.60681	(114,12)	515277.0	3710778.0	6.86912	(242,13)
515377.0	3710778.0	6.80426	(213,11)	515477.0	3710778.0	6.71316	(159,12)
515577.0	3710778.0	6.47799	(159,12)	515677.0	3710778.0	7.29307	(255,15)
515777.0	3710778.0	8.47214	(211,14)	515877.0	3710778.0	8.66469	(243,12)
515977.0	3710778.0	8.89299	(188,13)	516077.0	3710778.0	8.27300	(213,12)
516177.0	3710778.0	8.01395	(158,14)	516277.0	3710778.0	7.77484	(242,11)

*** I. P. - CANDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516377.0	3710778.0	7.43463	(242,11)	516477.0	3710778.0	6.70855	(278,12)
516577.0	3710778.0	6.98254	(188,14)	516677.0	3710778.0	7.65714	(345,21)
516777.0	3710778.0	9.29862	(104,12)	516877.0	3710778.0	9.03930	(66,12)
516977.0	3710778.0	10.56142	(68,15)	517077.0	3710778.0	8.81156	(114,13)
517177.0	3710778.0	8.16159	(33,21)	515277.0	3710678.0	6.60244	(281,14)
515377.0	3710678.0	6.44613	(188,17)	515477.0	3710678.0	6.82587	(174,13)
515577.0	3710678.0	6.48563	(211,13)	515677.0	3710678.0	7.10376	(211,14)
515777.0	3710678.0	7.90848	(212,14)	515877.0	3710678.0	9.30148	(188,13)
515977.0	3710678.0	9.40210	(52, 8)	516077.0	3710678.0	8.02989	(256,10)
516177.0	3710678.0	8.03316	(158,14)	516277.0	3710678.0	7.71718	(242,11)
516377.0	3710678.0	7.63145	(242,11)	516477.0	3710678.0	6.79640	(278,12)
516577.0	3710678.0	7.76513	(188,14)	516677.0	3710678.0	8.50298	(256,13)
516777.0	3710678.0	8.67895	(15,14)	516877.0	3710678.0	9.14162	(104,12)
516977.0	3710678.0	8.69400	(68,15)	517077.0	3710678.0	8.21618	(108,12)
517177.0	3710678.0	7.51148	(123,11)	515277.0	3710578.0	6.87597	(281,14)
515377.0	3710578.0	6.80123	(174,13)	515477.0	3710578.0	7.66990	(264,10)
515577.0	3710578.0	7.50943	(255,15)	515677.0	3710578.0	7.28530	(211,14)
515777.0	3710578.0	8.57303	(256,15)	515877.0	3710578.0	9.97315	(188,13)
515977.0	3710578.0	9.51134	(213,12)	516077.0	3710578.0	7.41853	(114,11)
516177.0	3710578.0	8.21758	(256,14)	516277.0	3710578.0	7.92919	(256,14)
516377.0	3710578.0	9.58118	(75,21)	516477.0	3710578.0	8.40961	(358, 6)
516577.0	3710578.0	8.15632	(188,14)	516677.0	3710578.0	8.88357	(256,13)
516777.0	3710578.0	7.18956	(319,15)	516877.0	3710578.0	7.23821	(319,15)
516977.0	3710578.0	7.37334	(108,11)	517077.0	3710578.0	7.69912	(68,15)
517177.0	3710578.0	7.58627	(108,12)	515277.0	3710478.0	6.62602	(281,14)
515377.0	3710478.0	8.10026	(264,10)	515477.0	3710478.0	7.22147	(264,12)
515577.0	3710478.0	7.29410	(187,15)	515677.0	3710478.0	7.63530	(47,13)
515777.0	3710478.0	9.36310	(243,14)	515877.0	3710478.0	9.87449	(188,13)
515977.0	3710478.0	9.38774	(256,10)	516077.0	3710478.0	8.07644	(256,11)
516177.0	3710478.0	8.96271	(256,14)	516277.0	3710478.0	8.73282	(55,21)
516377.0	3710478.0	9.65417	(75,21)	516477.0	3710478.0	8.27724	(128,15)
516577.0	3710478.0	7.84567	(352,15)	516677.0	3710478.0	8.84597	(256,13)
516777.0	3710478.0	7.61746	(256,13)	516877.0	3710478.0	7.72541	(104,12)
516977.0	3710478.0	8.35287	(104,12)	517077.0	3710478.0	7.40688	(114,13)
517177.0	3710478.0	7.14586	(108,12)	515277.0	3710378.0	7.14648	(174,13)
515377.0	3710378.0	7.06813	(174,13)	515477.0	3710378.0	6.97470	(187,15)
515577.0	3710378.0	7.49604	(15, 9)	515677.0	3710378.0	8.77717	(245,16)
515777.0	3710378.0	9.75096	(188,13)	515877.0	3710378.0	10.05087	(243,13)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515977.0	3710378.0	9.15724	(256,10)	516077.0	3710378.0	7.89676	(256,11)
516177.0	3710378.0	8.69858	(256,14)	516277.0	3710378.0	7.98502	(256,14)
516377.0	3710378.0	8.72423	(75,21)	516477.0	3710378.0	7.53344	(108,13)
516577.0	3710378.0	7.36158	(264,13)	516677.0	3710378.0	8.14558	(256,13)
516777.0	3710378.0	7.90228	(345,21)	516877.0	3710378.0	8.44590	(15,14)
516977.0	3710378.0	7.28140	(108,11)	517077.0	3710378.0	7.38169	(108,11)
517177.0	3710378.0	6.98908	(67,15)	515277.0	3712276.0	7.27625	(210,14)
515377.0	3712276.0	7.08871	(211,12)	515477.0	3712276.0	6.75974	(210,14)
515577.0	3712276.0	7.13013	(227,13)	515677.0	3712276.0	7.58201	(227,13)
515777.0	3712276.0	9.91114	(230,14)	515877.0	3712276.0	7.12852	(62,12)
515977.0	3712276.0	9.35629	(230,13)	516077.0	3712276.0	8.30088	(230,13)
516177.0	3712276.0	9.07685	(122,12)	516277.0	3712276.0	18.70651	(126,14)
516377.0	3712276.0	8.81798	(322,14)	516477.0	3712276.0	4.75178	(318,14)
516577.0	3712276.0	4.53471	(102,10)	516677.0	3712276.0	3.80129	(29, 9)
516777.0	3712276.0	5.23657	(150,13)	516877.0	3712276.0	7.12970	(194,14)
516977.0	3712276.0	8.14169	(194,12)	517077.0	3712276.0	7.67978	(194,14)
517177.0	3712276.0	6.57244	(194,12)	515277.0	3712376.0	6.40455	(109,12)
515377.0	3712376.0	6.33428	(161,11)	515477.0	3712376.0	6.62693	(227,13)
515577.0	3712376.0	7.46559	(236,11)	515677.0	3712376.0	9.65827	(36, 6)
515777.0	3712376.0	8.10032	(139,13)	515877.0	3712376.0	8.59776	(62,12)
515977.0	3712376.0	11.35781	(230,12)	516077.0	3712376.0	10.13192	(162,13)
516177.0	3712376.0	11.69106	(126,14)	516277.0	3712376.0	15.21385	(91, 9)
516377.0	3712376.0	7.64522	(156,15)	516477.0	3712376.0	4.31823	(134,11)
516577.0	3712376.0	4.54183	(91,12)	516677.0	3712376.0	4.12477	(150,13)
516777.0	3712376.0	6.61021	(194,11)	516877.0	3712376.0	7.96800	(150,13)
516977.0	3712376.0	6.79739	(150,13)	517077.0	3712376.0	6.53851	(194,12)
517177.0	3712376.0	6.28224	(234,13)	515277.0	3712476.0	6.93225	(161,13)
515377.0	3712476.0	7.11751	(252,13)	515477.0	3712476.0	7.11452	(36, 6)
515577.0	3712476.0	7.03704	(210,13)	515677.0	3712476.0	7.39422	(147,11)
515777.0	3712476.0	7.65454	(62,12)	515877.0	3712476.0	9.69027	(230,12)
515977.0	3712476.0	8.22225	(220,13)	516077.0	3712476.0	7.59321	(203,12)
516177.0	3712476.0	13.54646	(122,12)	516277.0	3712476.0	13.28577	(91, 9)
516377.0	3712476.0	6.95924	(156,15)	516477.0	3712476.0	4.24318	(121,14)
516577.0	3712476.0	6.95610	(205,12)	516677.0	3712476.0	5.22203	(205,13)
516777.0	3712476.0	6.74529	(150,13)	516877.0	3712476.0	7.63119	(209,13)
516977.0	3712476.0	7.13206	(150,13)	517077.0	3712476.0	6.70535	(208,12)
517177.0	3712476.0	6.38427	(206,14)	515277.0	3712576.0	7.09746	(161,13)
515377.0	3712576.0	8.14278	(230,14)	515477.0	3712576.0	7.37993	(210,13)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515577.0	3712576.0	7.08620	(62,12)	515677.0	3712576.0	7.36733	(230,12)
515777.0	3712576.0	9.09755	(230,12)	515877.0	3712576.0	8.02413	(224,13)
515977.0	3712576.0	7.91832	(220,13)	516077.0	3712576.0	8.72662	(203,12)
516177.0	3712576.0	10.28714	(122,12)	516277.0	3712576.0	11.46117	(91, 9)
516377.0	3712576.0	6.31144	(126,12)	516477.0	3712576.0	4.33071	(126,13)
516577.0	3712576.0	7.25110	(205,12)	516677.0	3712576.0	6.03384	(205,13)
516777.0	3712576.0	6.45209	(205,13)	516877.0	3712576.0	6.32071	(150,13)
516977.0	3712576.0	6.65025	(208,13)	517077.0	3712576.0	6.43014	(208,13)
517177.0	3712576.0	7.10823	(208,12)	515277.0	3712676.0	7.58458	(36, 6)
515377.0	3712676.0	7.22830	(210,13)	515477.0	3712676.0	8.00920	(62,12)
515577.0	3712676.0	7.28297	(230,12)	515677.0	3712676.0	9.43016	(230,13)
515777.0	3712676.0	7.45325	(230,12)	515877.0	3712676.0	7.15139	(122,13)
515977.0	3712676.0	7.57714	(203,12)	516077.0	3712676.0	7.84023	(203,12)
516177.0	3712676.0	10.39972	(126,11)	516277.0	3712676.0	8.57496	(126,12)
516377.0	3712676.0	6.15867	(126,12)	516477.0	3712676.0	5.00134	(145,12)
516577.0	3712676.0	6.01466	(203,11)	516677.0	3712676.0	6.24029	(251,17)
516777.0	3712676.0	7.00767	(205,12)	516877.0	3712676.0	6.03969	(209,13)
516977.0	3712676.0	5.92074	(208,13)	517077.0	3712676.0	6.87896	(145,11)
517177.0	3712676.0	6.86826	(208,13)	515277.0	3712776.0	6.66346	(210,13)
515377.0	3712776.0	7.31966	(62,12)	515477.0	3712776.0	6.54426	(192,13)
515577.0	3712776.0	9.11080	(230,13)	515677.0	3712776.0	8.58459	(230,12)
515777.0	3712776.0	6.36792	(170,14)	515877.0	3712776.0	7.25673	(170,14)
515977.0	3712776.0	6.62413	(203,12)	516077.0	3712776.0	7.28855	(126,14)
516177.0	3712776.0	9.47758	(126,11)	516277.0	3712776.0	7.55315	(126,12)
516377.0	3712776.0	6.34130	(147,12)	516477.0	3712776.0	5.53301	(145,12)
516577.0	3712776.0	6.34220	(145,12)	516677.0	3712776.0	6.45046	(203,11)
516777.0	3712776.0	6.08241	(181,14)	516877.0	3712776.0	6.38815	(247,13)
516977.0	3712776.0	5.84476	(107,14)	517077.0	3712776.0	6.07769	(200,16)
517177.0	3712776.0	6.70194	(145,11)	515277.0	3712876.0	6.92734	(230,14)
515377.0	3712876.0	6.41793	(192,13)	515477.0	3712876.0	7.75718	(230,13)
515577.0	3712876.0	8.15557	(230,12)	515677.0	3712876.0	7.00316	(230,13)
515777.0	3712876.0	6.96362	(170,14)	515877.0	3712876.0	7.02321	(248,13)
515977.0	3712876.0	6.22363	(171,11)	516077.0	3712876.0	8.59451	(126,14)
516177.0	3712876.0	9.20758	(126,11)	516277.0	3712876.0	6.45828	(156,15)
516377.0	3712876.0	6.59366	(147,12)	516477.0	3712876.0	5.50157	(145,12)
516577.0	3712876.0	6.17244	(203,11)	516677.0	3712876.0	6.34852	(145,12)
516777.0	3712876.0	6.37770	(251,17)	516877.0	3712876.0	6.88536	(181,14)
516977.0	3712876.0	6.46150	(247,13)	517077.0	3712876.0	5.77564	(200,16)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
517177.0	3712876.0	6.32534	(200,16)	515277.0	3712976.0	6.58284	(164,14)
515377.0	3712976.0	7.20831	(230,13)	515477.0	3712976.0	8.23083	(230,12)
515577.0	3712976.0	6.81189	(163,10)	515677.0	3712976.0	6.56086	(170,14)
515777.0	3712976.0	6.88252	(170,14)	515877.0	3712976.0	7.64466	(248,13)
515977.0	3712976.0	6.67085	(163,11)	516077.0	3712976.0	9.23598	(122,12)
516177.0	3712976.0	9.62366	(126,14)	516277.0	3712976.0	6.45012	(185,14)
516377.0	3712976.0	6.85708	(147,12)	516477.0	3712976.0	5.73514	(125,11)
516577.0	3712976.0	6.09756	(233,13)	516677.0	3712976.0	6.30343	(233,11)
516777.0	3712976.0	6.78347	(233,11)	516877.0	3712976.0	6.73871	(204,14)
516977.0	3712976.0	6.91934	(247,13)	517077.0	3712976.0	6.28364	(205,13)
517177.0	3712976.0	5.87223	(200,16)	515277.0	3713076.0	6.60957	(230,13)
515377.0	3713076.0	8.00296	(230,12)	515477.0	3713076.0	7.16696	(163,10)
515577.0	3713076.0	5.97250	(164,15)	515677.0	3713076.0	7.12898	(162,14)
515777.0	3713076.0	7.27703	(248,13)	515877.0	3713076.0	6.22295	(163,11)
515977.0	3713076.0	5.97317	(139,12)	516077.0	3713076.0	7.78618	(122,12)
516177.0	3713076.0	7.95380	(126,14)	516277.0	3713076.0	6.64013	(185,14)
516377.0	3713076.0	6.69321	(147,12)	516477.0	3713076.0	5.97410	(125,11)
516577.0	3713076.0	5.88660	(203,13)	516677.0	3713076.0	6.37614	(235,12)
516777.0	3713076.0	7.07337	(233,11)	516877.0	3713076.0	6.84801	(204,14)
516977.0	3713076.0	6.70791	(205,13)	517077.0	3713076.0	6.60970	(247,13)
517177.0	3713076.0	6.37913	(184,14)	515277.0	3713176.0	7.49687	(230,13)
515377.0	3713176.0	7.14735	(163,10)	515477.0	3713176.0	6.46999	(163,10)
515577.0	3713176.0	6.79167	(162,14)	515677.0	3713176.0	7.06154	(162,14)
515777.0	3713176.0	7.72576	(248,13)	515877.0	3713176.0	6.03652	(122,13)
515977.0	3713176.0	6.21062	(205,15)	516077.0	3713176.0	7.80277	(126,11)
516177.0	3713176.0	7.19816	(126,14)	516277.0	3713176.0	6.65102	(185,14)
516377.0	3713176.0	6.92701	(126,12)	516477.0	3713176.0	6.19001	(233,16)
516577.0	3713176.0	6.20337	(233,13)	516677.0	3713176.0	6.18150	(235,12)
516777.0	3713176.0	6.65693	(233,11)	516877.0	3713176.0	7.76287	(184,12)
516977.0	3713176.0	6.29725	(204,14)	517077.0	3713176.0	6.40747	(181,14)
517177.0	3713176.0	7.56831	(185,12)	515277.0	3712176.0	6.65660	(211,12)
515377.0	3712176.0	6.78867	(211,12)	515477.0	3712176.0	6.82820	(160,14)
515577.0	3712176.0	5.93321	(210,14)	515677.0	3712176.0	5.98688	(109,12)
515777.0	3712176.0	5.69892	(199,14)	515877.0	3712176.0	8.09766	(230,14)
515977.0	3712176.0	11.94996	(36, 6)	516077.0	3712176.0	13.85820	(230,15)
516177.0	3712176.0	12.14656	(63,13)	515277.0	3712076.0	6.24909	(170,11)
515377.0	3712076.0	5.91266	(170,11)	515477.0	3712076.0	5.51985	(170,11)
515577.0	3712076.0	5.45841	(212,11)	515677.0	3712076.0	4.45786	(215,11)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515777.0	3712076.0	3.59070	(140, 6)	515877.0	3712076.0	5.32866	(140, 6)
515977.0	3712076.0	5.90847	(215,10)	516077.0	3712076.0	17.73145	(230,14)
516177.0	3712076.0	16.67283	(230,13)	515277.0	3711976.0	6.80432	(192,11)
515377.0	3711976.0	6.33674	(210,11)	515477.0	3711976.0	5.46461	(109,13)
515577.0	3711976.0	5.09217	(152,13)	515677.0	3711976.0	4.44193	(214,17)
515777.0	3711976.0	5.17811	(109,13)	515877.0	3711976.0	4.72886	(131, 6)
515977.0	3711976.0	5.13794	(261,14)	516077.0	3711976.0	8.47488	(140, 6)
516177.0	3711976.0	9.51292	(40,17)	515277.0	3711876.0	8.38288	(109,13)
515377.0	3711876.0	6.95620	(109,13)	515477.0	3711876.0	7.65781	(109,13)
515577.0	3711876.0	8.40962	(109,13)	515677.0	3711876.0	9.25156	(109,13)
515777.0	3711876.0	10.16896	(109,13)	515877.0	3711876.0	11.10126	(109,13)
515977.0	3711876.0	11.86531	(109,13)	516077.0	3711876.0	11.93684	(109,13)
516177.0	3711876.0	16.32210	(82,16)	515277.0	3711776.0	6.28071	(212,16)
515377.0	3711776.0	6.62591	(152,13)	515477.0	3711776.0	7.24688	(144,13)
515577.0	3711776.0	8.07484	(144,13)	515677.0	3711776.0	7.40005	(144,13)
515777.0	3711776.0	4.24724	(144,13)	515877.0	3711776.0	2.72969	(217,24)
515977.0	3711776.0	4.31012	(18,10)	516077.0	3711776.0	6.27471	(82, 7)
516177.0	3711776.0	7.31643	(57,13)	515277.0	3711676.0	6.15949	(172,12)
515377.0	3711676.0	6.31729	(144,13)	515477.0	3711676.0	7.37049	(144,13)
515577.0	3711676.0	7.78739	(234,12)	515677.0	3711676.0	7.20379	(144,13)
515777.0	3711676.0	5.16591	(228,12)	515877.0	3711676.0	3.40476	(109,21)
515977.0	3711676.0	5.17109	(57,16)	516077.0	3711676.0	1.33994	(57,13)
516177.0	3711676.0	5.02363	(20, 8)	515277.0	3711576.0	6.17578	(172,12)
515377.0	3711576.0	6.70361	(234,12)	515477.0	3711576.0	7.40562	(193,12)
515577.0	3711576.0	7.86364	(228,12)	515677.0	3711576.0	8.67951	(228,12)
515777.0	3711576.0	6.85798	(235,11)	515877.0	3711576.0	4.32542	(190,14)
515977.0	3711576.0	1.47546	(218,13)	516077.0	3711576.0	0.72411	(20, 8)
516177.0	3711576.0	8.24767	(20, 8)	515277.0	3711476.0	6.89279	(188,11)
515377.0	3711476.0	7.52752	(188,11)	515477.0	3711476.0	7.44383	(193,12)
515577.0	3711476.0	7.54166	(235,11)	515677.0	3711476.0	8.07558	(190,14)
515777.0	3711476.0	7.77860	(218,13)	515877.0	3711476.0	6.70490	(190,14)
515977.0	3711476.0	3.91219	(156,14)	516077.0	3711476.0	5.58691	(20, 8)
516177.0	3711476.0	9.54659	(243,14)	511277.0	3709378.0	11.15481	(282,24)
512277.0	3709378.0	11.11692	(172,23)	513277.0	3709378.0	10.95726	(189, 1)
514277.0	3709378.0	10.15894	(212, 1)	515277.0	3709378.0	10.49217	(244,23)
516277.0	3709378.0	6.72719	(75,22)	517277.0	3709378.0	6.12327	(362,16)
518277.0	3709378.0	10.60685	(143, 3)	519277.0	3709378.0	4.61379	(92,10)
520277.0	3709378.0	4.52269	(297, 7)	521277.0	3709378.0	4.59866	(348, 4)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522277.0	3709378.0	4.81585	(32, 1)	511277.0	3708378.0	10.14239	(281, 5)
512277.0	3708378.0	8.08719	(155,21)	513277.0	3708378.0	10.50753	(188, 6)
514277.0	3708378.0	10.84062	(187,20)	515277.0	3708378.0	8.11679	(244,24)
516277.0	3708378.0	5.05158	(75,22)	517277.0	3708378.0	10.51666	(278, 2)
518277.0	3708378.0	8.21274	(193, 7)	519277.0	3708378.0	4.13986	(11,19)
520277.0	3708378.0	4.87908	(296,18)	521277.0	3708378.0	4.51959	(294,18)
522277.0	3708378.0	4.59539	(123, 3)	511277.0	3707378.0	9.21373	(188,21)
512277.0	3707378.0	10.89887	(70, 1)	513277.0	3707378.0	10.53404	(174, 1)
514277.0	3707378.0	9.94965	(143,24)	515277.0	3707378.0	11.44929	(283, 7)
516277.0	3707378.0	7.90944	(155,20)	517277.0	3707378.0	10.94302	(194,22)
518277.0	3707378.0	8.11195	(359,21)	519277.0	3707378.0	5.15630	(35, 2)
520277.0	3707378.0	4.23675	(11,19)	521277.0	3707378.0	4.30780	(346, 4)
522277.0	3707378.0	4.84330	(59, 4)	511277.0	3706378.0	10.05068	(70, 1)
512277.0	3706378.0	10.19547	(44, 4)	513277.0	3706378.0	8.74428	(70, 3)
514277.0	3706378.0	10.60427	(283, 4)	515277.0	3706378.0	11.26373	(46,21)
516277.0	3706378.0	7.72194	(245, 3)	517277.0	3706378.0	8.32589	(238, 7)
518277.0	3706378.0	9.42675	(59, 5)	519277.0	3706378.0	5.83157	(123, 4)
520277.0	3706378.0	4.06340	(327,21)	521277.0	3706378.0	4.68421	(68,21)
522277.0	3706378.0	4.33660	(319,24)	523277.0	3706378.0	4.57472	(296,19)
522402.0	3710378.0	4.92266	(41,18)	522402.0	3711378.0	5.07731	(54, 7)
522402.0	3712378.0	5.18882	(22,22)	511277.0	3714176.0	6.11385	(239, 1)
512277.0	3714176.0	5.93122	(305,18)	513277.0	3714176.0	4.85917	(210, 5)
514277.0	3714176.0	5.12094	(85, 6)	515277.0	3714176.0	7.10304	(247,22)
516277.0	3714176.0	9.16766	(322,22)	517277.0	3714176.0	10.35006	(222,20)
518277.0	3714176.0	4.94115	(275,16)	519277.0	3714176.0	4.54590	(85,18)
520277.0	3714176.0	4.99387	(233,19)	521277.0	3714176.0	4.75145	(307,18)
522277.0	3714176.0	5.05700	(23, 7)	511277.0	3715176.0	7.68730	(147, 3)
512277.0	3715176.0	11.85201	(229,21)	513277.0	3715176.0	6.38005	(284, 7)
514277.0	3715176.0	9.37627	(249, 2)	515277.0	3715176.0	9.91138	(223, 5)
516277.0	3715176.0	6.06736	(327, 1)	517277.0	3715176.0	5.04644	(141,16)
518277.0	3715176.0	4.67980	(102,10)	519277.0	3715176.0	4.13137	(222, 2)
520277.0	3715176.0	3.90263	(148, 1)	521277.0	3715176.0	5.44361	(179, 3)
522277.0	3715176.0	5.27402	(149, 6)	511277.0	3716176.0	11.74508	(177,22)
512277.0	3716176.0	6.99738	(212,20)	513277.0	3716176.0	9.62598	(197, 5)
514277.0	3716176.0	11.54492	(231,19)	515277.0	3716176.0	11.71685	(183,23)
516277.0	3716176.0	4.14599	(103,12)	517277.0	3716176.0	4.61120	(275,18)
518277.0	3716176.0	4.80955	(141,17)	519277.0	3716176.0	4.60927	(100, 7)
520277.0	3716176.0	5.12736	(206, 4)	521277.0	3716176.0	4.62522	(139,23)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522277.0	3716176.0	4.14417	(179, 3)	511277.0	3717176.0	8.87226	(212,20)
512277.0	3717176.0	10.31799	(228,22)	513277.0	3717176.0	11.40807	(126, 5)
514277.0	3717176.0	11.60788	(290,22)	515277.0	3717176.0	7.50473	(181,21)
516277.0	3717176.0	5.13268	(204,20)	517277.0	3717176.0	5.38174	(203,20)
518277.0	3717176.0	5.56318	(199,21)	519277.0	3717176.0	5.88053	(85,21)
520277.0	3717176.0	5.14627	(277,23)	521277.0	3717176.0	4.08658	(222, 2)
522277.0	3717176.0	4.96578	(221,21)	511277.0	3713176.0	7.16717	(191,20)
512277.0	3713176.0	5.54409	(280, 6)	513277.0	3713176.0	4.51264	(197,15)
514277.0	3713176.0	5.95544	(267,11)	511277.0	3712176.0	5.89926	(304,18)
512277.0	3712176.0	5.72983	(304,18)	513277.0	3712176.0	5.72993	(214,15)
514277.0	3712176.0	6.53741	(216,13)	511277.0	3711176.0	8.18754	(129, 1)
512277.0	3711176.0	10.14580	(309,24)	513277.0	3711176.0	5.23861	(239,15)
514277.0	3711176.0	7.07726	(188,10)	511277.0	3709378.0	11.15481	(282,24)
512277.0	3709378.0	11.11692	(172,23)	513277.0	3709378.0	10.95726	(189, 1)
514277.0	3709378.0	10.15894	(212, 1)	515277.0	3709378.0	10.49217	(244,23)
516277.0	3709378.0	6.72719	(75,22)	517277.0	3709378.0	6.12327	(362,16)
518277.0	3709378.0	10.60685	(143, 3)	519277.0	3709378.0	4.61379	(92,10)
520277.0	3709378.0	4.52269	(297, 7)	521277.0	3709378.0	4.59866	(348, 4)
522277.0	3709378.0	4.81585	(32, 1)	511277.0	3708378.0	10.14239	(281, 5)
512277.0	3708378.0	8.08719	(155,21)	513277.0	3708378.0	10.50753	(188, 6)
514277.0	3708378.0	10.84062	(187,20)	515277.0	3708378.0	8.11679	(244,24)
516277.0	3708378.0	5.05158	(75,22)	517277.0	3708378.0	10.51666	(278, 2)
518277.0	3708378.0	8.21274	(193, 7)	519277.0	3708378.0	4.13986	(11,19)
520277.0	3708378.0	4.87908	(296,18)	521277.0	3708378.0	4.51959	(294,18)
522277.0	3708378.0	4.59539	(123, 3)	511277.0	3707378.0	9.21373	(188,21)
512277.0	3707378.0	10.89887	(70, 1)	513277.0	3707378.0	10.53404	(174, 1)
514277.0	3707378.0	9.94965	(143,24)	515277.0	3707378.0	11.44929	(283, 7)
516277.0	3707378.0	7.90944	(155,20)	517277.0	3707378.0	10.94302	(194,22)
518277.0	3707378.0	8.11195	(359,21)	519277.0	3707378.0	5.15630	(35, 2)
520277.0	3707378.0	4.23675	(11,19)	521277.0	3707378.0	4.30780	(346, 4)
522277.0	3707378.0	4.84330	(59, 4)	511277.0	3706378.0	10.05068	(70, 1)
512277.0	3706378.0	10.19547	(44, 4)	513277.0	3706378.0	8.74428	(70, 3)
514277.0	3706378.0	10.60427	(283, 4)	515277.0	3706378.0	11.26373	(46,21)
516277.0	3706378.0	7.72194	(245, 3)	517277.0	3706378.0	8.32589	(238, 7)
518277.0	3706378.0	9.42675	(59, 5)	519277.0	3706378.0	5.83157	(123, 4)
520277.0	3706378.0	4.06340	(327,21)	521277.0	3706378.0	4.68421	(68,21)
522277.0	3706378.0	4.33660	(319,24)	523277.0	3706378.0	4.57472	(296,19)
522402.0	3710378.0	4.92266	(41,18)	522402.0	3711378.0	5.07731	(54, 7)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522402.0	3712378.0	5.18882	(22,22)	511277.0	3714176.0	6.11385	(239, 1)
512277.0	3714176.0	5.93122	(305,18)	513277.0	3714176.0	4.85917	(210, 5)
514277.0	3714176.0	5.12094	(85, 6)	515277.0	3714176.0	7.10304	(247,22)
516277.0	3714176.0	9.16766	(322,22)	517277.0	3714176.0	10.35006	(222,20)
518277.0	3714176.0	4.94115	(275,16)	519277.0	3714176.0	4.54590	(85,18)
520277.0	3714176.0	4.99387	(233,19)	521277.0	3714176.0	4.75145	(307,18)
522277.0	3714176.0	5.05700	(23, 7)	511277.0	3715176.0	7.68730	(147, 3)
512277.0	3715176.0	11.85201	(229,21)	513277.0	3715176.0	6.38005	(284, 7)
514277.0	3715176.0	9.37627	(249, 2)	515277.0	3715176.0	9.91138	(223, 5)
516277.0	3715176.0	6.06736	(327, 1)	517277.0	3715176.0	5.04644	(141,16)
518277.0	3715176.0	4.67980	(102,10)	519277.0	3715176.0	4.13137	(222, 2)
520277.0	3715176.0	3.90263	(148, 1)	521277.0	3715176.0	5.44361	(179, 3)
522277.0	3715176.0	5.27402	(149, 6)	511277.0	3716176.0	11.74508	(177,22)
512277.0	3716176.0	6.99738	(212,20)	513277.0	3716176.0	9.62598	(197, 5)
514277.0	3716176.0	11.54492	(231,19)	515277.0	3716176.0	11.71685	(183,23)
516277.0	3716176.0	4.14599	(103,12)	517277.0	3716176.0	4.61120	(275,18)
518277.0	3716176.0	4.80955	(141,17)	519277.0	3716176.0	4.60927	(100, 7)
520277.0	3716176.0	5.12736	(206, 4)	521277.0	3716176.0	4.62522	(139,23)
522277.0	3716176.0	4.14417	(179, 3)	511277.0	3717176.0	8.87226	(212,20)
512277.0	3717176.0	10.31799	(228,22)	513277.0	3717176.0	11.40807	(126, 5)
514277.0	3717176.0	11.60788	(290,22)	515277.0	3717176.0	7.50473	(181,21)
516277.0	3717176.0	5.13268	(204,20)	517277.0	3717176.0	5.38174	(203,20)
518277.0	3717176.0	5.56318	(199,21)	519277.0	3717176.0	5.88053	(85,21)
520277.0	3717176.0	5.14627	(277,23)	521277.0	3717176.0	4.08658	(222, 2)
522277.0	3717176.0	4.96578	(221,21)	511277.0	3713176.0	7.16717	(191,20)
512277.0	3713176.0	5.54409	(280, 6)	513277.0	3713176.0	4.51264	(197,15)
514277.0	3713176.0	5.95544	(267,11)	511277.0	3712176.0	5.89926	(304,18)
512277.0	3712176.0	5.72983	(304,18)	513277.0	3712176.0	5.72993	(214,15)
514277.0	3712176.0	6.53741	(216,13)	511277.0	3711176.0	8.18754	(129, 1)
512277.0	3711176.0	10.14580	(309,24)	513277.0	3711176.0	5.23861	(239,15)
514277.0	3711176.0	7.07726	(188,10)	516500.0	3708100.0	10.83593	(282, 8)
518100.0	3709350.0	8.52799	(244, 5)	514500.0	3708800.0	10.94883	(282,19)
517300.0	3714400.0	10.48114	(318,18)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SO MAXIMUM 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	HOUR	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	HOUR	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	27.09660	15	230	516179.3	3712061.0	26	17.74573	13	122	516177.0	3712276.0
2	25.90379	6	36	516008.5	3712122.0	27	17.73145	14	230	516077.0	3712076.0
3	24.00236	10	323	516264.6	3712122.0	28	17.66410	13	230	516179.3	3712061.0
4	24.00236	10	323	516264.6	3712122.0	29	17.05320	14	230	515977.0	3712176.0
5	23.41272	15	156	516277.0	3712276.0	30	16.96687	11	230	515977.0	3711876.0
6	23.09657	15	230	516177.0	3712076.0	31	16.93696	13	122	516077.0	3712376.0
7	23.08953	17	251	516411.0	3712159.0	32	16.67784	11	230	516177.0	3711876.0
8	23.03844	14	126	516264.6	3712122.0	33	16.67283	13	230	516177.0	3712076.0
9	23.03844	14	126	516264.6	3712122.0	34	16.63806	11	126	516277.0	3712276.0
10	22.99150	15	156	516264.6	3712122.0	35	16.46523	9	91	516277.0	3712276.0
11	22.99150	15	156	516264.6	3712122.0	36	16.40771	12	230	516177.0	3712076.0
12	22.75091	6	85	516179.3	3712061.0	37	16.38194	16	261	516179.3	3712122.0
13	22.71900	6	36	516077.0	3712076.0	38	16.32210	16	82	516177.0	3711876.0
14	21.30906	6	36	516177.0	3711976.0	39	15.92566	17	251	516477.0	3712276.0
15	20.59201	13	122	516177.0	3712176.0	40	15.87169	13	122	516077.0	3712476.0
16	20.49447	13	243	516177.0	3711476.0	41	15.54668	15	57	516177.0	3711876.0
17	20.33095	16	322	516264.6	3712122.0	42	15.21385	9	91	516277.0	3712376.0
18	20.33095	16	322	516264.6	3712122.0	43	15.19714	11	230	515877.0	3711876.0
19	19.59957	14	230	516008.5	3712122.0	44	15.02194	13	243	516177.0	3711576.0
20	19.10988	12	122	516264.6	3712122.0	45	14.84522	15	215	516177.0	3711876.0
21	19.10988	12	122	516264.6	3712122.0	46	14.74747	13	162	516179.3	3712122.0
22	18.70651	14	126	516277.0	3712276.0	47	14.65259	15	156	516277.0	3712476.0
23	18.57950	15	156	516277.0	3712376.0	48	14.56489	11	126	516264.6	3712122.0
24	18.19234	11	230	516077.0	3711876.0	49	14.56489	11	126	516264.6	3712122.0
25	18.03491	12	230	516179.3	3712061.0	50	14.44064	15	258	516264.6	3712122.0

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516276.8	3711378.0	1.28310	(358, 1)	516411.0	3712159.0	2.88681	(251, 3)
516679.3	3711159.0	1.88407	(150, 2)	516679.3	3711378.0	2.55288	(114, 2)
517079.3	3711378.0	2.53386	(142, 2)	517079.3	3711549.0	1.42433	(92, 2)
517530.5	3711488.0	1.75257	(92, 1)	517530.5	3711317.0	1.77959	(92, 2)
518743.9	3711171.0	1.97767	(92, 1)	518743.9	3711573.0	2.47340	(155, 2)
519914.6	3711573.0	1.88521	(155, 2)	519914.6	3711171.0	1.50953	(327, 2)
520304.8	3711171.0	1.45467	(99, 1)	520304.8	3711024.0	1.46209	(327, 2)
520707.2	3711024.0	1.33831	(327, 2)	520817.0	3711628.0	1.46184	(86, 2)
520402.3	3712176.0	1.40985	(14, 2)	518707.2	3712176.0	1.26544	(331, 2)
518707.2	3712030.0	1.79409	(14, 2)	518280.4	3712030.0	1.54504	(14, 2)
518280.4	3712250.0	1.57617	(324, 2)	518060.9	3712335.0	1.66544	(324, 2)
518060.9	3712878.0	2.89059	(206, 2)	517426.8	3712878.0	3.86372	(208, 2)
517426.8	3713079.0	3.36958	(208, 2)	516993.9	3713079.0	2.41992	(184, 2)
516993.9	3713280.0	2.41673	(184, 2)	516603.7	3713280.0	2.80832	(247, 2)
516603.7	3712884.0	1.94452	(233, 2)	516372.0	3712884.0	3.19161	(126, 2)
516372.0	3712798.0	3.06862	(126, 2)	516256.2	3712774.0	4.25587	(126, 2)
516276.8	3711378.0	1.28310	(358, 1)	516264.6	3712122.0	6.15289	(122, 2)
516264.6	3711598.0	1.73531	(243, 2)	516008.5	3712006.0	1.50605	(109, 2)
516008.5	3712122.0	3.63537	(230, 2)	516115.2	3712189.0	5.60567	(230, 2)
516179.3	3712061.0	10.58920	(230, 2)	516179.3	3712122.0	4.60018	(85, 1)
516264.6	3712122.0	6.15289	(122, 2)	515277.0	3711278.0	2.62070	(57, 2)
515377.0	3711278.0	2.14947	(57, 2)	515477.0	3711278.0	2.12282	(189, 2)
515577.0	3711278.0	2.20908	(244, 2)	515677.0	3711278.0	2.48685	(244, 2)
515777.0	3711278.0	2.32097	(244, 2)	515877.0	3711278.0	2.03077	(167, 2)
515977.0	3711278.0	1.97040	(246, 2)	516077.0	3711278.0	2.58131	(243, 2)
516177.0	3711278.0	2.04870	(243, 2)	516277.0	3711278.0	1.45273	(238, 2)
516377.0	3711278.0	3.04320	(358, 1)	516477.0	3711278.0	3.54356	(358, 2)
516577.0	3711278.0	1.95442	(319, 2)	516677.0	3711278.0	2.23839	(114, 2)
516777.0	3711278.0	1.99736	(114, 2)	516877.0	3711278.0	2.52767	(91, 3)
516977.0	3711278.0	3.07149	(91, 3)	517077.0	3711278.0	2.82501	(142, 2)
517177.0	3711278.0	2.89612	(142, 2)	515277.0	3711178.0	2.39380	(189, 2)
515377.0	3711178.0	2.49172	(189, 2)	515477.0	3711178.0	2.56327	(244, 2)
515577.0	3711178.0	2.92905	(244, 2)	515677.0	3711178.0	3.07712	(244, 2)
515777.0	3711178.0	2.59743	(244, 2)	515877.0	3711178.0	1.91361	(167, 2)
515977.0	3711178.0	2.14490	(246, 2)	516077.0	3711178.0	2.78342	(243, 2)
516177.0	3711178.0	1.60760	(143, 2)	516277.0	3711178.0	2.01130	(143, 2)
516377.0	3711178.0	2.07172	(143, 2)	516477.0	3711178.0	1.99573	(150, 2)
516577.0	3711178.0	2.09343	(150, 2)	516677.0	3711178.0	1.85721	(150, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516777.0	3711178.0	2.05527	(114, 2)	516877.0	3711178.0	1.87611	(123, 2)
516977.0	3711178.0	2.94894	(91, 3)	517077.0	3711178.0	3.91172	(91, 3)
517177.0	3711178.0	3.02623	(142, 2)	515277.0	3711078.0	2.70481	(189, 2)
515377.0	3711078.0	2.82949	(244, 2)	515477.0	3711078.0	3.05639	(244, 2)
515577.0	3711078.0	3.39145	(244, 2)	515677.0	3711078.0	3.18799	(244, 2)
515777.0	3711078.0	2.48755	(244, 2)	515877.0	3711078.0	1.85380	(246, 2)
515977.0	3711078.0	2.50956	(243, 2)	516077.0	3711078.0	2.68065	(243, 2)
516177.0	3711078.0	1.92696	(143, 2)	516277.0	3711078.0	2.27833	(143, 2)
516377.0	3711078.0	2.28857	(143, 2)	516477.0	3711078.0	1.98722	(150, 2)
516577.0	3711078.0	2.10375	(150, 2)	516677.0	3711078.0	1.87703	(150, 2)
516777.0	3711078.0	1.85400	(114, 2)	516877.0	3711078.0	2.11675	(114, 2)
516977.0	3711078.0	2.45766	(314, 2)	517077.0	3711078.0	3.27610	(91, 3)
517177.0	3711078.0	4.15491	(91, 3)	515277.0	3710978.0	2.93188	(244, 2)
515377.0	3710978.0	3.30202	(244, 2)	515477.0	3710978.0	3.30058	(244, 2)
515577.0	3710978.0	3.30842	(244, 2)	515677.0	3710978.0	2.85360	(244, 2)
515777.0	3710978.0	2.27372	(244, 2)	515877.0	3710978.0	1.90437	(245, 2)
515977.0	3710978.0	3.48432	(243, 2)	516077.0	3710978.0	2.98647	(243, 2)
516177.0	3710978.0	2.35608	(256, 2)	516277.0	3710978.0	2.24905	(143, 2)
516377.0	3710978.0	2.19351	(143, 2)	516477.0	3710978.0	1.87300	(143, 2)
516577.0	3710978.0	1.86965	(150, 2)	516677.0	3710978.0	1.73626	(150, 2)
516777.0	3710978.0	1.65703	(114, 2)	516877.0	3710978.0	2.33547	(114, 2)
516977.0	3710978.0	2.30786	(114, 2)	517077.0	3710978.0	2.75330	(314, 2)
517177.0	3710978.0	3.51658	(91, 3)	515277.0	3710878.0	3.29463	(244, 2)
515377.0	3710878.0	3.37522	(244, 2)	515477.0	3710878.0	3.28646	(244, 2)
515577.0	3710878.0	2.95789	(244, 2)	515677.0	3710878.0	2.52171	(244, 2)
515777.0	3710878.0	2.12142	(244, 2)	515877.0	3710878.0	2.95956	(243, 2)
515977.0	3710878.0	4.01968	(243, 2)	516077.0	3710878.0	2.98315	(243, 2)
516177.0	3710878.0	2.89507	(256, 2)	516277.0	3710878.0	2.37069	(256, 2)
516377.0	3710878.0	2.27836	(105, 2)	516477.0	3710878.0	1.97424	(105, 2)
516577.0	3710878.0	2.24058	(358, 2)	516677.0	3710878.0	1.95286	(66, 2)
516777.0	3710878.0	2.13964	(66, 2)	516877.0	3710878.0	2.30092	(114, 2)
516977.0	3710878.0	2.58356	(319, 2)	517077.0	3710878.0	2.40339	(314, 2)
517177.0	3710878.0	2.97102	(314, 2)	515277.0	3710778.0	3.38477	(244, 2)
515377.0	3710778.0	3.24182	(244, 2)	515477.0	3710778.0	3.08743	(244, 2)
515577.0	3710778.0	2.52487	(244, 2)	515677.0	3710778.0	2.16698	(244, 2)
515777.0	3710778.0	2.23931	(243, 2)	515877.0	3710778.0	3.90938	(243, 2)
515977.0	3710778.0	4.09716	(243, 2)	516077.0	3710778.0	3.48353	(256, 2)
516177.0	3710778.0	3.14363	(256, 2)	516277.0	3710778.0	2.69408	(256, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516377.0	3710778.0	2.72269	(105, 2)	516477.0	3710778.0	2.65004	(105, 2)
516577.0	3710778.0	2.64732	(358, 2)	516677.0	3710778.0	3.06536	(358, 2)
516777.0	3710778.0	2.88774	(66, 2)	516877.0	3710778.0	2.81369	(68, 2)
516977.0	3710778.0	3.31503	(319, 2)	517077.0	3710778.0	3.39709	(319, 2)
517177.0	3710778.0	2.76978	(314, 2)	515277.0	3710678.0	3.17338	(244, 2)
515377.0	3710678.0	2.97459	(244, 2)	515477.0	3710678.0	2.63609	(244, 2)
515577.0	3710678.0	2.18684	(244, 2)	515677.0	3710678.0	1.88626	(244, 2)
515777.0	3710678.0	2.74111	(243, 2)	515877.0	3710678.0	4.22863	(243, 2)
515977.0	3710678.0	3.85510	(243, 2)	516077.0	3710678.0	3.72210	(256, 2)
516177.0	3710678.0	3.50941	(256, 2)	516277.0	3710678.0	2.78767	(256, 2)
516377.0	3710678.0	3.09634	(105, 2)	516477.0	3710678.0	2.92631	(105, 2)
516577.0	3710678.0	2.88303	(358, 2)	516677.0	3710678.0	3.60129	(358, 2)
516777.0	3710678.0	2.91366	(66, 2)	516877.0	3710678.0	2.53125	(66, 2)
516977.0	3710678.0	2.92702	(68, 2)	517077.0	3710678.0	3.01327	(319, 2)
517177.0	3710678.0	2.49819	(319, 2)	515277.0	3710578.0	2.91256	(244, 2)
515377.0	3710578.0	2.60722	(244, 2)	515477.0	3710578.0	2.29969	(244, 2)
515577.0	3710578.0	2.17115	(264, 2)	515677.0	3710578.0	1.98119	(245, 2)
515777.0	3710578.0	3.72920	(243, 2)	515877.0	3710578.0	4.40855	(243, 2)
515977.0	3710578.0	3.30126	(243, 2)	516077.0	3710578.0	3.68548	(256, 2)
516177.0	3710578.0	3.78159	(256, 2)	516277.0	3710578.0	2.97220	(256, 2)
516377.0	3710578.0	3.56572	(105, 2)	516477.0	3710578.0	3.48017	(105, 2)
516577.0	3710578.0	2.96243	(358, 2)	516677.0	3710578.0	3.92285	(358, 2)
516777.0	3710578.0	2.29495	(66, 2)	516877.0	3710578.0	2.59496	(66, 2)
516977.0	3710578.0	2.04062	(68, 2)	517077.0	3710578.0	2.41223	(68, 2)
517177.0	3710578.0	2.66504	(319, 2)	515277.0	3710478.0	2.52729	(244, 2)
515377.0	3710478.0	2.26763	(244, 2)	515477.0	3710478.0	2.37304	(264, 2)
515577.0	3710478.0	2.19094	(264, 2)	515677.0	3710478.0	2.58927	(243, 2)
515777.0	3710478.0	4.08763	(243, 2)	515877.0	3710478.0	4.22433	(243, 2)
515977.0	3710478.0	3.56815	(256, 2)	516077.0	3710478.0	3.96790	(256, 2)
516177.0	3710478.0	3.96528	(256, 2)	516277.0	3710478.0	3.09434	(256, 2)
516377.0	3710478.0	3.59882	(105, 2)	516477.0	3710478.0	3.59413	(105, 2)
516577.0	3710478.0	2.90858	(105, 2)	516677.0	3710478.0	4.01785	(358, 2)
516777.0	3710478.0	2.89681	(358, 2)	516877.0	3710478.0	2.68211	(66, 2)
516977.0	3710478.0	2.38773	(66, 2)	517077.0	3710478.0	2.38015	(68, 2)
517177.0	3710478.0	2.46827	(319, 2)	515277.0	3710378.0	2.14587	(244, 2)
515377.0	3710378.0	1.97407	(264, 2)	515477.0	3710378.0	2.16881	(264, 2)
515577.0	3710378.0	1.92845	(245, 2)	515677.0	3710378.0	3.38611	(243, 2)
515777.0	3710378.0	4.30776	(243, 2)	515877.0	3710378.0	3.72208	(243, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515977.0	3710378.0	3.67362	(256, 2)	516077.0	3710378.0	3.83298	(256, 2)
516177.0	3710378.0	3.75290	(256, 2)	516277.0	3710378.0	2.96673	(105, 2)
516377.0	3710378.0	3.44040	(105, 2)	516477.0	3710378.0	3.34603	(105, 2)
516577.0	3710378.0	2.95265	(105, 2)	516677.0	3710378.0	3.51880	(358, 2)
516777.0	3710378.0	3.33973	(358, 2)	516877.0	3710378.0	3.02418	(66, 2)
516977.0	3710378.0	2.63797	(66, 2)	517077.0	3710378.0	2.11300	(68, 2)
517177.0	3710378.0	2.24277	(68, 2)	515277.0	3712276.0	2.13778	(210, 2)
515377.0	3712276.0	2.08903	(210, 2)	515477.0	3712276.0	1.96783	(210, 2)
515577.0	3712276.0	1.72216	(210, 2)	515677.0	3712276.0	1.65575	(192, 2)
515777.0	3712276.0	1.76132	(230, 2)	515877.0	3712276.0	2.70872	(230, 2)
515977.0	3712276.0	4.55809	(230, 2)	516077.0	3712276.0	2.58031	(230, 2)
516177.0	3712276.0	3.64387	(122, 2)	516277.0	3712276.0	8.14200	(126, 2)
516377.0	3712276.0	3.33533	(322, 2)	516477.0	3712276.0	1.99071	(251, 3)
516577.0	3712276.0	1.15122	(121, 2)	516677.0	3712276.0	1.17129	(85, 3)
516777.0	3712276.0	1.54644	(194, 2)	516877.0	3712276.0	2.68658	(194, 2)
516977.0	3712276.0	2.87297	(194, 2)	517077.0	3712276.0	2.52984	(194, 2)
517177.0	3712276.0	2.37020	(206, 2)	515277.0	3712376.0	2.31250	(210, 2)
515377.0	3712376.0	2.25339	(210, 2)	515477.0	3712376.0	2.07533	(210, 2)
515577.0	3712376.0	1.96979	(192, 2)	515677.0	3712376.0	2.06947	(192, 2)
515777.0	3712376.0	2.55908	(230, 2)	515877.0	3712376.0	4.27927	(230, 2)
515977.0	3712376.0	4.63625	(230, 2)	516077.0	3712376.0	2.38257	(122, 2)
516177.0	3712376.0	3.93537	(122, 2)	516277.0	3712376.0	7.14197	(126, 2)
516377.0	3712376.0	3.00162	(126, 2)	516477.0	3712376.0	0.99559	(251, 3)
516577.0	3712376.0	1.16035	(121, 2)	516677.0	3712376.0	0.98105	(205, 2)
516777.0	3712376.0	1.41653	(194, 2)	516877.0	3712376.0	2.24683	(194, 2)
516977.0	3712376.0	2.56415	(194, 2)	517077.0	3712376.0	2.43650	(194, 2)
517177.0	3712376.0	2.68288	(206, 2)	515277.0	3712476.0	2.49927	(210, 2)
515377.0	3712476.0	2.51967	(161, 2)	515477.0	3712476.0	2.34783	(161, 2)
515577.0	3712476.0	2.17167	(192, 2)	515677.0	3712476.0	2.29426	(192, 2)
515777.0	3712476.0	3.30792	(230, 2)	515877.0	3712476.0	3.73317	(230, 2)
515977.0	3712476.0	1.61038	(85, 1)	516077.0	3712476.0	2.70996	(122, 2)
516177.0	3712476.0	3.47810	(126, 2)	516277.0	3712476.0	6.18799	(126, 2)
516377.0	3712476.0	3.04832	(126, 2)	516477.0	3712476.0	1.16906	(121, 2)
516577.0	3712476.0	1.31620	(251, 3)	516677.0	3712476.0	1.71770	(205, 2)
516777.0	3712476.0	1.44998	(209, 2)	516877.0	3712476.0	2.42129	(208, 2)
516977.0	3712476.0	2.84527	(208, 2)	517077.0	3712476.0	2.90928	(208, 2)
517177.0	3712476.0	2.41301	(208, 2)	515277.0	3712576.0	2.76558	(161, 2)
515377.0	3712576.0	2.74286	(161, 2)	515477.0	3712576.0	2.42923	(137, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515577.0	3712576.0	2.56763	(137, 2)	515677.0	3712576.0	3.13015	(230, 2)
515777.0	3712576.0	3.52116	(230, 2)	515877.0	3712576.0	2.02194	(145, 2)
515977.0	3712576.0	1.75316	(145, 2)	516077.0	3712576.0	2.55225	(122, 2)
516177.0	3712576.0	3.52882	(126, 2)	516277.0	3712576.0	5.37925	(126, 2)
516377.0	3712576.0	2.95955	(126, 2)	516477.0	3712576.0	1.10821	(121, 2)
516577.0	3712576.0	1.33959	(205, 2)	516677.0	3712576.0	1.94576	(205, 2)
516777.0	3712576.0	1.85730	(205, 2)	516877.0	3712576.0	2.25358	(208, 2)
516977.0	3712576.0	3.15255	(208, 2)	517077.0	3712576.0	3.40433	(208, 2)
517177.0	3712576.0	3.37132	(208, 2)	515277.0	3712676.0	2.75197	(161, 2)
515377.0	3712676.0	2.75201	(137, 2)	515477.0	3712676.0	3.13732	(137, 2)
515577.0	3712676.0	3.09220	(230, 2)	515677.0	3712676.0	3.79594	(230, 2)
515777.0	3712676.0	2.66422	(230, 2)	515877.0	3712676.0	2.05251	(145, 2)
515977.0	3712676.0	1.72507	(122, 2)	516077.0	3712676.0	2.09499	(122, 2)
516177.0	3712676.0	3.89002	(126, 2)	516277.0	3712676.0	4.47126	(126, 2)
516377.0	3712676.0	2.69928	(126, 2)	516477.0	3712676.0	1.25581C	(203, 2)
516577.0	3712676.0	1.25960	(233, 2)	516677.0	3712676.0	1.80970	(205, 2)
516777.0	3712676.0	1.99138	(205, 2)	516877.0	3712676.0	2.04253	(209, 2)
516977.0	3712676.0	2.77997	(208, 2)	517077.0	3712676.0	3.54299	(208, 2)
517177.0	3712676.0	3.81500	(208, 2)	515277.0	3712776.0	2.81484	(137, 2)
515377.0	3712776.0	3.01633	(137, 2)	515477.0	3712776.0	2.89636	(137, 2)
515577.0	3712776.0	3.84021	(230, 2)	515677.0	3712776.0	3.24004	(230, 2)
515777.0	3712776.0	1.92394	(145, 2)	515877.0	3712776.0	2.03014	(162, 2)
515977.0	3712776.0	1.86117	(122, 2)	516077.0	3712776.0	2.02051	(122, 2)
516177.0	3712776.0	3.60054	(126, 2)	516277.0	3712776.0	3.67796	(126, 2)
516377.0	3712776.0	2.60182	(126, 2)	516477.0	3712776.0	1.48905	(125, 2)
516577.0	3712776.0	1.48531	(233, 2)	516677.0	3712776.0	1.44265	(205, 2)
516777.0	3712776.0	1.88292	(205, 2)	516877.0	3712776.0	2.12544	(209, 2)
516977.0	3712776.0	2.28341	(209, 2)	517077.0	3712776.0	3.19015	(208, 2)
517177.0	3712776.0	3.80319	(208, 2)	515277.0	3712876.0	3.15891	(137, 2)
515377.0	3712876.0	3.11082	(137, 2)	515477.0	3712876.0	3.23030	(230, 2)
515577.0	3712876.0	3.06004	(230, 2)	515677.0	3712876.0	2.53267	(163, 2)
515777.0	3712876.0	2.07766	(162, 2)	515877.0	3712876.0	1.72089	(162, 2)
515977.0	3712876.0	1.80594	(122, 2)	516077.0	3712876.0	2.07105	(126, 2)
516177.0	3712876.0	3.55907	(126, 2)	516277.0	3712876.0	3.46368	(126, 2)
516377.0	3712876.0	2.55246	(126, 2)	516477.0	3712876.0	1.86941	(125, 2)
516577.0	3712876.0	1.70070	(233, 2)	516677.0	3712876.0	1.46682	(233, 2)
516777.0	3712876.0	1.73576	(184, 2)	516877.0	3712876.0	2.09618	(209, 2)
516977.0	3712876.0	2.32869	(209, 2)	517077.0	3712876.0	2.56182	(208, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
517177.0	3712876.0	3.29106	(208, 2)	515277.0	3712976.0	3.22055	(137, 2)
515377.0	3712976.0	3.12487	(230, 2)	515477.0	3712976.0	3.22392	(230, 2)
515577.0	3712976.0	2.44793	(163, 2)	515677.0	3712976.0	2.19439	(162, 2)
515777.0	3712976.0	2.03629	(162, 2)	515877.0	3712976.0	1.90206	(163, 2)
515977.0	3712976.0	1.98108	(122, 2)	516077.0	3712976.0	2.49260	(258, 2)
516177.0	3712976.0	3.99459	(126, 2)	516277.0	3712976.0	3.52233	(126, 2)
516377.0	3712976.0	2.67291	(126, 2)	516477.0	3712976.0	2.20102	(125, 2)
516577.0	3712976.0	1.82307	(233, 2)	516677.0	3712976.0	1.69615	(233, 2)
516777.0	3712976.0	1.74806	(184, 2)	516877.0	3712976.0	2.04452	(184, 2)
516977.0	3712976.0	2.32322	(209, 2)	517077.0	3712976.0	2.42281	(209, 2)
517177.0	3712976.0	2.59963	(208, 2)	515277.0	3713076.0	3.05146	(137, 2)
515377.0	3713076.0	3.26255	(230, 2)	515477.0	3713076.0	2.60639	(163, 2)
515577.0	3713076.0	2.34475	(163, 2)	515677.0	3713076.0	2.25981	(162, 2)
515777.0	3713076.0	1.87491	(162, 2)	515877.0	3713076.0	1.74185	(163, 2)
515977.0	3713076.0	1.75721	(122, 2)	516077.0	3713076.0	2.47711	(258, 2)
516177.0	3713076.0	3.51231	(126, 2)	516277.0	3713076.0	3.52778	(126, 2)
516377.0	3713076.0	2.55133	(126, 2)	516477.0	3713076.0	2.47077	(125, 2)
516577.0	3713076.0	2.06594	(247, 2)	516677.0	3713076.0	1.93634	(233, 2)
516777.0	3713076.0	1.81371	(184, 2)	516877.0	3713076.0	2.06422	(184, 2)
516977.0	3713076.0	2.21102	(184, 2)	517077.0	3713076.0	2.43793	(209, 2)
517177.0	3713076.0	2.48554	(209, 2)	515277.0	3713176.0	3.21590	(230, 2)
515377.0	3713176.0	2.77862	(230, 2)	515477.0	3713176.0	2.49434	(163, 2)
515577.0	3713176.0	2.28939	(162, 2)	515677.0	3713176.0	2.17087	(162, 2)
515777.0	3713176.0	1.93300	(163, 2)	515877.0	3713176.0	1.80246	(163, 2)
515977.0	3713176.0	1.77629	(287, 2)	516077.0	3713176.0	2.98381	(258, 2)
516177.0	3713176.0	3.52843	(126, 2)	516277.0	3713176.0	3.49635	(126, 2)
516377.0	3713176.0	2.77220	(126, 2)	516477.0	3713176.0	2.67577	(125, 2)
516577.0	3713176.0	2.25299	(247, 2)	516677.0	3713176.0	2.10441	(247, 2)
516777.0	3713176.0	1.68125	(233, 2)	516877.0	3713176.0	2.12538	(184, 2)
516977.0	3713176.0	2.12563	(184, 2)	517077.0	3713176.0	2.30812	(209, 2)
517177.0	3713176.0	2.65384	(209, 2)	515277.0	3712176.0	2.13732C	(160, 2)
515377.0	3712176.0	1.95861C	(160, 2)	515477.0	3712176.0	1.88680	(210, 2)
515577.0	3712176.0	1.56280C	(160, 2)	515677.0	3712176.0	1.19513C	(160, 2)
515777.0	3712176.0	1.53054	(109, 2)	515877.0	3712176.0	1.56111	(230, 2)
515977.0	3712176.0	3.06915	(230, 2)	516077.0	3712176.0	6.99193	(230, 2)
516177.0	3712176.0	2.92845	(122, 2)	515277.0	3712076.0	2.38662C	(160, 2)
515377.0	3712076.0	2.25776C	(160, 2)	515477.0	3712076.0	2.14039C	(160, 2)
515577.0	3712076.0	1.66510C	(160, 2)	515677.0	3712076.0	1.18202C	(160, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515777.0	3712076.0	0.65716	(109, 2)	515877.0	3712076.0	1.56676	(109, 2)
515977.0	3712076.0	2.37621	(109, 2)	516077.0	3712076.0	3.24647	(230, 2)
516177.0	3712076.0	8.96774	(230, 2)	515277.0	3711976.0	2.29689C	(160, 2)
515377.0	3711976.0	2.18041C	(160, 2)	515477.0	3711976.0	1.87544C	(160, 2)
515577.0	3711976.0	1.44698C	(160, 2)	515677.0	3711976.0	0.95110C	(160, 2)
515777.0	3711976.0	0.72007	(215, 2)	515877.0	3711976.0	0.77972	(215, 2)
515977.0	3711976.0	1.04386	(215, 2)	516077.0	3711976.0	1.40893	(109, 2)
516177.0	3711976.0	2.76512	(36, 1)	515277.0	3711876.0	1.75612	(152, 2)
515377.0	3711876.0	1.62571	(152, 2)	515477.0	3711876.0	1.54928	(152, 2)
515577.0	3711876.0	1.34914	(230, 2)	515677.0	3711876.0	1.50271	(230, 2)
515777.0	3711876.0	1.68695	(230, 2)	515877.0	3711876.0	1.89996	(230, 2)
515977.0	3711876.0	2.12086	(230, 2)	516077.0	3711876.0	2.27404	(230, 2)
516177.0	3711876.0	2.48531	(215, 2)	515277.0	3711776.0	1.69927	(187, 2)
515377.0	3711776.0	1.37689	(187, 2)	515477.0	3711776.0	1.31960	(236, 2)
515577.0	3711776.0	1.29250	(236, 2)	515677.0	3711776.0	1.09992	(236, 2)
515777.0	3711776.0	0.62201	(236, 2)	515877.0	3711776.0	0.54663	(82, 1)
515977.0	3711776.0	0.94785	(82, 1)	516077.0	3711776.0	1.48864	(57, 2)
516177.0	3711776.0	1.28020	(31, 3)	515277.0	3711676.0	1.57595	(187, 2)
515377.0	3711676.0	1.19987	(187, 2)	515477.0	3711676.0	1.00457	(236, 2)
515577.0	3711676.0	1.00286	(236, 2)	515677.0	3711676.0	0.93926	(235, 2)
515777.0	3711676.0	0.71138	(235, 2)	515877.0	3711676.0	0.90314	(57, 2)
515977.0	3711676.0	1.39092	(57, 2)	516077.0	3711676.0	0.79542	(31, 3)
516177.0	3711676.0	2.31384	(264, 2)	515277.0	3711576.0	1.79533	(188, 2)
515377.0	3711576.0	1.91397	(188, 2)	515477.0	3711576.0	1.91053	(188, 2)
515577.0	3711576.0	1.66608	(188, 2)	515677.0	3711576.0	1.11988	(188, 2)
515777.0	3711576.0	1.12491	(57, 2)	515877.0	3711576.0	0.85533	(57, 2)
515977.0	3711576.0	0.71102	(31, 3)	516077.0	3711576.0	0.81326	(264, 2)
516177.0	3711576.0	2.85236	(243, 2)	515277.0	3711476.0	2.39564	(188, 2)
515377.0	3711476.0	2.28125	(188, 2)	515477.0	3711476.0	2.05230	(188, 2)
515577.0	3711476.0	1.62044	(188, 2)	515677.0	3711476.0	1.21263	(188, 2)
515777.0	3711476.0	1.34367	(167, 2)	515877.0	3711476.0	1.29090	(167, 2)
515977.0	3711476.0	0.73513	(167, 2)	516077.0	3711476.0	1.50004	(264, 2)
516177.0	3711476.0	3.77516	(243, 2)	511277.0	3709378.0	3.27483C	(129, 1)
512277.0	3709378.0	3.29120	(57, 1)	513277.0	3709378.0	2.59142	(188, 3)
514277.0	3709378.0	2.93497	(257, 1)	515277.0	3709378.0	2.61057	(244, 3)
516277.0	3709378.0	2.20633	(278, 2)	517277.0	3709378.0	2.39754	(66, 2)
518277.0	3709378.0	4.17020	(314, 2)	519277.0	3709378.0	2.19709	(91, 3)
520277.0	3709378.0	1.74606	(345, 2)	521277.0	3709378.0	1.57891	(114, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3709378.0	1.09765	(92, 1)	511277.0	3708378.0	2.75587	(188, 1)
512277.0	3708378.0	2.19156	(188, 3)	513277.0	3708378.0	3.19568	(257, 1)
514277.0	3708378.0	2.75254	(70, 1)	515277.0	3708378.0	2.64274	(256, 1)
516277.0	3708378.0	1.72022	(264, 1)	517277.0	3708378.0	3.94727	(358, 2)
518277.0	3708378.0	2.12435	(68, 2)	519277.0	3708378.0	2.36186	(314, 2)
520277.0	3708378.0	1.94550	(91, 3)	521277.0	3708378.0	1.53171	(327, 3)
522277.0	3708378.0	1.50833	(345, 2)	511277.0	3707378.0	2.24215	(188, 3)
512277.0	3707378.0	2.66317	(257, 1)	513277.0	3707378.0	2.26923	(243, 3)
514277.0	3707378.0	2.36666	(70, 1)	515277.0	3707378.0	2.31117C	(297, 3)
516277.0	3707378.0	2.80153	(187, 1)	517277.0	3707378.0	3.10846	(364, 1)
518277.0	3707378.0	2.00741C	(136, 1)	519277.0	3707378.0	1.64516	(104, 1)
520277.0	3707378.0	1.85967	(314, 2)	521277.0	3707378.0	1.57687	(91, 3)
522277.0	3707378.0	2.08023	(327, 3)	511277.0	3706378.0	2.20430	(188, 1)
512277.0	3706378.0	1.89928	(243, 3)	513277.0	3706378.0	2.25589	(70, 1)
514277.0	3706378.0	3.88366C	(283, 1)	515277.0	3706378.0	2.29746	(256, 1)
516277.0	3706378.0	2.79813	(187, 1)	517277.0	3706378.0	1.94451	(352, 2)
518277.0	3706378.0	1.76542	(15, 1)	519277.0	3706378.0	1.64751	(95, 3)
520277.0	3706378.0	1.68760	(104, 1)	521277.0	3706378.0	1.55539	(314, 2)
522277.0	3706378.0	1.34191	(114, 1)	523277.0	3706378.0	1.99059	(327, 3)
522402.0	3710378.0	0.98280	(327, 2)	522402.0	3711378.0	1.29111	(99, 1)
522402.0	3712378.0	1.19809C	(10, 3)	511277.0	3714176.0	1.06895C	(191, 1)
512277.0	3714176.0	1.75789	(162, 3)	513277.0	3714176.0	1.78930C	(196, 1)
514277.0	3714176.0	3.13001	(51, 2)	515277.0	3714176.0	2.21914	(178, 3)
516277.0	3714176.0	4.94833	(126, 3)	517277.0	3714176.0	3.09477	(222, 3)
518277.0	3714176.0	1.69146	(307, 2)	519277.0	3714176.0	1.24564	(85, 2)
520277.0	3714176.0	1.24954	(149, 1)	521277.0	3714176.0	1.29301	(32, 2)
522277.0	3714176.0	2.88035	(23, 1)	511277.0	3715176.0	2.14450	(30, 3)
512277.0	3715176.0	4.35738C	(169, 3)	513277.0	3715176.0	2.95810	(51, 2)
514277.0	3715176.0	3.90887	(338, 3)	515277.0	3715176.0	2.99062C	(212, 1)
516277.0	3715176.0	3.76053	(126, 3)	517277.0	3715176.0	1.81476	(247, 2)
518277.0	3715176.0	1.49563	(307, 2)	519277.0	3715176.0	1.48733	(318, 2)
520277.0	3715176.0	1.24228	(318, 2)	521277.0	3715176.0	1.50632C	(224, 1)
522277.0	3715176.0	1.56789	(241, 1)	511277.0	3716176.0	3.64162C	(169, 3)
512277.0	3716176.0	2.28217	(51, 2)	513277.0	3716176.0	3.80025C	(132, 3)
514277.0	3716176.0	3.20221C	(252, 1)	515277.0	3716176.0	3.70475	(183, 3)
516277.0	3716176.0	2.65033	(126, 3)	517277.0	3716176.0	1.81929	(247, 2)
518277.0	3716176.0	1.17745	(222, 3)	519277.0	3716176.0	1.25237	(307, 2)
520277.0	3716176.0	1.54088	(318, 2)	521277.0	3716176.0	1.19933	(318, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3716176.0	0.93444C	(232, 1)	511277.0	3717176.0	2.37714	(163, 3)
512277.0	3717176.0	3.96548	(292, 3)	513277.0	3717176.0	3.53575	(338, 3)
514277.0	3717176.0	2.52384C	(290, 3)	515277.0	3717176.0	2.28681	(125, 3)
516277.0	3717176.0	2.61526	(126, 3)	517277.0	3717176.0	1.45785	(322, 2)
518277.0	3717176.0	1.49206	(222, 3)	519277.0	3717176.0	1.87202C	(308, 1)
520277.0	3717176.0	1.07912	(277, 2)	521277.0	3717176.0	1.27310	(318, 2)
522277.0	3717176.0	1.16929	(208, 1)	511277.0	3713176.0	1.53484C	(191, 3)
512277.0	3713176.0	1.25014C	(271, 3)	513277.0	3713176.0	1.48995	(81, 2)
514277.0	3713176.0	2.21524	(161, 2)	511277.0	3712176.0	1.32737	(215, 2)
512277.0	3712176.0	1.55007	(215, 2)	513277.0	3712176.0	1.54014	(56, 2)
514277.0	3712176.0	1.98611C	(160, 2)	511277.0	3711176.0	1.54975C	(227, 3)
512277.0	3711176.0	3.06988C	(309, 3)	513277.0	3711176.0	1.56188	(239, 2)
514277.0	3711176.0	2.14969	(188, 2)	511277.0	3709378.0	3.27483C	(129, 1)
512277.0	3709378.0	3.29120	(57, 1)	513277.0	3709378.0	2.59142	(188, 3)
514277.0	3709378.0	2.93497	(257, 1)	515277.0	3709378.0	2.61057	(244, 3)
516277.0	3709378.0	2.20633	(278, 2)	517277.0	3709378.0	2.39754	(66, 2)
518277.0	3709378.0	4.17020	(314, 2)	519277.0	3709378.0	2.19709	(91, 3)
520277.0	3709378.0	1.74606	(345, 2)	521277.0	3709378.0	1.57891	(114, 1)
522277.0	3709378.0	1.09765	(92, 1)	511277.0	3708378.0	2.75587	(188, 1)
512277.0	3708378.0	2.19156	(188, 3)	513277.0	3708378.0	3.19568	(257, 1)
514277.0	3708378.0	2.75254	(70, 1)	515277.0	3708378.0	2.64274	(256, 1)
516277.0	3708378.0	1.72022	(264, 1)	517277.0	3708378.0	3.94727	(358, 2)
518277.0	3708378.0	2.12435	(68, 2)	519277.0	3708378.0	2.36186	(314, 2)
520277.0	3708378.0	1.94550	(91, 3)	521277.0	3708378.0	1.53171	(327, 3)
522277.0	3708378.0	1.50833	(345, 2)	511277.0	3707378.0	2.24215	(188, 3)
512277.0	3707378.0	2.66317	(257, 1)	513277.0	3707378.0	2.26923	(243, 3)
514277.0	3707378.0	2.36666	(70, 1)	515277.0	3707378.0	2.31117C	(297, 3)
516277.0	3707378.0	2.80153	(187, 1)	517277.0	3707378.0	3.10846	(364, 1)
518277.0	3707378.0	2.00741C	(136, 1)	519277.0	3707378.0	1.64516	(104, 1)
520277.0	3707378.0	1.85967	(314, 2)	521277.0	3707378.0	1.57687	(91, 3)
522277.0	3707378.0	2.08023	(327, 3)	511277.0	3706378.0	2.20430	(188, 1)
512277.0	3706378.0	1.89928	(243, 3)	513277.0	3706378.0	2.25589	(70, 1)
514277.0	3706378.0	3.88366C	(283, 1)	515277.0	3706378.0	2.29746	(256, 1)
516277.0	3706378.0	2.79813	(187, 1)	517277.0	3706378.0	1.94451	(352, 2)
518277.0	3706378.0	1.76542	(15, 1)	519277.0	3706378.0	1.64751	(95, 3)
520277.0	3706378.0	1.68760	(104, 1)	521277.0	3706378.0	1.55539	(314, 2)
522277.0	3706378.0	1.34191	(114, 1)	523277.0	3706378.0	1.99059	(327, 3)
522402.0	3710378.0	0.98280	(327, 2)	522402.0	3711378.0	1.29111	(99, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522402.0	3712378.0	1.19809C	(10, 3)	511277.0	3714176.0	1.06895C	(191, 1)
512277.0	3714176.0	1.75789	(162, 3)	513277.0	3714176.0	1.78930C	(196, 1)
514277.0	3714176.0	3.13001	(51, 2)	515277.0	3714176.0	2.21914	(178, 3)
516277.0	3714176.0	4.94833	(126, 3)	517277.0	3714176.0	3.09477	(222, 3)
518277.0	3714176.0	1.69146	(307, 2)	519277.0	3714176.0	1.24564	(85, 2)
520277.0	3714176.0	1.24954	(149, 1)	521277.0	3714176.0	1.29301	(32, 2)
522277.0	3714176.0	2.88035	(23, 1)	511277.0	3715176.0	2.14450	(30, 3)
512277.0	3715176.0	4.35738C	(169, 3)	513277.0	3715176.0	2.95810	(51, 2)
514277.0	3715176.0	3.90887	(338, 3)	515277.0	3715176.0	2.99062C	(212, 1)
516277.0	3715176.0	3.76053	(126, 3)	517277.0	3715176.0	1.81476	(247, 2)
518277.0	3715176.0	1.49563	(307, 2)	519277.0	3715176.0	1.48733	(318, 2)
520277.0	3715176.0	1.24228	(318, 2)	521277.0	3715176.0	1.50632C	(224, 1)
522277.0	3715176.0	1.56789	(241, 1)	511277.0	3716176.0	3.64162C	(169, 3)
512277.0	3716176.0	2.28217	(51, 2)	513277.0	3716176.0	3.80025C	(132, 3)
514277.0	3716176.0	3.20221C	(252, 1)	515277.0	3716176.0	3.70475	(183, 3)
516277.0	3716176.0	2.65033	(126, 3)	517277.0	3716176.0	1.81929	(247, 2)
518277.0	3716176.0	1.17745	(222, 3)	519277.0	3716176.0	1.25237	(307, 2)
520277.0	3716176.0	1.54088	(318, 2)	521277.0	3716176.0	1.19933	(318, 2)
522277.0	3716176.0	0.93444C	(232, 1)	511277.0	3717176.0	2.37714	(163, 3)
512277.0	3717176.0	3.96548	(292, 3)	513277.0	3717176.0	3.53575	(338, 3)
514277.0	3717176.0	2.52384C	(290, 3)	515277.0	3717176.0	2.28681	(125, 3)
516277.0	3717176.0	2.61526	(126, 3)	517277.0	3717176.0	1.45785	(322, 2)
518277.0	3717176.0	1.49206	(222, 3)	519277.0	3717176.0	1.87202C	(308, 1)
520277.0	3717176.0	1.07912	(277, 2)	521277.0	3717176.0	1.27310	(318, 2)
522277.0	3717176.0	1.16929	(208, 1)	511277.0	3713176.0	1.53484C	(191, 3)
512277.0	3713176.0	1.25014C	(271, 3)	513277.0	3713176.0	1.48995	(81, 2)
514277.0	3713176.0	2.21524	(161, 2)	511277.0	3712176.0	1.32737	(215, 2)
512277.0	3712176.0	1.55007	(215, 2)	513277.0	3712176.0	1.54014	(56, 2)
514277.0	3712176.0	1.98611C	(160, 2)	511277.0	3711176.0	1.54975C	(227, 3)
512277.0	3711176.0	3.06988C	(309, 3)	513277.0	3711176.0	1.56188	(239, 2)
514277.0	3711176.0	2.14969	(188, 2)	516500.0	3708100.0	3.48991C	(282, 1)
518100.0	3709350.0	3.96113	(104, 1)	514500.0	3708800.0	2.72734	(70, 1)
517300.0	3714400.0	3.23800	(276, 1)				

*** I. P. - CANDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516276.8	3711378.0	0.88944	(264, 1)	516411.0	3712159.0	2.50337	(121, 2)
516679.3	3711159.0	1.43679	(114, 2)	516679.3	3711378.0	2.43194	(314, 2)
517079.3	3711378.0	1.80699	(92, 2)	517079.3	3711549.0	1.40720	(92, 1)
517530.5	3711488.0	1.50265	(200, 2)	517530.5	3711317.0	1.63544	(200, 2)
518743.9	3711171.0	1.53867	(55, 2)	518743.9	3711573.0	1.68662	(100, 2)
519914.6	3711573.0	1.36926	(100, 2)	519914.6	3711171.0	1.17447	(86, 2)
520304.8	3711171.0	1.35203	(327, 2)	520304.8	3711024.0	1.14804	(86, 2)
520707.2	3711024.0	1.21214	(99, 1)	520817.0	3711628.0	1.37845	(155, 2)
520402.3	3712176.0	1.21236	(308, 2)	518707.2	3712176.0	1.24285	(324, 2)
518707.2	3712030.0	1.52672	(155, 2)	518280.4	3712030.0	1.54467	(155, 2)
518280.4	3712250.0	1.52372	(65, 2)	518060.9	3712335.0	1.51046	(206, 2)
518060.9	3712878.0	2.53692	(148, 2)	517426.8	3712878.0	2.59014C	(222, 2)
517426.8	3713079.0	2.38624C	(222, 2)	516993.9	3713079.0	2.30171	(209, 2)
516993.9	3713280.0	1.91276	(209, 2)	516603.7	3713280.0	2.34372	(125, 2)
516603.7	3712884.0	1.77264	(247, 2)	516372.0	3712884.0	2.65984	(126, 3)
516372.0	3712798.0	2.39904	(126, 3)	516256.2	3712774.0	2.39646	(258, 2)
516276.8	3711378.0	0.88944	(264, 1)	516264.6	3712122.0	6.03459	(126, 2)
516264.6	3711598.0	0.83009	(52, 1)	516008.5	3712006.0	0.98247	(215, 2)
516008.5	3712122.0	3.23889	(36, 1)	516115.2	3712189.0	3.68653	(51, 2)
516179.3	3712061.0	10.47455	(51, 2)	516179.3	3712122.0	4.14207	(230, 2)
516264.6	3712122.0	6.03459	(126, 2)	515277.0	3711278.0	2.03986	(188, 2)
515377.0	3711278.0	2.12712	(189, 2)	515477.0	3711278.0	1.79777	(244, 2)
515577.0	3711278.0	1.99615	(189, 2)	515677.0	3711278.0	1.86670	(167, 2)
515777.0	3711278.0	2.15033	(167, 2)	515877.0	3711278.0	1.63876	(244, 2)
515977.0	3711278.0	1.42771	(167, 2)	516077.0	3711278.0	1.82898	(246, 2)
516177.0	3711278.0	1.25951	(246, 2)	516277.0	3711278.0	1.39460	(358, 1)
516377.0	3711278.0	1.97182	(75, 3)	516477.0	3711278.0	2.67118	(362, 3)
516577.0	3711278.0	1.68540	(150, 2)	516677.0	3711278.0	1.76401	(68, 2)
516777.0	3711278.0	1.90510	(314, 2)	516877.0	3711278.0	1.95146	(123, 2)
516977.0	3711278.0	2.41094	(142, 2)	517077.0	3711278.0	2.39663	(91, 3)
517177.0	3711278.0	1.94213	(92, 2)	515277.0	3711178.0	2.13401	(57, 2)
515377.0	3711178.0	2.15579	(244, 2)	515477.0	3711178.0	2.29533	(189, 2)
515577.0	3711178.0	2.05692	(189, 2)	515677.0	3711178.0	1.93552	(167, 2)
515777.0	3711178.0	2.08497	(167, 2)	515877.0	3711178.0	1.89318	(246, 2)
515977.0	3711178.0	1.50013	(227, 2)	516077.0	3711178.0	2.04735	(246, 2)
516177.0	3711178.0	1.60658	(238, 2)	516277.0	3711178.0	1.97877	(238, 2)
516377.0	3711178.0	1.80078	(238, 2)	516477.0	3711178.0	1.86337	(358, 2)
516577.0	3711178.0	1.41436	(143, 2)	516677.0	3711178.0	1.50435	(114, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516777.0	3711178.0	1.54954	(150, 2)	516877.0	3711178.0	1.79145	(114, 2)
516977.0	3711178.0	2.39598	(123, 2)	517077.0	3711178.0	2.70752	(142, 2)
517177.0	3711178.0	2.92247	(91, 3)	515277.0	3711078.0	2.36927	(244, 2)
515377.0	3711078.0	2.53555	(189, 2)	515477.0	3711078.0	2.16385	(189, 2)
515577.0	3711078.0	2.06394	(266, 2)	515677.0	3711078.0	1.85431	(167, 2)
515777.0	3711078.0	1.89184	(167, 2)	515877.0	3711078.0	1.82256	(244, 2)
515977.0	3711078.0	2.02228	(246, 2)	516077.0	3711078.0	1.95207	(246, 2)
516177.0	3711078.0	1.73720	(238, 2)	516277.0	3711078.0	2.00759	(238, 2)
516377.0	3711078.0	1.86002	(238, 2)	516477.0	3711078.0	1.97926	(143, 2)
516577.0	3711078.0	1.70549	(358, 2)	516677.0	3711078.0	1.25747	(149, 2)
516777.0	3711078.0	1.56539	(150, 2)	516877.0	3711078.0	1.61566	(319, 2)
516977.0	3711078.0	2.44459	(123, 2)	517077.0	3711078.0	2.60709	(123, 2)
517177.0	3711078.0	2.80731	(142, 2)	515277.0	3710978.0	2.63945	(189, 2)
515377.0	3710978.0	2.47072	(266, 2)	515477.0	3710978.0	2.16697	(266, 2)
515577.0	3710978.0	1.88605	(266, 2)	515677.0	3710978.0	1.71613	(159, 2)
515777.0	3710978.0	1.79386	(227, 2)	515877.0	3710978.0	1.86647	(243, 2)
515977.0	3710978.0	2.02170	(245, 2)	516077.0	3710978.0	2.12078	(256, 2)
516177.0	3710978.0	1.94209	(143, 2)	516277.0	3710978.0	2.14089	(256, 2)
516377.0	3710978.0	1.95294	(105, 2)	516477.0	3710978.0	1.77510	(150, 2)
516577.0	3710978.0	1.45407	(358, 2)	516677.0	3710978.0	1.55155	(66, 2)
516777.0	3710978.0	1.45991	(150, 2)	516877.0	3710978.0	1.96021	(319, 2)
516977.0	3710978.0	1.99477	(319, 2)	517077.0	3710978.0	2.65721	(123, 2)
517177.0	3710978.0	2.71856	(123, 2)	515277.0	3710878.0	2.70263	(266, 2)
515377.0	3710878.0	2.44837	(266, 2)	515477.0	3710878.0	2.06232	(266, 2)
515577.0	3710878.0	1.74843	(159, 2)	515677.0	3710878.0	1.75581	(264, 2)
515777.0	3710878.0	1.88515	(245, 2)	515877.0	3710878.0	2.23417	(245, 2)
515977.0	3710878.0	2.17868	(245, 2)	516077.0	3710878.0	2.93399	(256, 2)
516177.0	3710878.0	2.21981	(158, 2)	516277.0	3710878.0	2.17978	(136, 2)
516377.0	3710878.0	2.16539	(136, 2)	516477.0	3710878.0	1.84469	(167, 2)
516577.0	3710878.0	1.78126	(167, 2)	516677.0	3710878.0	1.77873	(358, 2)
516777.0	3710878.0	2.00061	(319, 2)	516877.0	3710878.0	2.14936	(68, 2)
516977.0	3710878.0	2.55077	(114, 2)	517077.0	3710878.0	2.26635	(123, 2)
517177.0	3710878.0	2.76093	(123, 2)	515277.0	3710778.0	2.72817	(266, 2)
515377.0	3710778.0	2.24028	(266, 2)	515477.0	3710778.0	1.84008	(159, 2)
515577.0	3710778.0	1.69570	(159, 2)	515677.0	3710778.0	1.89945	(264, 2)
515777.0	3710778.0	2.23057	(245, 2)	515877.0	3710778.0	2.44875	(245, 2)
515977.0	3710778.0	2.53316	(256, 2)	516077.0	3710778.0	2.65801	(243, 2)
516177.0	3710778.0	2.34582	(158, 2)	516277.0	3710778.0	2.50166	(105, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516377.0	3710778.0	2.48078	(136, 2)	516477.0	3710778.0	2.19119	(358, 1)
516577.0	3710778.0	2.07209	(69, 2)	516677.0	3710778.0	2.71774	(362, 3)
516777.0	3710778.0	2.25918	(319, 2)	516877.0	3710778.0	2.56731	(319, 2)
516977.0	3710778.0	3.28450	(68, 2)	517077.0	3710778.0	2.72250	(114, 2)
517177.0	3710778.0	2.42972	(123, 2)	515277.0	3710678.0	2.42070	(266, 2)
515377.0	3710678.0	1.92497	(266, 2)	515477.0	3710678.0	1.79001	(159, 2)
515577.0	3710678.0	1.77629	(264, 2)	515677.0	3710678.0	1.71862	(245, 2)
515777.0	3710678.0	2.24563	(245, 2)	515877.0	3710678.0	2.44539	(245, 2)
515977.0	3710678.0	3.02469	(256, 2)	516077.0	3710678.0	2.23056	(243, 2)
516177.0	3710678.0	2.50012	(158, 2)	516277.0	3710678.0	2.66381	(105, 2)
516377.0	3710678.0	2.72052	(136, 2)	516477.0	3710678.0	2.27444	(358, 1)
516577.0	3710678.0	2.55211	(69, 2)	516677.0	3710678.0	2.99981	(362, 3)
516777.0	3710678.0	2.18008	(362, 3)	516877.0	3710678.0	2.35268	(319, 2)
516977.0	3710678.0	2.58232	(319, 2)	517077.0	3710678.0	2.58337	(114, 2)
517177.0	3710678.0	2.22956	(242, 2)	515277.0	3710578.0	2.09317	(266, 2)
515377.0	3710578.0	1.79587	(159, 2)	515477.0	3710578.0	2.05454	(264, 2)
515577.0	3710578.0	1.97364	(244, 2)	515677.0	3710578.0	1.86909	(243, 2)
515777.0	3710578.0	2.49477	(245, 2)	515877.0	3710578.0	2.46236	(256, 2)
515977.0	3710578.0	3.26746	(256, 2)	516077.0	3710578.0	2.16752	(158, 2)
516177.0	3710578.0	2.58725	(158, 2)	516277.0	3710578.0	2.91319	(105, 2)
516377.0	3710578.0	2.98634	(136, 2)	516477.0	3710578.0	2.96441	(358, 1)
516577.0	3710578.0	2.92072	(69, 2)	516677.0	3710578.0	3.11940	(362, 3)
516777.0	3710578.0	2.09099	(358, 2)	516877.0	3710578.0	1.91567	(319, 2)
516977.0	3710578.0	1.89161	(319, 2)	517077.0	3710578.0	2.40983	(319, 2)
517177.0	3710578.0	2.21794	(114, 2)	515277.0	3710478.0	1.77262	(159, 2)
515377.0	3710478.0	1.90869	(264, 2)	515477.0	3710478.0	1.98100	(244, 2)
515577.0	3710478.0	1.81420	(244, 2)	515677.0	3710478.0	2.19028	(245, 2)
515777.0	3710478.0	2.47799	(245, 2)	515877.0	3710478.0	2.80901	(256, 2)
515977.0	3710478.0	2.87325	(243, 2)	516077.0	3710478.0	2.24636	(158, 2)
516177.0	3710478.0	2.61949	(158, 2)	516277.0	3710478.0	3.09368	(105, 2)
516377.0	3710478.0	2.99591	(136, 2)	516477.0	3710478.0	2.94762	(358, 1)
516577.0	3710478.0	2.82241	(69, 2)	516677.0	3710478.0	3.09281	(362, 3)
516777.0	3710478.0	2.63359	(362, 3)	516877.0	3710478.0	2.04053C	(297, 2)
516977.0	3710478.0	2.13327	(319, 2)	517077.0	3710478.0	2.10375	(319, 2)
517177.0	3710478.0	2.16770	(114, 2)	515277.0	3710378.0	1.66918	(159, 2)
515377.0	3710378.0	1.88154	(244, 2)	515477.0	3710378.0	1.70104	(244, 2)
515577.0	3710378.0	1.89725	(15, 2)	515677.0	3710378.0	2.37092	(245, 2)
515777.0	3710378.0	2.78194	(244, 3)	515877.0	3710378.0	2.98823	(256, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515977.0	3710378.0	2.40540	(243, 2)	516077.0	3710378.0	2.17513	(158, 2)
516177.0	3710378.0	2.46830	(158, 2)	516277.0	3710378.0	2.92292	(256, 2)
516377.0	3710378.0	2.89077	(136, 2)	516477.0	3710378.0	2.44689	(136, 2)
516577.0	3710378.0	2.60279	(358, 1)	516677.0	3710378.0	2.71124	(69, 2)
516777.0	3710378.0	2.89165	(362, 3)	516877.0	3710378.0	2.41439	(362, 3)
516977.0	3710378.0	1.96424	(319, 2)	517077.0	3710378.0	1.90209	(319, 2)
517177.0	3710378.0	2.15414	(319, 2)	515277.0	3712276.0	1.96753	(129, 2)
515377.0	3712276.0	1.66478	(129, 2)	515477.0	3712276.0	1.54478C	(160, 2)
515577.0	3712276.0	1.63492	(192, 2)	515677.0	3712276.0	1.42052C	(199, 2)
515777.0	3712276.0	1.44650	(36, 1)	515877.0	3712276.0	1.04952	(51, 2)
515977.0	3712276.0	2.98760	(51, 2)	516077.0	3712276.0	1.85037	(85, 1)
516177.0	3712276.0	1.49041	(322, 3)	516277.0	3712276.0	4.04191	(322, 3)
516377.0	3712276.0	2.67616	(126, 2)	516477.0	3712276.0	0.95880	(91, 2)
516577.0	3712276.0	0.56684	(102, 2)	516677.0	3712276.0	0.77404	(318, 2)
516777.0	3712276.0	0.98749	(65, 2)	516877.0	3712276.0	1.29527	(85, 2)
516977.0	3712276.0	1.53508	(206, 2)	517077.0	3712276.0	2.04587	(206, 2)
517177.0	3712276.0	2.04622	(194, 2)	515277.0	3712376.0	1.67887	(161, 2)
515377.0	3712376.0	1.90134	(161, 2)	515477.0	3712376.0	2.02957	(161, 2)
515577.0	3712376.0	1.96830	(161, 2)	515677.0	3712376.0	1.78122	(230, 2)
515777.0	3712376.0	1.78099	(192, 2)	515877.0	3712376.0	2.99045	(51, 2)
515977.0	3712376.0	2.82434	(51, 2)	516077.0	3712376.0	1.88401	(85, 1)
516177.0	3712376.0	2.53855	(126, 2)	516277.0	3712376.0	3.72308	(91, 2)
516377.0	3712376.0	2.92152	(322, 2)	516477.0	3712376.0	0.92645	(121, 2)
516577.0	3712376.0	0.81204	(205, 2)	516677.0	3712376.0	0.59051	(209, 2)
516777.0	3712376.0	1.30032	(208, 2)	516877.0	3712376.0	2.00107	(208, 2)
516977.0	3712376.0	2.14102	(208, 2)	517077.0	3712376.0	1.99629	(206, 2)
517177.0	3712376.0	2.10771	(194, 2)	515277.0	3712476.0	2.34442	(161, 2)
515377.0	3712476.0	2.33681	(210, 2)	515477.0	3712476.0	1.95558	(210, 2)
515577.0	3712476.0	1.98403	(137, 2)	515677.0	3712476.0	2.24270	(230, 2)
515777.0	3712476.0	1.99616	(192, 2)	515877.0	3712476.0	1.86125	(51, 2)
515977.0	3712476.0	1.59220	(162, 2)	516077.0	3712476.0	1.22959C	(203, 2)
516177.0	3712476.0	3.38541	(122, 2)	516277.0	3712476.0	3.32306	(91, 2)
516377.0	3712476.0	2.70289	(126, 3)	516477.0	3712476.0	0.95315	(120, 3)
516577.0	3712476.0	1.29080	(205, 2)	516677.0	3712476.0	1.04935	(121, 2)
516777.0	3712476.0	1.42264	(205, 2)	516877.0	3712476.0	1.61576	(194, 2)
516977.0	3712476.0	1.94316	(194, 2)	517077.0	3712476.0	2.01343	(194, 2)
517177.0	3712476.0	2.21243	(206, 2)	515277.0	3712576.0	2.33849	(210, 2)
515377.0	3712576.0	2.18203	(137, 2)	515477.0	3712576.0	2.23214	(161, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515577.0	3712576.0	2.25514	(192, 2)	515677.0	3712576.0	2.48518	(137, 2)
515777.0	3712576.0	1.96620	(192, 2)	515877.0	3712576.0	1.98914	(230, 2)
515977.0	3712576.0	1.55537	(162, 2)	516077.0	3712576.0	1.57067C	(203, 2)
516177.0	3712576.0	2.48474	(122, 2)	516277.0	3712576.0	2.92577	(91, 2)
516377.0	3712576.0	2.59881	(126, 3)	516477.0	3712576.0	1.00215	(322, 2)
516577.0	3712576.0	0.97574	(251, 3)	516677.0	3712576.0	1.19815	(209, 2)
516777.0	3712576.0	1.73366	(209, 2)	516877.0	3712576.0	1.94580	(209, 2)
516977.0	3712576.0	1.90537C	(222, 2)	517077.0	3712576.0	2.06264C	(222, 2)
517177.0	3712576.0	2.14782C	(222, 2)	515277.0	3712676.0	2.33537	(137, 2)
515377.0	3712676.0	2.39539	(161, 2)	515477.0	3712676.0	2.19213	(230, 2)
515577.0	3712676.0	2.95300	(137, 2)	515677.0	3712676.0	2.29591	(137, 2)
515777.0	3712676.0	2.14003	(163, 2)	515877.0	3712676.0	2.01228	(162, 2)
515977.0	3712676.0	1.72340	(145, 2)	516077.0	3712676.0	1.60938C	(203, 2)
516177.0	3712676.0	2.15443	(122, 2)	516277.0	3712676.0	2.11490	(91, 2)
516377.0	3712676.0	1.88500	(126, 3)	516477.0	3712676.0	1.17005	(233, 2)
516577.0	3712676.0	1.25793C	(203, 2)	516677.0	3712676.0	1.23933	(209, 2)
516777.0	3712676.0	1.77295	(209, 2)	516877.0	3712676.0	1.74648	(208, 2)
516977.0	3712676.0	2.09112	(209, 2)	517077.0	3712676.0	2.24033C	(222, 2)
517177.0	3712676.0	2.40953C	(222, 2)	515277.0	3712776.0	2.36469	(161, 2)
515377.0	3712776.0	2.05184	(169, 2)	515477.0	3712776.0	2.59203	(230, 2)
515577.0	3712776.0	2.74493	(137, 2)	515677.0	3712776.0	2.52873	(163, 2)
515777.0	3712776.0	1.89576	(162, 2)	515877.0	3712776.0	1.89638	(145, 2)
515977.0	3712776.0	1.62599C	(203, 2)	516077.0	3712776.0	1.60842	(126, 2)
516177.0	3712776.0	2.42745	(258, 2)	516277.0	3712776.0	2.00612	(258, 2)
516377.0	3712776.0	2.04669	(125, 2)	516477.0	3712776.0	1.43427C	(203, 2)
516577.0	3712776.0	1.45447C	(203, 2)	516677.0	3712776.0	1.22680C	(203, 2)
516777.0	3712776.0	1.67170	(209, 2)	516877.0	3712776.0	1.85106	(205, 2)
516977.0	3712776.0	2.23747	(208, 2)	517077.0	3712776.0	2.19641C	(222, 2)
517177.0	3712776.0	2.49428C	(222, 2)	515277.0	3712876.0	2.23642	(169, 2)
515377.0	3712876.0	2.48629	(230, 2)	515477.0	3712876.0	2.72393	(137, 2)
515577.0	3712876.0	2.37606	(163, 2)	515677.0	3712876.0	2.20197	(162, 2)
515777.0	3712876.0	1.83158	(163, 2)	515877.0	3712876.0	1.71504	(163, 2)
515977.0	3712876.0	1.54700C	(203, 2)	516077.0	3712876.0	2.05684	(122, 2)
516177.0	3712876.0	2.59478	(258, 2)	516277.0	3712876.0	2.15376	(258, 2)
516377.0	3712876.0	2.19584	(125, 2)	516477.0	3712876.0	1.50586C	(203, 2)
516577.0	3712876.0	1.56193C	(203, 2)	516677.0	3712876.0	1.35578C	(203, 2)
516777.0	3712876.0	1.69119	(205, 2)	516877.0	3712876.0	1.90557	(205, 2)
516977.0	3712876.0	1.77807	(208, 2)	517077.0	3712876.0	2.40616	(209, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
517177.0	3712876.0	2.32138C	(222, 2)	515277.0	3712976.0	2.42665	(280, 2)
515377.0	3712976.0	2.93687	(137, 2)	515477.0	3712976.0	2.51851	(163, 2)
515577.0	3712976.0	2.23798	(230, 2)	515677.0	3712976.0	2.12252	(163, 2)
515777.0	3712976.0	1.83063	(163, 2)	515877.0	3712976.0	1.67217	(122, 2)
515977.0	3712976.0	1.64301	(163, 2)	516077.0	3712976.0	2.44760	(126, 2)
516177.0	3712976.0	3.16872	(258, 2)	516277.0	3712976.0	2.43652	(258, 2)
516377.0	3712976.0	2.44563	(125, 2)	516477.0	3712976.0	1.52524	(145, 2)
516577.0	3712976.0	1.81179	(247, 2)	516677.0	3712976.0	1.46901	(247, 2)
516777.0	3712976.0	1.43898	(209, 2)	516877.0	3712976.0	1.93820	(209, 2)
516977.0	3712976.0	1.98108	(184, 2)	517077.0	3712976.0	1.95947	(208, 2)
517177.0	3712976.0	2.33686	(209, 2)	515277.0	3713076.0	2.97576	(230, 2)
515377.0	3713076.0	2.57457	(163, 2)	515477.0	3713076.0	2.56404	(230, 2)
515577.0	3713076.0	2.15044	(162, 2)	515677.0	3713076.0	2.02767	(163, 2)
515777.0	3713076.0	1.84167	(163, 2)	515877.0	3713076.0	1.55302	(122, 2)
515977.0	3713076.0	1.60567	(287, 2)	516077.0	3713076.0	2.43024	(126, 2)
516177.0	3713076.0	2.94675	(258, 2)	516277.0	3713076.0	2.65663	(258, 2)
516377.0	3713076.0	2.47456	(125, 2)	516477.0	3713076.0	1.64240	(60, 2)
516577.0	3713076.0	1.86464	(233, 2)	516677.0	3713076.0	1.91582	(247, 2)
516777.0	3713076.0	1.58338	(233, 2)	516877.0	3713076.0	1.76452	(209, 2)
516977.0	3713076.0	2.17616	(209, 2)	517077.0	3713076.0	1.96833	(184, 2)
517177.0	3713076.0	2.10049	(208, 2)	515277.0	3713176.0	2.70923	(137, 2)
515377.0	3713176.0	2.68221	(163, 2)	515477.0	3713176.0	2.02989	(162, 2)
515577.0	3713176.0	2.18943	(163, 2)	515677.0	3713176.0	1.94842	(163, 2)
515777.0	3713176.0	1.78438	(162, 2)	515877.0	3713176.0	1.66378	(122, 2)
515977.0	3713176.0	1.77138	(122, 2)	516077.0	3713176.0	2.77854	(126, 2)
516177.0	3713176.0	3.12707	(258, 2)	516277.0	3713176.0	2.81580	(258, 2)
516377.0	3713176.0	2.74740	(125, 2)	516477.0	3713176.0	1.82632	(60, 2)
516577.0	3713176.0	2.04199	(125, 2)	516677.0	3713176.0	1.93537	(233, 2)
516777.0	3713176.0	1.63340	(247, 2)	516877.0	3713176.0	1.63660	(209, 2)
516977.0	3713176.0	1.95001	(209, 2)	517077.0	3713176.0	2.24705	(184, 2)
517177.0	3713176.0	2.41368	(184, 2)	515277.0	3712176.0	2.11409	(210, 2)
515377.0	3712176.0	1.94374	(210, 2)	515477.0	3712176.0	1.86704C	(160, 2)
515577.0	3712176.0	1.48965	(210, 2)	515677.0	3712176.0	1.08785	(109, 2)
515777.0	3712176.0	0.97000C	(199, 2)	515877.0	3712176.0	1.34072	(36, 1)
515977.0	3712176.0	1.49377	(36, 1)	516077.0	3712176.0	5.31662	(51, 2)
516177.0	3712176.0	2.60720	(85, 1)	515277.0	3712076.0	1.93004	(210, 2)
515377.0	3712076.0	1.82416	(210, 2)	515477.0	3712076.0	1.73286	(210, 2)
515577.0	3712076.0	1.29216	(210, 2)	515677.0	3712076.0	0.93836	(210, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515777.0	3712076.0	0.56974	(215, 2)	515877.0	3712076.0	0.66618	(140, 1)
515977.0	3712076.0	0.97916	(230, 2)	516077.0	3712076.0	2.84058	(36, 1)
516177.0	3712076.0	8.03498	(51, 2)	515277.0	3711976.0	2.04743	(152, 2)
515377.0	3711976.0	1.94491	(152, 2)	515477.0	3711976.0	1.66473	(152, 2)
515577.0	3711976.0	1.25437	(152, 2)	515677.0	3711976.0	0.75307	(152, 2)
515777.0	3711976.0	0.67644	(214, 3)	515877.0	3711976.0	0.74192	(214, 3)
515977.0	3711976.0	0.64224	(261, 2)	516077.0	3711976.0	1.28763	(215, 2)
516177.0	3711976.0	2.27139	(109, 2)	515277.0	3711876.0	1.69322C	(160, 2)
515377.0	3711876.0	1.43022C	(160, 2)	515477.0	3711876.0	1.27709C	(160, 2)
515577.0	3711876.0	1.25503	(152, 2)	515677.0	3711876.0	1.15801	(109, 2)
515777.0	3711876.0	1.27131	(109, 2)	515877.0	3711876.0	1.38768	(109, 2)
515977.0	3711876.0	1.56764	(215, 2)	516077.0	3711876.0	1.95692	(215, 2)
516177.0	3711876.0	2.08473	(230, 2)	515277.0	3711776.0	1.27813	(236, 2)
515377.0	3711776.0	1.27398	(236, 2)	515477.0	3711776.0	1.15631	(152, 2)
515577.0	3711776.0	1.03096	(144, 2)	515677.0	3711776.0	0.93170	(144, 2)
515777.0	3711776.0	0.53197	(144, 2)	515877.0	3711776.0	0.34121	(217, 3)
515977.0	3711776.0	0.70730	(109, 3)	516077.0	3711776.0	1.34535	(109, 3)
516177.0	3711776.0	1.23518	(57, 2)	515277.0	3711676.0	1.47361	(239, 2)
515377.0	3711676.0	1.19667	(239, 2)	515477.0	3711676.0	0.97921	(193, 2)
515577.0	3711676.0	1.00158	(144, 2)	515677.0	3711676.0	0.90201	(144, 2)
515777.0	3711676.0	0.64574	(228, 2)	515877.0	3711676.0	0.68856	(109, 3)
515977.0	3711676.0	0.24628	(109, 3)	516077.0	3711676.0	0.19408	(57, 2)
516177.0	3711676.0	0.62795	(20, 1)	515277.0	3711576.0	1.48588	(193, 2)
515377.0	3711576.0	1.52243	(193, 2)	515477.0	3711576.0	1.47886	(193, 2)
515577.0	3711576.0	1.28324	(193, 2)	515677.0	3711576.0	1.09527	(235, 2)
515777.0	3711576.0	0.91077	(228, 2)	515877.0	3711576.0	0.54492	(190, 2)
515977.0	3711576.0	0.19080	(167, 2)	516077.0	3711576.0	0.09052	(20, 1)
516177.0	3711576.0	1.22872	(264, 2)	515277.0	3711476.0	1.74680	(193, 2)
515377.0	3711476.0	1.65039	(193, 2)	515477.0	3711476.0	1.52867	(57, 2)
515577.0	3711476.0	1.43094	(57, 2)	515677.0	3711476.0	1.19508	(156, 2)
515777.0	3711476.0	1.20175	(156, 2)	515877.0	3711476.0	0.95183	(156, 2)
515977.0	3711476.0	0.56724	(156, 2)	516077.0	3711476.0	0.69859	(20, 1)
516177.0	3711476.0	1.06187	(52, 1)	511277.0	3709378.0	3.08200C	(282, 1)
512277.0	3709378.0	3.02231	(188, 1)	513277.0	3709378.0	2.30472C	(214, 1)
514277.0	3709378.0	1.69316C	(212, 1)	515277.0	3709378.0	2.32991	(243, 2)
516277.0	3709378.0	2.18204	(187, 1)	517277.0	3709378.0	2.13184C	(297, 2)
518277.0	3709378.0	3.31390	(104, 1)	519277.0	3709378.0	1.87930	(79, 3)
520277.0	3709378.0	1.21779	(92, 1)	521277.0	3709378.0	1.21983	(345, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3709378.0	1.04835	(295, 2)	511277.0	3708378.0	1.75262	(1, 1)
512277.0	3708378.0	1.52323	(257, 1)	513277.0	3708378.0	1.80607C	(297, 3)
514277.0	3708378.0	2.22410	(187, 3)	515277.0	3708378.0	2.15062	(244, 3)
516277.0	3708378.0	1.70669	(187, 1)	517277.0	3708378.0	3.43022	(362, 3)
518277.0	3708378.0	2.09234	(319, 1)	519277.0	3708378.0	1.44088	(80, 1)
520277.0	3708378.0	1.56326	(79, 3)	521277.0	3708378.0	1.43373	(319, 3)
522277.0	3708378.0	1.31779	(76, 3)	511277.0	3707378.0	1.67386C	(46, 1)
512277.0	3707378.0	2.03069	(188, 1)	513277.0	3707378.0	1.75626C	(174, 1)
514277.0	3707378.0	1.86794	(143, 3)	515277.0	3707378.0	2.20899	(256, 1)
516277.0	3707378.0	2.27178C	(15, 3)	517277.0	3707378.0	2.93440	(76, 1)
518277.0	3707378.0	1.89446	(11, 3)	519277.0	3707378.0	1.61008	(319, 2)
520277.0	3707378.0	1.39556	(80, 1)	521277.0	3707378.0	1.40579	(114, 1)
522277.0	3707378.0	1.76501	(319, 3)	511277.0	3706378.0	2.14433	(257, 1)
512277.0	3706378.0	1.79715C	(172, 1)	513277.0	3706378.0	1.69198	(257, 1)
514277.0	3706378.0	2.91872	(243, 3)	515277.0	3706378.0	2.20005C	(264, 3)
516277.0	3706378.0	2.33236C	(15, 3)	517277.0	3706378.0	1.90174	(47, 1)
518277.0	3706378.0	1.64658	(362, 3)	519277.0	3706378.0	1.41374	(319, 1)
520277.0	3706378.0	1.21389	(319, 2)	521277.0	3706378.0	1.32943C	(10, 1)
522277.0	3706378.0	1.30944	(91, 3)	523277.0	3706378.0	1.62056	(285, 3)
522402.0	3710378.0	0.82924C	(44, 3)	522402.0	3711378.0	0.98588	(155, 2)
522402.0	3712378.0	1.07834	(123, 3)	511277.0	3714176.0	0.96868	(31, 2)
512277.0	3714176.0	1.46780	(292, 1)	513277.0	3714176.0	1.75427	(346, 3)
514277.0	3714176.0	2.15789	(280, 2)	515277.0	3714176.0	1.99806	(93, 3)
516277.0	3714176.0	3.73737	(126, 2)	517277.0	3714176.0	3.02213C	(148, 3)
518277.0	3714176.0	1.47845	(165, 2)	519277.0	3714176.0	1.15553	(318, 2)
520277.0	3714176.0	1.19317	(241, 1)	521277.0	3714176.0	1.17758C	(54, 3)
522277.0	3714176.0	1.24640	(32, 2)	511277.0	3715176.0	1.85939	(230, 3)
512277.0	3715176.0	3.56226C	(196, 1)	513277.0	3715176.0	1.72493	(163, 3)
514277.0	3715176.0	3.17678	(293, 1)	515277.0	3715176.0	2.64630	(153, 1)
516277.0	3715176.0	2.65221	(65, 1)	517277.0	3715176.0	1.30677	(127, 2)
518277.0	3715176.0	1.48629	(184, 2)	519277.0	3715176.0	1.15551	(307, 2)
520277.0	3715176.0	1.11185	(65, 2)	521277.0	3715176.0	1.28725C	(232, 1)
522277.0	3715176.0	1.43452	(149, 1)	511277.0	3716176.0	3.52444C	(287, 3)
512277.0	3716176.0	1.72814	(163, 3)	513277.0	3716176.0	3.38897	(293, 1)
514277.0	3716176.0	2.77116	(329, 3)	515277.0	3716176.0	3.58565	(116, 3)
516277.0	3716176.0	1.94323	(65, 1)	517277.0	3716176.0	1.37450	(121, 2)
518277.0	3716176.0	1.07814	(277, 1)	519277.0	3716176.0	1.04606	(277, 2)
520277.0	3716176.0	1.49209C	(235, 3)	521277.0	3716176.0	1.10338	(65, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522402.0	3712378.0	1.07834	(123, 3)	511277.0	3714176.0	0.96868	(31, 2)
512277.0	3714176.0	1.46780	(292, 1)	513277.0	3714176.0	1.75427	(346, 3)
514277.0	3714176.0	2.15789	(280, 2)	515277.0	3714176.0	1.99806	(93, 3)
516277.0	3714176.0	3.73737	(126, 2)	517277.0	3714176.0	3.02213C	(148, 3)
518277.0	3714176.0	1.47845	(165, 2)	519277.0	3714176.0	1.15553	(318, 2)
520277.0	3714176.0	1.19317	(241, 1)	521277.0	3714176.0	1.17758C	(54, 3)
522277.0	3714176.0	1.24640	(32, 2)	511277.0	3715176.0	1.85939	(230, 3)
512277.0	3715176.0	3.56226C	(196, 1)	513277.0	3715176.0	1.72493	(163, 3)
514277.0	3715176.0	3.17678	(293, 1)	515277.0	3715176.0	2.64630	(153, 1)
516277.0	3715176.0	2.65221	(65, 1)	517277.0	3715176.0	1.30677	(127, 2)
518277.0	3715176.0	1.48629	(184, 2)	519277.0	3715176.0	1.15551	(307, 2)
520277.0	3715176.0	1.11185	(65, 2)	521277.0	3715176.0	1.28725C	(232, 1)
522277.0	3715176.0	1.43452	(149, 1)	511277.0	3716176.0	3.52444C	(287, 3)
512277.0	3716176.0	1.72814	(163, 3)	513277.0	3716176.0	3.38897	(293, 1)
514277.0	3716176.0	2.77116	(329, 3)	515277.0	3716176.0	3.58565	(116, 3)
516277.0	3716176.0	1.94323	(65, 1)	517277.0	3716176.0	1.37450	(121, 2)
518277.0	3716176.0	1.07814	(277, 1)	519277.0	3716176.0	1.04606	(277, 2)
520277.0	3716176.0	1.49209C	(235, 3)	521277.0	3716176.0	1.10338	(65, 2)
522277.0	3716176.0	0.85778	(224, 3)	511277.0	3717176.0	2.02938C	(313, 1)
512277.0	3717176.0	3.57993C	(132, 3)	513277.0	3717176.0	2.79563	(329, 3)
514277.0	3717176.0	2.43097	(93, 3)	515277.0	3717176.0	2.13419	(324, 3)
516277.0	3717176.0	2.02168	(65, 1)	517277.0	3717176.0	1.37707	(121, 2)
518277.0	3717176.0	1.14166	(240, 3)	519277.0	3717176.0	1.84004	(277, 1)
520277.0	3717176.0	0.92042	(307, 2)	521277.0	3717176.0	1.22924C	(235, 3)
522277.0	3717176.0	1.05713	(318, 2)	511277.0	3713176.0	1.42046C	(271, 3)
512277.0	3713176.0	1.17495	(129, 2)	513277.0	3713176.0	1.31135	(129, 2)
514277.0	3713176.0	2.04790	(88, 2)	511277.0	3712176.0	1.30163C	(171, 3)
512277.0	3712176.0	1.51300C	(171, 3)	513277.0	3712176.0	1.53386	(215, 2)
514277.0	3712176.0	1.90566	(56, 2)	511277.0	3711176.0	1.52801C	(279, 3)
512277.0	3711176.0	1.69970	(245, 3)	513277.0	3711176.0	1.49022	(282, 2)
514277.0	3711176.0	1.58009	(175, 2)	516500.0	3708100.0	3.43134C	(298, 3)
518100.0	3709350.0	3.38003	(319, 2)	514500.0	3708800.0	2.36597	(187, 3)
517300.0	3714400.0	3.16754	(222, 3)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1983 BINARY ***

* 50 MAXIMUM 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	10.58920	2	230	516179.3	3712061.0	26	4.47126	2	126	516277.0	3712676.0
2	10.47455	2	51	516179.3	3712061.0	27	4.40855	2	243	515877.0	3710578.0
3	8.96774	2	230	516177.0	3712076.0	28	4.35738C	3	169	512277.0	3715176.0
4	8.14200	2	126	516277.0	3712276.0	29	4.35738C	3	169	512277.0	3715176.0
5	8.03498	2	51	516177.0	3712076.0	30	4.31908	1	323	516264.6	3712122.0
6	7.14197	2	126	516277.0	3712376.0	31	4.31908	1	323	516264.6	3712122.0
7	6.99193	2	230	516077.0	3712176.0	32	4.30776	2	243	515777.0	3710378.0
8	6.18799	2	126	516277.0	3712476.0	33	4.27927	2	230	515877.0	3712376.0
9	6.15289	2	122	516264.6	3712122.0	34	4.25587	2	126	516256.2	3712774.0
10	6.15289	2	122	516264.6	3712122.0	35	4.22863	2	243	515877.0	3710678.0
11	6.03459	2	126	516264.6	3712122.0	36	4.22433	2	243	515877.0	3710478.0
12	6.03459	2	126	516264.6	3712122.0	37	4.18016	2	84	516177.0	3712076.0
13	5.60567	2	230	516115.2	3712189.0	38	4.17020	2	314	518277.0	3709378.0
14	5.37925	2	126	516277.0	3712576.0	39	4.17020	2	314	518277.0	3709378.0
15	5.35981	1	85	516179.3	3712061.0	40	4.15491	3	91	517177.0	3711078.0
16	5.31662	2	51	516077.0	3712176.0	41	4.14207	2	230	516179.3	3712122.0
17	5.01455	2	84	516179.3	3712061.0	42	4.09716	2	243	515977.0	3710778.0
18	4.94833	3	126	516277.0	3714176.0	43	4.08763	2	243	515777.0	3710478.0
19	4.94833	3	126	516277.0	3714176.0	44	4.04191	3	322	516277.0	3712276.0
20	4.74702	3	322	516264.6	3712122.0	45	4.01968	2	243	515977.0	3710878.0
21	4.74702	3	322	516264.6	3712122.0	46	4.01785	2	358	516677.0	3710478.0
22	4.64948	1	85	516177.0	3712076.0	47	3.99459	2	126	516177.0	3712976.0
23	4.63625	2	230	515977.0	3712376.0	48	3.96790	2	256	516077.0	3710478.0
24	4.60018	1	85	516179.3	3712122.0	49	3.96548	3	292	512277.0	3717176.0
25	4.55809	2	230	515977.0	3712276.0	50	3.96548	3	292	512277.0	3717176.0

SECTION H.14

1984 MODELING OUTPUT FOR CO ISCST

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
517177.0	3712876.0	2.62251	(235, 2)	515277.0	3712976.0	2.50128	(251, 2)
515377.0	3712976.0	2.39266	(98, 2)	515477.0	3712976.0	2.05524	(98, 2)
515577.0	3712976.0	1.59680	(118, 2)	515677.0	3712976.0	1.46093	(233, 2)
515777.0	3712976.0	1.75250	(132, 2)	515877.0	3712976.0	2.11518	(250, 2)
515977.0	3712976.0	2.54351	(250, 2)	516077.0	3712976.0	3.04888	(153, 2)
516177.0	3712976.0	3.77903	(111, 2)	516277.0	3712976.0	3.86896	(127, 2)
516377.0	3712976.0	4.42353	(127, 2)	516477.0	3712976.0	3.34396	(127, 2)
516577.0	3712976.0	2.42316	(154, 2)	516677.0	3712976.0	2.19019	(154, 2)
516777.0	3712976.0	1.99428	(154, 2)	516877.0	3712976.0	2.11866	(174, 2)
516977.0	3712976.0	2.06250C	(190, 2)	517077.0	3712976.0	2.14922	(235, 2)
517177.0	3712976.0	2.59847	(235, 2)	515277.0	3713076.0	2.53505	(98, 2)
515377.0	3713076.0	2.35386	(98, 2)	515477.0	3713076.0	1.68580	(118, 2)
515577.0	3713076.0	1.47253	(250, 2)	515677.0	3713076.0	1.74968	(233, 2)
515777.0	3713076.0	1.91572	(132, 2)	515877.0	3713076.0	2.15876	(250, 2)
515977.0	3713076.0	2.52104	(250, 2)	516077.0	3713076.0	3.08056	(153, 2)
516177.0	3713076.0	3.34056	(153, 2)	516277.0	3713076.0	3.97422	(127, 2)
516377.0	3713076.0	4.22228	(127, 2)	516477.0	3713076.0	3.65693	(127, 2)
516577.0	3713076.0	2.52399	(154, 2)	516677.0	3713076.0	2.33584	(154, 2)
516777.0	3713076.0	2.13550	(154, 2)	516877.0	3713076.0	2.09974	(174, 2)
516977.0	3713076.0	2.16254	(174, 2)	517077.0	3713076.0	2.09489C	(190, 2)
517177.0	3713076.0	2.53406	(235, 2)	515277.0	3713176.0	2.58974	(98, 2)
515377.0	3713176.0	1.83173	(98, 2)	515477.0	3713176.0	1.59531	(118, 2)
515577.0	3713176.0	1.59387	(233, 2)	515677.0	3713176.0	1.83578	(233, 2)
515777.0	3713176.0	2.05811	(312, 2)	515877.0	3713176.0	2.33996	(250, 2)
515977.0	3713176.0	2.62178	(153, 2)	516077.0	3713176.0	3.51511	(153, 2)
516177.0	3713176.0	3.53071	(153, 2)	516277.0	3713176.0	4.01257	(127, 2)
516377.0	3713176.0	4.53092	(127, 2)	516477.0	3713176.0	3.86998	(127, 2)
516577.0	3713176.0	2.56916	(154, 2)	516677.0	3713176.0	2.35719	(171, 2)
516777.0	3713176.0	2.14427	(154, 2)	516877.0	3713176.0	2.03682	(174, 2)
516977.0	3713176.0	2.12682	(174, 2)	517077.0	3713176.0	2.07294	(174, 2)
517177.0	3713176.0	2.48600	(235, 2)	515277.0	3712176.0	1.49703	(138, 2)
515377.0	3712176.0	1.31351C	(226, 2)	515477.0	3712176.0	1.29989C	(226, 2)
515577.0	3712176.0	1.47700	(237, 2)	515677.0	3712176.0	1.83636	(237, 2)
515777.0	3712176.0	2.00575	(237, 2)	515877.0	3712176.0	1.71045	(237, 2)
515977.0	3712176.0	0.90058	(237, 2)	516077.0	3712176.0	6.02038	(98, 2)
516177.0	3712176.0	5.07446	(312, 2)	515277.0	3712076.0	1.80680	(201, 2)
515377.0	3712076.0	1.58211	(201, 2)	515477.0	3712076.0	1.44116C	(226, 2)
515577.0	3712076.0	1.15881	(125, 2)	515677.0	3712076.0	0.97632	(237, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515777.0	3712076.0	1.35596	(237, 2)	515877.0	3712076.0	1.91017	(237, 2)
515977.0	3712076.0	2.29637	(237, 2)	516077.0	3712076.0	1.15025	(237, 2)
516177.0	3712076.0	9.12248	(98, 2)	515277.0	3711976.0	2.07767	(249, 2)
515377.0	3711976.0	2.04805	(202, 2)	515477.0	3711976.0	1.91959	(202, 2)
515577.0	3711976.0	1.58901	(202, 2)	515677.0	3711976.0	1.04146	(202, 2)
515777.0	3711976.0	0.73339	(69, 3)	515877.0	3711976.0	0.94733	(245, 2)
515977.0	3711976.0	1.46485	(245, 2)	516077.0	3711976.0	1.66870	(237, 2)
516177.0	3711976.0	1.25418	(159, 3)	515277.0	3711876.0	2.24735	(249, 2)
515377.0	3711876.0	2.17072	(202, 2)	515477.0	3711876.0	2.21050	(202, 2)
515577.0	3711876.0	1.96160	(202, 2)	515677.0	3711876.0	1.37535	(202, 2)
515777.0	3711876.0	0.83740	(212, 2)	515877.0	3711876.0	0.98846	(212, 2)
515977.0	3711876.0	1.18250	(212, 2)	516077.0	3711876.0	1.72603C	(294, 3)
516177.0	3711876.0	3.14159C	(294, 3)	515277.0	3711776.0	2.05003C	(182, 2)
515377.0	3711776.0	2.05712	(202, 2)	515477.0	3711776.0	2.08647	(202, 2)
515577.0	3711776.0	1.89109	(202, 2)	515677.0	3711776.0	1.38164	(202, 2)
515777.0	3711776.0	1.17845	(212, 2)	515877.0	3711776.0	1.60243	(339, 3)
515977.0	3711776.0	1.79751	(339, 3)	516077.0	3711776.0	1.16164	(339, 3)
516177.0	3711776.0	3.93848	(211, 2)	515277.0	3711676.0	1.90745C	(182, 2)
515377.0	3711676.0	1.87492	(203, 2)	515477.0	3711676.0	1.94328	(203, 2)
515577.0	3711676.0	1.79443	(203, 2)	515677.0	3711676.0	1.34730	(203, 2)
515777.0	3711676.0	0.79214	(339, 3)	515877.0	3711676.0	0.63245	(321, 1)
515977.0	3711676.0	2.06766	(211, 2)	516077.0	3711676.0	3.72630	(211, 2)
516177.0	3711676.0	1.90825	(211, 2)	515277.0	3711576.0	2.25296	(203, 2)
515377.0	3711576.0	2.34620	(203, 2)	515477.0	3711576.0	2.31372	(203, 2)
515577.0	3711576.0	2.04846	(203, 2)	515677.0	3711576.0	1.40341	(203, 2)
515777.0	3711576.0	1.27308	(211, 2)	515877.0	3711576.0	3.01546	(211, 2)
515977.0	3711576.0	3.68910	(211, 2)	516077.0	3711576.0	2.26730	(211, 2)
516177.0	3711576.0	2.82457	(128, 3)	515277.0	3711476.0	2.39601	(203, 2)
515377.0	3711476.0	2.30709	(203, 2)	515477.0	3711476.0	2.08566	(203, 2)
515577.0	3711476.0	1.63641	(203, 2)	515677.0	3711476.0	2.22534	(211, 2)
515777.0	3711476.0	3.53632	(211, 2)	515877.0	3711476.0	3.50101	(211, 2)
515977.0	3711476.0	2.46989	(211, 2)	516077.0	3711476.0	0.92202	(211, 2)
516177.0	3711476.0	1.88423	(223, 2)	511277.0	3709378.0	2.58086	(136, 3)
512277.0	3709378.0	5.38433	(21, 1)	513277.0	3709378.0	2.94235C	(327, 1)
514277.0	3709378.0	3.48546	(263, 1)	515277.0	3709378.0	3.42188	(11, 1)
516277.0	3709378.0	2.57103	(151, 2)	517277.0	3709378.0	2.25034	(149, 3)
518277.0	3709378.0	3.18061	(106, 2)	519277.0	3709378.0	2.30077	(58, 2)
520277.0	3709378.0	1.86275	(88, 2)	521277.0	3709378.0	1.65609	(88, 2)

HIGH
8-HR
SGROUP# 1

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3709378.0	1.46291	(95, 1)	511277.0	3708378.0	2.00419	(262, 3)
512277.0	3708378.0	3.10531	(261, 3)	513277.0	3708378.0	3.38032	(263, 1)
514277.0	3708378.0	3.35910	(260, 1)	515277.0	3708378.0	2.15335	(211, 1)
516277.0	3708378.0	2.10684	(18, 2)	517277.0	3708378.0	2.90513	(30, 2)
518277.0	3708378.0	1.84400	(149, 3)	519277.0	3708378.0	1.92397	(88, 3)
520277.0	3708378.0	1.77110	(315, 2)	521277.0	3708378.0	1.57121	(112, 3)
522277.0	3708378.0	1.46262	(88, 2)	511277.0	3707378.0	3.60480	(261, 3)
512277.0	3707378.0	2.60215	(263, 1)	513277.0	3707378.0	2.62698	(326, 3)
514277.0	3707378.0	2.92671	(11, 1)	515277.0	3707378.0	4.25497C	(200, 1)
516277.0	3707378.0	2.47973	(18, 2)	517277.0	3707378.0	3.68022	(37, 1)
518277.0	3707378.0	2.83004	(90, 1)	519277.0	3707378.0	1.73276	(106, 2)
520277.0	3707378.0	1.66864	(88, 3)	521277.0	3707378.0	1.62504	(35, 3)
522277.0	3707378.0	1.33030	(58, 2)	511277.0	3706378.0	1.96681	(263, 1)
512277.0	3706378.0	3.13296	(260, 3)	513277.0	3706378.0	3.39679	(261, 1)
514277.0	3706378.0	3.54090	(325, 3)	515277.0	3706378.0	2.30939	(308, 1)
516277.0	3706378.0	2.22607	(18, 2)	517277.0	3706378.0	3.81987C	(30, 3)
518277.0	3706378.0	1.71741	(30, 2)	519277.0	3706378.0	1.34775	(149, 3)
520277.0	3706378.0	1.53279	(106, 2)	521277.0	3706378.0	1.46754	(88, 3)
522277.0	3706378.0	1.70082	(35, 3)	523277.0	3706378.0	1.42128C	(357, 1)
522402.0	3710378.0	0.98281	(114, 2)	522402.0	3711378.0	1.92882C	(7, 1)
522402.0	3712378.0	1.15873	(36, 1)	511277.0	3714176.0	1.74935	(92, 3)
512277.0	3714176.0	2.36951	(125, 3)	513277.0	3714176.0	1.61704	(109, 2)
514277.0	3714176.0	3.09617	(98, 2)	515277.0	3714176.0	4.75514	(312, 2)
516277.0	3714176.0	5.29228	(159, 2)	517277.0	3714176.0	3.67933	(255, 1)
518277.0	3714176.0	1.85950	(235, 2)	519277.0	3714176.0	1.68022	(343, 2)
520277.0	3714176.0	1.50223	(181, 1)	521277.0	3714176.0	0.96877	(180, 3)
522277.0	3714176.0	0.97174C	(100, 1)	511277.0	3715176.0	3.09864	(125, 3)
512277.0	3715176.0	4.64897C	(251, 1)	513277.0	3715176.0	2.74935	(98, 2)
514277.0	3715176.0	3.82638	(252, 1)	515277.0	3715176.0	3.53996	(46, 1)
516277.0	3715176.0	3.65316	(159, 2)	517277.0	3715176.0	1.32802	(54, 3)
518277.0	3715176.0	1.92577	(41, 2)	519277.0	3715176.0	1.33299	(168, 2)
520277.0	3715176.0	1.27485	(343, 2)	521277.0	3715176.0	1.33131	(181, 1)
522277.0	3715176.0	1.22025	(181, 1)	511277.0	3716176.0	3.62974C	(251, 1)
512277.0	3716176.0	2.38378	(250, 3)	513277.0	3716176.0	3.75746	(38, 3)
514277.0	3716176.0	3.53633	(312, 2)	515277.0	3716176.0	4.33294	(45, 3)
516277.0	3716176.0	2.44727	(159, 2)	517277.0	3716176.0	1.70017	(116, 1)
518277.0	3716176.0	1.38821	(255, 1)	519277.0	3716176.0	1.33892	(41, 2)
520277.0	3716176.0	1.16457	(356, 2)	521277.0	3716176.0	1.41617	(134, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3716176.0	1.11366	(343, 2)	511277.0	3717176.0	3.35909	(250, 3)
512277.0	3717176.0	3.30941	(38, 3)	513277.0	3717176.0	3.33763	(156, 3)
514277.0	3717176.0	3.89161	(318, 3)	515277.0	3717176.0	2.87291C	(333, 3)
516277.0	3717176.0	2.29812	(159, 2)	517277.0	3717176.0	1.74049	(116, 1)
518277.0	3717176.0	1.51424	(347, 1)	519277.0	3717176.0	1.78415	(347, 2)
520277.0	3717176.0	1.26929C	(5, 3)	521277.0	3717176.0	0.97935	(356, 2)
522277.0	3717176.0	1.26929	(134, 1)	511277.0	3713176.0	1.98652	(361, 1)
512277.0	3713176.0	1.27346	(48, 2)	513277.0	3713176.0	1.50170	(71, 3)
514277.0	3713176.0	2.47752	(109, 2)	511277.0	3712176.0	1.38289	(339, 2)
512277.0	3712176.0	1.51307	(339, 2)	513277.0	3712176.0	1.42950	(201, 2)
514277.0	3712176.0	1.96129	(201, 2)	511277.0	3711176.0	2.68403	(138, 1)
512277.0	3711176.0	3.28130	(137, 1)	513277.0	3711176.0	2.09500	(339, 3)
514277.0	3711176.0	2.56515	(339, 3)	511277.0	3709378.0	2.58086	(136, 3)
512277.0	3709378.0	5.38433	(21, 1)	513277.0	3709378.0	2.94235C	(327, 1)
514277.0	3709378.0	3.48546	(263, 1)	515277.0	3709378.0	3.42188	(11, 1)
516277.0	3709378.0	2.57103	(151, 2)	517277.0	3709378.0	2.25034	(149, 3)
518277.0	3709378.0	3.18061	(106, 2)	519277.0	3709378.0	2.30077	(58, 2)
520277.0	3709378.0	1.86275	(88, 2)	521277.0	3709378.0	1.65609	(88, 2)
522277.0	3709378.0	1.46291	(95, 1)	511277.0	3708378.0	2.00419	(262, 3)
512277.0	3708378.0	3.10531	(261, 3)	513277.0	3708378.0	3.38032	(263, 1)
514277.0	3708378.0	3.35910	(260, 1)	515277.0	3708378.0	2.15335	(211, 1)
516277.0	3708378.0	2.10684	(18, 2)	517277.0	3708378.0	2.90513	(30, 2)
518277.0	3708378.0	1.84400	(149, 3)	519277.0	3708378.0	1.92397	(88, 3)
520277.0	3708378.0	1.77110	(315, 2)	521277.0	3708378.0	1.57121	(112, 3)
522277.0	3708378.0	1.46262	(88, 2)	511277.0	3707378.0	3.60480	(261, 3)
512277.0	3707378.0	2.60215	(263, 1)	513277.0	3707378.0	2.62698	(326, 3)
514277.0	3707378.0	2.92671	(11, 1)	515277.0	3707378.0	4.25497C	(200, 1)
516277.0	3707378.0	2.47973	(18, 2)	517277.0	3707378.0	3.68022	(37, 1)
518277.0	3707378.0	2.83004	(90, 1)	519277.0	3707378.0	1.73276	(106, 2)
520277.0	3707378.0	1.66864	(88, 3)	521277.0	3707378.0	1.62504	(35, 3)
522277.0	3707378.0	1.33030	(58, 2)	511277.0	3706378.0	1.96681	(263, 1)
512277.0	3706378.0	3.13296	(260, 3)	513277.0	3706378.0	3.39679	(261, 1)
514277.0	3706378.0	3.54090	(325, 3)	515277.0	3706378.0	2.30939	(308, 1)
516277.0	3706378.0	2.22607	(18, 2)	517277.0	3706378.0	3.81987C	(30, 3)
518277.0	3706378.0	1.71741	(30, 2)	519277.0	3706378.0	1.34775	(149, 3)
520277.0	3706378.0	1.53279	(106, 2)	521277.0	3706378.0	1.46754	(88, 3)
522277.0	3706378.0	1.70082	(35, 3)	523277.0	3706378.0	1.42128C	(357, 1)
522402.0	3710378.0	0.98281	(114, 2)	522402.0	3711378.0	1.92882C	(7, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522402.0	3712378.0	1.15873	(36, 1)	511277.0	3714176.0	1.74935	(92, 3)
512277.0	3714176.0	2.36951	(125, 3)	513277.0	3714176.0	1.61704	(109, 2)
514277.0	3714176.0	3.09617	(98, 2)	515277.0	3714176.0	4.75514	(312, 2)
516277.0	3714176.0	5.29228	(159, 2)	517277.0	3714176.0	3.67933	(255, 1)
518277.0	3714176.0	1.85950	(235, 2)	519277.0	3714176.0	1.68022	(343, 2)
520277.0	3714176.0	1.50223	(181, 1)	521277.0	3714176.0	0.96877	(180, 3)
522277.0	3714176.0	0.97174C	(100, 1)	511277.0	3715176.0	3.09864	(125, 3)
512277.0	3715176.0	4.64897C	(251, 1)	513277.0	3715176.0	2.74935	(98, 2)
514277.0	3715176.0	3.82638	(252, 1)	515277.0	3715176.0	3.53996	(46, 1)
516277.0	3715176.0	3.65316	(159, 2)	517277.0	3715176.0	1.32802	(54, 3)
518277.0	3715176.0	1.92577	(41, 2)	519277.0	3715176.0	1.33299	(168, 2)
520277.0	3715176.0	1.27485	(343, 2)	521277.0	3715176.0	1.33131	(181, 1)
522277.0	3715176.0	1.22025	(181, 1)	511277.0	3716176.0	3.62974C	(251, 1)
512277.0	3716176.0	2.38378	(250, 3)	513277.0	3716176.0	3.75746	(38, 3)
514277.0	3716176.0	3.53633	(312, 2)	515277.0	3716176.0	4.33294	(45, 3)
516277.0	3716176.0	2.44727	(159, 2)	517277.0	3716176.0	1.70017	(116, 1)
518277.0	3716176.0	1.38821	(255, 1)	519277.0	3716176.0	1.33892	(41, 2)
520277.0	3716176.0	1.16457	(356, 2)	521277.0	3716176.0	1.41617	(134, 1)
522277.0	3716176.0	1.11366	(343, 2)	511277.0	3717176.0	3.35909	(250, 3)
512277.0	3717176.0	3.30941	(38, 3)	513277.0	3717176.0	3.33763	(156, 3)
514277.0	3717176.0	3.89161	(318, 3)	515277.0	3717176.0	2.87291C	(333, 3)
516277.0	3717176.0	2.29812	(159, 2)	517277.0	3717176.0	1.74049	(116, 1)
518277.0	3717176.0	1.51424	(347, 1)	519277.0	3717176.0	1.78415	(347, 2)
520277.0	3717176.0	1.26929C	(5, 3)	521277.0	3717176.0	0.97935	(356, 2)
522277.0	3717176.0	1.26929	(134, 1)	511277.0	3713176.0	1.98652	(361, 1)
512277.0	3713176.0	1.27346	(48, 2)	513277.0	3713176.0	1.50170	(71, 3)
514277.0	3713176.0	2.47752	(109, 2)	511277.0	3712176.0	1.38289	(339, 2)
512277.0	3712176.0	1.51307	(339, 2)	513277.0	3712176.0	1.42950	(201, 2)
514277.0	3712176.0	1.96129	(201, 2)	511277.0	3711176.0	2.68403	(138, 1)
512277.0	3711176.0	3.28130	(137, 1)	513277.0	3711176.0	2.09500	(339, 3)
514277.0	3711176.0	2.56515	(339, 3)	516500.0	3708100.0	4.71305	(68, 3)
518100.0	3709350.0	3.85297	(106, 2)	514500.0	3708800.0	3.43342	(260, 1)
517300.0	3714400.0	3.50351	(255, 1)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516276.8	3711378.0	1.62059	(36, 3)	516411.0	3712159.0	2.65637	(86, 2)
516679.3	3711159.0	1.06622C	(228, 2)	516679.3	3711378.0	2.47012	(106, 2)
517079.3	3711378.0	3.08904	(88, 2)	517079.3	3711549.0	1.80518	(124, 2)
517530.5	3711488.0	1.46697	(223, 2)	517530.5	3711317.0	2.12533	(224, 2)
518743.9	3711171.0	1.00449	(84, 2)	518743.9	3711573.0	1.48840	(84, 2)
519914.6	3711573.0	1.61694C	(7, 1)	519914.6	3711171.0	1.15356	(281, 2)
520304.8	3711171.0	1.16804	(281, 2)	520304.8	3711024.0	1.08322	(58, 1)
520707.2	3711024.0	1.05325	(281, 2)	520817.0	3711628.0	1.42110	(84, 2)
520402.3	3712176.0	1.10918	(68, 2)	518707.2	3712176.0	1.46607	(94, 2)
518707.2	3712030.0	1.72539	(68, 2)	518280.4	3712030.0	1.82379	(94, 2)
518280.4	3712250.0	1.99423	(68, 2)	518060.9	3712335.0	2.04112	(180, 2)
518060.9	3712878.0	2.21257	(180, 2)	517426.8	3712878.0	2.47977	(217, 2)
517426.8	3713079.0	2.67670	(217, 2)	516993.9	3713079.0	2.10103C	(190, 2)
516993.9	3713280.0	1.84896C	(190, 2)	516603.7	3713280.0	2.41625	(127, 2)
516603.7	3712884.0	2.26392	(171, 2)	516372.0	3712884.0	3.60347	(120, 2)
516372.0	3712798.0	3.63208	(120, 2)	516256.2	3712774.0	3.74078	(111, 2)
516276.8	3711378.0	1.62059	(36, 3)	516264.6	3712122.0	8.41511	(111, 2)
516264.6	3711598.0	3.08653	(10, 1)	516008.5	3712006.0	0.78101	(245, 2)
516008.5	3712122.0	1.03295	(42, 3)	516115.2	3712189.0	3.58544	(57, 1)
516179.3	3712061.0	10.36033	(57, 2)	516179.3	3712122.0	4.01185	(366, 2)
516264.6	3712122.0	8.41511	(111, 2)	515277.0	3711278.0	1.99611	(211, 2)
515377.0	3711278.0	2.17294	(261, 2)	515477.0	3711278.0	2.29526	(261, 2)
515577.0	3711278.0	2.17295	(261, 2)	515677.0	3711278.0	2.07722	(264, 2)
515777.0	3711278.0	1.97077	(264, 2)	515877.0	3711278.0	1.35219	(264, 2)
515977.0	3711278.0	1.13423	(213, 2)	516077.0	3711278.0	1.34147	(128, 3)
516177.0	3711278.0	1.74112	(10, 2)	516277.0	3711278.0	1.64593	(36, 3)
516377.0	3711278.0	2.29278	(10, 1)	516477.0	3711278.0	2.37056	(30, 2)
516577.0	3711278.0	1.60078	(36, 2)	516677.0	3711278.0	1.22084	(105, 2)
516777.0	3711278.0	1.85218C	(135, 2)	516877.0	3711278.0	1.95753	(88, 3)
516977.0	3711278.0	1.71375	(105, 2)	517077.0	3711278.0	2.37536	(105, 2)
517177.0	3711278.0	2.42988	(88, 2)	515277.0	3711178.0	2.45773	(261, 2)
515377.0	3711178.0	2.71987	(261, 2)	515477.0	3711178.0	2.52061	(261, 2)
515577.0	3711178.0	2.59065	(264, 2)	515677.0	3711178.0	2.41481	(262, 2)
515777.0	3711178.0	2.18752	(248, 2)	515877.0	3711178.0	1.59081	(212, 2)
515977.0	3711178.0	1.81708	(213, 2)	516077.0	3711178.0	1.90100	(212, 2)
516177.0	3711178.0	1.52949	(151, 2)	516277.0	3711178.0	2.24321	(151, 2)
516377.0	3711178.0	2.05356	(151, 2)	516477.0	3711178.0	1.52355	(10, 2)
516577.0	3711178.0	1.20508	(30, 2)	516677.0	3711178.0	1.06569C	(228, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516777.0	3711178.0	1.60282C	(135, 2)	516877.0	3711178.0	2.02093C	(135, 2)
516977.0	3711178.0	1.99838C	(135, 2)	517077.0	3711178.0	2.19735	(88, 3)
517177.0	3711178.0	2.60291	(124, 2)	515277.0	3711078.0	2.99461	(261, 2)
515377.0	3711078.0	2.83823	(261, 2)	515477.0	3711078.0	2.83913	(264, 2)
515577.0	3711078.0	2.85827	(262, 2)	515677.0	3711078.0	2.90584	(248, 2)
515777.0	3711078.0	2.30706	(248, 2)	515877.0	3711078.0	2.12966	(213, 2)
515977.0	3711078.0	2.37338	(213, 2)	516077.0	3711078.0	2.35092	(212, 2)
516177.0	3711078.0	2.25299	(151, 2)	516277.0	3711078.0	2.73347C	(208, 2)
516377.0	3711078.0	1.94040C	(208, 2)	516477.0	3711078.0	1.59934	(151, 2)
516577.0	3711078.0	1.57592	(167, 2)	516677.0	3711078.0	1.08185	(167, 2)
516777.0	3711078.0	1.25875	(231, 2)	516877.0	3711078.0	1.95807	(231, 2)
516977.0	3711078.0	2.33096	(231, 2)	517077.0	3711078.0	1.99889	(231, 2)
517177.0	3711078.0	2.41678	(88, 3)	515277.0	3710978.0	3.01695	(261, 2)
515377.0	3710978.0	3.24023	(211, 2)	515477.0	3710978.0	2.80370	(262, 2)
515577.0	3710978.0	3.04179	(262, 2)	515677.0	3710978.0	2.80627	(248, 2)
515777.0	3710978.0	2.15512	(248, 2)	515877.0	3710978.0	2.42792	(213, 2)
515977.0	3710978.0	2.61988	(213, 2)	516077.0	3710978.0	2.74580C	(208, 2)
516177.0	3710978.0	2.82910	(151, 2)	516277.0	3710978.0	2.71776C	(208, 2)
516377.0	3710978.0	2.01859C	(208, 2)	516477.0	3710978.0	1.79754	(167, 2)
516577.0	3710978.0	1.53301	(167, 2)	516677.0	3710978.0	1.42379	(149, 3)
516777.0	3710978.0	1.27276	(149, 3)	516877.0	3710978.0	1.84901	(231, 2)
516977.0	3710978.0	2.44884	(231, 2)	517077.0	3710978.0	2.38434	(88, 3)
517177.0	3710978.0	2.29385	(108, 2)	515277.0	3710878.0	3.20191	(211, 2)
515377.0	3710878.0	3.18780	(262, 2)	515477.0	3710878.0	3.19804	(262, 2)
515577.0	3710878.0	2.97553	(248, 2)	515677.0	3710878.0	2.62209	(264, 2)
515777.0	3710878.0	2.42615	(213, 2)	515877.0	3710878.0	2.67176	(213, 2)
515977.0	3710878.0	2.67975	(213, 2)	516077.0	3710878.0	2.52747C	(208, 2)
516177.0	3710878.0	2.68241C	(208, 2)	516277.0	3710878.0	2.42616C	(208, 2)
516377.0	3710878.0	1.95617	(231, 2)	516477.0	3710878.0	1.82690	(230, 2)
516577.0	3710878.0	1.73640	(230, 2)	516677.0	3710878.0	2.00709	(30, 2)
516777.0	3710878.0	2.10308	(129, 2)	516877.0	3710878.0	1.68667	(89, 2)
516977.0	3710878.0	2.33787	(231, 2)	517077.0	3710878.0	2.63865	(231, 2)
517177.0	3710878.0	2.53302	(231, 2)	515277.0	3710778.0	3.59316	(262, 2)
515377.0	3710778.0	3.41708	(262, 2)	515477.0	3710778.0	3.39066	(248, 2)
515577.0	3710778.0	2.67461	(248, 2)	515677.0	3710778.0	2.18197	(248, 2)
515777.0	3710778.0	2.65321	(213, 2)	515877.0	3710778.0	2.77688	(213, 2)
515977.0	3710778.0	2.60692	(213, 2)	516077.0	3710778.0	2.82702	(212, 2)
516177.0	3710778.0	2.45840	(66, 2)	516277.0	3710778.0	2.53394	(10, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516377.0	3710778.0	2.33042	(10, 2)	516477.0	3710778.0	2.17789	(230, 2)
516577.0	3710778.0	2.02956	(230, 2)	516677.0	3710778.0	2.99003	(129, 2)
516777.0	3710778.0	2.83366	(129, 2)	516877.0	3710778.0	2.19050	(89, 2)
516977.0	3710778.0	2.43647	(106, 2)	517077.0	3710778.0	3.10806	(106, 2)
517177.0	3710778.0	2.68097	(231, 2)	515277.0	3710678.0	3.66470	(264, 2)
515377.0	3710678.0	3.40435	(262, 2)	515477.0	3710678.0	3.07807	(248, 2)
515577.0	3710678.0	2.37650	(264, 2)	515677.0	3710678.0	2.25716	(213, 2)
515777.0	3710678.0	2.58650	(213, 2)	515877.0	3710678.0	2.70008	(213, 2)
515977.0	3710678.0	2.45257	(213, 2)	516077.0	3710678.0	2.82308	(151, 2)
516177.0	3710678.0	2.85104	(66, 2)	516277.0	3710678.0	2.56673	(10, 1)
516377.0	3710678.0	2.74356	(10, 2)	516477.0	3710678.0	2.30196	(10, 2)
516577.0	3710678.0	2.25632	(230, 2)	516677.0	3710678.0	2.94623	(129, 2)
516777.0	3710678.0	2.82176	(149, 3)	516877.0	3710678.0	2.34286	(129, 2)
516977.0	3710678.0	2.06814	(36, 2)	517077.0	3710678.0	2.38689	(106, 2)
517177.0	3710678.0	2.57386	(231, 2)	515277.0	3710578.0	3.53495	(264, 2)
515377.0	3710578.0	3.19315	(264, 2)	515477.0	3710578.0	2.70912	(264, 2)
515577.0	3710578.0	2.16426	(248, 2)	515677.0	3710578.0	2.40698	(213, 2)
515777.0	3710578.0	2.70054	(213, 2)	515877.0	3710578.0	2.61330	(213, 2)
515977.0	3710578.0	2.26834	(200, 2)	516077.0	3710578.0	2.90433	(151, 2)
516177.0	3710578.0	3.20269	(66, 2)	516277.0	3710578.0	2.90594	(10, 1)
516377.0	3710578.0	3.52157	(10, 2)	516477.0	3710578.0	2.70660	(151, 2)
516577.0	3710578.0	2.41571	(230, 2)	516677.0	3710578.0	2.83107	(129, 2)
516777.0	3710578.0	2.35197	(30, 2)	516877.0	3710578.0	2.46167	(129, 2)
516977.0	3710578.0	1.87007	(89, 2)	517077.0	3710578.0	1.98234	(89, 2)
517177.0	3710578.0	2.27302	(231, 2)	515277.0	3710478.0	3.27277	(248, 2)
515377.0	3710478.0	2.83394	(262, 2)	515477.0	3710478.0	2.45029	(260, 1)
515577.0	3710478.0	2.30055	(213, 2)	515677.0	3710478.0	2.49900	(213, 2)
515777.0	3710478.0	2.62260	(213, 2)	515877.0	3710478.0	2.74101	(326, 2)
515977.0	3710478.0	2.79062	(66, 2)	516077.0	3710478.0	3.09209	(151, 2)
516177.0	3710478.0	3.56527	(10, 1)	516277.0	3710478.0	3.21081	(10, 1)
516377.0	3710478.0	3.49458	(10, 2)	516477.0	3710478.0	2.73134	(151, 2)
516577.0	3710478.0	2.43363	(10, 2)	516677.0	3710478.0	2.67730	(129, 2)
516777.0	3710478.0	2.79909	(129, 2)	516877.0	3710478.0	2.50492	(149, 3)
516977.0	3710478.0	2.15118	(129, 2)	517077.0	3710478.0	1.78178	(149, 3)
517177.0	3710478.0	1.92968	(89, 2)	515277.0	3710378.0	2.79830	(262, 2)
515377.0	3710378.0	2.29940	(262, 2)	515477.0	3710378.0	2.04912	(213, 2)
515577.0	3710378.0	2.39588	(259, 2)	515677.0	3710378.0	2.94270	(259, 2)
515777.0	3710378.0	2.89468	(326, 2)	515877.0	3710378.0	2.67559	(326, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515977.0	3710378.0	2.89247C	(200, 1)	516077.0	3710378.0	3.08407	(151, 2)
516177.0	3710378.0	3.30342	(10, 1)	516277.0	3710378.0	2.84785	(10, 1)
516377.0	3710378.0	3.11616	(10, 2)	516477.0	3710378.0	2.60430	(151, 2)
516577.0	3710378.0	2.18506	(10, 2)	516677.0	3710378.0	2.28296	(10, 2)
516777.0	3710378.0	2.69210	(129, 2)	516877.0	3710378.0	2.80350	(149, 3)
516977.0	3710378.0	2.36409	(129, 2)	517077.0	3710378.0	1.95671	(89, 2)
517177.0	3710378.0	1.62521	(36, 2)	515277.0	3712276.0	1.22362	(109, 2)
515377.0	3712276.0	1.34019	(138, 2)	515477.0	3712276.0	1.30247	(109, 2)
515577.0	3712276.0	1.51716C	(226, 2)	515677.0	3712276.0	1.78938C	(226, 2)
515777.0	3712276.0	1.76570C	(226, 2)	515877.0	3712276.0	1.12776	(237, 2)
515977.0	3712276.0	2.91153	(57, 2)	516077.0	3712276.0	1.53473	(312, 2)
516177.0	3712276.0	3.01178	(312, 2)	516277.0	3712276.0	5.08620	(127, 2)
516377.0	3712276.0	4.77544	(127, 2)	516477.0	3712276.0	1.07556	(86, 2)
516577.0	3712276.0	0.76451	(313, 2)	516677.0	3712276.0	0.73801	(41, 2)
516777.0	3712276.0	0.83416	(175, 2)	516877.0	3712276.0	1.58336C	(188, 2)
516977.0	3712276.0	1.99264	(189, 2)	517077.0	3712276.0	1.91268	(189, 2)
517177.0	3712276.0	1.63631	(189, 2)	515277.0	3712376.0	1.64955	(237, 2)
515377.0	3712376.0	1.75048	(109, 2)	515477.0	3712376.0	1.69067	(109, 2)
515577.0	3712376.0	1.94213C	(226, 2)	515677.0	3712376.0	2.31936C	(226, 2)
515777.0	3712376.0	1.82385	(237, 2)	515877.0	3712376.0	2.73477	(57, 2)
515977.0	3712376.0	2.66418	(57, 1)	516077.0	3712376.0	2.13474	(117, 2)
516177.0	3712376.0	3.83045	(111, 3)	516277.0	3712376.0	5.18656	(127, 2)
516377.0	3712376.0	4.95237	(127, 2)	516477.0	3712376.0	1.11195	(131, 2)
516577.0	3712376.0	0.66513	(313, 2)	516677.0	3712376.0	0.59508	(175, 2)
516777.0	3712376.0	1.09365	(175, 2)	516877.0	3712376.0	1.63924	(189, 2)
516977.0	3712376.0	2.08567	(189, 2)	517077.0	3712376.0	2.13147	(189, 2)
517177.0	3712376.0	1.94599	(189, 2)	515277.0	3712476.0	2.01760	(237, 2)
515377.0	3712476.0	2.19846	(109, 2)	515477.0	3712476.0	1.87571	(109, 2)
515577.0	3712476.0	2.16606C	(226, 2)	515677.0	3712476.0	2.16412	(237, 2)
515777.0	3712476.0	2.07887	(98, 2)	515877.0	3712476.0	2.00172	(57, 2)
515977.0	3712476.0	1.44204	(366, 2)	516077.0	3712476.0	2.00515	(111, 2)
516177.0	3712476.0	3.82562	(111, 3)	516277.0	3712476.0	4.97462	(127, 2)
516377.0	3712476.0	4.83817	(127, 2)	516477.0	3712476.0	1.40415	(131, 2)
516577.0	3712476.0	0.95856	(165, 2)	516677.0	3712476.0	1.07001C	(166, 2)
516777.0	3712476.0	1.02448	(175, 2)	516877.0	3712476.0	1.43265	(189, 2)
516977.0	3712476.0	1.87224	(189, 2)	517077.0	3712476.0	2.09314	(217, 2)
517177.0	3712476.0	1.98289	(189, 2)	515277.0	3712576.0	2.19586	(101, 2)
515377.0	3712576.0	2.29101	(109, 2)	515477.0	3712576.0	1.90531C	(226, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515577.0	3712576.0	2.09673C	(226, 2)	515677.0	3712576.0	1.91498	(98, 2)
515777.0	3712576.0	1.87993	(57, 2)	515877.0	3712576.0	1.30325C	(226, 2)
515977.0	3712576.0	1.57659	(132, 2)	516077.0	3712576.0	1.69279	(111, 3)
516177.0	3712576.0	3.00704	(111, 3)	516277.0	3712576.0	4.56238	(111, 2)
516377.0	3712576.0	4.37596	(120, 2)	516477.0	3712576.0	1.75862C	(166, 2)
516577.0	3712576.0	1.15165	(165, 2)	516677.0	3712576.0	1.27390C	(190, 2)
516777.0	3712576.0	1.25470C	(190, 2)	516877.0	3712576.0	1.36558	(235, 2)
516977.0	3712576.0	1.59756	(235, 2)	517077.0	3712576.0	1.94949C	(188, 2)
517177.0	3712576.0	2.18178	(217, 2)	515277.0	3712676.0	2.23994	(237, 2)
515377.0	3712676.0	2.24149	(251, 2)	515477.0	3712676.0	2.22260	(237, 2)
515577.0	3712676.0	2.11911	(98, 2)	515677.0	3712676.0	2.13452	(57, 2)
515777.0	3712676.0	1.43991	(218, 2)	515877.0	3712676.0	1.50797	(116, 2)
515977.0	3712676.0	1.61184	(239, 2)	516077.0	3712676.0	1.87742	(111, 2)
516177.0	3712676.0	2.66174	(111, 3)	516277.0	3712676.0	3.77892	(111, 2)
516377.0	3712676.0	3.46461	(120, 2)	516477.0	3712676.0	2.15905	(127, 2)
516577.0	3712676.0	1.62904	(154, 2)	516677.0	3712676.0	1.72222C	(190, 2)
516777.0	3712676.0	1.60466C	(166, 2)	516877.0	3712676.0	1.31445	(235, 2)
516977.0	3712676.0	1.85432	(235, 2)	517077.0	3712676.0	1.98126	(235, 2)
517177.0	3712676.0	2.13116C	(188, 2)	515277.0	3712776.0	2.18570	(237, 2)
515377.0	3712776.0	2.03221	(237, 2)	515477.0	3712776.0	1.79659	(183, 2)
515577.0	3712776.0	2.37203	(57, 2)	515677.0	3712776.0	1.70731	(118, 2)
515777.0	3712776.0	1.21567	(239, 2)	515877.0	3712776.0	1.80477	(116, 2)
515977.0	3712776.0	1.74978	(132, 2)	516077.0	3712776.0	2.16091	(111, 2)
516177.0	3712776.0	2.63513	(153, 2)	516277.0	3712776.0	3.06021	(111, 2)
516377.0	3712776.0	3.14145	(120, 2)	516477.0	3712776.0	2.13366	(120, 2)
516577.0	3712776.0	1.94176C	(166, 2)	516677.0	3712776.0	1.86164C	(190, 2)
516777.0	3712776.0	1.71319	(174, 2)	516877.0	3712776.0	1.69647	(174, 2)
516977.0	3712776.0	1.67729C	(190, 2)	517077.0	3712776.0	2.25693	(217, 2)
517177.0	3712776.0	2.35068	(235, 2)	515277.0	3712876.0	2.02666	(237, 2)
515377.0	3712876.0	1.83491	(98, 2)	515477.0	3712876.0	1.90645	(57, 2)
515577.0	3712876.0	1.57263	(118, 2)	515677.0	3712876.0	1.44116	(218, 2)
515777.0	3712876.0	1.54063	(116, 2)	515877.0	3712876.0	1.80958	(250, 2)
515977.0	3712876.0	1.55065	(153, 2)	516077.0	3712876.0	2.55039	(250, 2)
516177.0	3712876.0	2.89403	(153, 2)	516277.0	3712876.0	2.90450	(155, 2)
516377.0	3712876.0	2.84015	(120, 2)	516477.0	3712876.0	2.46899	(120, 2)
516577.0	3712876.0	2.03782	(171, 2)	516677.0	3712876.0	1.91206C	(190, 2)
516777.0	3712876.0	1.87459	(174, 2)	516877.0	3712876.0	2.01097	(174, 2)
516977.0	3712876.0	1.74884	(174, 2)	517077.0	3712876.0	1.82194	(217, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
517177.0	3712876.0	2.39135	(217, 2)	515277.0	3712976.0	1.95354	(98, 2)
515377.0	3712976.0	2.00464	(57, 2)	515477.0	3712976.0	1.77886	(57, 2)
515577.0	3712976.0	1.45692	(218, 2)	515677.0	3712976.0	1.44509	(250, 2)
515777.0	3712976.0	1.74252	(233, 2)	515877.0	3712976.0	2.02710	(132, 2)
515977.0	3712976.0	2.09105	(153, 2)	516077.0	3712976.0	2.75106	(111, 2)
516177.0	3712976.0	3.46732	(153, 2)	516277.0	3712976.0	2.98388	(155, 2)
516377.0	3712976.0	2.84081	(120, 2)	516477.0	3712976.0	2.70762	(120, 2)
516577.0	3712976.0	2.14661	(171, 2)	516677.0	3712976.0	2.03363	(171, 2)
516777.0	3712976.0	1.97412C	(190, 2)	516877.0	3712976.0	2.00110C	(190, 2)
516977.0	3712976.0	2.03722	(174, 2)	517077.0	3712976.0	1.96361C	(190, 2)
517177.0	3712976.0	1.92164	(217, 2)	515277.0	3713076.0	2.11968	(251, 2)
515377.0	3713076.0	2.03452	(57, 2)	515477.0	3713076.0	1.49167	(218, 2)
515577.0	3713076.0	1.43780	(118, 2)	515677.0	3713076.0	1.63729	(116, 2)
515777.0	3713076.0	1.77944	(250, 2)	515877.0	3713076.0	1.62997	(132, 2)
515977.0	3713076.0	2.28362	(153, 2)	516077.0	3713076.0	2.58442	(250, 2)
516177.0	3713076.0	3.29847	(111, 2)	516277.0	3713076.0	2.96264	(155, 2)
516377.0	3713076.0	2.55551	(120, 2)	516477.0	3713076.0	2.86197	(120, 2)
516577.0	3713076.0	2.16775	(171, 2)	516677.0	3713076.0	2.33516	(171, 2)
516777.0	3713076.0	1.94233C	(190, 2)	516877.0	3713076.0	1.93307C	(190, 2)
516977.0	3713076.0	2.00736C	(190, 2)	517077.0	3713076.0	1.94337	(174, 2)
517177.0	3713076.0	2.03794C	(190, 2)	515277.0	3713176.0	2.21812	(57, 2)
515377.0	3713176.0	1.71792	(118, 2)	515477.0	3713176.0	1.49574	(250, 2)
515577.0	3713176.0	1.53648	(250, 2)	515677.0	3713176.0	1.80631	(312, 2)
515777.0	3713176.0	1.97523	(132, 2)	515877.0	3713176.0	1.79914	(153, 2)
515977.0	3713176.0	2.59208	(250, 2)	516077.0	3713176.0	2.85162	(111, 2)
516177.0	3713176.0	3.20944	(111, 2)	516277.0	3713176.0	3.02330	(153, 2)
516377.0	3713176.0	2.75573	(120, 2)	516477.0	3713176.0	2.94816	(120, 2)
516577.0	3713176.0	2.21369	(127, 2)	516677.0	3713176.0	2.33042	(154, 2)
516777.0	3713176.0	2.11692	(171, 2)	516877.0	3713176.0	1.95929	(154, 2)
516977.0	3713176.0	1.85837C	(190, 2)	517077.0	3713176.0	2.02590C	(190, 2)
517177.0	3713176.0	2.38574C	(190, 2)	515277.0	3712176.0	1.42654C	(226, 2)
515377.0	3712176.0	1.27069	(138, 2)	515477.0	3712176.0	1.18927	(138, 2)
515577.0	3712176.0	1.18136C	(226, 2)	515677.0	3712176.0	1.09159C	(226, 2)
515777.0	3712176.0	0.88098C	(226, 2)	515877.0	3712176.0	0.47126C	(226, 2)
515977.0	3712176.0	0.75032	(98, 2)	516077.0	3712176.0	5.39228	(57, 2)
516177.0	3712176.0	2.79639	(117, 2)	515277.0	3712076.0	1.65276	(249, 2)
515377.0	3712076.0	1.53321C	(226, 2)	515477.0	3712076.0	1.42587	(202, 2)
515577.0	3712076.0	1.10064C	(226, 2)	515677.0	3712076.0	0.86409	(125, 2)

*** I. P. - CANDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515777.0	3712076.0	0.58707	(245, 2)	515877.0	3712076.0	0.37302	(159, 3)
515977.0	3712076.0	0.88560	(159, 3)	516077.0	3712076.0	0.83924	(42, 3)
516177.0	3712076.0	8.17858	(57, 2)	515277.0	3711976.0	1.99966	(201, 2)
515377.0	3711976.0	1.94993	(249, 2)	515477.0	3711976.0	1.64956	(249, 2)
515577.0	3711976.0	1.34685	(125, 2)	515677.0	3711976.0	1.03606	(125, 2)
515777.0	3711976.0	0.54224	(245, 2)	515877.0	3711976.0	0.72985	(69, 3)
515977.0	3711976.0	0.93637	(237, 2)	516077.0	3711976.0	1.20474	(245, 2)
516177.0	3711976.0	1.01263	(237, 2)	515277.0	3711876.0	2.12262	(202, 2)
515377.0	3711876.0	2.02842	(249, 2)	515477.0	3711876.0	2.01042	(249, 2)
515577.0	3711876.0	1.74885	(249, 2)	515677.0	3711876.0	1.29102	(249, 2)
515777.0	3711876.0	0.69274C	(294, 3)	515877.0	3711876.0	0.86704C	(294, 3)
515977.0	3711876.0	1.15712C	(294, 3)	516077.0	3711876.0	1.42022	(212, 2)
516177.0	3711876.0	1.88487	(339, 1)	515277.0	3711776.0	1.94338	(249, 2)
515377.0	3711776.0	1.85983	(249, 2)	515477.0	3711776.0	1.80961	(249, 2)
515577.0	3711776.0	1.65724	(249, 2)	515677.0	3711776.0	1.30903	(249, 2)
515777.0	3711776.0	1.11310	(339, 3)	515877.0	3711776.0	0.95990	(212, 2)
515977.0	3711776.0	1.08578C	(226, 3)	516077.0	3711776.0	1.07306	(321, 1)
516177.0	3711776.0	2.56823C	(259, 1)	515277.0	3711676.0	1.77977	(203, 2)
515377.0	3711676.0	1.79897	(202, 2)	515477.0	3711676.0	1.84125	(202, 2)
515577.0	3711676.0	1.66441	(202, 2)	515677.0	3711676.0	1.21377	(202, 2)
515777.0	3711676.0	0.63034	(203, 2)	515877.0	3711676.0	0.51393	(211, 2)
515977.0	3711676.0	1.44319C	(259, 1)	516077.0	3711676.0	0.65843	(321, 1)
516177.0	3711676.0	1.22612	(321, 2)	515277.0	3711576.0	1.67556	(136, 2)
515377.0	3711576.0	1.61216	(263, 2)	515477.0	3711576.0	1.54923	(202, 2)
515577.0	3711576.0	1.40458	(202, 2)	515677.0	3711576.0	1.03943	(206, 2)
515777.0	3711576.0	0.94892	(206, 2)	515877.0	3711576.0	1.20009C	(259, 1)
515977.0	3711576.0	0.60282	(321, 1)	516077.0	3711576.0	0.84682	(176, 3)
516177.0	3711576.0	2.70526	(259, 2)	515277.0	3711476.0	1.86712	(263, 2)
515377.0	3711476.0	1.62010	(136, 2)	515477.0	3711476.0	1.71391	(92, 2)
515577.0	3711476.0	1.49214	(92, 2)	515677.0	3711476.0	1.39270	(206, 2)
515777.0	3711476.0	1.31263	(206, 2)	515877.0	3711476.0	0.97012C	(194, 2)
515977.0	3711476.0	0.71293	(176, 3)	516077.0	3711476.0	0.75898	(321, 2)
516177.0	3711476.0	1.71232	(128, 3)	511277.0	3709378.0	2.17970	(248, 3)
512277.0	3709378.0	3.60448	(210, 3)	513277.0	3709378.0	2.82356	(261, 3)
514277.0	3709378.0	2.86383	(260, 3)	515277.0	3709378.0	3.22053	(51, 1)
516277.0	3709378.0	2.57043	(18, 2)	517277.0	3709378.0	1.88198	(30, 2)
518277.0	3709378.0	2.99663	(80, 2)	519277.0	3709378.0	2.10394	(315, 2)
520277.0	3709378.0	1.62026	(112, 3)	521277.0	3709378.0	1.60674	(107, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3709378.0	0.97345	(94, 3)	511277.0	3708378.0	1.69939	(21, 1)
512277.0	3708378.0	1.77055C	(327, 1)	513277.0	3708378.0	2.82370	(211, 3)
514277.0	3708378.0	3.10972	(261, 1)	515277.0	3708378.0	1.82068	(248, 1)
516277.0	3708378.0	1.83901	(65, 1)	517277.0	3708378.0	2.66759C	(356, 3)
518277.0	3708378.0	1.38902	(89, 2)	519277.0	3708378.0	1.83093	(89, 1)
520277.0	3708378.0	1.68556	(58, 2)	521277.0	3708378.0	1.39100C	(55, 3)
522277.0	3708378.0	1.39535	(96, 1)	511277.0	3707378.0	1.69159	(259, 3)
512277.0	3707378.0	2.31987	(211, 3)	513277.0	3707378.0	2.30958	(260, 3)
514277.0	3707378.0	2.12929	(70, 3)	515277.0	3707378.0	1.88354C	(52, 3)
516277.0	3707378.0	2.20488	(65, 1)	517277.0	3707378.0	3.56619C	(30, 3)
518277.0	3707378.0	2.30140	(149, 3)	519277.0	3707378.0	1.20310	(80, 2)
520277.0	3707378.0	1.53104	(89, 1)	521277.0	3707378.0	1.41099	(315, 2)
522277.0	3707378.0	1.29235	(80, 1)	511277.0	3706378.0	1.92012	(260, 1)
512277.0	3706378.0	2.44320	(212, 3)	513277.0	3706378.0	2.43913	(260, 1)
514277.0	3706378.0	2.95522	(211, 1)	515277.0	3706378.0	2.24356C	(200, 1)
516277.0	3706378.0	1.99527	(65, 1)	517277.0	3706378.0	2.62894	(37, 1)
518277.0	3706378.0	1.68170C	(209, 3)	519277.0	3706378.0	0.94992	(315, 3)
520277.0	3706378.0	1.30994	(310, 1)	521277.0	3706378.0	1.36380	(30, 1)
522277.0	3706378.0	1.33687	(106, 1)	523277.0	3706378.0	1.30227	(315, 3)
522402.0	3710378.0	0.94176	(107, 3)	522402.0	3711378.0	1.26213C	(228, 1)
522402.0	3712378.0	0.98685	(83, 3)	511277.0	3714176.0	1.52547	(71, 3)
512277.0	3714176.0	2.03911	(92, 3)	513277.0	3714176.0	1.49993	(39, 2)
514277.0	3714176.0	2.19446	(57, 2)	515277.0	3714176.0	2.38630	(117, 2)
516277.0	3714176.0	4.24704	(78, 2)	517277.0	3714176.0	2.64456C	(199, 1)
518277.0	3714176.0	1.79402	(217, 2)	519277.0	3714176.0	1.37609	(54, 2)
520277.0	3714176.0	1.27615	(180, 3)	521277.0	3714176.0	0.81645	(191, 2)
522277.0	3714176.0	0.88444	(4, 2)	511277.0	3715176.0	2.12058C	(12, 1)
512277.0	3715176.0	3.33313	(101, 1)	513277.0	3715176.0	2.22885	(56, 3)
514277.0	3715176.0	3.67570C	(362, 3)	515277.0	3715176.0	3.17978	(289, 3)
516277.0	3715176.0	3.05797	(78, 2)	517277.0	3715176.0	1.29349	(143, 2)
518277.0	3715176.0	1.70205	(347, 2)	519277.0	3715176.0	1.24686	(217, 2)
520277.0	3715176.0	1.26931	(219, 2)	521277.0	3715176.0	1.10301	(343, 2)
522277.0	3715176.0	1.18931	(180, 3)	511277.0	3716176.0	3.34743C	(16, 3)
512277.0	3716176.0	2.05848	(98, 2)	513277.0	3716176.0	3.04036C	(191, 1)
514277.0	3716176.0	3.11020C	(217, 1)	515277.0	3716176.0	4.01123C	(333, 3)
516277.0	3716176.0	2.09647	(78, 2)	517277.0	3716176.0	1.31936	(355, 2)
518277.0	3716176.0	1.24153	(132, 2)	519277.0	3716176.0	1.23226	(131, 1)
520277.0	3716176.0	1.09853	(68, 1)	521277.0	3716176.0	1.07134	(219, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3716176.0	0.96968	(54, 2)	511277.0	3717176.0	3.18317C	(282, 3)
512277.0	3717176.0	3.11576	(22, 1)	513277.0	3717176.0	3.22024C	(168, 1)
514277.0	3717176.0	3.65579	(46, 1)	515277.0	3717176.0	2.79083	(45, 3)
516277.0	3717176.0	2.02693	(313, 3)	517277.0	3717176.0	1.37206	(222, 1)
518277.0	3717176.0	1.43386	(255, 1)	519277.0	3717176.0	1.64362	(242, 1)
520277.0	3717176.0	1.13675	(146, 1)	521277.0	3717176.0	0.87570	(68, 1)
522277.0	3717176.0	0.87441C	(81, 3)	511277.0	3713176.0	1.33409C	(182, 3)
512277.0	3713176.0	1.19033	(349, 3)	513277.0	3713176.0	1.41568	(91, 1)
514277.0	3713176.0	2.09754	(101, 2)	511277.0	3712176.0	1.28877	(214, 3)
512277.0	3712176.0	1.45140	(214, 3)	513277.0	3712176.0	1.38415	(339, 2)
514277.0	3712176.0	1.87035	(249, 2)	511277.0	3711176.0	2.58377	(201, 3)
512277.0	3711176.0	2.77368	(206, 3)	513277.0	3711176.0	1.69710C	(204, 3)
514277.0	3711176.0	2.39786	(263, 2)	511277.0	3709378.0	2.17970	(248, 3)
512277.0	3709378.0	3.60448	(210, 3)	513277.0	3709378.0	2.82356	(261, 3)
514277.0	3709378.0	2.86383	(260, 3)	515277.0	3709378.0	3.22053	(51, 1)
516277.0	3709378.0	2.57043	(18, 2)	517277.0	3709378.0	1.88198	(30, 2)
518277.0	3709378.0	2.99663	(80, 2)	519277.0	3709378.0	2.10394	(315, 2)
520277.0	3709378.0	1.62026	(112, 3)	521277.0	3709378.0	1.60674	(107, 1)
522277.0	3709378.0	0.97345	(94, 3)	511277.0	3708378.0	1.69939	(21, 1)
512277.0	3708378.0	1.77055C	(327, 1)	513277.0	3708378.0	2.82370	(211, 3)
514277.0	3708378.0	3.10972	(261, 1)	515277.0	3708378.0	1.82068	(248, 1)
516277.0	3708378.0	1.83901	(65, 1)	517277.0	3708378.0	2.66759C	(356, 3)
518277.0	3708378.0	1.38902	(89, 2)	519277.0	3708378.0	1.83093	(89, 1)
520277.0	3708378.0	1.68556	(58, 2)	521277.0	3708378.0	1.39100C	(55, 3)
522277.0	3708378.0	1.39535	(96, 1)	511277.0	3707378.0	1.69159	(259, 3)
512277.0	3707378.0	2.31987	(211, 3)	513277.0	3707378.0	2.30958	(260, 3)
514277.0	3707378.0	2.12929	(70, 3)	515277.0	3707378.0	1.88354C	(52, 3)
516277.0	3707378.0	2.20488	(65, 1)	517277.0	3707378.0	3.56619C	(30, 3)
518277.0	3707378.0	2.30140	(149, 3)	519277.0	3707378.0	1.20310	(80, 2)
520277.0	3707378.0	1.53104	(89, 1)	521277.0	3707378.0	1.41099	(315, 2)
522277.0	3707378.0	1.29235	(80, 1)	511277.0	3706378.0	1.92012	(260, 1)
512277.0	3706378.0	2.44320	(212, 3)	513277.0	3706378.0	2.43913	(260, 1)
514277.0	3706378.0	2.95522	(211, 1)	515277.0	3706378.0	2.24356C	(200, 1)
516277.0	3706378.0	1.99527	(65, 1)	517277.0	3706378.0	2.62894	(37, 1)
518277.0	3706378.0	1.68170C	(209, 3)	519277.0	3706378.0	0.94992	(315, 3)
520277.0	3706378.0	1.30994	(310, 1)	521277.0	3706378.0	1.36380	(30, 1)
522277.0	3706378.0	1.33687	(106, 1)	523277.0	3706378.0	1.30227	(315, 3)
522402.0	3710378.0	0.94176	(107, 3)	522402.0	3711378.0	1.26213C	(228, 1)

*** I. P. - CANDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522402.0	3712378.0	0.98685	(83, 3)	511277.0	3714176.0	1.52547	(71, 3)
512277.0	3714176.0	2.03911	(92, 3)	513277.0	3714176.0	1.49993	(39, 2)
514277.0	3714176.0	2.19446	(57, 2)	515277.0	3714176.0	2.38630	(117, 2)
516277.0	3714176.0	4.24704	(78, 2)	517277.0	3714176.0	2.64456C	(199, 1)
518277.0	3714176.0	1.79402	(217, 2)	519277.0	3714176.0	1.37609	(54, 2)
520277.0	3714176.0	1.27615	(180, 3)	521277.0	3714176.0	0.81645	(191, 2)
522277.0	3714176.0	0.88444	(4, 2)	511277.0	3715176.0	2.12058C	(12, 1)
512277.0	3715176.0	3.33313	(101, 1)	513277.0	3715176.0	2.22885	(56, 3)
514277.0	3715176.0	3.67570C	(362, 3)	515277.0	3715176.0	3.17978	(289, 3)
516277.0	3715176.0	3.05797	(78, 2)	517277.0	3715176.0	1.29349	(143, 2)
518277.0	3715176.0	1.70205	(347, 2)	519277.0	3715176.0	1.24686	(217, 2)
520277.0	3715176.0	1.26931	(219, 2)	521277.0	3715176.0	1.10301	(343, 2)
522277.0	3715176.0	1.18931	(180, 3)	511277.0	3716176.0	3.34743C	(16, 3)
512277.0	3716176.0	2.05848	(98, 2)	513277.0	3716176.0	3.04036C	(191, 1)
514277.0	3716176.0	3.11020C	(217, 1)	515277.0	3716176.0	4.01123C	(333, 3)
516277.0	3716176.0	2.09647	(78, 2)	517277.0	3716176.0	1.31936	(355, 2)
518277.0	3716176.0	1.24153	(132, 2)	519277.0	3716176.0	1.23226	(131, 1)
520277.0	3716176.0	1.09853	(68, 1)	521277.0	3716176.0	1.07134	(219, 2)
522277.0	3716176.0	0.96968	(54, 2)	511277.0	3717176.0	3.18317C	(282, 3)
512277.0	3717176.0	3.11576	(22, 1)	513277.0	3717176.0	3.22024C	(168, 1)
514277.0	3717176.0	3.65579	(46, 1)	515277.0	3717176.0	2.79083	(45, 3)
516277.0	3717176.0	2.02693	(313, 3)	517277.0	3717176.0	1.37206	(222, 1)
518277.0	3717176.0	1.43386	(255, 1)	519277.0	3717176.0	1.64362	(242, 1)
520277.0	3717176.0	1.13675	(146, 1)	521277.0	3717176.0	0.87570	(68, 1)
522277.0	3717176.0	0.87441C	(81, 3)	511277.0	3713176.0	1.33409C	(182, 3)
512277.0	3713176.0	1.19033	(349, 3)	513277.0	3713176.0	1.41568	(91, 1)
514277.0	3713176.0	2.09754	(101, 2)	511277.0	3712176.0	1.28877	(214, 3)
512277.0	3712176.0	1.45140	(214, 3)	513277.0	3712176.0	1.38415	(339, 2)
514277.0	3712176.0	1.87035	(249, 2)	511277.0	3711176.0	2.58377	(201, 3)
512277.0	3711176.0	2.77368	(206, 3)	513277.0	3711176.0	1.69710C	(204, 3)
514277.0	3711176.0	2.39786	(263, 2)	516500.0	3708100.0	2.79504	(65, 1)
518100.0	3709350.0	3.17426	(80, 2)	514500.0	3708800.0	2.92221	(326, 1)
517300.0	3714400.0	2.94737C	(199, 1)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* 50 MAXIMUM 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	11.69264	2	98	516179.3	3712061.0	26	5.07446	2	312	516177.0	3712176.0
2	10.36033	2	57	516179.3	3712061.0	27	5.07308	2	36	516679.3	3711378.0
3	9.12248	2	98	516177.0	3712076.0	28	4.97841	2	120	516377.0	3712476.0
4	9.04267	3	111	516264.6	3712122.0	29	4.97462	2	127	516277.0	3712476.0
5	9.04267	3	111	516264.6	3712122.0	30	4.95799	2	127	516372.0	3712798.0
6	8.41511	2	111	516264.6	3712122.0	31	4.95237	2	127	516377.0	3712376.0
7	8.41511	2	111	516264.6	3712122.0	32	4.93110	2	56	516177.0	3712076.0
8	8.17858	2	57	516177.0	3712076.0	33	4.91840	3	42	516179.3	3712061.0
9	7.79895	2	111	516277.0	3712276.0	34	4.83817	2	127	516377.0	3712476.0
10	6.55500	2	111	516277.0	3712376.0	35	4.78066	3	111	516277.0	3712276.0
11	6.52013	2	56	516179.3	3712061.0	36	4.77544	2	127	516377.0	3712276.0
12	6.06253	1	57	516179.3	3712061.0	37	4.75514	2	312	515277.0	3714176.0
13	6.02038	2	98	516077.0	3712176.0	38	4.75514	2	312	515277.0	3714176.0
14	5.98197	2	120	516377.0	3712276.0	39	4.75359	2	120	516277.0	3712276.0
15	5.64382	1	57	516177.0	3712076.0	40	4.71305	3	68	516500.0	3708100.0
16	5.59329	2	120	516377.0	3712376.0	41	4.71266	2	211	515277.0	3711078.0
17	5.45437	2	111	516277.0	3712476.0	42	4.67597	2	127	516277.0	3712576.0
18	5.39228	2	57	516077.0	3712176.0	43	4.65076	2	127	516377.0	3712576.0
19	5.38433	1	21	512277.0	3709378.0	44	4.64897C	1	251	512277.0	3715176.0
20	5.38433	1	21	512277.0	3709378.0	45	4.64897C	1	251	512277.0	3715176.0
21	5.29228	2	159	516277.0	3714176.0	46	4.56238	2	111	516277.0	3712576.0
22	5.29228	2	159	516277.0	3714176.0	47	4.53092	2	127	516377.0	3713176.0
23	5.18656	2	127	516277.0	3712376.0	48	4.45011	2	312	516179.3	3712122.0
24	5.14323	2	127	516372.0	3712884.0	49	4.42353	2	127	516377.0	3712976.0
25	5.08620	2	127	516277.0	3712276.0	50	4.42277	2	211	515377.0	3711178.0

ISCST (DATED 90346)
BOWMAN ENVIRONMENTAL ENGINEERING REV.6.96

SESSION INFORMATION

INPUT DATA FILE NAME : ISCC084.DTA
OUTPUT LIST FILE NAME : ISCC084.LST
MET DATA FILE NAME : shvggg84.bin

NOTE THAT THE BUILDING DIMENSIONS ON CARD 6,1 FOR SOURCE NO. 1 DO NOT MEET THE SCHULMAN-SCIRE CRITERIA.
THEREFORE, DIRECTION SPECIFIC BUILDING DIMENSIONS WILL NOT BE USED BY THE MODEL.

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CALCULATE (CONCENTRATION=1,DEPOSITION=2)                          ISW(1) =   1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)           ISW(2) =   3
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1,POLAR=2)                  ISW(3) =   1
TERRAIN ELEVATIONS ARE READ (YES=1,NO=0)                          ISW(4) =   1
CALCULATIONS ARE WRITTEN TO TAPE (YES=1,NO=0)                     ISW(5) =   0
LIST ALL INPUT DATA (NO=0,YES=1,MET DATA ALSO=2)                  ISW(6) =   1

COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION)
WITH THE FOLLOWING TIME PERIODS:
  HOURLY (YES=1,NO=0)                                             ISW(7) =   1
  2-HOUR (YES=1,NO=0)                                             ISW(8) =   0
  3-HOUR (YES=1,NO=0)                                             ISW(9) =   0
  4-HOUR (YES=1,NO=0)                                            ISW(10) =   0
  6-HOUR (YES=1,NO=0)                                            ISW(11) =   0
  8-HOUR (YES=1,NO=0)                                            ISW(12) =   1
  12-HOUR (YES=1,NO=0)                                           ISW(13) =   0
  24-HOUR (YES=1,NO=0)                                           ISW(14) =   0
PRINT 'N'-DAY TABLE(S) (YES=1,NO=0)                              ISW(15) =   0

PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE
SPECIFIED BY ISW(7) THROUGH ISW(14):
  DAILY TABLES (YES=1,NO=0)                                      ISW(16) =   0
  HIGHEST & SECOND HIGHEST TABLES (YES=1,NO=0)                   ISW(17) =   1
  MAXIMUM 50 TABLES (YES=1,NO=0)                                 ISW(18) =   1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1,CARD=2)        ISW(19) =   1
RURAL-URBAN OPTION (RU.=0,UR. MODE 1=1,UR. MODE 2=2,UR. MODE 3=3) ISW(20) =   0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1,USER ENTERS=2,3)        ISW(21) =   1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1,USER ENTERS=2,3) ISW(22) =   1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0,YES>0)                ISW(23) =   0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1,NO=2)            ISW(24) =   1
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2,NO=1)      ISW(25) =   2
PROGRAM USES BUOYANCY INDUCED DISPERSION (YES=1,NO=2)            ISW(26) =   1
CONCENTRATIONS DURING CALM PERIODS SET = 0 (YES=1,NO=2)          ISW(27) =   1
REG. DEFAULT OPTION CHOSEN (YES=1,NO=2)                          ISW(28) =   1
TYPE OF POLLUTANT TO BE MODELLED (1=SO2,2=OTHER)                 ISW(29) =   2
DEBUG OPTION CHOSEN (YES=1,NO=2)                                 ISW(30) =   2
ABOVE GROUND (FLAGPOLE) RECEPTORS USED (YES=1,NO=0)              ISW(31) =   0

NUMBER OF INPUT SOURCES                                          NSOURC =   1
NUMBER OF SOURCE GROUPS (=0,ALL SOURCES)                         NGROUP =   0
TIME PERIOD INTERVAL TO BE PRINTED (=0,ALL INTERVALS)             IPERD =   0
NUMBER OF X (RANGE) GRID VALUES                                  NXPNTS =   0
NUMBER OF Y (THETA) GRID VALUES                                  NYPNTS =   0
NUMBER OF DISCRETE RECEPTORS                                     NXWYPT = 749
SOURCE EMISSION RATE UNITS CONVERSION FACTOR                         TK =.10000E+07
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED                 ZR =  10.00  METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA                         IMET =   9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION              DECAY =0.000000E+00
SURFACE STATION NO.                                                  ISS = 13957
YEAR OF SURFACE DATA                                                 ISY = 84
UPPER AIR STATION NO.                                                IUS =  3951
YEAR OF UPPER AIR DATA                                               IUY = 84
ALLOCATED DATA STORAGE                                            LIMIT =160000 WORDS
REQUIRED DATA STORAGE FOR THIS PROBLEM RUN                        MIMIT = 11924 WORDS
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*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

```
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
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*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** X,Y COORDINATES OF DISCRETE RECEPTORS ***
(METERS)

(516276.8,3711378.0),	(516411.0,3712159.0),	(516679.3,3711159.0),	(516679.3,3711378.0),	(517079.3,3711378.0),
(517079.3,3711549.0),	(517530.5,3711488.0),	(517530.5,3711317.0),	(518743.9,3711171.0),	(518743.9,3711573.0),
(519914.6,3711573.0),	(519914.6,3711171.0),	(520304.8,3711171.0),	(520304.8,3711024.0),	(520707.2,3711024.0),
(520817.0,3711628.0),	(520402.3,3712176.0),	(518707.2,3712176.0),	(518707.2,3712030.0),	(518280.4,3712030.0),
(518280.4,3712250.0),	(518060.9,3712335.0),	(518060.9,3712878.0),	(517426.8,3712878.0),	(517426.8,3713079.0),
(516993.9,3713079.0),	(516993.9,3713280.0),	(516603.7,3713280.0),	(516603.7,3712884.0),	(516372.0,3712884.0),
(516372.0,3712798.0),	(516256.2,3712774.0),	(516276.8,3711378.0),	(516264.6,3712122.0),	(516264.6,3711598.0),
(516008.5,3712006.0),	(516008.5,3712122.0),	(516115.2,3712189.0),	(516179.3,3712061.0),	(516179.3,3712122.0),
(516264.6,3712122.0),	(515277.0,3711278.0),	(515377.0,3711278.0),	(515477.0,3711278.0),	(515577.0,3711278.0),
(515677.0,3711278.0),	(515777.0,3711278.0),	(515877.0,3711278.0),	(515977.0,3711278.0),	(516077.0,3711278.0),
(516177.0,3711278.0),	(516277.0,3711278.0),	(516377.0,3711278.0),	(516477.0,3711278.0),	(516577.0,3711278.0),
(516677.0,3711278.0),	(516777.0,3711278.0),	(516877.0,3711278.0),	(516977.0,3711278.0),	(517077.0,3711278.0),
(517177.0,3711278.0),	(515277.0,3711178.0),	(515377.0,3711178.0),	(515477.0,3711178.0),	(515577.0,3711178.0),
(515677.0,3711178.0),	(515777.0,3711178.0),	(515877.0,3711178.0),	(515977.0,3711178.0),	(516077.0,3711178.0),
(516177.0,3711178.0),	(516277.0,3711178.0),	(516377.0,3711178.0),	(516477.0,3711178.0),	(516577.0,3711178.0),
(516677.0,3711178.0),	(516777.0,3711178.0),	(516877.0,3711178.0),	(516977.0,3711178.0),	(517077.0,3711178.0),
(517177.0,3711178.0),	(515277.0,3711078.0),	(515377.0,3711078.0),	(515477.0,3711078.0),	(515577.0,3711078.0),
(515677.0,3711078.0),	(515777.0,3711078.0),	(515877.0,3711078.0),	(515977.0,3711078.0),	(516077.0,3711078.0),
(516177.0,3711078.0),	(516277.0,3711078.0),	(516377.0,3711078.0),	(516477.0,3711078.0),	(516577.0,3711078.0),
(516677.0,3711078.0),	(516777.0,3711078.0),	(516877.0,3711078.0),	(516977.0,3711078.0),	(517077.0,3711078.0),
(517177.0,3711078.0),	(515277.0,3710978.0),	(515377.0,3710978.0),	(515477.0,3710978.0),	(515577.0,3710978.0),
(515677.0,3710978.0),	(515777.0,3710978.0),	(515877.0,3710978.0),	(515977.0,3710978.0),	(516077.0,3710978.0),
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(513277.0,3713176.0), (514277.0,3713176.0), (511277.0,3712176.0), (512277.0,3712176.0), (513277.0,3712176.0),
(514277.0,3712176.0), (511277.0,3711176.0), (512277.0,3711176.0), (513277.0,3711176.0), (514277.0,3711176.0),
(516500.0,3708100.0), (518100.0,3709350.0), (514500.0,3708800.0), (517300.0,3714400.0), (

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
516276.8	3711378.0	34.43942	516411.0	3712159.0	34.43942	516679.3	3711159.0	34.43942
516679.3	3711378.0	34.43942	517079.3	3711378.0	34.43942	517079.3	3711549.0	34.43942
517530.5	3711488.0	34.43942	517530.5	3711317.0	34.43942	518743.9	3711171.0	34.43942
518743.9	3711573.0	34.43942	519914.6	3711573.0	34.43942	519914.6	3711171.0	34.43942
520304.8	3711171.0	34.43942	520304.8	3711024.0	34.43942	520707.2	3711024.0	34.43942
520817.0	3711628.0	34.43942	520402.3	3712176.0	34.43942	518707.2	3712176.0	34.43942
518707.2	3712030.0	34.43942	518280.4	3712030.0	34.43942	518280.4	3712250.0	34.43942
518060.9	3712335.0	34.43942	518060.9	3712878.0	34.43942	517426.8	3712878.0	34.43942
517426.8	3713079.0	34.43942	516993.9	3713079.0	34.43942	516993.9	3713280.0	34.43942
516603.7	3713280.0	34.43942	516603.7	3712884.0	34.43942	516372.0	3712884.0	34.43942
516372.0	3712798.0	34.43942	516256.2	3712774.0	34.43942	516276.8	3711378.0	34.43942
516264.6	3712122.0	34.43942	516264.6	3711598.0	34.43942	516008.5	3712006.0	34.43942
516008.5	3712122.0	34.43942	516115.2	3712189.0	34.43942	516179.3	3712061.0	34.43942
516179.3	3712122.0	34.43942	516264.6	3712122.0	34.43942	515277.0	3711278.0	39.62103
515377.0	3711278.0	39.62103	515477.0	3711278.0	39.62103	515577.0	3711278.0	39.62103
515677.0	3711278.0	39.62103	515777.0	3711278.0	39.62103	515877.0	3711278.0	39.62103
515977.0	3711278.0	39.62103	516077.0	3711278.0	39.62103	516177.0	3711278.0	39.62103
516277.0	3711278.0	36.57912	516377.0	3711278.0	39.62103	516477.0	3711278.0	39.62103
516577.0	3711278.0	39.62103	516677.0	3711278.0	33.53112	516777.0	3711278.0	33.53112
516877.0	3711278.0	30.48006	516977.0	3711278.0	30.48006	517077.0	3711278.0	33.53112
517177.0	3711278.0	33.53112	515277.0	3711178.0	39.62103	515377.0	3711178.0	42.66904
515477.0	3711178.0	39.62103	515577.0	3711178.0	39.62103	515677.0	3711178.0	42.66904
515777.0	3711178.0	42.66904	515877.0	3711178.0	42.66904	515977.0	3711178.0	39.62103
516077.0	3711178.0	39.62103	516177.0	3711178.0	36.57912	516277.0	3711178.0	36.57912
516377.0	3711178.0	36.57912	516477.0	3711178.0	36.57912	516577.0	3711178.0	36.57912
516677.0	3711178.0	33.53112	516777.0	3711178.0	33.53112	516877.0	3711178.0	33.53112
516977.0	3711178.0	33.53112	517077.0	3711178.0	33.53112	517177.0	3711178.0	33.53112
515277.0	3711078.0	45.72009	515377.0	3711078.0	42.66904	515477.0	3711078.0	36.57912
515577.0	3711078.0	42.66904	515677.0	3711078.0	45.72009	515777.0	3711078.0	45.72009
515877.0	3711078.0	45.72009	515977.0	3711078.0	42.66904	516077.0	3711078.0	39.62103
516177.0	3711078.0	39.62103	516277.0	3711078.0	36.57912	516377.0	3711078.0	36.57912
516477.0	3711078.0	36.57912	516577.0	3711078.0	39.62103	516677.0	3711078.0	33.53112
516777.0	3711078.0	33.53112	516877.0	3711078.0	33.53112	516977.0	3711078.0	36.57912
517077.0	3711078.0	33.53112	517177.0	3711078.0	33.53112	515277.0	3710978.0	45.72009
515377.0	3710978.0	42.66904	515477.0	3710978.0	36.57912	515577.0	3710978.0	42.66904
515677.0	3710978.0	45.72009	515777.0	3710978.0	48.77114	515877.0	3710978.0	45.72009
515977.0	3710978.0	45.72009	516077.0	3710978.0	45.72009	516177.0	3710978.0	42.66904
516277.0	3710978.0	42.66904	516377.0	3710978.0	39.62103	516477.0	3710978.0	36.57912

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
515977.0	3710378.0	57.90907	516077.0	3710378.0	51.81915	516177.0	3710378.0	51.81915
516277.0	3710378.0	48.77114	516377.0	3710378.0	48.77114	516477.0	3710378.0	45.72009
516577.0	3710378.0	48.77114	516677.0	3710378.0	48.77114	516777.0	3710378.0	48.77114
516877.0	3710378.0	51.81915	516977.0	3710378.0	45.72009	517077.0	3710378.0	39.62103
517177.0	3710378.0	36.57912	515277.0	3712276.0	30.48006	515377.0	3712276.0	30.48006
515477.0	3712276.0	30.48006	515577.0	3712276.0	30.48006	515677.0	3712276.0	33.53112
515777.0	3712276.0	30.48006	515877.0	3712276.0	30.48006	515977.0	3712276.0	30.48006
516077.0	3712276.0	30.48006	516177.0	3712276.0	33.53112	516277.0	3712276.0	33.53112
516377.0	3712276.0	30.48006	516477.0	3712276.0	30.48006	516577.0	3712276.0	30.48006
516677.0	3712276.0	30.48006	516777.0	3712276.0	27.42900	516877.0	3712276.0	33.53112
516977.0	3712276.0	30.48006	517077.0	3712276.0	27.42900	517177.0	3712276.0	27.42900
515277.0	3712376.0	30.48006	515377.0	3712376.0	30.48006	515477.0	3712376.0	30.48006
515577.0	3712376.0	30.48006	515677.0	3712376.0	33.53112	515777.0	3712376.0	33.53112
515877.0	3712376.0	33.53112	515977.0	3712376.0	36.57912	516077.0	3712376.0	36.57912
516177.0	3712376.0	36.57912	516277.0	3712376.0	33.53112	516377.0	3712376.0	30.48006
516477.0	3712376.0	30.48006	516577.0	3712376.0	30.48006	516677.0	3712376.0	27.42900
516777.0	3712376.0	27.42900	516877.0	3712376.0	27.42900	516977.0	3712376.0	27.42900
517077.0	3712376.0	27.42900	517177.0	3712376.0	30.48006	515277.0	3712476.0	33.53112
515377.0	3712476.0	33.53112	515477.0	3712476.0	30.48006	515577.0	3712476.0	30.48006
515677.0	3712476.0	33.53112	515777.0	3712476.0	33.53112	515877.0	3712476.0	33.53112
515977.0	3712476.0	33.53112	516077.0	3712476.0	36.57912	516177.0	3712476.0	36.57912
516277.0	3712476.0	33.53112	516377.0	3712476.0	30.48006	516477.0	3712476.0	30.48006
516577.0	3712476.0	30.48006	516677.0	3712476.0	30.48006	516777.0	3712476.0	27.42900
516877.0	3712476.0	27.42900	516977.0	3712476.0	24.38100	517077.0	3712476.0	27.42900
517177.0	3712476.0	27.42900	515277.0	3712576.0	33.53112	515377.0	3712576.0	33.53112
515477.0	3712576.0	30.48006	515577.0	3712576.0	30.48006	515677.0	3712576.0	33.53112
515777.0	3712576.0	33.53112	515877.0	3712576.0	33.53112	515977.0	3712576.0	33.53112
516077.0	3712576.0	36.57912	516177.0	3712576.0	33.53112	516277.0	3712576.0	33.53112
516377.0	3712576.0	30.48006	516477.0	3712576.0	30.48006	516577.0	3712576.0	30.48006
516677.0	3712576.0	30.48006	516777.0	3712576.0	27.42900	516877.0	3712576.0	27.42900
516977.0	3712576.0	27.42900	517077.0	3712576.0	24.38100	517177.0	3712576.0	27.42900
515277.0	3712676.0	30.48006	515377.0	3712676.0	30.48006	515477.0	3712676.0	33.53112
515577.0	3712676.0	33.53112	515677.0	3712676.0	33.53112	515777.0	3712676.0	33.53112
515877.0	3712676.0	33.53112	515977.0	3712676.0	33.53112	516077.0	3712676.0	33.53112
516177.0	3712676.0	36.57912	516277.0	3712676.0	33.53112	516377.0	3712676.0	30.48006
516477.0	3712676.0	30.48006	516577.0	3712676.0	30.48006	516677.0	3712676.0	30.48006
516777.0	3712676.0	27.42900	516877.0	3712676.0	24.38100	516977.0	3712676.0	27.42900
517077.0	3712676.0	27.42900	517177.0	3712676.0	27.42900	515277.0	3712776.0	27.42900

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
515377.0	3712776.0	27.42900	515477.0	3712776.0	27.42900	515577.0	3712776.0	33.53112
515677.0	3712776.0	33.53112	515777.0	3712776.0	27.42900	515877.0	3712776.0	33.53112
515977.0	3712776.0	33.53112	516077.0	3712776.0	33.53112	516177.0	3712776.0	33.53112
516277.0	3712776.0	30.48006	516377.0	3712776.0	30.48006	516477.0	3712776.0	27.42900
516577.0	3712776.0	27.42900	516677.0	3712776.0	27.42900	516777.0	3712776.0	27.42900
516877.0	3712776.0	27.42900	516977.0	3712776.0	27.42900	517077.0	3712776.0	30.48006
517177.0	3712776.0	30.48006	515277.0	3712876.0	27.42900	515377.0	3712876.0	27.42900
515477.0	3712876.0	27.42900	515577.0	3712876.0	27.42900	515677.0	3712876.0	33.53112
515777.0	3712876.0	27.42900	515877.0	3712876.0	30.48006	515977.0	3712876.0	30.48006
516077.0	3712876.0	33.53112	516177.0	3712876.0	30.48006	516277.0	3712876.0	27.42900
516377.0	3712876.0	27.42900	516477.0	3712876.0	27.42900	516577.0	3712876.0	27.42900
516677.0	3712876.0	27.42900	516777.0	3712876.0	30.48006	516877.0	3712876.0	30.48006
516977.0	3712876.0	27.42900	517077.0	3712876.0	30.48006	517177.0	3712876.0	30.48006
515277.0	3712976.0	27.42900	515377.0	3712976.0	27.42900	515477.0	3712976.0	27.42900
515577.0	3712976.0	27.42900	515677.0	3712976.0	27.42900	515777.0	3712976.0	27.42900
515877.0	3712976.0	33.53112	515977.0	3712976.0	33.53112	516077.0	3712976.0	33.53112
516177.0	3712976.0	33.53112	516277.0	3712976.0	27.42900	516377.0	3712976.0	27.42900
516477.0	3712976.0	27.42900	516577.0	3712976.0	27.42900	516677.0	3712976.0	27.42900
516777.0	3712976.0	30.48006	516877.0	3712976.0	30.48006	516977.0	3712976.0	30.48006
517077.0	3712976.0	27.42900	517177.0	3712976.0	27.42900	515277.0	3713076.0	27.42900
515377.0	3713076.0	27.42900	515477.0	3713076.0	27.42900	515577.0	3713076.0	27.42900
515677.0	3713076.0	27.42900	515777.0	3713076.0	27.42900	515877.0	3713076.0	27.42900
515977.0	3713076.0	27.42900	516077.0	3713076.0	27.42900	516177.0	3713076.0	27.42900
516277.0	3713076.0	27.42900	516377.0	3713076.0	24.38100	516477.0	3713076.0	27.42900
516577.0	3713076.0	27.42900	516677.0	3713076.0	30.48006	516777.0	3713076.0	33.53112
516877.0	3713076.0	30.48006	516977.0	3713076.0	30.48006	517077.0	3713076.0	30.48006
517177.0	3713076.0	30.48006	515277.0	3713176.0	27.42900	515377.0	3713176.0	27.42900
515477.0	3713176.0	27.42900	515577.0	3713176.0	27.42900	515677.0	3713176.0	27.42900
515777.0	3713176.0	30.48006	515877.0	3713176.0	30.48006	515977.0	3713176.0	27.42900
516077.0	3713176.0	30.48006	516177.0	3713176.0	27.42900	516277.0	3713176.0	27.42900
516377.0	3713176.0	27.42900	516477.0	3713176.0	27.42900	516577.0	3713176.0	27.42900
516677.0	3713176.0	27.42900	516777.0	3713176.0	30.48006	516877.0	3713176.0	33.53112
516977.0	3713176.0	27.42900	517077.0	3713176.0	30.48006	517177.0	3713176.0	42.66904
515277.0	3712176.0	33.53112	515377.0	3712176.0	30.48006	515477.0	3712176.0	33.53112
515577.0	3712176.0	30.48006	515677.0	3712176.0	30.48006	515777.0	3712176.0	30.48006
515877.0	3712176.0	30.48006	515977.0	3712176.0	30.48006	516077.0	3712176.0	33.53112
516177.0	3712176.0	33.53112	515277.0	3712076.0	30.48006	515377.0	3712076.0	30.48006
515477.0	3712076.0	33.53112	515577.0	3712076.0	30.48006	515677.0	3712076.0	33.53112

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516276.8	3711378.0	9.53476	(10, 7)	516411.0	3712159.0	12.79269	(131,13)
516679.3	3711159.0	7.27246	(105,12)	516679.3	3711378.0	14.94608	(36,13)
517079.3	3711378.0	10.06011	(124,12)	517079.3	3711549.0	9.08953	(124,13)
517530.5	3711488.0	8.88793	(105,13)	517530.5	3711317.0	8.35960	(124,13)
518743.9	3711171.0	5.81719	(258,11)	518743.9	3711573.0	6.80807	(88, 8)
519914.6	3711573.0	5.08883	(94,17)	519914.6	3711171.0	4.95949	(114,14)
520304.8	3711171.0	5.00664	(105, 6)	520304.8	3711024.0	5.22811	(290,19)
520707.2	3711024.0	5.21580	(290,19)	520817.0	3711628.0	5.09996	(7, 5)
520402.3	3712176.0	5.09312	(310,18)	518707.2	3712176.0	6.01527	(223,10)
518707.2	3712030.0	5.97017	(186,13)	518280.4	3712030.0	7.13171	(254,12)
518280.4	3712250.0	6.51197	(130,12)	518060.9	3712335.0	7.88005	(94, 8)
518060.9	3712878.0	6.88245	(232,11)	517426.8	3712878.0	7.40872	(253,13)
517426.8	3713079.0	6.74705	(186, 9)	516993.9	3713079.0	7.45720	(153,12)
516993.9	3713280.0	7.72674	(253,15)	516603.7	3713280.0	8.51626	(131,13)
516603.7	3712884.0	8.45673	(131,13)	516372.0	3712884.0	10.03324	(127,14)
516372.0	3712798.0	9.97837	(127,14)	516256.2	3712774.0	12.04021	(120,11)
516276.8	3711378.0	9.53476	(10, 7)	516264.6	3712122.0	19.35901	(111,13)
516264.6	3711598.0	12.73881	(10,10)	516008.5	3712006.0	14.90008	(237,14)
516008.5	3712122.0	12.29960	(237,14)	516115.2	3712189.0	13.44750	(42,21)
516179.3	3712061.0	34.22960	(42,21)	516179.3	3712122.0	18.61232	(111,16)
516264.6	3712122.0	19.35901	(111,13)	515277.0	3711278.0	7.82041	(203,13)
515377.0	3711278.0	8.00615	(211,13)	515477.0	3711278.0	9.92952	(211,13)
515577.0	3711278.0	9.77564	(211,11)	515677.0	3711278.0	7.80179	(125,12)
515777.0	3711278.0	9.44799	(211,12)	515877.0	3711278.0	8.76437	(211,12)
515977.0	3711278.0	6.29517	(135,12)	516077.0	3711278.0	8.08642	(223,16)
516177.0	3711278.0	11.82561	(223,16)	516277.0	3711278.0	9.60877	(10, 7)
516377.0	3711278.0	13.52954	(166,18)	516477.0	3711278.0	15.66563	(36,16)
516577.0	3711278.0	9.13056	(36,15)	516677.0	3711278.0	9.68834	(105,12)
516777.0	3711278.0	9.62099	(96,12)	516877.0	3711278.0	8.66448	(209,11)
516977.0	3711278.0	7.92668	(209,11)	517077.0	3711278.0	9.10203	(124,12)
517177.0	3711278.0	10.20716	(124,12)	515277.0	3711178.0	8.87617	(211,13)
515377.0	3711178.0	10.57820	(211,13)	515477.0	3711178.0	9.82082	(211,11)
515577.0	3711178.0	8.89521	(125,12)	515677.0	3711178.0	9.87744	(211,12)
515777.0	3711178.0	9.52744	(211,12)	515877.0	3711178.0	7.57216	(188,14)
515977.0	3711178.0	7.74173	(135,12)	516077.0	3711178.0	9.68383	(223,16)
516177.0	3711178.0	8.02643	(223,16)	516277.0	3711178.0	7.66977	(151,11)
516377.0	3711178.0	10.80390	(166,18)	516477.0	3711178.0	7.86729	(36,16)
516577.0	3711178.0	6.00842	(167,13)	516677.0	3711178.0	7.54908	(105,12)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516777.0	3711178.0	8.28503	(36,14)	516877.0	3711178.0	8.10747	(96,12)
516977.0	3711178.0	8.21912	(209,11)	517077.0	3711178.0	7.47645	(105,11)
517177.0	3711178.0	8.81008	(105,11)	515277.0	3711078.0	10.50198	(211,13)
515377.0	3711078.0	9.91185	(211,11)	515477.0	3711078.0	8.65512	(125,12)
515577.0	3711078.0	9.69062	(211,12)	515677.0	3711078.0	10.96487	(211,12)
515777.0	3711078.0	6.88680	(211,12)	515877.0	3711078.0	7.58009	(212,11)
515977.0	3711078.0	7.68772	(135,12)	516077.0	3711078.0	9.60287	(223,16)
516177.0	3711078.0	8.78160	(209,12)	516277.0	3711078.0	7.88373	(204,14)
516377.0	3711078.0	9.63961	(166,18)	516477.0	3711078.0	7.85077	(167,13)
516577.0	3711078.0	8.08577	(36,16)	516677.0	3711078.0	5.56443	(100,13)
516777.0	3711078.0	8.35300	(105,12)	516877.0	3711078.0	8.46513	(36,14)
516977.0	3711078.0	8.50507	(36,12)	517077.0	3711078.0	7.48972	(209,11)
517177.0	3711078.0	7.37913	(105,11)	515277.0	3710978.0	9.60217	(211,11)
515377.0	3710978.0	8.07632	(150,12)	515477.0	3710978.0	8.36884	(211,12)
515577.0	3710978.0	10.42812	(211,12)	515677.0	3710978.0	8.25854	(211,12)
515777.0	3710978.0	6.99198	(212,11)	515877.0	3710978.0	9.38052	(211,14)
515977.0	3710978.0	8.58867	(223,16)	516077.0	3710978.0	11.49816	(223,16)
516177.0	3710978.0	9.23675	(209,12)	516277.0	3710978.0	8.06304	(227,12)
516377.0	3710978.0	9.92363	(166,18)	516477.0	3710978.0	7.29323	(167,13)
516577.0	3710978.0	7.61506	(36,16)	516677.0	3710978.0	7.11484	(100,13)
516777.0	3710978.0	7.86495	(105,12)	516877.0	3710978.0	9.16534	(105,12)
516977.0	3710978.0	9.79999	(36,13)	517077.0	3710978.0	8.21115	(36,12)
517177.0	3710978.0	7.18303	(88,18)	515277.0	3710878.0	8.53283	(150,12)
515377.0	3710878.0	8.26823	(211,12)	515477.0	3710878.0	9.68067	(211,12)
515577.0	3710878.0	8.56679	(211,12)	515677.0	3710878.0	7.20837	(238,12)
515777.0	3710878.0	9.56056	(211,14)	515877.0	3710878.0	10.27231	(211,14)
515977.0	3710878.0	10.94579	(223,16)	516077.0	3710878.0	12.10578	(223,16)
516177.0	3710878.0	9.10827	(209,12)	516277.0	3710878.0	8.27024	(227,12)
516377.0	3710878.0	10.04212	(166,18)	516477.0	3710878.0	7.57581	(166,18)
516577.0	3710878.0	10.26349	(36,16)	516677.0	3710878.0	7.98084	(100,13)
516777.0	3710878.0	9.43720	(36,15)	516877.0	3710878.0	9.64604	(105,12)
516977.0	3710878.0	10.67007	(36,14)	517077.0	3710878.0	9.07974	(96,12)
517177.0	3710878.0	7.66831	(36,12)	515277.0	3710778.0	8.22973	(211,12)
515377.0	3710778.0	9.21444	(211,12)	515477.0	3710778.0	9.16342	(211,12)
515577.0	3710778.0	7.22391	(238,12)	515677.0	3710778.0	7.29375	(212,15)
515777.0	3710778.0	11.43001	(211,14)	515877.0	3710778.0	9.69086	(211,14)
515977.0	3710778.0	12.23545	(223,16)	516077.0	3710778.0	11.91805	(215,16)
516177.0	3710778.0	8.43028	(209,12)	516277.0	3710778.0	9.20383	(238,14)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516377.0	3710778.0	10.48379	(166,18)	516477.0	3710778.0	9.12890	(166,18)
516577.0	3710778.0	10.31994	(36,16)	516677.0	3710778.0	11.82285	(36,16)
516777.0	3710778.0	9.05103	(129,12)	516877.0	3710778.0	11.70849	(36,15)
516977.0	3710778.0	10.84148	(105,12)	517077.0	3710778.0	13.16622	(36,14)
517177.0	3710778.0	8.87129	(36,12)	515277.0	3710678.0	8.91090	(211,12)
515377.0	3710678.0	8.71448	(211,12)	515477.0	3710678.0	8.09385	(248,10)
515577.0	3710678.0	6.83844	(212,15)	515677.0	3710678.0	8.55421	(211,14)
515777.0	3710678.0	10.27522	(211,14)	515877.0	3710678.0	9.18882	(223,16)
515977.0	3710678.0	12.51477	(223,16)	516077.0	3710678.0	11.17454	(215,16)
516177.0	3710678.0	8.02068	(36,19)	516277.0	3710678.0	9.45862	(238,14)
516377.0	3710678.0	10.61234	(166,18)	516477.0	3710678.0	9.38945	(166,18)
516577.0	3710678.0	9.49321	(150,11)	516677.0	3710678.0	13.68009	(36,16)
516777.0	3710678.0	8.85474	(58,18)	516877.0	3710678.0	10.90467	(36,15)
516977.0	3710678.0	9.65055	(105,12)	517077.0	3710678.0	10.05588	(36,14)
517177.0	3710678.0	9.58428	(36,13)	515277.0	3710578.0	8.64711	(211,12)
515377.0	3710578.0	8.15429	(248,10)	515477.0	3710578.0	8.20331	(238,12)
515577.0	3710578.0	7.57844	(248,16)	515677.0	3710578.0	9.77794	(211,14)
515777.0	3710578.0	10.12603	(128,22)	515877.0	3710578.0	10.45200	(223,16)
515977.0	3710578.0	11.62675	(223,16)	516077.0	3710578.0	8.95073	(215,16)
516177.0	3710578.0	9.53730	(36,19)	516277.0	3710578.0	10.44087	(306,16)
516377.0	3710578.0	11.01495	(306,16)	516477.0	3710578.0	10.18541	(166,18)
516577.0	3710578.0	9.99297	(150,11)	516677.0	3710578.0	14.00313	(36,16)
516777.0	3710578.0	7.97223	(129,15)	516877.0	3710578.0	8.43606	(129,12)
516977.0	3710578.0	8.38160	(36,15)	517077.0	3710578.0	8.77346	(105,12)
517177.0	3710578.0	9.15498	(36,14)	515277.0	3710478.0	7.92839	(248,10)
515377.0	3710478.0	8.46890	(238,12)	515477.0	3710478.0	8.22416	(248,16)
515577.0	3710478.0	9.01817	(211,14)	515677.0	3710478.0	10.01012	(211,14)
515777.0	3710478.0	9.98028	(128,22)	515877.0	3710478.0	10.95707	(223,16)
515977.0	3710478.0	12.56617	(215,16)	516077.0	3710478.0	8.96449	(10,10)
516177.0	3710478.0	10.85662	(36,19)	516277.0	3710478.0	11.53619	(306,16)
516377.0	3710478.0	11.03771	(306,16)	516477.0	3710478.0	10.46823	(10, 6)
516577.0	3710478.0	9.67389	(150,11)	516677.0	3710478.0	13.17532	(36,16)
516777.0	3710478.0	9.39469	(36,16)	516877.0	3710478.0	7.71586	(129,12)
516977.0	3710478.0	9.79140	(36,15)	517077.0	3710478.0	7.98282	(105,12)
517177.0	3710478.0	7.81857	(105,12)	515277.0	3710378.0	7.83457	(238,12)
515377.0	3710378.0	7.44232	(248,16)	515477.0	3710378.0	7.51949	(248,16)
515577.0	3710378.0	9.52112	(211,14)	515677.0	3710378.0	10.45188	(128,22)
515777.0	3710378.0	9.58367	(200,14)	515877.0	3710378.0	10.65484	(223,16)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515977.0	3710378.0	12.60108	(215,16)	516077.0	3710378.0	7.61834	(66,16)
516177.0	3710378.0	10.07992	(10, 7)	516277.0	3710378.0	10.43524	(306,16)
516377.0	3710378.0	10.03425	(306,16)	516477.0	3710378.0	9.02356	(166,18)
516577.0	3710378.0	8.82597	(150,11)	516677.0	3710378.0	10.77670	(36,16)
516777.0	3710378.0	10.83315	(36,16)	516877.0	3710378.0	9.10554	(58,18)
516977.0	3710378.0	8.24753	(129,12)	517077.0	3710378.0	8.30559	(36,15)
517177.0	3710378.0	7.63055	(105,12)	515277.0	3712276.0	5.88034	(197,13)
515377.0	3712276.0	7.26791	(237,14)	515477.0	3712276.0	8.63053	(237,14)
515577.0	3712276.0	9.44573	(237,14)	515677.0	3712276.0	10.24923	(237,14)
515777.0	3712276.0	8.20209	(237,14)	515877.0	3712276.0	5.82471	(218,14)
515977.0	3712276.0	9.42250	(126,12)	516077.0	3712276.0	8.95656	(116,13)
516177.0	3712276.0	12.26405	(132,14)	516277.0	3712276.0	24.04749	(111,13)
516377.0	3712276.0	16.57505	(120,12)	516477.0	3712276.0	7.89658	(290,13)
516577.0	3712276.0	4.50896	(41,15)	516677.0	3712276.0	6.94246	(42,16)
516777.0	3712276.0	5.88638	(175,13)	516877.0	3712276.0	8.05698	(217,14)
516977.0	3712276.0	7.44574	(189,13)	517077.0	3712276.0	7.59174	(189,13)
517177.0	3712276.0	7.84861	(99,13)	515277.0	3712376.0	7.27658	(237,14)
515377.0	3712376.0	8.20189	(125,11)	515477.0	3712376.0	9.04927	(125,11)
515577.0	3712376.0	9.12547	(125,11)	515677.0	3712376.0	8.22020	(202,13)
515777.0	3712376.0	8.66613	(218,14)	515877.0	3712376.0	9.28441	(126,12)
515977.0	3712376.0	10.22928	(42,21)	516077.0	3712376.0	13.56509	(116,13)
516177.0	3712376.0	10.97443	(111,15)	516277.0	3712376.0	20.98162	(120,11)
516377.0	3712376.0	14.54732	(120,12)	516477.0	3712376.0	8.43657	(131,13)
516577.0	3712376.0	5.25318	(49,10)	516677.0	3712376.0	4.24935	(175,13)
516777.0	3712376.0	7.55918	(175,13)	516877.0	3712376.0	8.44428	(175,13)
516977.0	3712376.0	8.02589	(217,14)	517077.0	3712376.0	7.16475	(189,12)
517177.0	3712376.0	6.67029	(189,13)	515277.0	3712476.0	8.00715	(125,11)
515377.0	3712476.0	8.76051	(125,11)	515477.0	3712476.0	9.09659	(125,11)
515577.0	3712476.0	8.64402	(125,11)	515677.0	3712476.0	7.60083	(237,13)
515777.0	3712476.0	8.19585	(226,11)	515877.0	3712476.0	7.51540	(42,21)
515977.0	3712476.0	9.61445	(116,13)	516077.0	3712476.0	11.93729	(132,14)
516177.0	3712476.0	10.15633	(111,13)	516277.0	3712476.0	18.30112	(120,11)
516377.0	3712476.0	12.28441	(120,12)	516477.0	3712476.0	9.56212	(131,13)
516577.0	3712476.0	7.12479	(165,11)	516677.0	3712476.0	6.32415	(165,11)
516777.0	3712476.0	6.71911	(175,13)	516877.0	3712476.0	7.92353	(175,13)
516977.0	3712476.0	7.39102	(175,13)	517077.0	3712476.0	6.85434	(189,12)
517177.0	3712476.0	6.45319	(198,14)	515277.0	3712576.0	8.09032	(125,11)
515377.0	3712576.0	8.29221	(125,11)	515477.0	3712576.0	8.02270	(125,11)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
517177.0	3712876.0	6.45368	(130,14)	515277.0	3712976.0	6.81418	(126,12)
515377.0	3712976.0	7.85314	(126,12)	515477.0	3712976.0	6.90573	(126,12)
515577.0	3712976.0	5.96350	(156,15)	515677.0	3712976.0	7.47673	(116,13)
515777.0	3712976.0	8.15763	(116,13)	515877.0	3712976.0	8.89491	(132,14)
515977.0	3712976.0	6.98906	(255,12)	516077.0	3712976.0	8.13838	(126,14)
516177.0	3712976.0	10.52999	(111,13)	516277.0	3712976.0	9.59228	(120,11)
516377.0	3712976.0	8.73221	(127,14)	516477.0	3712976.0	9.26359	(120,12)
516577.0	3712976.0	8.23638	(131,13)	516677.0	3712976.0	7.12123	(175,11)
516777.0	3712976.0	7.15079	(134,13)	516877.0	3712976.0	6.59815	(174,14)
516977.0	3712976.0	6.89842	(174,14)	517077.0	3712976.0	6.53133	(173,13)
517177.0	3712976.0	6.47067	(130,14)	515277.0	3713076.0	7.57199	(126,12)
515377.0	3713076.0	7.07594	(126,12)	515477.0	3713076.0	6.15415	(234,15)
515577.0	3713076.0	6.29318	(116,13)	515677.0	3713076.0	8.18313	(116,13)
515777.0	3713076.0	8.16681	(132,14)	515877.0	3713076.0	7.35693	(153,17)
515977.0	3713076.0	6.82925	(255,12)	516077.0	3713076.0	7.80306	(126,14)
516177.0	3713076.0	9.13865	(111,13)	516277.0	3713076.0	8.93793	(120,11)
516377.0	3713076.0	8.16828	(127,14)	516477.0	3713076.0	8.94780	(120,12)
516577.0	3713076.0	8.19530	(131,13)	516677.0	3713076.0	7.23278	(131,13)
516777.0	3713076.0	7.14553	(134,13)	516877.0	3713076.0	6.77489	(253,15)
516977.0	3713076.0	6.82781	(153,12)	517077.0	3713076.0	6.66432	(173,13)
517177.0	3713076.0	7.12313	(253,14)	515277.0	3713176.0	7.02816	(126,12)
515377.0	3713176.0	6.28149	(234,15)	515477.0	3713176.0	6.10658	(234,15)
515577.0	3713176.0	7.42508	(116,13)	515677.0	3713176.0	7.84263	(116,13)
515777.0	3713176.0	8.31496	(132,14)	515877.0	3713176.0	7.08529	(146,13)
515977.0	3713176.0	6.79255	(255,12)	516077.0	3713176.0	8.46055	(126,14)
516177.0	3713176.0	8.58718	(111,13)	516277.0	3713176.0	8.60181	(127,11)
516377.0	3713176.0	8.37792	(127,14)	516477.0	3713176.0	8.47445	(127,12)
516577.0	3713176.0	7.83412	(131,13)	516677.0	3713176.0	7.53826	(131,13)
516777.0	3713176.0	6.78675	(175,11)	516877.0	3713176.0	6.74944	(253,15)
516977.0	3713176.0	6.71692	(253,15)	517077.0	3713176.0	7.11221	(153,12)
517177.0	3713176.0	7.92513	(253,14)	515277.0	3712176.0	6.33849	(226,12)
515377.0	3712176.0	6.54782	(197,13)	515477.0	3712176.0	6.71396	(197,13)
515577.0	3712176.0	8.12110	(237,14)	515677.0	3712176.0	10.76632	(237,14)
515777.0	3712176.0	12.84363	(237,14)	515877.0	3712176.0	12.17165	(237,14)
515977.0	3712176.0	6.90359	(237,14)	516077.0	3712176.0	17.22855	(42,21)
516177.0	3712176.0	15.03437	(116,13)	515277.0	3712076.0	7.26108	(226,12)
515377.0	3712076.0	6.96502	(226,12)	515477.0	3712076.0	6.58311	(226,12)
515577.0	3712076.0	5.13159	(125,14)	515677.0	3712076.0	6.43218	(237,14)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515777.0	3712076.0	10.11544	(237,14)	515877.0	3712076.0	15.04806	(237,14)
515977.0	3712076.0	18.34294	(237,14)	516077.0	3712076.0	9.20169	(237,14)
516177.0	3712076.0	29.29797	(42,21)	515277.0	3711976.0	6.80432	(202,15)
515377.0	3711976.0	6.54873	(191,12)	515477.0	3711976.0	7.16889	(125,14)
515577.0	3711976.0	7.59202	(125,14)	515677.0	3711976.0	6.59044	(125,14)
515777.0	3711976.0	5.86294	(69,23)	515877.0	3711976.0	5.83742	(69,23)
515977.0	3711976.0	7.48838	(237,14)	516077.0	3711976.0	13.34960	(237,14)
516177.0	3711976.0	10.03343	(159,20)	515277.0	3711876.0	7.92121	(188,17)
515377.0	3711876.0	7.10352	(188,17)	515477.0	3711876.0	7.66975	(222,14)
515577.0	3711876.0	8.28848	(125,14)	515677.0	3711876.0	7.25026	(125,14)
515777.0	3711876.0	6.67747	(212,13)	515877.0	3711876.0	7.90450	(212,13)
515977.0	3711876.0	9.45993	(212,13)	516077.0	3711876.0	11.36176	(212,13)
516177.0	3711876.0	18.84953	(294,18)	515277.0	3711776.0	9.13877	(212,13)
515377.0	3711776.0	8.47488	(212,13)	515477.0	3711776.0	8.03795	(212,13)
515577.0	3711776.0	8.80211	(212,13)	515677.0	3711776.0	9.31069	(212,13)
515777.0	3711776.0	9.14648	(212,13)	515877.0	3711776.0	7.62530	(212,13)
515977.0	3711776.0	7.57365	(226,20)	516077.0	3711776.0	6.73502	(339,18)
516177.0	3711776.0	14.00455	(211,13)	515277.0	3711676.0	8.54379	(212,13)
515377.0	3711676.0	7.41575	(136,14)	515477.0	3711676.0	7.37258	(203,11)
515577.0	3711676.0	7.67367	(249,12)	515677.0	3711676.0	6.75500	(249,12)
515777.0	3711676.0	3.69909	(226,20)	515877.0	3711676.0	3.43264	(339,18)
515977.0	3711676.0	9.27048	(211,13)	516077.0	3711676.0	12.69253	(211,11)
516177.0	3711676.0	13.29661	(211,12)	515277.0	3711576.0	8.68568	(237,16)
515377.0	3711576.0	8.02143	(237,16)	515477.0	3711576.0	6.48870	(237,16)
515577.0	3711576.0	6.14126	(229,13)	515677.0	3711576.0	7.32940	(206,14)
515777.0	3711576.0	7.00752	(206,14)	515877.0	3711576.0	11.99721	(211,13)
515977.0	3711576.0	12.16503	(211,11)	516077.0	3711576.0	14.44147	(211,12)
516177.0	3711576.0	13.07332	(128,22)	515277.0	3711476.0	6.71684	(263,15)
515377.0	3711476.0	6.71753	(137,13)	515477.0	3711476.0	7.22498	(203,13)
515577.0	3711476.0	7.37206	(206,14)	515677.0	3711476.0	8.65255	(206,14)
515777.0	3711476.0	11.68217	(211,13)	515877.0	3711476.0	10.76753	(211,11)
515977.0	3711476.0	14.24221	(211,12)	516077.0	3711476.0	6.00742	(321,15)
516177.0	3711476.0	15.07380	(223,16)	511277.0	3709378.0	11.47765	(206, 6)
512277.0	3709378.0	11.65422	(293,19)	513277.0	3709378.0	10.75517	(150,22)
514277.0	3709378.0	10.42605	(211,20)	515277.0	3709378.0	10.13018	(211, 5)
516277.0	3709378.0	8.14438	(306,16)	517277.0	3709378.0	6.23817	(59,13)
518277.0	3709378.0	10.26326	(303, 3)	519277.0	3709378.0	4.75193	(105,14)
520277.0	3709378.0	4.34829	(80,24)	521277.0	3709378.0	5.38807	(236, 4)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522277.0	3709378.0	4.87062	(28,11)	511277.0	3708378.0	9.71920	(283,24)
512277.0	3708378.0	8.29698	(71, 5)	513277.0	3708378.0	10.90228	(71, 6)
514277.0	3708378.0	11.29545	(261, 2)	515277.0	3708378.0	7.98301	(248, 4)
516277.0	3708378.0	5.68304	(176, 7)	517277.0	3708378.0	10.98195	(356,18)
518277.0	3708378.0	8.21357	(66,19)	519277.0	3708378.0	4.85477	(6,12)
520277.0	3708378.0	4.68905	(315,18)	521277.0	3708378.0	4.78518	(5, 8)
522277.0	3708378.0	5.12307	(114,19)	511277.0	3707378.0	10.31865	(102, 2)
512277.0	3707378.0	11.51895	(150,21)	513277.0	3707378.0	11.07583	(326,24)
514277.0	3707378.0	9.93513	(70,22)	515277.0	3707378.0	11.81236	(200, 6)
516277.0	3707378.0	7.50743	(19,19)	517277.0	3707378.0	11.06894	(291, 1)
518277.0	3707378.0	7.68244	(90, 5)	519277.0	3707378.0	4.73228	(6,11)
520277.0	3707378.0	4.40460	(6,12)	521277.0	3707378.0	4.38926	(113,23)
522277.0	3707378.0	4.84970	(357, 8)	511277.0	3706378.0	10.74934	(150,21)
512277.0	3706378.0	11.25357	(211,22)	513277.0	3706378.0	11.46405	(261, 3)
514277.0	3706378.0	10.88588	(71, 1)	515277.0	3706378.0	10.86820	(327, 4)
516277.0	3706378.0	7.36157	(19,19)	517277.0	3706378.0	8.20927	(13,19)
518277.0	3706378.0	10.09020	(209,24)	519277.0	3706378.0	5.73513	(66,19)
520277.0	3706378.0	5.21231	(6,11)	521277.0	3706378.0	4.68942	(50,24)
522277.0	3706378.0	4.14891	(113,23)	523277.0	3706378.0	4.56777	(290,22)
522402.0	3710378.0	4.50728	(225, 4)	522402.0	3711378.0	5.12122	(243,22)
522402.0	3712378.0	5.25269	(310,18)	511277.0	3714176.0	6.35392	(228,19)
512277.0	3714176.0	6.07151	(235,20)	513277.0	3714176.0	4.71256	(251,19)
514277.0	3714176.0	5.23372	(98,16)	515277.0	3714176.0	7.86551	(98,17)
516277.0	3714176.0	9.30011	(292,15)	517277.0	3714176.0	10.50305	(290,13)
518277.0	3714176.0	5.08048	(280,13)	519277.0	3714176.0	5.47057	(343,10)
520277.0	3714176.0	4.87234	(246,22)	521277.0	3714176.0	4.96114	(172, 7)
522277.0	3714176.0	4.85528	(247,13)	511277.0	3715176.0	8.24079	(139, 7)
512277.0	3715176.0	12.03035	(197,22)	513277.0	3715176.0	6.62041	(179, 1)
514277.0	3715176.0	9.47783	(221,24)	515277.0	3715176.0	10.18469	(199, 2)
516277.0	3715176.0	6.11871	(78,12)	517277.0	3715176.0	5.05590	(292,24)
518277.0	3715176.0	4.42290	(313,15)	519277.0	3715176.0	4.22563	(169, 2)
520277.0	3715176.0	4.20960	(169,20)	521277.0	3715176.0	4.55805	(44,18)
522277.0	3715176.0	5.94479	(231, 7)	511277.0	3716176.0	11.89200	(231, 1)
512277.0	3716176.0	7.11592	(301,18)	513277.0	3716176.0	10.05139	(191, 7)
514277.0	3716176.0	11.46916	(239,24)	515277.0	3716176.0	11.88348	(234,23)
516277.0	3716176.0	4.25752	(116, 7)	517277.0	3716176.0	5.16729	(185, 7)
518277.0	3716176.0	4.99354	(240,19)	519277.0	3716176.0	5.03461	(197, 7)
520277.0	3716176.0	5.75471	(181, 2)	521277.0	3716176.0	5.02599	(209, 7)

*** I. P. - CAMDEN - CO SCREEN - SNV/LONG 1984 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522277.0	3716176.0	5.40013	(67,19)	511277.0	3717176.0	9.40337	(301,18)
512277.0	3717176.0	10.76004	(269, 7)	513277.0	3717176.0	12.03216	(289,19)
514277.0	3717176.0	12.00927	(244,21)	515277.0	3717176.0	7.86735	(221,21)
516277.0	3717176.0	5.14101	(154,20)	517277.0	3717176.0	5.01735	(185, 7)
518277.0	3717176.0	5.68873	(163,21)	519277.0	3717176.0	6.41736	(173,21)
520277.0	3717176.0	5.40978	(175, 6)	521277.0	3717176.0	5.07427	(181, 2)
522277.0	3717176.0	5.24644	(81,19)	511277.0	3713176.0	6.95540	(182,20)
512277.0	3713176.0	5.75890	(178,22)	513277.0	3713176.0	5.88212	(195,14)
514277.0	3713176.0	6.35303	(328,11)	511277.0	3712176.0	5.94869	(236,19)
512277.0	3712176.0	6.42956	(236,19)	513277.0	3712176.0	5.45445	(231,19)
514277.0	3712176.0	6.57841	(214,14)	511277.0	3711176.0	8.81532	(178,20)
512277.0	3711176.0	11.28753	(182, 6)	513277.0	3711176.0	5.48911	(177,20)
514277.0	3711176.0	7.20921	(226,20)	511277.0	3709378.0	11.47765	(206, 6)
512277.0	3709378.0	11.65422	(293,19)	513277.0	3709378.0	10.75517	(150,22)
514277.0	3709378.0	10.42605	(211,20)	515277.0	3709378.0	10.13018	(211, 5)
516277.0	3709378.0	8.14438	(306,16)	517277.0	3709378.0	6.23817	(59,13)
518277.0	3709378.0	10.26326	(303, 3)	519277.0	3709378.0	4.75193	(105,14)
520277.0	3709378.0	4.34829	(80,24)	521277.0	3709378.0	5.38807	(236, 4)
522277.0	3709378.0	4.87062	(28,11)	511277.0	3708378.0	9.71920	(283,24)
512277.0	3708378.0	8.29698	(71, 5)	513277.0	3708378.0	10.90228	(71, 6)
514277.0	3708378.0	11.29545	(261, 2)	515277.0	3708378.0	7.98301	(248, 4)
516277.0	3708378.0	5.68304	(176, 7)	517277.0	3708378.0	10.98195	(356,18)
518277.0	3708378.0	8.21357	(66,19)	519277.0	3708378.0	4.85477	(6,12)
520277.0	3708378.0	4.68905	(315,18)	521277.0	3708378.0	4.78518	(5, 8)
522277.0	3708378.0	5.12307	(114,19)	511277.0	3707378.0	10.31865	(102, 2)
512277.0	3707378.0	11.51895	(150,21)	513277.0	3707378.0	11.07583	(326,24)
514277.0	3707378.0	9.93513	(70,22)	515277.0	3707378.0	11.81236	(200, 6)
516277.0	3707378.0	7.50743	(19,19)	517277.0	3707378.0	11.06894	(291, 1)
518277.0	3707378.0	7.68244	(90, 5)	519277.0	3707378.0	4.73228	(6,11)
520277.0	3707378.0	4.40460	(6,12)	521277.0	3707378.0	4.38926	(113,23)
522277.0	3707378.0	4.84970	(357, 8)	511277.0	3706378.0	10.74934	(150,21)
512277.0	3706378.0	11.25357	(211,22)	513277.0	3706378.0	11.46405	(261, 3)
514277.0	3706378.0	10.88588	(71, 1)	515277.0	3706378.0	10.86820	(327, 4)
516277.0	3706378.0	7.36157	(19,19)	517277.0	3706378.0	8.20927	(13,19)
518277.0	3706378.0	10.09020	(209,24)	519277.0	3706378.0	5.73513	(66,19)
520277.0	3706378.0	5.21231	(6,11)	521277.0	3706378.0	4.68942	(50,24)
522277.0	3706378.0	4.14891	(113,23)	523277.0	3706378.0	4.56777	(290,22)
522402.0	3710378.0	4.50728	(225, 4)	522402.0	3711378.0	5.12122	(243,22)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522402.0	3712378.0	5.25269	(310,18)	511277.0	3714176.0	6.35392	(228,19)
512277.0	3714176.0	6.07151	(235,20)	513277.0	3714176.0	4.71256	(251,19)
514277.0	3714176.0	5.23372	(98,16)	515277.0	3714176.0	7.86551	(98,17)
516277.0	3714176.0	9.30011	(292,15)	517277.0	3714176.0	10.50305	(290,13)
518277.0	3714176.0	5.08048	(280,13)	519277.0	3714176.0	5.47057	(343,10)
520277.0	3714176.0	4.87234	(246,22)	521277.0	3714176.0	4.96114	(172, 7)
522277.0	3714176.0	4.85528	(247,13)	511277.0	3715176.0	8.24079	(139, 7)
512277.0	3715176.0	12.03035	(197,22)	513277.0	3715176.0	6.62041	(179, 1)
514277.0	3715176.0	9.47783	(221,24)	515277.0	3715176.0	10.18469	(199, 2)
516277.0	3715176.0	6.11871	(78,12)	517277.0	3715176.0	5.05590	(292,24)
518277.0	3715176.0	4.42290	(313,15)	519277.0	3715176.0	4.22563	(169, 2)
520277.0	3715176.0	4.20960	(169,20)	521277.0	3715176.0	4.55805	(44,18)
522277.0	3715176.0	5.94479	(231, 7)	511277.0	3716176.0	11.89200	(231, 1)
512277.0	3716176.0	7.11592	(301,18)	513277.0	3716176.0	10.05139	(191, 7)
514277.0	3716176.0	11.46916	(239,24)	515277.0	3716176.0	11.88348	(234,23)
516277.0	3716176.0	4.25752	(116, 7)	517277.0	3716176.0	5.16729	(185, 7)
518277.0	3716176.0	4.99354	(240,19)	519277.0	3716176.0	5.03461	(197, 7)
520277.0	3716176.0	5.75471	(181, 2)	521277.0	3716176.0	5.02599	(209, 7)
522277.0	3716176.0	5.40013	(67,19)	511277.0	3717176.0	9.40337	(301,18)
512277.0	3717176.0	10.76004	(269, 7)	513277.0	3717176.0	12.03216	(289,19)
514277.0	3717176.0	12.00927	(244,21)	515277.0	3717176.0	7.86735	(221,21)
516277.0	3717176.0	5.14101	(154,20)	517277.0	3717176.0	5.01735	(185, 7)
518277.0	3717176.0	5.68873	(163,21)	519277.0	3717176.0	6.41736	(173,21)
520277.0	3717176.0	5.40978	(175, 6)	521277.0	3717176.0	5.07427	(181, 2)
522277.0	3717176.0	5.24644	(81,19)	511277.0	3713176.0	6.95540	(182,20)
512277.0	3713176.0	5.75890	(178,22)	513277.0	3713176.0	5.88212	(195,14)
514277.0	3713176.0	6.35303	(328,11)	511277.0	3712176.0	5.94869	(236,19)
512277.0	3712176.0	6.42956	(236,19)	513277.0	3712176.0	5.45445	(231,19)
514277.0	3712176.0	6.57841	(214,14)	511277.0	3711176.0	8.81532	(178,20)
512277.0	3711176.0	11.28753	(182, 6)	513277.0	3711176.0	5.48911	(177,20)
514277.0	3711176.0	7.20921	(226,20)	516500.0	3708100.0	10.46992	(272, 2)
518100.0	3709350.0	10.41803	(270, 1)	514500.0	3708800.0	11.04123	(215,20)
517300.0	3714400.0	10.48114	(199, 4)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
517177.0	3712876.0	2.62251	(235, 2)	515277.0	3712976.0	2.50128	(251, 2)
515377.0	3712976.0	2.39266	(98, 2)	515477.0	3712976.0	2.05524	(98, 2)
515577.0	3712976.0	1.59680	(118, 2)	515677.0	3712976.0	1.46093	(233, 2)
515777.0	3712976.0	1.75250	(132, 2)	515877.0	3712976.0	2.11518	(250, 2)
515977.0	3712976.0	2.54351	(250, 2)	516077.0	3712976.0	3.04888	(153, 2)
516177.0	3712976.0	3.77903	(111, 2)	516277.0	3712976.0	3.86896	(127, 2)
516377.0	3712976.0	4.42353	(127, 2)	516477.0	3712976.0	3.34396	(127, 2)
516577.0	3712976.0	2.42316	(154, 2)	516677.0	3712976.0	2.19019	(154, 2)
516777.0	3712976.0	1.99428	(154, 2)	516877.0	3712976.0	2.11866	(174, 2)
516977.0	3712976.0	2.06250C	(190, 2)	517077.0	3712976.0	2.14922	(235, 2)
517177.0	3712976.0	2.59847	(235, 2)	515277.0	3713076.0	2.53505	(98, 2)
515377.0	3713076.0	2.35386	(98, 2)	515477.0	3713076.0	1.68580	(118, 2)
515577.0	3713076.0	1.47253	(250, 2)	515677.0	3713076.0	1.74968	(233, 2)
515777.0	3713076.0	1.91572	(132, 2)	515877.0	3713076.0	2.15876	(250, 2)
515977.0	3713076.0	2.52104	(250, 2)	516077.0	3713076.0	3.08056	(153, 2)
516177.0	3713076.0	3.34056	(153, 2)	516277.0	3713076.0	3.97422	(127, 2)
516377.0	3713076.0	4.22228	(127, 2)	516477.0	3713076.0	3.65693	(127, 2)
516577.0	3713076.0	2.52399	(154, 2)	516677.0	3713076.0	2.33584	(154, 2)
516777.0	3713076.0	2.13550	(154, 2)	516877.0	3713076.0	2.09974	(174, 2)
516977.0	3713076.0	2.16254	(174, 2)	517077.0	3713076.0	2.09489C	(190, 2)
517177.0	3713076.0	2.53406	(235, 2)	515277.0	3713176.0	2.58974	(98, 2)
515377.0	3713176.0	1.83173	(98, 2)	515477.0	3713176.0	1.59531	(118, 2)
515577.0	3713176.0	1.59387	(233, 2)	515677.0	3713176.0	1.83578	(233, 2)
515777.0	3713176.0	2.05811	(312, 2)	515877.0	3713176.0	2.33996	(250, 2)
515977.0	3713176.0	2.62178	(153, 2)	516077.0	3713176.0	3.51511	(153, 2)
516177.0	3713176.0	3.53071	(153, 2)	516277.0	3713176.0	4.01257	(127, 2)
516377.0	3713176.0	4.53092	(127, 2)	516477.0	3713176.0	3.86998	(127, 2)
516577.0	3713176.0	2.56916	(154, 2)	516677.0	3713176.0	2.35719	(171, 2)
516777.0	3713176.0	2.14427	(154, 2)	516877.0	3713176.0	2.03682	(174, 2)
516977.0	3713176.0	2.12682	(174, 2)	517077.0	3713176.0	2.07294	(174, 2)
517177.0	3713176.0	2.48600	(235, 2)	515277.0	3712176.0	1.49703	(138, 2)
515377.0	3712176.0	1.31351C	(226, 2)	515477.0	3712176.0	1.29989C	(226, 2)
515577.0	3712176.0	1.47700	(237, 2)	515677.0	3712176.0	1.83636	(237, 2)
515777.0	3712176.0	2.00575	(237, 2)	515877.0	3712176.0	1.71045	(237, 2)
515977.0	3712176.0	0.90058	(237, 2)	516077.0	3712176.0	6.02038	(98, 2)
516177.0	3712176.0	5.07446	(312, 2)	515277.0	3712076.0	1.80680	(201, 2)
515377.0	3712076.0	1.58211	(201, 2)	515477.0	3712076.0	1.44116C	(226, 2)
515577.0	3712076.0	1.15881	(125, 2)	515677.0	3712076.0	0.97632	(237, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515777.0	3712076.0	1.35596	(237, 2)	515877.0	3712076.0	1.91017	(237, 2)
515977.0	3712076.0	2.29637	(237, 2)	516077.0	3712076.0	1.15025	(237, 2)
516177.0	3712076.0	9.12248	(98, 2)	515277.0	3711976.0	2.07767	(249, 2)
515377.0	3711976.0	2.04805	(202, 2)	515477.0	3711976.0	1.91959	(202, 2)
515577.0	3711976.0	1.58901	(202, 2)	515677.0	3711976.0	1.04146	(202, 2)
515777.0	3711976.0	0.73339	(69, 3)	515877.0	3711976.0	0.94733	(245, 2)
515977.0	3711976.0	1.46485	(245, 2)	516077.0	3711976.0	1.66870	(237, 2)
516177.0	3711976.0	1.25418	(159, 3)	515277.0	3711876.0	2.24735	(249, 2)
515377.0	3711876.0	2.17072	(202, 2)	515477.0	3711876.0	2.21050	(202, 2)
515577.0	3711876.0	1.96160	(202, 2)	515677.0	3711876.0	1.37535	(202, 2)
515777.0	3711876.0	0.83740	(212, 2)	515877.0	3711876.0	0.98846	(212, 2)
515977.0	3711876.0	1.18250	(212, 2)	516077.0	3711876.0	1.72603C	(294, 3)
516177.0	3711876.0	3.14159C	(294, 3)	515277.0	3711776.0	2.05003C	(182, 2)
515377.0	3711776.0	2.05712	(202, 2)	515477.0	3711776.0	2.08647	(202, 2)
515577.0	3711776.0	1.89109	(202, 2)	515677.0	3711776.0	1.38164	(202, 2)
515777.0	3711776.0	1.17845	(212, 2)	515877.0	3711776.0	1.60243	(339, 3)
515977.0	3711776.0	1.79751	(339, 3)	516077.0	3711776.0	1.16164	(339, 3)
516177.0	3711776.0	3.93848	(211, 2)	515277.0	3711676.0	1.90745C	(182, 2)
515377.0	3711676.0	1.87492	(203, 2)	515477.0	3711676.0	1.94328	(203, 2)
515577.0	3711676.0	1.79443	(203, 2)	515677.0	3711676.0	1.34730	(203, 2)
515777.0	3711676.0	0.79214	(339, 3)	515877.0	3711676.0	0.63245	(321, 1)
515977.0	3711676.0	2.06766	(211, 2)	516077.0	3711676.0	3.72630	(211, 2)
516177.0	3711676.0	1.90825	(211, 2)	515277.0	3711576.0	2.25296	(203, 2)
515377.0	3711576.0	2.34620	(203, 2)	515477.0	3711576.0	2.31372	(203, 2)
515577.0	3711576.0	2.04846	(203, 2)	515677.0	3711576.0	1.40341	(203, 2)
515777.0	3711576.0	1.27308	(211, 2)	515877.0	3711576.0	3.01546	(211, 2)
515977.0	3711576.0	3.68910	(211, 2)	516077.0	3711576.0	2.26730	(211, 2)
516177.0	3711576.0	2.82457	(128, 3)	515277.0	3711476.0	2.39601	(203, 2)
515377.0	3711476.0	2.30709	(203, 2)	515477.0	3711476.0	2.08566	(203, 2)
515577.0	3711476.0	1.63641	(203, 2)	515677.0	3711476.0	2.22534	(211, 2)
515777.0	3711476.0	3.53632	(211, 2)	515877.0	3711476.0	3.50101	(211, 2)
515977.0	3711476.0	2.46989	(211, 2)	516077.0	3711476.0	0.92202	(211, 2)
516177.0	3711476.0	1.88423	(223, 2)	511277.0	3709378.0	2.58086	(136, 3)
512277.0	3709378.0	5.38433	(21, 1)	513277.0	3709378.0	2.94235C	(327, 1)
514277.0	3709378.0	3.48546	(263, 1)	515277.0	3709378.0	3.42188	(11, 1)
516277.0	3709378.0	2.57103	(151, 2)	517277.0	3709378.0	2.25034	(149, 3)
518277.0	3709378.0	3.18061	(106, 2)	519277.0	3709378.0	2.30077	(58, 2)
520277.0	3709378.0	1.86275	(88, 2)	521277.0	3709378.0	1.65609	(88, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3709378.0	1.46291	(95, 1)	511277.0	3708378.0	2.00419	(262, 3)
512277.0	3708378.0	3.10531	(261, 3)	513277.0	3708378.0	3.38032	(263, 1)
514277.0	3708378.0	3.35910	(260, 1)	515277.0	3708378.0	2.15335	(211, 1)
516277.0	3708378.0	2.10684	(18, 2)	517277.0	3708378.0	2.90513	(30, 2)
518277.0	3708378.0	1.84400	(149, 3)	519277.0	3708378.0	1.92397	(88, 3)
520277.0	3708378.0	1.77110	(315, 2)	521277.0	3708378.0	1.57121	(112, 3)
522277.0	3708378.0	1.46262	(88, 2)	511277.0	3707378.0	3.60480	(261, 3)
512277.0	3707378.0	2.60215	(263, 1)	513277.0	3707378.0	2.62698	(326, 3)
514277.0	3707378.0	2.92671	(11, 1)	515277.0	3707378.0	4.25497C	(200, 1)
516277.0	3707378.0	2.47973	(18, 2)	517277.0	3707378.0	3.68022	(37, 1)
518277.0	3707378.0	2.83004	(90, 1)	519277.0	3707378.0	1.73276	(106, 2)
520277.0	3707378.0	1.66864	(88, 3)	521277.0	3707378.0	1.62504	(35, 3)
522277.0	3707378.0	1.33030	(58, 2)	511277.0	3706378.0	1.96681	(263, 1)
512277.0	3706378.0	3.13296	(260, 3)	513277.0	3706378.0	3.39679	(261, 1)
514277.0	3706378.0	3.54090	(325, 3)	515277.0	3706378.0	2.30939	(308, 1)
516277.0	3706378.0	2.22607	(18, 2)	517277.0	3706378.0	3.81987C	(30, 3)
518277.0	3706378.0	1.71741	(30, 2)	519277.0	3706378.0	1.34775	(149, 3)
520277.0	3706378.0	1.53279	(106, 2)	521277.0	3706378.0	1.46754	(88, 3)
522277.0	3706378.0	1.70082	(35, 3)	523277.0	3706378.0	1.42128C	(357, 1)
522402.0	3710378.0	0.98281	(114, 2)	522402.0	3711378.0	1.92882C	(7, 1)
522402.0	3712378.0	1.15873	(36, 1)	511277.0	3714176.0	1.74935	(92, 3)
512277.0	3714176.0	2.36951	(125, 3)	513277.0	3714176.0	1.61704	(109, 2)
514277.0	3714176.0	3.09617	(98, 2)	515277.0	3714176.0	4.75514	(312, 2)
516277.0	3714176.0	5.29228	(159, 2)	517277.0	3714176.0	3.67933	(255, 1)
518277.0	3714176.0	1.85950	(235, 2)	519277.0	3714176.0	1.68022	(343, 2)
520277.0	3714176.0	1.50223	(181, 1)	521277.0	3714176.0	0.96877	(180, 3)
522277.0	3714176.0	0.97174C	(100, 1)	511277.0	3715176.0	3.09864	(125, 3)
512277.0	3715176.0	4.64897C	(251, 1)	513277.0	3715176.0	2.74935	(98, 2)
514277.0	3715176.0	3.82638	(252, 1)	515277.0	3715176.0	3.53996	(46, 1)
516277.0	3715176.0	3.65316	(159, 2)	517277.0	3715176.0	1.32802	(54, 3)
518277.0	3715176.0	1.92577	(41, 2)	519277.0	3715176.0	1.33299	(168, 2)
520277.0	3715176.0	1.27485	(343, 2)	521277.0	3715176.0	1.33131	(181, 1)
522277.0	3715176.0	1.22025	(181, 1)	511277.0	3716176.0	3.62974C	(251, 1)
512277.0	3716176.0	2.38378	(250, 3)	513277.0	3716176.0	3.75746	(38, 3)
514277.0	3716176.0	3.53633	(312, 2)	515277.0	3716176.0	4.33294	(45, 3)
516277.0	3716176.0	2.44727	(159, 2)	517277.0	3716176.0	1.70017	(116, 1)
518277.0	3716176.0	1.38821	(255, 1)	519277.0	3716176.0	1.33892	(41, 2)
520277.0	3716176.0	1.16457	(356, 2)	521277.0	3716176.0	1.41617	(134, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3716176.0	1.11366	(343, 2)	511277.0	3717176.0	3.35909	(250, 3)
512277.0	3717176.0	3.30941	(38, 3)	513277.0	3717176.0	3.33763	(156, 3)
514277.0	3717176.0	3.89161	(318, 3)	515277.0	3717176.0	2.87291C	(333, 3)
516277.0	3717176.0	2.29812	(159, 2)	517277.0	3717176.0	1.74049	(116, 1)
518277.0	3717176.0	1.51424	(347, 1)	519277.0	3717176.0	1.78415	(347, 2)
520277.0	3717176.0	1.26929C	(5, 3)	521277.0	3717176.0	0.97935	(356, 2)
522277.0	3717176.0	1.26929	(134, 1)	511277.0	3713176.0	1.98652	(361, 1)
512277.0	3713176.0	1.27346	(48, 2)	513277.0	3713176.0	1.50170	(71, 3)
514277.0	3713176.0	2.47752	(109, 2)	511277.0	3712176.0	1.38289	(339, 2)
512277.0	3712176.0	1.51307	(339, 2)	513277.0	3712176.0	1.42950	(201, 2)
514277.0	3712176.0	1.96129	(201, 2)	511277.0	3711176.0	2.68403	(138, 1)
512277.0	3711176.0	3.28130	(137, 1)	513277.0	3711176.0	2.09500	(339, 3)
514277.0	3711176.0	2.56515	(339, 3)	511277.0	3709378.0	2.58086	(136, 3)
512277.0	3709378.0	5.38433	(21, 1)	513277.0	3709378.0	2.94235C	(327, 1)
514277.0	3709378.0	3.48546	(263, 1)	515277.0	3709378.0	3.42188	(11, 1)
516277.0	3709378.0	2.57103	(151, 2)	517277.0	3709378.0	2.25034	(149, 3)
518277.0	3709378.0	3.18061	(106, 2)	519277.0	3709378.0	2.30077	(58, 2)
520277.0	3709378.0	1.86275	(88, 2)	521277.0	3709378.0	1.65609	(88, 2)
522277.0	3709378.0	1.46291	(95, 1)	511277.0	3708378.0	2.00419	(262, 3)
512277.0	3708378.0	3.10531	(261, 3)	513277.0	3708378.0	3.38032	(263, 1)
514277.0	3708378.0	3.35910	(260, 1)	515277.0	3708378.0	2.15335	(211, 1)
516277.0	3708378.0	2.10684	(18, 2)	517277.0	3708378.0	2.90513	(30, 2)
518277.0	3708378.0	1.84400	(149, 3)	519277.0	3708378.0	1.92397	(88, 3)
520277.0	3708378.0	1.77110	(315, 2)	521277.0	3708378.0	1.57121	(112, 3)
522277.0	3708378.0	1.46262	(88, 2)	511277.0	3707378.0	3.60480	(261, 3)
512277.0	3707378.0	2.60215	(263, 1)	513277.0	3707378.0	2.62698	(326, 3)
514277.0	3707378.0	2.92671	(11, 1)	515277.0	3707378.0	4.25497C	(200, 1)
516277.0	3707378.0	2.47973	(18, 2)	517277.0	3707378.0	3.68022	(37, 1)
518277.0	3707378.0	2.83004	(90, 1)	519277.0	3707378.0	1.73276	(106, 2)
520277.0	3707378.0	1.66864	(88, 3)	521277.0	3707378.0	1.62504	(35, 3)
522277.0	3707378.0	1.33030	(58, 2)	511277.0	3706378.0	1.96681	(263, 1)
512277.0	3706378.0	3.13296	(260, 3)	513277.0	3706378.0	3.39679	(261, 1)
514277.0	3706378.0	3.54090	(325, 3)	515277.0	3706378.0	2.30939	(308, 1)
516277.0	3706378.0	2.22607	(18, 2)	517277.0	3706378.0	3.81987C	(30, 3)
518277.0	3706378.0	1.71741	(30, 2)	519277.0	3706378.0	1.34775	(149, 3)
520277.0	3706378.0	1.53279	(106, 2)	521277.0	3706378.0	1.46754	(88, 3)
522277.0	3706378.0	1.70082	(35, 3)	523277.0	3706378.0	1.42128C	(357, 1)
522402.0	3710378.0	0.98281	(114, 2)	522402.0	3711378.0	1.92882C	(7, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522402.0	3712378.0	1.15873	(36, 1)	511277.0	3714176.0	1.74935	(92, 3)
512277.0	3714176.0	2.36951	(125, 3)	513277.0	3714176.0	1.61704	(109, 2)
514277.0	3714176.0	3.09617	(98, 2)	515277.0	3714176.0	4.75514	(312, 2)
516277.0	3714176.0	5.29228	(159, 2)	517277.0	3714176.0	3.67933	(255, 1)
518277.0	3714176.0	1.85950	(235, 2)	519277.0	3714176.0	1.68022	(343, 2)
520277.0	3714176.0	1.50223	(181, 1)	521277.0	3714176.0	0.96877	(180, 3)
522277.0	3714176.0	0.97174C	(100, 1)	511277.0	3715176.0	3.09864	(125, 3)
512277.0	3715176.0	4.64897C	(251, 1)	513277.0	3715176.0	2.74935	(98, 2)
514277.0	3715176.0	3.82638	(252, 1)	515277.0	3715176.0	3.53996	(46, 1)
516277.0	3715176.0	3.65316	(159, 2)	517277.0	3715176.0	1.32802	(54, 3)
518277.0	3715176.0	1.92577	(41, 2)	519277.0	3715176.0	1.33299	(168, 2)
520277.0	3715176.0	1.27485	(343, 2)	521277.0	3715176.0	1.33131	(181, 1)
522277.0	3715176.0	1.22025	(181, 1)	511277.0	3716176.0	3.62974C	(251, 1)
512277.0	3716176.0	2.38378	(250, 3)	513277.0	3716176.0	3.75746	(38, 3)
514277.0	3716176.0	3.53633	(312, 2)	515277.0	3716176.0	4.33294	(45, 3)
516277.0	3716176.0	2.44727	(159, 2)	517277.0	3716176.0	1.70017	(116, 1)
518277.0	3716176.0	1.38821	(255, 1)	519277.0	3716176.0	1.33892	(41, 2)
520277.0	3716176.0	1.16457	(356, 2)	521277.0	3716176.0	1.41617	(134, 1)
522277.0	3716176.0	1.11366	(343, 2)	511277.0	3717176.0	3.35909	(250, 3)
512277.0	3717176.0	3.30941	(38, 3)	513277.0	3717176.0	3.33763	(156, 3)
514277.0	3717176.0	3.89161	(318, 3)	515277.0	3717176.0	2.87291C	(333, 3)
516277.0	3717176.0	2.29812	(159, 2)	517277.0	3717176.0	1.74049	(116, 1)
518277.0	3717176.0	1.51424	(347, 1)	519277.0	3717176.0	1.78415	(347, 2)
520277.0	3717176.0	1.26929C	(5, 3)	521277.0	3717176.0	0.97935	(356, 2)
522277.0	3717176.0	1.26929	(134, 1)	511277.0	3713176.0	1.98652	(361, 1)
512277.0	3713176.0	1.27346	(48, 2)	513277.0	3713176.0	1.50170	(71, 3)
514277.0	3713176.0	2.47752	(109, 2)	511277.0	3712176.0	1.38289	(339, 2)
512277.0	3712176.0	1.51307	(339, 2)	513277.0	3712176.0	1.42950	(201, 2)
514277.0	3712176.0	1.96129	(201, 2)	511277.0	3711176.0	2.68403	(138, 1)
512277.0	3711176.0	3.28130	(137, 1)	513277.0	3711176.0	2.09500	(339, 3)
514277.0	3711176.0	2.56515	(339, 3)	516500.0	3708100.0	4.71305	(68, 3)
518100.0	3709350.0	3.85297	(106, 2)	514500.0	3708800.0	3.43342	(260, 1)
517300.0	3714400.0	3.50351	(255, 1)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516276.8	3711378.0	1.62059	(36, 3)	516411.0	3712159.0	2.65637	(86, 2)
516679.3	3711159.0	1.06622C	(228, 2)	516679.3	3711378.0	2.47012	(106, 2)
517079.3	3711378.0	3.08904	(88, 2)	517079.3	3711549.0	1.80518	(124, 2)
517530.5	3711488.0	1.46697	(223, 2)	517530.5	3711317.0	2.12533	(224, 2)
518743.9	3711171.0	1.00449	(84, 2)	518743.9	3711573.0	1.48840	(84, 2)
519914.6	3711573.0	1.61694C	(7, 1)	519914.6	3711171.0	1.15356	(281, 2)
520304.8	3711171.0	1.16804	(281, 2)	520304.8	3711024.0	1.08322	(58, 1)
520707.2	3711024.0	1.05325	(281, 2)	520817.0	3711628.0	1.42110	(84, 2)
520402.3	3712176.0	1.10918	(68, 2)	518707.2	3712176.0	1.46607	(94, 2)
518707.2	3712030.0	1.72539	(68, 2)	518280.4	3712030.0	1.82379	(94, 2)
518280.4	3712250.0	1.99423	(68, 2)	518060.9	3712335.0	2.04112	(180, 2)
518060.9	3712878.0	2.21257	(180, 2)	517426.8	3712878.0	2.47977	(217, 2)
517426.8	3713079.0	2.67670	(217, 2)	516993.9	3713079.0	2.10103C	(190, 2)
516993.9	3713280.0	1.84896C	(190, 2)	516603.7	3713280.0	2.41625	(127, 2)
516603.7	3712884.0	2.26392	(171, 2)	516372.0	3712884.0	3.60347	(120, 2)
516372.0	3712798.0	3.63208	(120, 2)	516256.2	3712774.0	3.74078	(111, 2)
516276.8	3711378.0	1.62059	(36, 3)	516264.6	3712122.0	8.41511	(111, 2)
516264.6	3711598.0	3.08653	(10, 1)	516008.5	3712006.0	0.78101	(245, 2)
516008.5	3712122.0	1.03295	(42, 3)	516115.2	3712189.0	3.58544	(57, 1)
516179.3	3712061.0	10.36033	(57, 2)	516179.3	3712122.0	4.01185	(366, 2)
516264.6	3712122.0	8.41511	(111, 2)	515277.0	3711278.0	1.99611	(211, 2)
515377.0	3711278.0	2.17294	(261, 2)	515477.0	3711278.0	2.29526	(261, 2)
515577.0	3711278.0	2.17295	(261, 2)	515677.0	3711278.0	2.07722	(264, 2)
515777.0	3711278.0	1.97077	(264, 2)	515877.0	3711278.0	1.35219	(264, 2)
515977.0	3711278.0	1.13423	(213, 2)	516077.0	3711278.0	1.34147	(128, 3)
516177.0	3711278.0	1.74112	(10, 2)	516277.0	3711278.0	1.64593	(36, 3)
516377.0	3711278.0	2.29278	(10, 1)	516477.0	3711278.0	2.37056	(30, 2)
516577.0	3711278.0	1.60078	(36, 2)	516677.0	3711278.0	1.22084	(105, 2)
516777.0	3711278.0	1.85218C	(135, 2)	516877.0	3711278.0	1.95753	(88, 3)
516977.0	3711278.0	1.71375	(105, 2)	517077.0	3711278.0	2.37536	(105, 2)
517177.0	3711278.0	2.42988	(88, 2)	515277.0	3711178.0	2.45773	(261, 2)
515377.0	3711178.0	2.71987	(261, 2)	515477.0	3711178.0	2.52061	(261, 2)
515577.0	3711178.0	2.59065	(264, 2)	515677.0	3711178.0	2.41481	(262, 2)
515777.0	3711178.0	2.18752	(248, 2)	515877.0	3711178.0	1.59081	(212, 2)
515977.0	3711178.0	1.81708	(213, 2)	516077.0	3711178.0	1.90100	(212, 2)
516177.0	3711178.0	1.52949	(151, 2)	516277.0	3711178.0	2.24321	(151, 2)
516377.0	3711178.0	2.05356	(151, 2)	516477.0	3711178.0	1.52355	(10, 2)
516577.0	3711178.0	1.20508	(30, 2)	516677.0	3711178.0	1.06569C	(228, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516777.0	3711178.0	1.60282C	(135, 2)	516877.0	3711178.0	2.02093C	(135, 2)
516977.0	3711178.0	1.99838C	(135, 2)	517077.0	3711178.0	2.19735	(88, 3)
517177.0	3711178.0	2.60291	(124, 2)	515277.0	3711078.0	2.99461	(261, 2)
515377.0	3711078.0	2.83823	(261, 2)	515477.0	3711078.0	2.83913	(264, 2)
515577.0	3711078.0	2.85827	(262, 2)	515677.0	3711078.0	2.90584	(248, 2)
515777.0	3711078.0	2.30706	(248, 2)	515877.0	3711078.0	2.12966	(213, 2)
515977.0	3711078.0	2.37338	(213, 2)	516077.0	3711078.0	2.35092	(212, 2)
516177.0	3711078.0	2.25299	(151, 2)	516277.0	3711078.0	2.73347C	(208, 2)
516377.0	3711078.0	1.94040C	(208, 2)	516477.0	3711078.0	1.59934	(151, 2)
516577.0	3711078.0	1.57592	(167, 2)	516677.0	3711078.0	1.08185	(167, 2)
516777.0	3711078.0	1.25875	(231, 2)	516877.0	3711078.0	1.95807	(231, 2)
516977.0	3711078.0	2.33096	(231, 2)	517077.0	3711078.0	1.99889	(231, 2)
517177.0	3711078.0	2.41678	(88, 3)	515277.0	3710978.0	3.01695	(261, 2)
515377.0	3710978.0	3.24023	(211, 2)	515477.0	3710978.0	2.80370	(262, 2)
515577.0	3710978.0	3.04179	(262, 2)	515677.0	3710978.0	2.80627	(248, 2)
515777.0	3710978.0	2.15512	(248, 2)	515877.0	3710978.0	2.42792	(213, 2)
515977.0	3710978.0	2.61988	(213, 2)	516077.0	3710978.0	2.74580C	(208, 2)
516177.0	3710978.0	2.82910	(151, 2)	516277.0	3710978.0	2.71776C	(208, 2)
516377.0	3710978.0	2.01859C	(208, 2)	516477.0	3710978.0	1.79754	(167, 2)
516577.0	3710978.0	1.53301	(167, 2)	516677.0	3710978.0	1.42379	(149, 3)
516777.0	3710978.0	1.27276	(149, 3)	516877.0	3710978.0	1.84901	(231, 2)
516977.0	3710978.0	2.44884	(231, 2)	517077.0	3710978.0	2.38434	(88, 3)
517177.0	3710978.0	2.29385	(108, 2)	515277.0	3710878.0	3.20191	(211, 2)
515377.0	3710878.0	3.18780	(262, 2)	515477.0	3710878.0	3.19804	(262, 2)
515577.0	3710878.0	2.97553	(248, 2)	515677.0	3710878.0	2.62209	(264, 2)
515777.0	3710878.0	2.42615	(213, 2)	515877.0	3710878.0	2.67176	(213, 2)
515977.0	3710878.0	2.67975	(213, 2)	516077.0	3710878.0	2.52747C	(208, 2)
516177.0	3710878.0	2.68241C	(208, 2)	516277.0	3710878.0	2.42616C	(208, 2)
516377.0	3710878.0	1.95617	(231, 2)	516477.0	3710878.0	1.82690	(230, 2)
516577.0	3710878.0	1.73640	(230, 2)	516677.0	3710878.0	2.00709	(30, 2)
516777.0	3710878.0	2.10308	(129, 2)	516877.0	3710878.0	1.68667	(89, 2)
516977.0	3710878.0	2.33787	(231, 2)	517077.0	3710878.0	2.63865	(231, 2)
517177.0	3710878.0	2.53302	(231, 2)	515277.0	3710778.0	3.59316	(262, 2)
515377.0	3710778.0	3.41708	(262, 2)	515477.0	3710778.0	3.39066	(248, 2)
515577.0	3710778.0	2.67461	(248, 2)	515677.0	3710778.0	2.18197	(248, 2)
515777.0	3710778.0	2.65321	(213, 2)	515877.0	3710778.0	2.77688	(213, 2)
515977.0	3710778.0	2.60692	(213, 2)	516077.0	3710778.0	2.82702	(212, 2)
516177.0	3710778.0	2.45840	(66, 2)	516277.0	3710778.0	2.53394	(10, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516377.0	3710778.0	2.33042	(10, 2)	516477.0	3710778.0	2.17789	(230, 2)
516577.0	3710778.0	2.02956	(230, 2)	516677.0	3710778.0	2.99003	(129, 2)
516777.0	3710778.0	2.83366	(129, 2)	516877.0	3710778.0	2.19050	(89, 2)
516977.0	3710778.0	2.43647	(106, 2)	517077.0	3710778.0	3.10806	(106, 2)
517177.0	3710778.0	2.68097	(231, 2)	515277.0	3710678.0	3.66470	(264, 2)
515377.0	3710678.0	3.40435	(262, 2)	515477.0	3710678.0	3.07807	(248, 2)
515577.0	3710678.0	2.37650	(264, 2)	515677.0	3710678.0	2.25716	(213, 2)
515777.0	3710678.0	2.58650	(213, 2)	515877.0	3710678.0	2.70008	(213, 2)
515977.0	3710678.0	2.45257	(213, 2)	516077.0	3710678.0	2.82308	(151, 2)
516177.0	3710678.0	2.85104	(66, 2)	516277.0	3710678.0	2.56673	(10, 1)
516377.0	3710678.0	2.74356	(10, 2)	516477.0	3710678.0	2.30196	(10, 2)
516577.0	3710678.0	2.25632	(230, 2)	516677.0	3710678.0	2.94623	(129, 2)
516777.0	3710678.0	2.82176	(149, 3)	516877.0	3710678.0	2.34286	(129, 2)
516977.0	3710678.0	2.06814	(36, 2)	517077.0	3710678.0	2.38689	(106, 2)
517177.0	3710678.0	2.57386	(231, 2)	515277.0	3710578.0	3.53495	(264, 2)
515377.0	3710578.0	3.19315	(264, 2)	515477.0	3710578.0	2.70912	(264, 2)
515577.0	3710578.0	2.16426	(248, 2)	515677.0	3710578.0	2.40698	(213, 2)
515777.0	3710578.0	2.70054	(213, 2)	515877.0	3710578.0	2.61330	(213, 2)
515977.0	3710578.0	2.26834	(200, 2)	516077.0	3710578.0	2.90433	(151, 2)
516177.0	3710578.0	3.20269	(66, 2)	516277.0	3710578.0	2.90594	(10, 1)
516377.0	3710578.0	3.52157	(10, 2)	516477.0	3710578.0	2.70660	(151, 2)
516577.0	3710578.0	2.41571	(230, 2)	516677.0	3710578.0	2.83107	(129, 2)
516777.0	3710578.0	2.35197	(30, 2)	516877.0	3710578.0	2.46167	(129, 2)
516977.0	3710578.0	1.87007	(89, 2)	517077.0	3710578.0	1.98234	(89, 2)
517177.0	3710578.0	2.27302	(231, 2)	515277.0	3710478.0	3.27277	(248, 2)
515377.0	3710478.0	2.83394	(262, 2)	515477.0	3710478.0	2.45029	(260, 1)
515577.0	3710478.0	2.30055	(213, 2)	515677.0	3710478.0	2.49900	(213, 2)
515777.0	3710478.0	2.62260	(213, 2)	515877.0	3710478.0	2.74101	(326, 2)
515977.0	3710478.0	2.79062	(66, 2)	516077.0	3710478.0	3.09209	(151, 2)
516177.0	3710478.0	3.56527	(10, 1)	516277.0	3710478.0	3.21081	(10, 1)
516377.0	3710478.0	3.49458	(10, 2)	516477.0	3710478.0	2.73134	(151, 2)
516577.0	3710478.0	2.43363	(10, 2)	516677.0	3710478.0	2.67730	(129, 2)
516777.0	3710478.0	2.79909	(129, 2)	516877.0	3710478.0	2.50492	(149, 3)
516977.0	3710478.0	2.15118	(129, 2)	517077.0	3710478.0	1.78178	(149, 3)
517177.0	3710478.0	1.92968	(89, 2)	515277.0	3710378.0	2.79830	(262, 2)
515377.0	3710378.0	2.29940	(262, 2)	515477.0	3710378.0	2.04912	(213, 2)
515577.0	3710378.0	2.39588	(259, 2)	515677.0	3710378.0	2.94270	(259, 2)
515777.0	3710378.0	2.89468	(326, 2)	515877.0	3710378.0	2.67559	(326, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515977.0	3710378.0	2.89247C	(200, 1)	516077.0	3710378.0	3.08407	(151, 2)
516177.0	3710378.0	3.30342	(10, 1)	516277.0	3710378.0	2.84785	(10, 1)
516377.0	3710378.0	3.11616	(10, 2)	516477.0	3710378.0	2.60430	(151, 2)
516577.0	3710378.0	2.18506	(10, 2)	516677.0	3710378.0	2.28296	(10, 2)
516777.0	3710378.0	2.69210	(129, 2)	516877.0	3710378.0	2.80350	(149, 3)
516977.0	3710378.0	2.36409	(129, 2)	517077.0	3710378.0	1.95671	(89, 2)
517177.0	3710378.0	1.62521	(36, 2)	515277.0	3712276.0	1.22362	(109, 2)
515377.0	3712276.0	1.34019	(138, 2)	515477.0	3712276.0	1.30247	(109, 2)
515577.0	3712276.0	1.51716C	(226, 2)	515677.0	3712276.0	1.78938C	(226, 2)
515777.0	3712276.0	1.76570C	(226, 2)	515877.0	3712276.0	1.12776	(237, 2)
515977.0	3712276.0	2.91153	(57, 2)	516077.0	3712276.0	1.53473	(312, 2)
516177.0	3712276.0	3.01178	(312, 2)	516277.0	3712276.0	5.08620	(127, 2)
516377.0	3712276.0	4.77544	(127, 2)	516477.0	3712276.0	1.07556	(86, 2)
516577.0	3712276.0	0.76451	(313, 2)	516677.0	3712276.0	0.73801	(41, 2)
516777.0	3712276.0	0.83416	(175, 2)	516877.0	3712276.0	1.58336C	(188, 2)
516977.0	3712276.0	1.99264	(189, 2)	517077.0	3712276.0	1.91268	(189, 2)
517177.0	3712276.0	1.63631	(189, 2)	515277.0	3712376.0	1.64955	(237, 2)
515377.0	3712376.0	1.75048	(109, 2)	515477.0	3712376.0	1.69067	(109, 2)
515577.0	3712376.0	1.94213C	(226, 2)	515677.0	3712376.0	2.31936C	(226, 2)
515777.0	3712376.0	1.82385	(237, 2)	515877.0	3712376.0	2.73477	(57, 2)
515977.0	3712376.0	2.66418	(57, 1)	516077.0	3712376.0	2.13474	(117, 2)
516177.0	3712376.0	3.83045	(111, 3)	516277.0	3712376.0	5.18656	(127, 2)
516377.0	3712376.0	4.95237	(127, 2)	516477.0	3712376.0	1.11195	(131, 2)
516577.0	3712376.0	0.66513	(313, 2)	516677.0	3712376.0	0.59508	(175, 2)
516777.0	3712376.0	1.09365	(175, 2)	516877.0	3712376.0	1.63924	(189, 2)
516977.0	3712376.0	2.08567	(189, 2)	517077.0	3712376.0	2.13147	(189, 2)
517177.0	3712376.0	1.94599	(189, 2)	515277.0	3712476.0	2.01760	(237, 2)
515377.0	3712476.0	2.19846	(109, 2)	515477.0	3712476.0	1.87571	(109, 2)
515577.0	3712476.0	2.16606C	(226, 2)	515677.0	3712476.0	2.16412	(237, 2)
515777.0	3712476.0	2.07887	(98, 2)	515877.0	3712476.0	2.00172	(57, 2)
515977.0	3712476.0	1.44204	(366, 2)	516077.0	3712476.0	2.00515	(111, 2)
516177.0	3712476.0	3.82562	(111, 3)	516277.0	3712476.0	4.97462	(127, 2)
516377.0	3712476.0	4.83817	(127, 2)	516477.0	3712476.0	1.40415	(131, 2)
516577.0	3712476.0	0.95856	(165, 2)	516677.0	3712476.0	1.07001C	(166, 2)
516777.0	3712476.0	1.02448	(175, 2)	516877.0	3712476.0	1.43265	(189, 2)
516977.0	3712476.0	1.87224	(189, 2)	517077.0	3712476.0	2.09314	(217, 2)
517177.0	3712476.0	1.98289	(189, 2)	515277.0	3712576.0	2.19586	(101, 2)
515377.0	3712576.0	2.29101	(109, 2)	515477.0	3712576.0	1.90531C	(226, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515577.0	3712576.0	2.09673C	(226, 2)	515677.0	3712576.0	1.91498	(98, 2)
515777.0	3712576.0	1.87993	(57, 2)	515877.0	3712576.0	1.30325C	(226, 2)
515977.0	3712576.0	1.57659	(132, 2)	516077.0	3712576.0	1.69279	(111, 3)
516177.0	3712576.0	3.00704	(111, 3)	516277.0	3712576.0	4.56238	(111, 2)
516377.0	3712576.0	4.37596	(120, 2)	516477.0	3712576.0	1.75862C	(166, 2)
516577.0	3712576.0	1.15165	(165, 2)	516677.0	3712576.0	1.27390C	(190, 2)
516777.0	3712576.0	1.25470C	(190, 2)	516877.0	3712576.0	1.36558	(235, 2)
516977.0	3712576.0	1.59756	(235, 2)	517077.0	3712576.0	1.94949C	(188, 2)
517177.0	3712576.0	2.18178	(217, 2)	515277.0	3712676.0	2.23994	(237, 2)
515377.0	3712676.0	2.24149	(251, 2)	515477.0	3712676.0	2.22260	(237, 2)
515577.0	3712676.0	2.11911	(98, 2)	515677.0	3712676.0	2.13452	(57, 2)
515777.0	3712676.0	1.43991	(218, 2)	515877.0	3712676.0	1.50797	(116, 2)
515977.0	3712676.0	1.61184	(239, 2)	516077.0	3712676.0	1.87742	(111, 2)
516177.0	3712676.0	2.66174	(111, 3)	516277.0	3712676.0	3.77892	(111, 2)
516377.0	3712676.0	3.46461	(120, 2)	516477.0	3712676.0	2.15905	(127, 2)
516577.0	3712676.0	1.62904	(154, 2)	516677.0	3712676.0	1.72222C	(190, 2)
516777.0	3712676.0	1.60466C	(166, 2)	516877.0	3712676.0	1.31445	(235, 2)
516977.0	3712676.0	1.85432	(235, 2)	517077.0	3712676.0	1.98126	(235, 2)
517177.0	3712676.0	2.13116C	(188, 2)	515277.0	3712776.0	2.18570	(237, 2)
515377.0	3712776.0	2.03221	(237, 2)	515477.0	3712776.0	1.79659	(183, 2)
515577.0	3712776.0	2.37203	(57, 2)	515677.0	3712776.0	1.70731	(118, 2)
515777.0	3712776.0	1.21567	(239, 2)	515877.0	3712776.0	1.80477	(116, 2)
515977.0	3712776.0	1.74978	(132, 2)	516077.0	3712776.0	2.16091	(111, 2)
516177.0	3712776.0	2.63513	(153, 2)	516277.0	3712776.0	3.06021	(111, 2)
516377.0	3712776.0	3.14145	(120, 2)	516477.0	3712776.0	2.13366	(120, 2)
516577.0	3712776.0	1.94176C	(166, 2)	516677.0	3712776.0	1.86164C	(190, 2)
516777.0	3712776.0	1.71319	(174, 2)	516877.0	3712776.0	1.69647	(174, 2)
516977.0	3712776.0	1.67729C	(190, 2)	517077.0	3712776.0	2.25693	(217, 2)
517177.0	3712776.0	2.35068	(235, 2)	515277.0	3712876.0	2.02666	(237, 2)
515377.0	3712876.0	1.83491	(98, 2)	515477.0	3712876.0	1.90645	(57, 2)
515577.0	3712876.0	1.57263	(118, 2)	515677.0	3712876.0	1.44116	(218, 2)
515777.0	3712876.0	1.54063	(116, 2)	515877.0	3712876.0	1.80958	(250, 2)
515977.0	3712876.0	1.55065	(153, 2)	516077.0	3712876.0	2.55039	(250, 2)
516177.0	3712876.0	2.89403	(153, 2)	516277.0	3712876.0	2.90450	(155, 2)
516377.0	3712876.0	2.84015	(120, 2)	516477.0	3712876.0	2.46899	(120, 2)
516577.0	3712876.0	2.03782	(171, 2)	516677.0	3712876.0	1.91206C	(190, 2)
516777.0	3712876.0	1.87459	(174, 2)	516877.0	3712876.0	2.01097	(174, 2)
516977.0	3712876.0	1.74884	(174, 2)	517077.0	3712876.0	1.82194	(217, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
517177.0	3712876.0	2.39135	(217, 2)	515277.0	3712976.0	1.95354	(98, 2)
515377.0	3712976.0	2.00464	(57, 2)	515477.0	3712976.0	1.77886	(57, 2)
515577.0	3712976.0	1.45692	(218, 2)	515677.0	3712976.0	1.44509	(250, 2)
515777.0	3712976.0	1.74252	(233, 2)	515877.0	3712976.0	2.02710	(132, 2)
515977.0	3712976.0	2.09105	(153, 2)	516077.0	3712976.0	2.75106	(111, 2)
516177.0	3712976.0	3.46732	(153, 2)	516277.0	3712976.0	2.98388	(155, 2)
516377.0	3712976.0	2.84081	(120, 2)	516477.0	3712976.0	2.70762	(120, 2)
516577.0	3712976.0	2.14661	(171, 2)	516677.0	3712976.0	2.03363	(171, 2)
516777.0	3712976.0	1.97412C	(190, 2)	516877.0	3712976.0	2.00110C	(190, 2)
516977.0	3712976.0	2.03722	(174, 2)	517077.0	3712976.0	1.96361C	(190, 2)
517177.0	3712976.0	1.92164	(217, 2)	515277.0	3713076.0	2.11968	(251, 2)
515377.0	3713076.0	2.03452	(57, 2)	515477.0	3713076.0	1.49167	(218, 2)
515577.0	3713076.0	1.43780	(118, 2)	515677.0	3713076.0	1.63729	(116, 2)
515777.0	3713076.0	1.77944	(250, 2)	515877.0	3713076.0	1.62997	(132, 2)
515977.0	3713076.0	2.28362	(153, 2)	516077.0	3713076.0	2.58442	(250, 2)
516177.0	3713076.0	3.29847	(111, 2)	516277.0	3713076.0	2.96264	(155, 2)
516377.0	3713076.0	2.55551	(120, 2)	516477.0	3713076.0	2.86197	(120, 2)
516577.0	3713076.0	2.16775	(171, 2)	516677.0	3713076.0	2.33516	(171, 2)
516777.0	3713076.0	1.94233C	(190, 2)	516877.0	3713076.0	1.93307C	(190, 2)
516977.0	3713076.0	2.00736C	(190, 2)	517077.0	3713076.0	1.94337	(174, 2)
517177.0	3713076.0	2.03794C	(190, 2)	515277.0	3713176.0	2.21812	(57, 2)
515377.0	3713176.0	1.71792	(118, 2)	515477.0	3713176.0	1.49574	(250, 2)
515577.0	3713176.0	1.53648	(250, 2)	515677.0	3713176.0	1.80631	(312, 2)
515777.0	3713176.0	1.97523	(132, 2)	515877.0	3713176.0	1.79914	(153, 2)
515977.0	3713176.0	2.59208	(250, 2)	516077.0	3713176.0	2.85162	(111, 2)
516177.0	3713176.0	3.20944	(111, 2)	516277.0	3713176.0	3.02330	(153, 2)
516377.0	3713176.0	2.75573	(120, 2)	516477.0	3713176.0	2.94816	(120, 2)
516577.0	3713176.0	2.21369	(127, 2)	516677.0	3713176.0	2.33042	(154, 2)
516777.0	3713176.0	2.11692	(171, 2)	516877.0	3713176.0	1.95929	(154, 2)
516977.0	3713176.0	1.85837C	(190, 2)	517077.0	3713176.0	2.02590C	(190, 2)
517177.0	3713176.0	2.38574C	(190, 2)	515277.0	3712176.0	1.42654C	(226, 2)
515377.0	3712176.0	1.27069	(138, 2)	515477.0	3712176.0	1.18927	(138, 2)
515577.0	3712176.0	1.18136C	(226, 2)	515677.0	3712176.0	1.09159C	(226, 2)
515777.0	3712176.0	0.88098C	(226, 2)	515877.0	3712176.0	0.47126C	(226, 2)
515977.0	3712176.0	0.75032	(98, 2)	516077.0	3712176.0	5.39228	(57, 2)
516177.0	3712176.0	2.79639	(117, 2)	515277.0	3712076.0	1.65276	(249, 2)
515377.0	3712076.0	1.53321C	(226, 2)	515477.0	3712076.0	1.42587	(202, 2)
515577.0	3712076.0	1.10064C	(226, 2)	515677.0	3712076.0	0.86409	(125, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515777.0	3712076.0	0.58707	(245, 2)	515877.0	3712076.0	0.37302	(159, 3)
515977.0	3712076.0	0.88560	(159, 3)	516077.0	3712076.0	0.83924	(42, 3)
516177.0	3712076.0	8.17858	(57, 2)	515277.0	3711976.0	1.99966	(201, 2)
515377.0	3711976.0	1.94993	(249, 2)	515477.0	3711976.0	1.64956	(249, 2)
515577.0	3711976.0	1.34685	(125, 2)	515677.0	3711976.0	1.03606	(125, 2)
515777.0	3711976.0	0.54224	(245, 2)	515877.0	3711976.0	0.72985	(69, 3)
515977.0	3711976.0	0.93637	(237, 2)	516077.0	3711976.0	1.20474	(245, 2)
516177.0	3711976.0	1.01263	(237, 2)	515277.0	3711876.0	2.12262	(202, 2)
515377.0	3711876.0	2.02842	(249, 2)	515477.0	3711876.0	2.01042	(249, 2)
515577.0	3711876.0	1.74885	(249, 2)	515677.0	3711876.0	1.29102	(249, 2)
515777.0	3711876.0	0.69274C	(294, 3)	515877.0	3711876.0	0.86704C	(294, 3)
515977.0	3711876.0	1.15712C	(294, 3)	516077.0	3711876.0	1.42022	(212, 2)
516177.0	3711876.0	1.88487	(339, 1)	515277.0	3711776.0	1.94338	(249, 2)
515377.0	3711776.0	1.85983	(249, 2)	515477.0	3711776.0	1.80961	(249, 2)
515577.0	3711776.0	1.65724	(249, 2)	515677.0	3711776.0	1.30903	(249, 2)
515777.0	3711776.0	1.11310	(339, 3)	515877.0	3711776.0	0.95990	(212, 2)
515977.0	3711776.0	1.08578C	(226, 3)	516077.0	3711776.0	1.07306	(321, 1)
516177.0	3711776.0	2.56823C	(259, 1)	515277.0	3711676.0	1.77977	(203, 2)
515377.0	3711676.0	1.79897	(202, 2)	515477.0	3711676.0	1.84125	(202, 2)
515577.0	3711676.0	1.66441	(202, 2)	515677.0	3711676.0	1.21377	(202, 2)
515777.0	3711676.0	0.63034	(203, 2)	515877.0	3711676.0	0.51393	(211, 2)
515977.0	3711676.0	1.44319C	(259, 1)	516077.0	3711676.0	0.65843	(321, 1)
516177.0	3711676.0	1.22612	(321, 2)	515277.0	3711576.0	1.67556	(136, 2)
515377.0	3711576.0	1.61216	(263, 2)	515477.0	3711576.0	1.54923	(202, 2)
515577.0	3711576.0	1.40458	(202, 2)	515677.0	3711576.0	1.03943	(206, 2)
515777.0	3711576.0	0.94892	(206, 2)	515877.0	3711576.0	1.20009C	(259, 1)
515977.0	3711576.0	0.60282	(321, 1)	516077.0	3711576.0	0.84682	(176, 3)
516177.0	3711576.0	2.70526	(259, 2)	515277.0	3711476.0	1.86712	(263, 2)
515377.0	3711476.0	1.62010	(136, 2)	515477.0	3711476.0	1.71391	(92, 2)
515577.0	3711476.0	1.49214	(92, 2)	515677.0	3711476.0	1.39270	(206, 2)
515777.0	3711476.0	1.31263	(206, 2)	515877.0	3711476.0	0.97012C	(194, 2)
515977.0	3711476.0	0.71293	(176, 3)	516077.0	3711476.0	0.75898	(321, 2)
516177.0	3711476.0	1.71232	(128, 3)	511277.0	3709378.0	2.17970	(248, 3)
512277.0	3709378.0	3.60448	(210, 3)	513277.0	3709378.0	2.82356	(261, 3)
514277.0	3709378.0	2.86383	(260, 3)	515277.0	3709378.0	3.22053	(51, 1)
516277.0	3709378.0	2.57043	(18, 2)	517277.0	3709378.0	1.88198	(30, 2)
518277.0	3709378.0	2.99663	(80, 2)	519277.0	3709378.0	2.10394	(315, 2)
520277.0	3709378.0	1.62026	(112, 3)	521277.0	3709378.0	1.60674	(107, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3709378.0	0.97345	(94, 3)	511277.0	3708378.0	1.69939	(21, 1)
512277.0	3708378.0	1.77055C	(327, 1)	513277.0	3708378.0	2.82370	(211, 3)
514277.0	3708378.0	3.10972	(261, 1)	515277.0	3708378.0	1.82068	(248, 1)
516277.0	3708378.0	1.83901	(65, 1)	517277.0	3708378.0	2.66759C	(356, 3)
518277.0	3708378.0	1.38902	(89, 2)	519277.0	3708378.0	1.83093	(89, 1)
520277.0	3708378.0	1.68556	(58, 2)	521277.0	3708378.0	1.39100C	(55, 3)
522277.0	3708378.0	1.39535	(96, 1)	511277.0	3707378.0	1.69159	(259, 3)
512277.0	3707378.0	2.31987	(211, 3)	513277.0	3707378.0	2.30958	(260, 3)
514277.0	3707378.0	2.12929	(70, 3)	515277.0	3707378.0	1.88354C	(52, 3)
516277.0	3707378.0	2.20488	(65, 1)	517277.0	3707378.0	3.56619C	(30, 3)
518277.0	3707378.0	2.30140	(149, 3)	519277.0	3707378.0	1.20310	(80, 2)
520277.0	3707378.0	1.53104	(89, 1)	521277.0	3707378.0	1.41099	(315, 2)
522277.0	3707378.0	1.29235	(80, 1)	511277.0	3706378.0	1.92012	(260, 1)
512277.0	3706378.0	2.44320	(212, 3)	513277.0	3706378.0	2.43913	(260, 1)
514277.0	3706378.0	2.95522	(211, 1)	515277.0	3706378.0	2.24356C	(200, 1)
516277.0	3706378.0	1.99527	(65, 1)	517277.0	3706378.0	2.62894	(37, 1)
518277.0	3706378.0	1.68170C	(209, 3)	519277.0	3706378.0	0.94992	(315, 3)
520277.0	3706378.0	1.30994	(310, 1)	521277.0	3706378.0	1.36380	(30, 1)
522277.0	3706378.0	1.33687	(106, 1)	523277.0	3706378.0	1.30227	(315, 3)
522402.0	3710378.0	0.94176	(107, 3)	522402.0	3711378.0	1.26213C	(228, 1)
522402.0	3712378.0	0.98685	(83, 3)	511277.0	3714176.0	1.52547	(71, 3)
512277.0	3714176.0	2.03911	(92, 3)	513277.0	3714176.0	1.49993	(39, 2)
514277.0	3714176.0	2.19446	(57, 2)	515277.0	3714176.0	2.38630	(117, 2)
516277.0	3714176.0	4.24704	(78, 2)	517277.0	3714176.0	2.64456C	(199, 1)
518277.0	3714176.0	1.79402	(217, 2)	519277.0	3714176.0	1.37609	(54, 2)
520277.0	3714176.0	1.27615	(180, 3)	521277.0	3714176.0	0.81645	(191, 2)
522277.0	3714176.0	0.88444	(4, 2)	511277.0	3715176.0	2.12058C	(12, 1)
512277.0	3715176.0	3.33313	(101, 1)	513277.0	3715176.0	2.22885	(56, 3)
514277.0	3715176.0	3.67570C	(362, 3)	515277.0	3715176.0	3.17978	(289, 3)
516277.0	3715176.0	3.05797	(78, 2)	517277.0	3715176.0	1.29349	(143, 2)
518277.0	3715176.0	1.70205	(347, 2)	519277.0	3715176.0	1.24686	(217, 2)
520277.0	3715176.0	1.26931	(219, 2)	521277.0	3715176.0	1.10301	(343, 2)
522277.0	3715176.0	1.18931	(180, 3)	511277.0	3716176.0	3.34743C	(16, 3)
512277.0	3716176.0	2.05848	(98, 2)	513277.0	3716176.0	3.04036C	(191, 1)
514277.0	3716176.0	3.11020C	(217, 1)	515277.0	3716176.0	4.01123C	(333, 3)
516277.0	3716176.0	2.09647	(78, 2)	517277.0	3716176.0	1.31936	(355, 2)
518277.0	3716176.0	1.24153	(132, 2)	519277.0	3716176.0	1.23226	(131, 1)
520277.0	3716176.0	1.09853	(68, 1)	521277.0	3716176.0	1.07134	(219, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3716176.0	0.96968	(54, 2)	511277.0	3717176.0	3.18317C	(282, 3)
512277.0	3717176.0	3.11576	(22, 1)	513277.0	3717176.0	3.22024C	(168, 1)
514277.0	3717176.0	3.65579	(46, 1)	515277.0	3717176.0	2.79083	(45, 3)
516277.0	3717176.0	2.02693	(313, 3)	517277.0	3717176.0	1.37206	(222, 1)
518277.0	3717176.0	1.43386	(255, 1)	519277.0	3717176.0	1.64362	(242, 1)
520277.0	3717176.0	1.13675	(146, 1)	521277.0	3717176.0	0.87570	(68, 1)
522277.0	3717176.0	0.87441C	(81, 3)	511277.0	3713176.0	1.33409C	(182, 3)
512277.0	3713176.0	1.19033	(349, 3)	513277.0	3713176.0	1.41568	(91, 1)
514277.0	3713176.0	2.09754	(101, 2)	511277.0	3712176.0	1.28877	(214, 3)
512277.0	3712176.0	1.45140	(214, 3)	513277.0	3712176.0	1.38415	(339, 2)
514277.0	3712176.0	1.87035	(249, 2)	511277.0	3711176.0	2.58377	(201, 3)
512277.0	3711176.0	2.77368	(206, 3)	513277.0	3711176.0	1.69710C	(204, 3)
514277.0	3711176.0	2.39786	(263, 2)	511277.0	3709378.0	2.17970	(248, 3)
512277.0	3709378.0	3.60448	(210, 3)	513277.0	3709378.0	2.82356	(261, 3)
514277.0	3709378.0	2.86383	(260, 3)	515277.0	3709378.0	3.22053	(51, 1)
516277.0	3709378.0	2.57043	(18, 2)	517277.0	3709378.0	1.88198	(30, 2)
518277.0	3709378.0	2.99663	(80, 2)	519277.0	3709378.0	2.10394	(315, 2)
520277.0	3709378.0	1.62026	(112, 3)	521277.0	3709378.0	1.60674	(107, 1)
522277.0	3709378.0	0.97345	(94, 3)	511277.0	3708378.0	1.69939	(21, 1)
512277.0	3708378.0	1.77055C	(327, 1)	513277.0	3708378.0	2.82370	(211, 3)
514277.0	3708378.0	3.10972	(261, 1)	515277.0	3708378.0	1.82068	(248, 1)
516277.0	3708378.0	1.83901	(65, 1)	517277.0	3708378.0	2.66759C	(356, 3)
518277.0	3708378.0	1.38902	(89, 2)	519277.0	3708378.0	1.83093	(89, 1)
520277.0	3708378.0	1.68556	(58, 2)	521277.0	3708378.0	1.39100C	(55, 3)
522277.0	3708378.0	1.39535	(96, 1)	511277.0	3707378.0	1.69159	(259, 3)
512277.0	3707378.0	2.31987	(211, 3)	513277.0	3707378.0	2.30958	(260, 3)
514277.0	3707378.0	2.12929	(70, 3)	515277.0	3707378.0	1.88354C	(52, 3)
516277.0	3707378.0	2.20488	(65, 1)	517277.0	3707378.0	3.56619C	(30, 3)
518277.0	3707378.0	2.30140	(149, 3)	519277.0	3707378.0	1.20310	(80, 2)
520277.0	3707378.0	1.53104	(89, 1)	521277.0	3707378.0	1.41099	(315, 2)
522277.0	3707378.0	1.29235	(80, 1)	511277.0	3706378.0	1.92012	(260, 1)
512277.0	3706378.0	2.44320	(212, 3)	513277.0	3706378.0	2.43913	(260, 1)
514277.0	3706378.0	2.95522	(211, 1)	515277.0	3706378.0	2.24356C	(200, 1)
516277.0	3706378.0	1.99527	(65, 1)	517277.0	3706378.0	2.62894	(37, 1)
518277.0	3706378.0	1.68170C	(209, 3)	519277.0	3706378.0	0.94992	(315, 3)
520277.0	3706378.0	1.30994	(310, 1)	521277.0	3706378.0	1.36380	(30, 1)
522277.0	3706378.0	1.33687	(106, 1)	523277.0	3706378.0	1.30227	(315, 3)
522402.0	3710378.0	0.94176	(107, 3)	522402.0	3711378.0	1.26213C	(228, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522402.0	3712378.0	0.98685	(83, 3)	511277.0	3714176.0	1.52547	(71, 3)
512277.0	3714176.0	2.03911	(92, 3)	513277.0	3714176.0	1.49993	(39, 2)
514277.0	3714176.0	2.19446	(57, 2)	515277.0	3714176.0	2.38630	(117, 2)
516277.0	3714176.0	4.24704	(78, 2)	517277.0	3714176.0	2.64456C	(199, 1)
518277.0	3714176.0	1.79402	(217, 2)	519277.0	3714176.0	1.37609	(54, 2)
520277.0	3714176.0	1.27615	(180, 3)	521277.0	3714176.0	0.81645	(191, 2)
522277.0	3714176.0	0.88444	(4, 2)	511277.0	3715176.0	2.12058C	(12, 1)
512277.0	3715176.0	3.33313	(101, 1)	513277.0	3715176.0	2.22885	(56, 3)
514277.0	3715176.0	3.67570C	(362, 3)	515277.0	3715176.0	3.17978	(289, 3)
516277.0	3715176.0	3.05797	(78, 2)	517277.0	3715176.0	1.29349	(143, 2)
518277.0	3715176.0	1.70205	(347, 2)	519277.0	3715176.0	1.24686	(217, 2)
520277.0	3715176.0	1.26931	(219, 2)	521277.0	3715176.0	1.10301	(343, 2)
522277.0	3715176.0	1.18931	(180, 3)	511277.0	3716176.0	3.34743C	(16, 3)
512277.0	3716176.0	2.05848	(98, 2)	513277.0	3716176.0	3.04036C	(191, 1)
514277.0	3716176.0	3.11020C	(217, 1)	515277.0	3716176.0	4.01123C	(333, 3)
516277.0	3716176.0	2.09647	(78, 2)	517277.0	3716176.0	1.31936	(355, 2)
518277.0	3716176.0	1.24153	(132, 2)	519277.0	3716176.0	1.23226	(131, 1)
520277.0	3716176.0	1.09853	(68, 1)	521277.0	3716176.0	1.07134	(219, 2)
522277.0	3716176.0	0.96968	(54, 2)	511277.0	3717176.0	3.18317C	(282, 3)
512277.0	3717176.0	3.11576	(22, 1)	513277.0	3717176.0	3.22024C	(168, 1)
514277.0	3717176.0	3.65579	(46, 1)	515277.0	3717176.0	2.79083	(45, 3)
516277.0	3717176.0	2.02693	(313, 3)	517277.0	3717176.0	1.37206	(222, 1)
518277.0	3717176.0	1.43386	(255, 1)	519277.0	3717176.0	1.64362	(242, 1)
520277.0	3717176.0	1.13675	(146, 1)	521277.0	3717176.0	0.87570	(68, 1)
522277.0	3717176.0	0.87441C	(81, 3)	511277.0	3713176.0	1.33409C	(182, 3)
512277.0	3713176.0	1.19033	(349, 3)	513277.0	3713176.0	1.41568	(91, 1)
514277.0	3713176.0	2.09754	(101, 2)	511277.0	3712176.0	1.28877	(214, 3)
512277.0	3712176.0	1.45140	(214, 3)	513277.0	3712176.0	1.38415	(339, 2)
514277.0	3712176.0	1.87035	(249, 2)	511277.0	3711176.0	2.58377	(201, 3)
512277.0	3711176.0	2.77368	(206, 3)	513277.0	3711176.0	1.69710C	(204, 3)
514277.0	3711176.0	2.39786	(263, 2)	516500.0	3708100.0	2.79504	(65, 1)
518100.0	3709350.0	3.17426	(80, 2)	514500.0	3708800.0	2.92221	(326, 1)
517300.0	3714400.0	2.94737C	(199, 1)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1984 BINARY ***

* 50 MAXIMUM 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	11.69264	2	98	516179.3	3712061.0	26	5.07446	2	312	516177.0	3712176.0
2	10.36033	2	57	516179.3	3712061.0	27	5.07308	2	36	516679.3	3711378.0
3	9.12248	2	98	516177.0	3712076.0	28	4.97841	2	120	516377.0	3712476.0
4	9.04267	3	111	516264.6	3712122.0	29	4.97462	2	127	516277.0	3712476.0
5	9.04267	3	111	516264.6	3712122.0	30	4.95799	2	127	516372.0	3712798.0
6	8.41511	2	111	516264.6	3712122.0	31	4.95237	2	127	516377.0	3712376.0
7	8.41511	2	111	516264.6	3712122.0	32	4.93110	2	56	516177.0	3712076.0
8	8.17858	2	57	516177.0	3712076.0	33	4.91840	3	42	516179.3	3712061.0
9	7.79895	2	111	516277.0	3712276.0	34	4.83817	2	127	516377.0	3712476.0
10	6.55500	2	111	516277.0	3712376.0	35	4.78066	3	111	516277.0	3712276.0
11	6.52013	2	56	516179.3	3712061.0	36	4.77544	2	127	516377.0	3712276.0
12	6.06253	1	57	516179.3	3712061.0	37	4.75514	2	312	515277.0	3714176.0
13	6.02038	2	98	516077.0	3712176.0	38	4.75514	2	312	515277.0	3714176.0
14	5.98197	2	120	516377.0	3712276.0	39	4.75359	2	120	516277.0	3712276.0
15	5.64382	1	57	516177.0	3712076.0	40	4.71305	3	68	516500.0	3708100.0
16	5.59329	2	120	516377.0	3712376.0	41	4.71266	2	211	515277.0	3711078.0
17	5.45437	2	111	516277.0	3712476.0	42	4.67597	2	127	516277.0	3712576.0
18	5.39228	2	57	516077.0	3712176.0	43	4.65076	2	127	516377.0	3712576.0
19	5.38433	1	21	512277.0	3709378.0	44	4.64897C	1	251	512277.0	3715176.0
20	5.38433	1	21	512277.0	3709378.0	45	4.64897C	1	251	512277.0	3715176.0
21	5.29228	2	159	516277.0	3714176.0	46	4.56238	2	111	516277.0	3712576.0
22	5.29228	2	159	516277.0	3714176.0	47	4.53092	2	127	516377.0	3713176.0
23	5.18656	2	127	516277.0	3712376.0	48	4.45011	2	312	516179.3	3712122.0
24	5.14323	2	127	516372.0	3712884.0	49	4.42353	2	127	516377.0	3712976.0
25	5.08620	2	127	516277.0	3712276.0	50	4.42277	2	211	515377.0	3711178.0

Woodward-Clyde
Consultants

SECTION H.15

1985 MODELING OUTPUT FOR CO ISCST

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* 50 MAXIMUM 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	9.61405C	3	19	516264.6	3711598.0	26	6.15502	3	62	516264.6	3712122.0
2	8.63916	2	301	516177.0	3711476.0	27	6.03403	1	301	516077.0	3710478.0
3	8.06322	1	301	516264.6	3711598.0	28	6.01776	2	301	515977.0	3710378.0
4	7.84099	2	301	515877.0	3710478.0	29	5.81222	3	301	516177.0	3711476.0
5	7.73971	2	301	515877.0	3710378.0	30	5.78929	3	302	516277.0	3711278.0
6	7.43520	2	301	515977.0	3710678.0	31	5.77137	2	301	516077.0	3710778.0
7	7.33393	2	301	516264.6	3711598.0	32	5.71524	3	302	516276.8	3711378.0
8	7.28649	3	302	516177.0	3710478.0	33	5.71524	3	302	516276.8	3711378.0
9	7.27055	3	302	516277.0	3710478.0	34	5.71355	3	302	516277.0	3710678.0
10	6.91630	2	301	515977.0	3710578.0	35	5.70678	2	301	516077.0	3710878.0
11	6.85943	2	301	515877.0	3710578.0	36	5.59422	3	302	516277.0	3710778.0
12	6.76030	3	302	516177.0	3710378.0	37	5.55186	1	301	516077.0	3710578.0
13	6.75274	2	301	515977.0	3710478.0	38	5.53685	1	301	515977.0	3710578.0
14	6.69485	2	301	515977.0	3710778.0	39	5.51934	2	301	516177.0	3711278.0
15	6.52583	3	302	516277.0	3710578.0	40	5.47048	3	301	515877.0	3710378.0
16	6.48949	3	302	516277.0	3710378.0	41	5.46963	3	301	515877.0	3710478.0
17	6.35408	3	133	516179.3	3712122.0	42	5.43397	1	301	516177.0	3711476.0
18	6.31115	1	301	515977.0	3710378.0	43	5.34766	2	301	515977.0	3710878.0
19	6.30310	3	302	516177.0	3710578.0	44	5.32752	3	301	515977.0	3710478.0
20	6.27536	3	301	516264.6	3711598.0	45	5.31607	2	302	516264.6	3711598.0
21	6.26935	2	301	515777.0	3710378.0	46	5.26328	1	301	516077.0	3710378.0
22	6.26229	1	301	516077.0	3710678.0	47	5.25916	2	301	515877.0	3710678.0
23	6.21953	1	301	515977.0	3710478.0	48	5.25208	3	302	516177.0	3710678.0
24	6.20213	1	301	516077.0	3710778.0	49	5.24210	2	112	516264.6	3712122.0
25	6.15502	3	62	516264.6	3712122.0	50	5.24210	2	112	516264.6	3712122.0

ISCST (DATED 90346)
BOWMAN ENVIRONMENTAL ENGINEERING REV.6.96

SESSION INFORMATION

INPUT DATA FILE NAME : ISCC085.DTA
OUTPUT LIST FILE NAME : ISCC085.LST
MET DATA FILE NAME : shvggg85.bin

NOTE THAT THE BUILDING DIMENSIONS ON CARD 6,1 FOR SOURCE NO. 1 DO NOT MEET THE SCHULMAN-SCIRE CRITERIA.
THEREFORE, DIRECTION SPECIFIC BUILDING DIMENSIONS WILL NOT BE USED BY THE MODEL.

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
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*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** X,Y COORDINATES OF DISCRETE RECEPTORS ***
(METERS)

(516276.8,3711378.0),	(516411.0,3712159.0),	(516679.3,3711159.0),	(516679.3,3711378.0),	(517079.3,3711378.0),
(517079.3,3711549.0),	(517530.5,3711488.0),	(517530.5,3711317.0),	(518743.9,3711171.0),	(518743.9,3711573.0),
(519914.6,3711573.0),	(519914.6,3711171.0),	(520304.8,3711171.0),	(520304.8,3711024.0),	(520707.2,3711024.0),
(520817.0,3711628.0),	(520402.3,3712176.0),	(518707.2,3712176.0),	(518707.2,3712030.0),	(518280.4,3712030.0),
(518280.4,3712250.0),	(518060.9,3712335.0),	(518060.9,3712878.0),	(517426.8,3712878.0),	(517426.8,3713079.0),
(516993.9,3713079.0),	(516993.9,3713280.0),	(516603.7,3713280.0),	(516603.7,3712884.0),	(516372.0,3712884.0),
(516372.0,3712798.0),	(516256.2,3712774.0),	(516276.8,3711378.0),	(516264.6,3712122.0),	(516264.6,3711598.0),
(516008.5,3712006.0),	(516008.5,3712122.0),	(516115.2,3712189.0),	(516179.3,3712061.0),	(516179.3,3712122.0),
(516264.6,3712122.0),	(515277.0,3711278.0),	(515377.0,3711278.0),	(515477.0,3711278.0),	(515577.0,3711278.0),
(515677.0,3711278.0),	(515777.0,3711278.0),	(515877.0,3711278.0),	(515977.0,3711278.0),	(516077.0,3711278.0),
(516177.0,3711278.0),	(516277.0,3711278.0),	(516377.0,3711278.0),	(516477.0,3711278.0),	(516577.0,3711278.0),
(516677.0,3711278.0),	(516777.0,3711278.0),	(516877.0,3711278.0),	(516977.0,3711278.0),	(517077.0,3711278.0),
(517177.0,3711278.0),	(515277.0,3711178.0),	(515377.0,3711178.0),	(515477.0,3711178.0),	(515577.0,3711178.0),
(515677.0,3711178.0),	(515777.0,3711178.0),	(515877.0,3711178.0),	(515977.0,3711178.0),	(516077.0,3711178.0),
(516177.0,3711178.0),	(516277.0,3711178.0),	(516377.0,3711178.0),	(516477.0,3711178.0),	(516577.0,3711178.0),
(516677.0,3711178.0),	(516777.0,3711178.0),	(516877.0,3711178.0),	(516977.0,3711178.0),	(517077.0,3711178.0),
(517177.0,3711178.0),	(515277.0,3711078.0),	(515377.0,3711078.0),	(515477.0,3711078.0),	(515577.0,3711078.0),
(515677.0,3711078.0),	(515777.0,3711078.0),	(515877.0,3711078.0),	(515977.0,3711078.0),	(516077.0,3711078.0),
(516177.0,3711078.0),	(516277.0,3711078.0),	(516377.0,3711078.0),	(516477.0,3711078.0),	(516577.0,3711078.0),
(516677.0,3711078.0),	(516777.0,3711078.0),	(516877.0,3711078.0),	(516977.0,3711078.0),	(517077.0,3711078.0),
(517177.0,3711078.0),	(515277.0,3710978.0),	(515377.0,3710978.0),	(515477.0,3710978.0),	(515577.0,3710978.0),
(515677.0,3710978.0),	(515777.0,3710978.0),	(515877.0,3710978.0),	(515977.0,3710978.0),	(516077.0,3710978.0),
(516177.0,3710978.0),	(516277.0,3710978.0),	(516377.0,3710978.0),	(516477.0,3710978.0),	(516577.0,3710978.0),
(516677.0,3710978.0),	(516777.0,3710978.0),	(516877.0,3710978.0),	(516977.0,3710978.0),	(517077.0,3710978.0),
(517177.0,3710978.0),	(515277.0,3710878.0),	(515377.0,3710878.0),	(515477.0,3710878.0),	(515577.0,3710878.0),
(515677.0,3710878.0),	(515777.0,3710878.0),	(515877.0,3710878.0),	(515977.0,3710878.0),	(516077.0,3710878.0),
(516177.0,3710878.0),	(516277.0,3710878.0),	(516377.0,3710878.0),	(516477.0,3710878.0),	(516577.0,3710878.0),
(516677.0,3710878.0),	(516777.0,3710878.0),	(516877.0,3710878.0),	(516977.0,3710878.0),	(517077.0,3710878.0),
(517177.0,3710878.0),	(515277.0,3710778.0),	(515377.0,3710778.0),	(515477.0,3710778.0),	(515577.0,3710778.0),
(515677.0,3710778.0),	(515777.0,3710778.0),	(515877.0,3710778.0),	(515977.0,3710778.0),	(516077.0,3710778.0),
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*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
516276.8	3711378.0	34.43942	516411.0	3712159.0	34.43942	516679.3	3711159.0	34.43942
516679.3	3711378.0	34.43942	517079.3	3711378.0	34.43942	517079.3	3711549.0	34.43942
517530.5	3711488.0	34.43942	517530.5	3711317.0	34.43942	518743.9	3711171.0	34.43942
518743.9	3711573.0	34.43942	519914.6	3711573.0	34.43942	519914.6	3711171.0	34.43942
520304.8	3711171.0	34.43942	520304.8	3711024.0	34.43942	520707.2	3711024.0	34.43942
520817.0	3711628.0	34.43942	520402.3	3712176.0	34.43942	518707.2	3712176.0	34.43942
518707.2	3712030.0	34.43942	518280.4	3712030.0	34.43942	518280.4	3712250.0	34.43942
518060.9	3712335.0	34.43942	518060.9	3712878.0	34.43942	517426.8	3712878.0	34.43942
517426.8	3713079.0	34.43942	516993.9	3713079.0	34.43942	516993.9	3713280.0	34.43942
516603.7	3713280.0	34.43942	516603.7	3712884.0	34.43942	516372.0	3712884.0	34.43942
516372.0	3712798.0	34.43942	516256.2	3712774.0	34.43942	516276.8	3711378.0	34.43942
516264.6	3712122.0	34.43942	516264.6	3711598.0	34.43942	516008.5	3712006.0	34.43942
516008.5	3712122.0	34.43942	516115.2	3712189.0	34.43942	516179.3	3712061.0	34.43942
516179.3	3712122.0	34.43942	516264.6	3712122.0	34.43942	515277.0	3711278.0	39.62103
515377.0	3711278.0	39.62103	515477.0	3711278.0	39.62103	515577.0	3711278.0	39.62103
515677.0	3711278.0	39.62103	515777.0	3711278.0	39.62103	515877.0	3711278.0	39.62103
515977.0	3711278.0	39.62103	516077.0	3711278.0	39.62103	516177.0	3711278.0	39.62103
516277.0	3711278.0	36.57912	516377.0	3711278.0	39.62103	516477.0	3711278.0	39.62103
516577.0	3711278.0	39.62103	516677.0	3711278.0	33.53112	516777.0	3711278.0	33.53112
516877.0	3711278.0	30.48006	516977.0	3711278.0	30.48006	517077.0	3711278.0	33.53112
517177.0	3711278.0	33.53112	515277.0	3711178.0	39.62103	515377.0	3711178.0	42.66904
515477.0	3711178.0	39.62103	515577.0	3711178.0	39.62103	515677.0	3711178.0	42.66904
515777.0	3711178.0	42.66904	515877.0	3711178.0	42.66904	515977.0	3711178.0	39.62103
516077.0	3711178.0	39.62103	516177.0	3711178.0	36.57912	516277.0	3711178.0	36.57912
516377.0	3711178.0	36.57912	516477.0	3711178.0	36.57912	516577.0	3711178.0	36.57912
516677.0	3711178.0	33.53112	516777.0	3711178.0	33.53112	516877.0	3711178.0	33.53112
516977.0	3711178.0	33.53112	517077.0	3711178.0	33.53112	517177.0	3711178.0	33.53112
515277.0	3711078.0	45.72009	515377.0	3711078.0	42.66904	515477.0	3711078.0	36.57912
515577.0	3711078.0	42.66904	515677.0	3711078.0	45.72009	515777.0	3711078.0	45.72009
515877.0	3711078.0	45.72009	515977.0	3711078.0	42.66904	516077.0	3711078.0	39.62103
516177.0	3711078.0	39.62103	516277.0	3711078.0	36.57912	516377.0	3711078.0	36.57912
516477.0	3711078.0	36.57912	516577.0	3711078.0	39.62103	516677.0	3711078.0	33.53112
516777.0	3711078.0	33.53112	516877.0	3711078.0	33.53112	516977.0	3711078.0	36.57912
517077.0	3711078.0	33.53112	517177.0	3711078.0	33.53112	515277.0	3710978.0	45.72009
515377.0	3710978.0	42.66904	515477.0	3710978.0	36.57912	515577.0	3710978.0	42.66904
515677.0	3710978.0	45.72009	515777.0	3710978.0	48.77114	515877.0	3710978.0	45.72009
515977.0	3710978.0	45.72009	516077.0	3710978.0	45.72009	516177.0	3710978.0	42.66904
516277.0	3710978.0	42.66904	516377.0	3710978.0	39.62103	516477.0	3710978.0	36.57912

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* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
515377.0	3712776.0	27.42900	515477.0	3712776.0	27.42900	515577.0	3712776.0	33.53112
515677.0	3712776.0	33.53112	515777.0	3712776.0	27.42900	515877.0	3712776.0	33.53112
515977.0	3712776.0	33.53112	516077.0	3712776.0	33.53112	516177.0	3712776.0	33.53112
516277.0	3712776.0	30.48006	516377.0	3712776.0	30.48006	516477.0	3712776.0	27.42900
516577.0	3712776.0	27.42900	516677.0	3712776.0	27.42900	516777.0	3712776.0	27.42900
516877.0	3712776.0	27.42900	516977.0	3712776.0	27.42900	517077.0	3712776.0	30.48006
517177.0	3712776.0	30.48006	515277.0	3712876.0	27.42900	515377.0	3712876.0	27.42900
515477.0	3712876.0	27.42900	515577.0	3712876.0	27.42900	515677.0	3712876.0	33.53112
515777.0	3712876.0	27.42900	515877.0	3712876.0	30.48006	515977.0	3712876.0	30.48006
516077.0	3712876.0	33.53112	516177.0	3712876.0	30.48006	516277.0	3712876.0	27.42900
516377.0	3712876.0	27.42900	516477.0	3712876.0	27.42900	516577.0	3712876.0	27.42900
516677.0	3712876.0	27.42900	516777.0	3712876.0	30.48006	516877.0	3712876.0	30.48006
516977.0	3712876.0	27.42900	517077.0	3712876.0	30.48006	517177.0	3712876.0	30.48006
515277.0	3712976.0	27.42900	515377.0	3712976.0	27.42900	515477.0	3712976.0	27.42900
515577.0	3712976.0	27.42900	515677.0	3712976.0	27.42900	515777.0	3712976.0	27.42900
515877.0	3712976.0	33.53112	515977.0	3712976.0	33.53112	516077.0	3712976.0	33.53112
516177.0	3712976.0	33.53112	516277.0	3712976.0	27.42900	516377.0	3712976.0	27.42900
516477.0	3712976.0	27.42900	516577.0	3712976.0	27.42900	516677.0	3712976.0	27.42900
516777.0	3712976.0	30.48006	516877.0	3712976.0	30.48006	516977.0	3712976.0	30.48006
517077.0	3712976.0	27.42900	517177.0	3712976.0	27.42900	515277.0	3713076.0	27.42900
515377.0	3713076.0	27.42900	515477.0	3713076.0	27.42900	515577.0	3713076.0	27.42900
515677.0	3713076.0	27.42900	515777.0	3713076.0	27.42900	515877.0	3713076.0	27.42900
515977.0	3713076.0	27.42900	516077.0	3713076.0	27.42900	516177.0	3713076.0	27.42900
516277.0	3713076.0	27.42900	516377.0	3713076.0	24.38100	516477.0	3713076.0	27.42900
516577.0	3713076.0	27.42900	516677.0	3713076.0	30.48006	516777.0	3713076.0	33.53112
516877.0	3713076.0	30.48006	516977.0	3713076.0	30.48006	517077.0	3713076.0	30.48006
517177.0	3713076.0	30.48006	515277.0	3713176.0	27.42900	515377.0	3713176.0	27.42900
515477.0	3713176.0	27.42900	515577.0	3713176.0	27.42900	515677.0	3713176.0	27.42900
515777.0	3713176.0	30.48006	515877.0	3713176.0	30.48006	515977.0	3713176.0	27.42900
516077.0	3713176.0	30.48006	516177.0	3713176.0	27.42900	516277.0	3713176.0	27.42900
516377.0	3713176.0	27.42900	516477.0	3713176.0	27.42900	516577.0	3713176.0	27.42900
516677.0	3713176.0	27.42900	516777.0	3713176.0	30.48006	516877.0	3713176.0	33.53112
516977.0	3713176.0	27.42900	517077.0	3713176.0	30.48006	517177.0	3713176.0	42.66904
515277.0	3712176.0	33.53112	515377.0	3712176.0	30.48006	515477.0	3712176.0	33.53112
515577.0	3712176.0	30.48006	515677.0	3712176.0	30.48006	515777.0	3712176.0	30.48006
515877.0	3712176.0	30.48006	515977.0	3712176.0	30.48006	516077.0	3712176.0	33.53112
516177.0	3712176.0	33.53112	515277.0	3712076.0	30.48006	515377.0	3712076.0	30.48006
515477.0	3712076.0	33.53112	515577.0	3712076.0	30.48006	515677.0	3712076.0	33.53112

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* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
515777.0	3712076.0	33.53112	515877.0	3712076.0	33.53112	515977.0	3712076.0	33.53112
516077.0	3712076.0	30.48006	516177.0	3712076.0	33.53112	515277.0	3711976.0	33.53112
515377.0	3711976.0	33.53112	515477.0	3711976.0	30.48006	515577.0	3711976.0	30.48006
515677.0	3711976.0	33.53112	515777.0	3711976.0	33.53112	515877.0	3711976.0	33.53112
515977.0	3711976.0	33.53112	516077.0	3711976.0	33.53112	516177.0	3711976.0	30.48006
515277.0	3711876.0	36.57912	515377.0	3711876.0	30.48006	515477.0	3711876.0	33.53112
515577.0	3711876.0	33.53112	515677.0	3711876.0	33.53112	515777.0	3711876.0	33.53112
515877.0	3711876.0	33.53112	515977.0	3711876.0	33.53112	516077.0	3711876.0	33.53112
516177.0	3711876.0	33.53112	515277.0	3711776.0	36.57912	515377.0	3711776.0	33.53112
515477.0	3711776.0	33.53112	515577.0	3711776.0	33.53112	515677.0	3711776.0	33.53112
515777.0	3711776.0	33.53112	515877.0	3711776.0	33.53112	515977.0	3711776.0	33.53112
516077.0	3711776.0	33.53112	516177.0	3711776.0	33.53112	515277.0	3711676.0	39.62103
515377.0	3711676.0	36.57912	515477.0	3711676.0	36.57912	515577.0	3711676.0	36.57912
515677.0	3711676.0	36.57912	515777.0	3711676.0	33.53112	515877.0	3711676.0	33.53112
515977.0	3711676.0	33.53112	516077.0	3711676.0	33.53112	516177.0	3711676.0	36.57912
515277.0	3711576.0	39.62103	515377.0	3711576.0	39.62103	515477.0	3711576.0	39.62103
515577.0	3711576.0	39.62103	515677.0	3711576.0	36.57912	515777.0	3711576.0	33.53112
515877.0	3711576.0	36.57912	515977.0	3711576.0	36.57912	516077.0	3711576.0	36.57912
516177.0	3711576.0	39.62103	515277.0	3711476.0	39.62103	515377.0	3711476.0	39.62103
515477.0	3711476.0	39.62103	515577.0	3711476.0	36.57912	515677.0	3711476.0	36.57912
515777.0	3711476.0	39.62103	515877.0	3711476.0	39.62103	515977.0	3711476.0	39.62103
516077.0	3711476.0	39.62103	516177.0	3711476.0	39.62103	511277.0	3709378.0	64.01117
512277.0	3709378.0	60.96012	513277.0	3709378.0	73.14910	514277.0	3709378.0	64.01117
515277.0	3709378.0	57.90907	516277.0	3709378.0	45.72009	517277.0	3709378.0	42.66904
518277.0	3709378.0	60.96012	519277.0	3709378.0	30.48006	520277.0	3709378.0	30.48006
521277.0	3709378.0	30.48006	522277.0	3709378.0	27.42900	511277.0	3708378.0	67.05918
512277.0	3708378.0	48.77114	513277.0	3708378.0	76.20015	514277.0	3708378.0	70.10109
515277.0	3708378.0	48.77114	516277.0	3708378.0	36.57912	517277.0	3708378.0	64.01117
518277.0	3708378.0	48.77114	519277.0	3708378.0	30.48006	520277.0	3708378.0	30.48006
521277.0	3708378.0	27.42900	522277.0	3708378.0	27.42900	511277.0	3707378.0	54.86106
512277.0	3707378.0	67.05918	513277.0	3707378.0	64.01117	514277.0	3707378.0	54.86106
515277.0	3707378.0	60.96012	516277.0	3707378.0	48.77114	517277.0	3707378.0	67.05918
518277.0	3707378.0	48.77114	519277.0	3707378.0	33.53112	520277.0	3707378.0	27.42900
521277.0	3707378.0	27.42900	522277.0	3707378.0	27.42900	511277.0	3706378.0	73.14910
512277.0	3706378.0	73.14910	513277.0	3706378.0	64.01117	514277.0	3706378.0	64.01117
515277.0	3706378.0	67.05918	516277.0	3706378.0	48.77114	517277.0	3706378.0	48.77114
518277.0	3706378.0	54.86106	519277.0	3706378.0	36.57912	520277.0	3706378.0	30.48006
521277.0	3706378.0	30.48006	522277.0	3706378.0	27.42900	523277.0	3706378.0	27.42900

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* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
522402.0	3710378.0	27.42900	522402.0	3711378.0	30.48006	522402.0	3712378.0	30.48006
511277.0	3714176.0	36.57912	512277.0	3714176.0	36.57912	513277.0	3714176.0	33.53112
514277.0	3714176.0	30.48006	515277.0	3714176.0	48.77114	516277.0	3714176.0	48.77114
517277.0	3714176.0	70.10109	518277.0	3714176.0	33.53112	519277.0	3714176.0	27.42900
520277.0	3714176.0	30.48006	521277.0	3714176.0	30.48006	522277.0	3714176.0	30.48006
511277.0	3715176.0	45.72009	512277.0	3715176.0	60.96012	513277.0	3715176.0	39.62103
514277.0	3715176.0	51.81915	515277.0	3715176.0	54.86106	516277.0	3715176.0	39.62103
517277.0	3715176.0	30.48006	518277.0	3715176.0	30.48006	519277.0	3715176.0	27.42900
520277.0	3715176.0	24.38100	521277.0	3715176.0	30.48006	522277.0	3715176.0	30.48006
511277.0	3716176.0	60.96012	512277.0	3716176.0	39.62103	513277.0	3716176.0	51.81915
514277.0	3716176.0	60.96012	515277.0	3716176.0	70.10109	516277.0	3716176.0	24.38100
517277.0	3716176.0	30.48006	518277.0	3716176.0	30.48006	519277.0	3716176.0	30.48006
520277.0	3716176.0	33.53112	521277.0	3716176.0	27.42900	522277.0	3716176.0	27.42900
511277.0	3717176.0	48.77114	512277.0	3717176.0	54.86106	513277.0	3717176.0	60.96012
514277.0	3717176.0	60.96012	515277.0	3717176.0	42.66904	516277.0	3717176.0	30.48006
517277.0	3717176.0	30.48006	518277.0	3717176.0	33.53112	519277.0	3717176.0	36.57912
520277.0	3717176.0	30.48006	521277.0	3717176.0	27.42900	522277.0	3717176.0	27.42900
511277.0	3713176.0	42.66904	512277.0	3713176.0	36.57912	513277.0	3713176.0	36.57912
514277.0	3713176.0	36.57912	511277.0	3712176.0	36.57912	512277.0	3712176.0	39.62103
513277.0	3712176.0	39.62103	514277.0	3712176.0	33.53112	511277.0	3711176.0	48.77114
512277.0	3711176.0	64.01117	513277.0	3711176.0	39.62103	514277.0	3711176.0	45.72009
511277.0	3709378.0	64.01117	512277.0	3709378.0	60.96012	513277.0	3709378.0	73.14910
514277.0	3709378.0	64.01117	515277.0	3709378.0	57.90907	516277.0	3709378.0	45.72009
517277.0	3709378.0	42.66904	518277.0	3709378.0	60.96012	519277.0	3709378.0	30.48006
520277.0	3709378.0	30.48006	521277.0	3709378.0	30.48006	522277.0	3709378.0	27.42900
511277.0	3708378.0	67.05918	512277.0	3708378.0	48.77114	513277.0	3708378.0	76.20015
514277.0	3708378.0	70.10109	515277.0	3708378.0	48.77114	516277.0	3708378.0	36.57912
517277.0	3708378.0	64.01117	518277.0	3708378.0	48.77114	519277.0	3708378.0	30.48006
520277.0	3708378.0	30.48006	521277.0	3708378.0	27.42900	522277.0	3708378.0	27.42900
511277.0	3707378.0	54.86106	512277.0	3707378.0	67.05918	513277.0	3707378.0	64.01117
514277.0	3707378.0	54.86106	515277.0	3707378.0	60.96012	516277.0	3707378.0	48.77114
517277.0	3707378.0	67.05918	518277.0	3707378.0	48.77114	519277.0	3707378.0	33.53112
520277.0	3707378.0	27.42900	521277.0	3707378.0	27.42900	522277.0	3707378.0	27.42900
511277.0	3706378.0	73.14910	512277.0	3706378.0	73.14910	513277.0	3706378.0	64.01117
514277.0	3706378.0	64.01117	515277.0	3706378.0	67.05918	516277.0	3706378.0	48.77114
517277.0	3706378.0	48.77114	518277.0	3706378.0	54.86106	519277.0	3706378.0	36.57912
520277.0	3706378.0	30.48006	521277.0	3706378.0	30.48006	522277.0	3706378.0	27.42900
523277.0	3706378.0	27.42900	522402.0	3710378.0	27.42900	522402.0	3711378.0	30.48006

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* ELEVATION HEIGHTS IN METERS *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	ELE.	- X -	- Y -	ELE.	- X -	- Y -	ELE.
522402.0	3712378.0	30.48006	511277.0	3714176.0	36.57912	512277.0	3714176.0	36.57912
513277.0	3714176.0	33.53112	514277.0	3714176.0	30.48006	515277.0	3714176.0	48.77114
516277.0	3714176.0	48.77114	517277.0	3714176.0	70.10109	518277.0	3714176.0	33.53112
519277.0	3714176.0	27.42900	520277.0	3714176.0	30.48006	521277.0	3714176.0	30.48006
522277.0	3714176.0	30.48006	511277.0	3715176.0	45.72009	512277.0	3715176.0	60.96012
513277.0	3715176.0	39.62103	514277.0	3715176.0	51.81915	515277.0	3715176.0	54.86106
516277.0	3715176.0	39.62103	517277.0	3715176.0	30.48006	518277.0	3715176.0	30.48006
519277.0	3715176.0	27.42900	520277.0	3715176.0	24.38100	521277.0	3715176.0	30.48006
522277.0	3715176.0	30.48006	511277.0	3716176.0	60.96012	512277.0	3716176.0	39.62103
513277.0	3716176.0	51.81915	514277.0	3716176.0	60.96012	515277.0	3716176.0	70.10109
516277.0	3716176.0	24.38100	517277.0	3716176.0	30.48006	518277.0	3716176.0	30.48006
519277.0	3716176.0	30.48006	520277.0	3716176.0	33.53112	521277.0	3716176.0	27.42900
522277.0	3716176.0	27.42900	511277.0	3717176.0	48.77114	512277.0	3717176.0	54.86106
513277.0	3717176.0	60.96012	514277.0	3717176.0	60.96012	515277.0	3717176.0	42.66904
516277.0	3717176.0	30.48006	517277.0	3717176.0	30.48006	518277.0	3717176.0	33.53112
519277.0	3717176.0	36.57912	520277.0	3717176.0	30.48006	521277.0	3717176.0	27.42900
522277.0	3717176.0	27.42900	511277.0	3713176.0	42.66904	512277.0	3713176.0	36.57912
513277.0	3713176.0	36.57912	514277.0	3713176.0	36.57912	511277.0	3712176.0	36.57912
512277.0	3712176.0	39.62103	513277.0	3712176.0	39.62103	514277.0	3712176.0	33.53112
511277.0	3711176.0	48.77114	512277.0	3711176.0	64.01117	513277.0	3711176.0	39.62103
514277.0	3711176.0	45.72009	516500.0	3708100.0	67.66878	518100.0	3709350.0	79.25121
514500.0	3708800.0	80.47041	517300.0	3714400.0	76.20015			

* CALM HOURS (=1) FOR DAY 99 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 100 *	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 101 *	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 102 *	0	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 103 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 104 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 105 *	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 107 *	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 114 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 115 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 117 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 118 *	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 119 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 120 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 122 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 123 *	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 124 *	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 125 *	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 126 *	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 127 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 128 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 129 *	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 130 *	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 133 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 134 *	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 135 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 136 *	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 138 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 139 *	1	1	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 140 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 141 *	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 142 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 143 *	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 144 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 145 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 146 *	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 147 *	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 148 *	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 152 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 155 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 156 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 157 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 158 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 159 *	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 160 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 161 *	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 162 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 164 *	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 165 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 166 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 167 *	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 169 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 170 *	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 171 *	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 172 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 173 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 174 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 175 *	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 176 *	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 177 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 180 *	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 181 *	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 182 *	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 183 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 184 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 185 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

* CALM HOURS (=1) FOR DAY 186 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 187 *	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 188 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 189 *	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 191 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 192 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 193 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 194 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 195 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 196 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 197 *	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 198 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 200 *	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 201 *	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 202 *	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 203 *	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 204 *	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 205 *	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 207 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 208 *	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 209 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 210 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 211 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 212 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 213 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
* CALM HOURS (=1) FOR DAY 214 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 215 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 216 *	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 217 *	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 218 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 219 *	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 220 *	1	1	1	1	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	1	0	1	0	0
* CALM HOURS (=1) FOR DAY 221 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 222 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 223 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 224 *	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0
* CALM HOURS (=1) FOR DAY 225 *	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 226 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 227 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 228 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 230 *	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 231 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 232 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 233 *	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0
* CALM HOURS (=1) FOR DAY 234 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 235 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 236 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 237 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 238 *	1	0	1	1	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 239 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 240 *	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 241 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 242 *	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 243 *	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 244 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 250 *	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 251 *	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 252 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 253 *	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 254 *	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 255 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 259 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 260 *	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 262 *	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 263 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 264 *	0	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* CALM HOURS (=1) FOR DAY 265 *	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 266 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 270 *	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 271 *	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 272 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
* CALM HOURS (=1) FOR DAY 275 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 276 *	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 277 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 278 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 279 *	0	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1
* CALM HOURS (=1) FOR DAY 280 *	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 284 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 285 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 287 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 288 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 289 *	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 291 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 292 *	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 293 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 294 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 295 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 297 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 300 *	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 307 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
* CALM HOURS (=1) FOR DAY 308 *	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 309 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	1	
* CALM HOURS (=1) FOR DAY 311 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	
* CALM HOURS (=1) FOR DAY 312 *	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 318 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 320 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 325 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0
* CALM HOURS (=1) FOR DAY 326 *	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 328 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 331 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 332 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 338 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 340 *	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 341 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 342 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 348 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 349 *	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 350 *	1	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 351 *	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 352 *	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 353 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 354 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1
* CALM HOURS (=1) FOR DAY 355 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
* CALM HOURS (=1) FOR DAY 356 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 357 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
* CALM HOURS (=1) FOR DAY 360 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 361 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 363 *	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 364 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516276.8	3711378.0	9.06424	(302,20)	516411.0	3712159.0	17.95999	(94,15)
516679.3	3711159.0	8.11318	(214,14)	516679.3	3711378.0	10.39333	(42,15)
517079.3	3711378.0	8.01513	(95,12)	517079.3	3711549.0	8.02403	(222,11)
517530.5	3711488.0	7.12851	(158,14)	517530.5	3711317.0	6.62667	(218,12)
518743.9	3711171.0	6.22954	(118,11)	518743.9	3711573.0	6.56067	(228, 7)
519914.6	3711573.0	4.82867	(228, 7)	519914.6	3711171.0	5.75175	(228, 7)
520304.8	3711171.0	5.80368	(228, 7)	520304.8	3711024.0	4.94374	(266,11)
520707.2	3711024.0	5.08873	(228, 7)	520817.0	3711628.0	5.25979	(105, 7)
520402.3	3712176.0	4.92392	(18, 9)	518707.2	3712176.0	6.30850	(18, 9)
518707.2	3712030.0	5.98549	(213, 8)	518280.4	3712030.0	6.88720	(83,15)
518280.4	3712250.0	6.68460	(142,13)	518060.9	3712335.0	6.75071	(142,13)
518060.9	3712878.0	6.59053	(236, 9)	517426.8	3712878.0	7.55956	(151,14)
517426.8	3713079.0	7.77770	(151,14)	516993.9	3713079.0	8.90119	(151,11)
516993.9	3713280.0	7.89740	(93,12)	516603.7	3713280.0	8.29668	(151,13)
516603.7	3712884.0	6.73804	(176,13)	516372.0	3712884.0	9.10001	(150,14)
516372.0	3712798.0	9.00263	(150,14)	516256.2	3712774.0	8.48682	(109,11)
516276.8	3711378.0	9.06424	(302,20)	516264.6	3712122.0	23.82314	(253,18)
516264.6	3711598.0	35.79667	(19,22)	516008.5	3712006.0	8.67172	(161, 6)
516008.5	3712122.0	7.20666	(51,16)	516115.2	3712189.0	22.34412	(133,19)
516179.3	3712061.0	15.41599	(88,24)	516179.3	3712122.0	36.99385	(133,19)
516264.6	3712122.0	23.82314	(253,18)	515277.0	3711278.0	7.35029	(242,12)
515377.0	3711278.0	7.31832	(198,14)	515477.0	3711278.0	7.72063	(199,13)
515577.0	3711278.0	8.09486	(199,13)	515677.0	3711278.0	7.63584	(198,12)
515777.0	3711278.0	8.08904	(135,12)	515877.0	3711278.0	7.52321	(135,12)
515977.0	3711278.0	8.12693	(208,14)	516077.0	3711278.0	10.95284	(20, 6)
516177.0	3711278.0	12.66121	(19,22)	516277.0	3711278.0	8.39946	(302,20)
516377.0	3711278.0	9.75377	(302,13)	516477.0	3711278.0	14.43400	(207,17)
516577.0	3711278.0	8.74362	(42,17)	516677.0	3711278.0	7.85251	(197,11)
516777.0	3711278.0	8.66183	(197,11)	516877.0	3711278.0	7.68194	(224,12)
516977.0	3711278.0	7.28718	(224,12)	517077.0	3711278.0	6.88870	(134,15)
517177.0	3711278.0	7.30454	(95,12)	515277.0	3711178.0	7.59161	(241,12)
515377.0	3711178.0	7.99114	(199,13)	515477.0	3711178.0	8.08643	(199,13)
515577.0	3711178.0	8.03176	(198,12)	515677.0	3711178.0	7.58032	(198,12)
515777.0	3711178.0	6.72738	(135,12)	515877.0	3711178.0	7.61020	(197,16)
515977.0	3711178.0	8.50819	(208,14)	516077.0	3711178.0	8.74467	(166,13)
516177.0	3711178.0	10.33520	(19,22)	516277.0	3711178.0	7.74426	(166,14)
516377.0	3711178.0	8.72680	(166,14)	516477.0	3711178.0	9.97331	(207,17)
516577.0	3711178.0	9.77368	(207,17)	516677.0	3711178.0	8.18883	(214,14)

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* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516777.0	3711178.0	7.69662	(197,11)	516877.0	3711178.0	7.56021	(95,13)
516977.0	3711178.0	6.87164	(224,12)	517077.0	3711178.0	6.97897	(134,15)
517177.0	3711178.0	7.21812	(134,15)	515277.0	3711078.0	7.76924	(199,13)
515377.0	3711078.0	7.85191	(199,13)	515477.0	3711078.0	7.68138	(198,12)
515577.0	3711078.0	7.70894	(123,11)	515677.0	3711078.0	7.07441	(123,11)
515777.0	3711078.0	9.06063	(197,16)	515877.0	3711078.0	8.01831	(197,16)
515977.0	3711078.0	7.80399	(20, 6)	516077.0	3711078.0	7.97653	(166,13)
516177.0	3711078.0	10.48884	(19,22)	516277.0	3711078.0	7.55426	(230,11)
516377.0	3711078.0	8.30390	(166,14)	516477.0	3711078.0	7.43360	(207,17)
516577.0	3711078.0	10.88255	(207,17)	516677.0	3711078.0	7.46582	(214,14)
516777.0	3711078.0	6.73347	(105,11)	516877.0	3711078.0	7.31365	(95,13)
516977.0	3711078.0	8.43888	(95,13)	517077.0	3711078.0	6.35943	(95,15)
517177.0	3711078.0	6.95153	(134,15)	515277.0	3710978.0	7.33351	(199,13)
515377.0	3710978.0	7.62910	(198,12)	515477.0	3710978.0	7.09903	(123,11)
515577.0	3710978.0	6.99166	(123,11)	515677.0	3710978.0	8.61088	(197,16)
515777.0	3710978.0	10.40352	(197,16)	515877.0	3710978.0	7.60802	(301, 1)
515977.0	3710978.0	8.15964	(105,12)	516077.0	3710978.0	8.35858	(237,12)
516177.0	3710978.0	9.30251	(191,22)	516277.0	3710978.0	7.53975	(243,12)
516377.0	3710978.0	7.18705	(166,14)	516477.0	3710978.0	6.81484	(197,12)
516577.0	3710978.0	10.49765	(207,17)	516677.0	3710978.0	7.77631	(207,17)
516777.0	3710978.0	7.40919	(179,12)	516877.0	3710978.0	7.34034	(105,11)
516977.0	3710978.0	8.73776	(95,13)	517077.0	3710978.0	8.18242	(95,13)
517177.0	3710978.0	6.83369	(163,14)	515277.0	3710878.0	7.14992	(198,12)
515377.0	3710878.0	6.86648	(123,11)	515477.0	3710878.0	6.82282	(199,11)
515577.0	3710878.0	7.25868	(197,16)	515677.0	3710878.0	10.63776	(197,16)
515777.0	3710878.0	9.42088	(197,16)	515877.0	3710878.0	9.60493	(20, 6)
515977.0	3710878.0	9.16662	(301, 2)	516077.0	3710878.0	11.39275	(147,11)
516177.0	3710878.0	10.84728	(191,22)	516277.0	3710878.0	7.96371	(243,12)
516377.0	3710878.0	7.42873	(128,14)	516477.0	3710878.0	6.88496	(197,12)
516577.0	3710878.0	11.22796	(207,17)	516677.0	3710878.0	10.63702	(207,17)
516777.0	3710878.0	8.77733	(42,17)	516877.0	3710878.0	8.26981	(179,12)
516977.0	3710878.0	7.44185	(95,13)	517077.0	3710878.0	8.92255	(95,13)
517177.0	3710878.0	7.66246	(95,13)	515277.0	3710778.0	7.01794	(274,10)
515377.0	3710778.0	6.66718	(199,11)	515477.0	3710778.0	6.74835	(199,11)
515577.0	3710778.0	9.04788	(197,16)	515677.0	3710778.0	10.07732	(197,16)
515777.0	3710778.0	11.50317	(301, 1)	515877.0	3710778.0	10.61342	(20, 6)
515977.0	3710778.0	11.54425	(301,10)	516077.0	3710778.0	13.54750	(19,22)
516177.0	3710778.0	10.39258	(191,22)	516277.0	3710778.0	8.34553	(243,12)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516377.0	3710778.0	7.76395	(187,13)	516477.0	3710778.0	8.68206	(163,13)
516577.0	3710778.0	10.45043	(207,17)	516677.0	3710778.0	12.45079	(207,17)
516777.0	3710778.0	7.95207	(179,12)	516877.0	3710778.0	10.96521	(42,17)
516977.0	3710778.0	8.68166	(179,12)	517077.0	3710778.0	10.21038	(42,15)
517177.0	3710778.0	8.65848	(95,13)	515277.0	3710678.0	6.95312	(256,15)
515377.0	3710678.0	6.52213	(256,15)	515477.0	3710678.0	8.51372	(197,16)
515577.0	3710678.0	9.77949	(197,16)	515677.0	3710678.0	8.49782	(97,12)
515777.0	3710678.0	9.42022	(301, 1)	515877.0	3710678.0	10.44392	(301,13)
515977.0	3710678.0	12.40976	(301,10)	516077.0	3710678.0	12.89262	(19,22)
516177.0	3710678.0	10.85327	(191,22)	516277.0	3710678.0	8.20848	(243,12)
516377.0	3710678.0	7.93148	(187,13)	516477.0	3710678.0	9.02479	(163,13)
516577.0	3710678.0	9.55610	(179,14)	516677.0	3710678.0	12.18920	(207,17)
516777.0	3710678.0	9.04549	(179,13)	516877.0	3710678.0	10.24774	(42,17)
516977.0	3710678.0	9.41765	(179,12)	517077.0	3710678.0	7.55078	(136,15)
517177.0	3710678.0	8.08204	(95,13)	515277.0	3710578.0	7.18257	(256,15)
515377.0	3710578.0	7.40435	(197,16)	515477.0	3710578.0	9.99891	(197,16)
515577.0	3710578.0	9.49205	(197,16)	515677.0	3710578.0	9.15816	(301, 1)
515777.0	3710578.0	11.83549	(20, 6)	515877.0	3710578.0	11.77720	(301, 2)
515977.0	3710578.0	11.93045	(20, 7)	516077.0	3710578.0	12.57848	(191,22)
516177.0	3710578.0	11.33649	(302,20)	516277.0	3710578.0	9.28263	(300,23)
516377.0	3710578.0	9.82239	(302,13)	516477.0	3710578.0	10.09008	(163,13)
516577.0	3710578.0	9.63426	(179,14)	516677.0	3710578.0	11.32919	(207,17)
516777.0	3710578.0	9.13808	(207,17)	516877.0	3710578.0	7.47926	(179,12)
516977.0	3710578.0	8.66113	(179,12)	517077.0	3710578.0	7.61223	(179,12)
517177.0	3710578.0	7.13246	(136,15)	515277.0	3710478.0	6.91237	(274,11)
515377.0	3710478.0	9.01294	(197,16)	515477.0	3710478.0	9.86244	(197,16)
515577.0	3710478.0	9.33401	(97,12)	515677.0	3710478.0	10.50523	(301, 1)
515777.0	3710478.0	11.59667	(301,13)	515877.0	3710478.0	13.22264	(301,10)
515977.0	3710478.0	13.38374	(147,11)	516077.0	3710478.0	14.29792	(191,22)
516177.0	3710478.0	12.43228	(302,20)	516277.0	3710478.0	10.24216	(300,23)
516377.0	3710478.0	9.58833	(302,13)	516477.0	3710478.0	9.86503	(163,13)
516577.0	3710478.0	9.30215	(163,12)	516677.0	3710478.0	10.17128	(207,17)
516777.0	3710478.0	9.74357	(207,17)	516877.0	3710478.0	7.07098	(43,12)
516977.0	3710478.0	9.25148	(42,17)	517077.0	3710478.0	8.27588	(179,12)
517177.0	3710478.0	6.83632	(136,15)	515277.0	3710378.0	7.49673	(197,16)
515377.0	3710378.0	8.84182	(197,16)	515477.0	3710378.0	8.29568	(197,16)
515577.0	3710378.0	10.71630	(301, 1)	515677.0	3710378.0	12.03628	(20, 6)
515777.0	3710378.0	11.95098	(301, 2)	515877.0	3710378.0	12.88769	(301,10)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515977.0	3710378.0	13.34523	(147,11)	516077.0	3710378.0	13.05686	(191,22)
516177.0	3710378.0	11.04428	(302,20)	516277.0	3710378.0	9.11154	(300,23)
516377.0	3710378.0	8.44776	(302,13)	516477.0	3710378.0	8.76881	(163,13)
516577.0	3710378.0	8.78892	(163,12)	516677.0	3710378.0	9.35365	(179,14)
516777.0	3710378.0	9.54860	(207,17)	516877.0	3710378.0	8.71427	(266,14)
516977.0	3710378.0	7.54346	(42,17)	517077.0	3710378.0	8.17214	(179,12)
517177.0	3710378.0	7.11628	(179,12)	515277.0	3712276.0	5.95987	(98,13)
515377.0	3712276.0	6.46354	(183,14)	515477.0	3712276.0	7.14662	(238,13)
515577.0	3712276.0	7.81503	(96,13)	515677.0	3712276.0	8.64521	(188,12)
515777.0	3712276.0	7.85475	(239,13)	515877.0	3712276.0	5.20408	(165,14)
515977.0	3712276.0	3.92181	(88,24)	516077.0	3712276.0	15.86647	(133,19)
516177.0	3712276.0	17.90841	(112,15)	516277.0	3712276.0	13.41564	(109,13)
516377.0	3712276.0	13.07728	(149,13)	516477.0	3712276.0	10.61105	(93,12)
516577.0	3712276.0	11.13134	(94,13)	516677.0	3712276.0	10.55282	(94,13)
516777.0	3712276.0	6.32169	(151,14)	516877.0	3712276.0	9.89985	(93,14)
516977.0	3712276.0	8.51332	(196,13)	517077.0	3712276.0	7.71169	(196,13)
517177.0	3712276.0	6.98935	(217,13)	515277.0	3712376.0	7.45223	(96,13)
515377.0	3712376.0	8.33846	(96,13)	515477.0	3712376.0	7.78693	(96,13)
515577.0	3712376.0	7.50509	(217,14)	515677.0	3712376.0	8.15817	(165,14)
515777.0	3712376.0	7.78316	(165,14)	515877.0	3712376.0	6.24638	(127,12)
515977.0	3712376.0	13.25814	(133,19)	516077.0	3712376.0	9.87079	(133,19)
516177.0	3712376.0	13.84924	(112,15)	516277.0	3712376.0	11.70798	(109,11)
516377.0	3712376.0	11.31610	(149,13)	516477.0	3712376.0	7.37312	(94,15)
516577.0	3712376.0	8.83643	(151,11)	516677.0	3712376.0	10.52089	(94,13)
516777.0	3712376.0	7.71108	(206,14)	516877.0	3712376.0	8.34113	(206,14)
516977.0	3712376.0	8.03749	(189,12)	517077.0	3712376.0	7.36755	(93,14)
517177.0	3712376.0	7.21614	(93,14)	515277.0	3712476.0	8.77937	(96,13)
515377.0	3712476.0	7.61001	(244,12)	515477.0	3712476.0	7.54069	(244,12)
515577.0	3712476.0	6.88521	(234,12)	515677.0	3712476.0	7.62262	(234,12)
515777.0	3712476.0	7.85580	(209,14)	515877.0	3712476.0	8.20187	(127,12)
515977.0	3712476.0	12.70511	(133,19)	516077.0	3712476.0	11.63685	(112,15)
516177.0	3712476.0	11.60012	(150,12)	516277.0	3712476.0	10.93597	(109,11)
516377.0	3712476.0	10.35110	(150,14)	516477.0	3712476.0	7.42564	(149,13)
516577.0	3712476.0	9.38489	(93,12)	516677.0	3712476.0	8.33005	(151,11)
516777.0	3712476.0	9.71040	(94,13)	516877.0	3712476.0	8.05699	(206,14)
516977.0	3712476.0	7.39776	(195,13)	517077.0	3712476.0	7.46825	(177,15)
517177.0	3712476.0	7.76857	(93,14)	515277.0	3712576.0	7.54202	(244,12)
515377.0	3712576.0	7.58580	(244,12)	515477.0	3712576.0	6.65848	(244,11)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515577.0	3712576.0	6.77665	(244,11)	515677.0	3712576.0	7.13376	(209,14)
515777.0	3712576.0	7.24082	(209,14)	515877.0	3712576.0	9.26538	(133,19)
515977.0	3712576.0	8.35953	(186,12)	516077.0	3712576.0	10.70660	(112,15)
516177.0	3712576.0	9.19565	(133,11)	516277.0	3712576.0	10.00395	(109,11)
516377.0	3712576.0	9.44521	(150,14)	516477.0	3712576.0	8.75632	(231,13)
516577.0	3712576.0	7.95314	(231,13)	516677.0	3712576.0	7.96775	(189,13)
516777.0	3712576.0	7.94858	(189,13)	516877.0	3712576.0	8.62150	(94,13)
516977.0	3712576.0	7.35494	(151,14)	517077.0	3712576.0	7.06538	(195,14)
517177.0	3712576.0	7.51162	(177,15)	515277.0	3712676.0	6.83704	(244,12)
515377.0	3712676.0	6.89160	(244,11)	515477.0	3712676.0	7.30627	(244,11)
515577.0	3712676.0	6.89058	(255,12)	515677.0	3712676.0	6.55495	(242,13)
515777.0	3712676.0	7.10010	(133,19)	515877.0	3712676.0	7.41404	(133,19)
515977.0	3712676.0	7.14993	(135,14)	516077.0	3712676.0	7.31721	(160,11)
516177.0	3712676.0	9.70477	(109,13)	516277.0	3712676.0	9.08514	(109,11)
516377.0	3712676.0	8.53002	(150,14)	516477.0	3712676.0	8.65245	(149,13)
516577.0	3712676.0	7.91364	(231,13)	516677.0	3712676.0	7.72439	(93,12)
516777.0	3712676.0	7.07187	(151,11)	516877.0	3712676.0	7.47181	(94,13)
516977.0	3712676.0	8.61457	(94,13)	517077.0	3712676.0	7.94772	(151,14)
517177.0	3712676.0	7.61119	(151,14)	515277.0	3712776.0	6.63074	(244,11)
515377.0	3712776.0	6.82069	(244,11)	515477.0	3712776.0	6.62790	(255,12)
515577.0	3712776.0	6.53598	(171,14)	515677.0	3712776.0	6.03646	(242,13)
515777.0	3712776.0	6.87563	(133,19)	515877.0	3712776.0	6.67220	(234,13)
515977.0	3712776.0	7.48632	(234,13)	516077.0	3712776.0	8.15301	(150,12)
516177.0	3712776.0	8.76534	(109,13)	516277.0	3712776.0	7.81326	(109,11)
516377.0	3712776.0	8.17283	(150,14)	516477.0	3712776.0	8.15979	(149,13)
516577.0	3712776.0	6.97502	(231,13)	516677.0	3712776.0	7.04223	(93,12)
516777.0	3712776.0	6.77106	(151,11)	516877.0	3712776.0	7.34640	(151,11)
516977.0	3712776.0	8.65001	(94,13)	517077.0	3712776.0	8.67732	(69,13)
517177.0	3712776.0	8.60472	(151,14)	515277.0	3712876.0	6.54334	(244,11)
515377.0	3712876.0	6.53075	(255,12)	515477.0	3712876.0	6.27970	(171,14)
515577.0	3712876.0	5.87470	(221,12)	515677.0	3712876.0	8.88611	(133,19)
515777.0	3712876.0	6.27014	(148,11)	515877.0	3712876.0	7.22861	(234,13)
515977.0	3712876.0	7.12912	(234,13)	516077.0	3712876.0	8.80982	(150,12)
516177.0	3712876.0	8.49507	(109,13)	516277.0	3712876.0	7.69868	(109,11)
516377.0	3712876.0	7.86945	(150,14)	516477.0	3712876.0	8.60903	(149,13)
516577.0	3712876.0	6.35069	(126,11)	516677.0	3712876.0	6.15941	(193,12)
516777.0	3712876.0	8.42800	(93,12)	516877.0	3712876.0	8.44660	(151,11)
516977.0	3712876.0	7.88644	(94,12)	517077.0	3712876.0	9.03413	(94,13)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515777.0	3712076.0	5.28934	(224,13)	515877.0	3712076.0	9.00533	(96,13)
515977.0	3712076.0	13.69206	(96,13)	516077.0	3712076.0	5.77551	(51,16)
516177.0	3712076.0	16.52012	(133,19)	515277.0	3711976.0	7.51846	(240,12)
515377.0	3711976.0	7.24119	(240,12)	515477.0	3711976.0	7.20831	(160,12)
515577.0	3711976.0	7.41407	(224,13)	515677.0	3711976.0	7.11748	(224,13)
515777.0	3711976.0	4.87576	(161, 9)	515877.0	3711976.0	4.88618	(161, 9)
515977.0	3711976.0	3.45851	(161, 9)	516077.0	3711976.0	9.73358	(161, 6)
516177.0	3711976.0	9.68925	(96,13)	515277.0	3711876.0	6.98094	(198,11)
515377.0	3711876.0	6.38725	(170,12)	515477.0	3711876.0	7.54279	(170,12)
515577.0	3711876.0	8.19313	(170,12)	515677.0	3711876.0	7.19570	(170,12)
515777.0	3711876.0	4.03303	(244,16)	515877.0	3711876.0	4.86142	(244,16)
515977.0	3711876.0	6.17151	(244,16)	516077.0	3711876.0	8.97404	(71,12)
516177.0	3711876.0	19.28209	(71,12)	515277.0	3711776.0	6.17595	(262,14)
515377.0	3711776.0	6.37361	(170,12)	515477.0	3711776.0	7.38074	(170,12)
515577.0	3711776.0	8.16921	(223,12)	515677.0	3711776.0	7.87472	(223,12)
515777.0	3711776.0	4.95182	(223,12)	515877.0	3711776.0	3.85548	(71,11)
515977.0	3711776.0	3.35672	(71,11)	516077.0	3711776.0	12.08077	(245,15)
516177.0	3711776.0	16.42199	(267, 9)	515277.0	3711676.0	7.49878	(227,14)
515377.0	3711676.0	6.47288	(227,14)	515477.0	3711676.0	7.75231	(223,12)
515577.0	3711676.0	8.70752	(223,12)	515677.0	3711676.0	8.32831	(223,12)
515777.0	3711676.0	5.87410	(188,13)	515877.0	3711676.0	6.98024	(245,15)
515977.0	3711676.0	3.89950	(245,15)	516077.0	3711676.0	8.32158	(267, 9)
516177.0	3711676.0	13.85847	(20, 2)	515277.0	3711576.0	6.50038	(227,14)
515377.0	3711576.0	6.11744	(198,13)	515477.0	3711576.0	7.31115	(188,13)
515577.0	3711576.0	8.34855	(188,13)	515677.0	3711576.0	8.18305	(188,13)
515777.0	3711576.0	5.76687	(188,13)	515877.0	3711576.0	4.95799	(267, 9)
515977.0	3711576.0	6.56514	(267, 9)	516077.0	3711576.0	6.94154	(71, 8)
516177.0	3711576.0	22.70790	(20, 6)	515277.0	3711476.0	7.02969	(241,10)
515377.0	3711476.0	7.61115	(242,12)	515477.0	3711476.0	7.95638	(242,12)
515577.0	3711476.0	7.27208	(198,13)	515677.0	3711476.0	7.62414	(98,12)
515777.0	3711476.0	7.75459	(98,12)	515877.0	3711476.0	6.31290	(135,12)
515977.0	3711476.0	5.35246	(71, 8)	516077.0	3711476.0	8.01525	(20, 2)
516177.0	3711476.0	14.75283	(301, 2)	511277.0	3709378.0	11.44559	(199, 5)
512277.0	3709378.0	11.41979	(298, 1)	513277.0	3709378.0	9.92086	(258,19)
514277.0	3709378.0	10.79849	(114,20)	515277.0	3709378.0	10.23209	(289, 3)
516277.0	3709378.0	7.28675	(302,17)	517277.0	3709378.0	5.69727	(143,16)
518277.0	3709378.0	10.65508	(95,19)	519277.0	3709378.0	7.61585	(137, 7)
520277.0	3709378.0	5.01777	(183, 7)	521277.0	3709378.0	4.66164	(76, 7)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522277.0	3709378.0	5.26538	(147, 9)	511277.0	3708378.0	10.12180	(123,23)
512277.0	3708378.0	7.90762	(299, 1)	513277.0	3708378.0	12.11843	(352, 8)
514277.0	3708378.0	11.29777	(198, 3)	515277.0	3708378.0	8.17470	(294,18)
516277.0	3708378.0	6.28414	(365,12)	517277.0	3708378.0	11.16340	(269, 3)
518277.0	3708378.0	8.26373	(136,24)	519277.0	3708378.0	4.58386	(134,21)
520277.0	3708378.0	5.95716	(137, 7)	521277.0	3708378.0	4.62057	(5,18)
522277.0	3708378.0	5.32799	(118, 3)	511277.0	3707378.0	9.03130	(59, 2)
512277.0	3707378.0	10.36921	(275,18)	513277.0	3707378.0	11.88112	(245, 5)
514277.0	3707378.0	10.60119	(143,20)	515277.0	3707378.0	11.60225	(288,23)
516277.0	3707378.0	8.87986	(293,18)	517277.0	3707378.0	11.13609	(293,19)
518277.0	3707378.0	7.48166	(365,20)	519277.0	3707378.0	5.60511	(114, 7)
520277.0	3707378.0	4.77051	(170, 3)	521277.0	3707378.0	4.70233	(137, 7)
522277.0	3707378.0	5.09390	(173,20)	511277.0	3706378.0	11.00821	(289, 1)
512277.0	3706378.0	11.31190	(129, 7)	513277.0	3706378.0	10.76661	(33,23)
514277.0	3706378.0	11.30387	(214, 3)	515277.0	3706378.0	11.42269	(128,23)
516277.0	3706378.0	9.18660	(293,18)	517277.0	3706378.0	7.91396	(163,20)
518277.0	3706378.0	10.98837	(203, 5)	519277.0	3706378.0	5.43713	(136,24)
520277.0	3706378.0	4.66159	(358, 4)	521277.0	3706378.0	5.74682	(170, 3)
522277.0	3706378.0	4.80190	(178,21)	523277.0	3706378.0	4.80849	(326, 1)
522402.0	3710378.0	4.51578	(237, 6)	522402.0	3711378.0	5.58571	(197, 7)
522402.0	3712378.0	4.60181	(55,19)	511277.0	3714176.0	6.06490	(233, 6)
512277.0	3714176.0	5.97348	(223,20)	513277.0	3714176.0	4.86887	(217,23)
514277.0	3714176.0	6.16211	(312, 9)	515277.0	3714176.0	8.62226	(248,13)
516277.0	3714176.0	9.40197	(85,14)	517277.0	3714176.0	10.03928	(235, 7)
518277.0	3714176.0	5.06967	(152,14)	519277.0	3714176.0	4.50015	(206, 9)
520277.0	3714176.0	6.18889	(24, 9)	521277.0	3714176.0	5.28543	(83,19)
522277.0	3714176.0	5.90442	(175,20)	511277.0	3715176.0	8.37874	(241, 2)
512277.0	3715176.0	12.09345	(229,21)	513277.0	3715176.0	6.62041	(188, 7)
514277.0	3715176.0	9.74021	(250,19)	515277.0	3715176.0	10.29395	(218, 1)
516277.0	3715176.0	6.30510	(85,14)	517277.0	3715176.0	6.39428	(360, 9)
518277.0	3715176.0	7.23793	(152, 8)	519277.0	3715176.0	4.11580	(153, 8)
520277.0	3715176.0	4.16237	(157, 4)	521277.0	3715176.0	5.35996	(197,24)
522277.0	3715176.0	5.66271	(184,24)	511277.0	3716176.0	11.99553	(230,21)
512277.0	3716176.0	7.13180	(171,20)	513277.0	3716176.0	10.09604	(160, 7)
514277.0	3716176.0	11.51194	(230,22)	515277.0	3716176.0	11.89132	(234,23)
516277.0	3716176.0	4.91320	(148, 8)	517277.0	3716176.0	4.70452	(221, 7)
518277.0	3716176.0	4.84217	(145,20)	519277.0	3716176.0	5.77136	(152, 8)
520277.0	3716176.0	5.38887	(54,21)	521277.0	3716176.0	4.71508	(157, 4)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522277.0	3716176.0	4.61217	(23,18)	511277.0	3717176.0	9.42135	(171,20)
512277.0	3717176.0	10.86910	(231,24)	513277.0	3717176.0	11.75126	(286, 4)
514277.0	3717176.0	11.94816	(181,21)	515277.0	3717176.0	7.34367	(283, 1)
516277.0	3717176.0	5.24958	(194,20)	517277.0	3717176.0	4.98952	(231, 7)
518277.0	3717176.0	6.05649	(208, 1)	519277.0	3717176.0	6.50194	(185, 2)
520277.0	3717176.0	5.64436	(70,20)	521277.0	3717176.0	4.85497	(193,20)
522277.0	3717176.0	4.49921	(195, 1)	511277.0	3713176.0	7.47616	(199,20)
512277.0	3713176.0	5.78792	(202,23)	513277.0	3713176.0	5.09479	(286,17)
514277.0	3713176.0	6.12977	(265,13)	511277.0	3712176.0	5.61161	(38,18)
512277.0	3712176.0	5.89684	(240, 7)	513277.0	3712176.0	5.44288	(252,13)
514277.0	3712176.0	6.48910	(200,17)	511277.0	3711176.0	7.98982	(294,24)
512277.0	3711176.0	11.88912	(255,22)	513277.0	3711176.0	5.45870	(26, 6)
514277.0	3711176.0	6.59758	(289,11)	511277.0	3709378.0	11.44559	(199, 5)
512277.0	3709378.0	11.41979	(298, 1)	513277.0	3709378.0	9.92086	(258,19)
514277.0	3709378.0	10.79849	(114,20)	515277.0	3709378.0	10.23209	(289, 3)
516277.0	3709378.0	7.28675	(302,17)	517277.0	3709378.0	5.69727	(143,16)
518277.0	3709378.0	10.65508	(95,19)	519277.0	3709378.0	7.61585	(137, 7)
520277.0	3709378.0	5.01777	(183, 7)	521277.0	3709378.0	4.66164	(76, 7)
522277.0	3709378.0	5.26538	(147, 9)	511277.0	3708378.0	10.12180	(123,23)
512277.0	3708378.0	7.90762	(299, 1)	513277.0	3708378.0	12.11843	(352, 8)
514277.0	3708378.0	11.29777	(198, 3)	515277.0	3708378.0	8.17470	(294,18)
516277.0	3708378.0	6.28414	(365,12)	517277.0	3708378.0	11.16340	(269, 3)
518277.0	3708378.0	8.26373	(136,24)	519277.0	3708378.0	4.58386	(134,21)
520277.0	3708378.0	5.95716	(137, 7)	521277.0	3708378.0	4.62057	(5,18)
522277.0	3708378.0	5.32799	(118, 3)	511277.0	3707378.0	9.03130	(59, 2)
512277.0	3707378.0	10.36921	(275,18)	513277.0	3707378.0	11.88112	(245, 5)
514277.0	3707378.0	10.60119	(143,20)	515277.0	3707378.0	11.60225	(288,23)
516277.0	3707378.0	8.87986	(293,18)	517277.0	3707378.0	11.13609	(293,19)
518277.0	3707378.0	7.48166	(365,20)	519277.0	3707378.0	5.60511	(114, 7)
520277.0	3707378.0	4.77051	(170, 3)	521277.0	3707378.0	4.70233	(137, 7)
522277.0	3707378.0	5.09390	(173,20)	511277.0	3706378.0	11.00821	(289, 1)
512277.0	3706378.0	11.31190	(129, 7)	513277.0	3706378.0	10.76661	(33,23)
514277.0	3706378.0	11.30387	(214, 3)	515277.0	3706378.0	11.42269	(128,23)
516277.0	3706378.0	9.18660	(293,18)	517277.0	3706378.0	7.91396	(163,20)
518277.0	3706378.0	10.98837	(203, 5)	519277.0	3706378.0	5.43713	(136,24)
520277.0	3706378.0	4.66159	(358, 4)	521277.0	3706378.0	5.74682	(170, 3)
522277.0	3706378.0	4.80190	(178,21)	523277.0	3706378.0	4.80849	(326, 1)
522402.0	3710378.0	4.51578	(237, 6)	522402.0	3711378.0	5.58571	(197, 7)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522402.0	3712378.0	4.60181	(55,19)	511277.0	3714176.0	6.06490	(233, 6)
512277.0	3714176.0	5.97348	(223,20)	513277.0	3714176.0	4.86887	(217,23)
514277.0	3714176.0	6.16211	(312, 9)	515277.0	3714176.0	8.62226	(248,13)
516277.0	3714176.0	9.40197	(85,14)	517277.0	3714176.0	10.03928	(235, 7)
518277.0	3714176.0	5.06967	(152,14)	519277.0	3714176.0	4.50015	(206, 9)
520277.0	3714176.0	6.18889	(24, 9)	521277.0	3714176.0	5.28543	(83,19)
522277.0	3714176.0	5.90442	(175,20)	511277.0	3715176.0	8.37874	(241, 2)
512277.0	3715176.0	12.09345	(229,21)	513277.0	3715176.0	6.62041	(188, 7)
514277.0	3715176.0	9.74021	(250,19)	515277.0	3715176.0	10.29395	(218, 1)
516277.0	3715176.0	6.30510	(85,14)	517277.0	3715176.0	6.39428	(360, 9)
518277.0	3715176.0	7.23793	(152, 8)	519277.0	3715176.0	4.11580	(153, 8)
520277.0	3715176.0	4.16237	(157, 4)	521277.0	3715176.0	5.35996	(197,24)
522277.0	3715176.0	5.66271	(184,24)	511277.0	3716176.0	11.99553	(230,21)
512277.0	3716176.0	7.13180	(171,20)	513277.0	3716176.0	10.09604	(160, 7)
514277.0	3716176.0	11.51194	(230,22)	515277.0	3716176.0	11.89132	(234,23)
516277.0	3716176.0	4.91320	(148, 8)	517277.0	3716176.0	4.70452	(221, 7)
518277.0	3716176.0	4.84217	(145,20)	519277.0	3716176.0	5.77136	(152, 8)
520277.0	3716176.0	5.38887	(54,21)	521277.0	3716176.0	4.71508	(157, 4)
522277.0	3716176.0	4.61217	(23,18)	511277.0	3717176.0	9.42135	(171,20)
512277.0	3717176.0	10.86910	(231,24)	513277.0	3717176.0	11.75126	(286, 4)
514277.0	3717176.0	11.94816	(181,21)	515277.0	3717176.0	7.34367	(283, 1)
516277.0	3717176.0	5.24958	(194,20)	517277.0	3717176.0	4.98952	(231, 7)
518277.0	3717176.0	6.05649	(208, 1)	519277.0	3717176.0	6.50194	(185, 2)
520277.0	3717176.0	5.64436	(70,20)	521277.0	3717176.0	4.85497	(193,20)
522277.0	3717176.0	4.49921	(195, 1)	511277.0	3713176.0	7.47616	(199,20)
512277.0	3713176.0	5.78792	(202,23)	513277.0	3713176.0	5.09479	(286,17)
514277.0	3713176.0	6.12977	(265,13)	511277.0	3712176.0	5.61161	(38,18)
512277.0	3712176.0	5.89684	(240, 7)	513277.0	3712176.0	5.44288	(252,13)
514277.0	3712176.0	6.48910	(200,17)	511277.0	3711176.0	7.98982	(294,24)
512277.0	3711176.0	11.88912	(255,22)	513277.0	3711176.0	5.45870	(26, 6)
514277.0	3711176.0	6.59758	(289,11)	516500.0	3708100.0	10.98670	(98,23)
518100.0	3709350.0	10.57431	(7,24)	514500.0	3708800.0	11.12274	(298,18)
517300.0	3714400.0	10.70617	(221, 4)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516276.8	3711378.0	7.93475	(19,23)	516411.0	3712159.0	17.11345	(62,18)
516679.3	3711159.0	6.32257	(197,11)	516679.3	3711378.0	9.35909	(95,13)
517079.3	3711378.0	5.40183	(105,13)	517079.3	3711549.0	4.64509	(222,14)
517530.5	3711488.0	6.89802	(158,11)	517530.5	3711317.0	6.35105	(159,13)
518743.9	3711171.0	5.79362	(277,12)	518743.9	3711573.0	5.95435	(121,12)
519914.6	3711573.0	4.78312	(197, 7)	519914.6	3711171.0	5.08378	(266,11)
520304.8	3711171.0	4.91507	(305, 7)	520304.8	3711024.0	4.93010	(140, 6)
520707.2	3711024.0	4.82397	(140, 6)	520817.0	3711628.0	5.16201	(351,19)
520402.3	3712176.0	3.94266	(202,15)	518707.2	3712176.0	6.00425	(221,16)
518707.2	3712030.0	5.93938	(229,10)	518280.4	3712030.0	6.47639	(142, 9)
518280.4	3712250.0	6.36466	(91,13)	518060.9	3712335.0	6.28477	(91,13)
518060.9	3712878.0	6.49715	(236,10)	517426.8	3712878.0	7.11422	(207, 9)
517426.8	3713079.0	7.70473	(210,12)	516993.9	3713079.0	7.80728	(151,12)
516993.9	3713280.0	6.98006	(156,10)	516603.7	3713280.0	8.28007	(149,13)
516603.7	3712884.0	6.66459	(185,13)	516372.0	3712884.0	7.35952	(62,16)
516372.0	3712798.0	7.21958	(160,14)	516256.2	3712774.0	7.62427	(235,12)
516276.8	3711378.0	7.93475	(19,23)	516264.6	3712122.0	18.80752	(85,12)
516264.6	3711598.0	17.46657	(191,22)	516008.5	3712006.0	8.18987	(96,13)
516008.5	3712122.0	6.70599	(96,13)	516115.2	3712189.0	11.63042	(112,20)
516179.3	3712061.0	14.35501	(112,20)	516179.3	3712122.0	15.39152	(111,11)
516264.6	3712122.0	18.80752	(85,12)	515277.0	3711278.0	6.86688	(241,12)
515377.0	3711278.0	7.19730	(241,12)	515477.0	3711278.0	7.36284	(198,14)
515577.0	3711278.0	6.98638	(198,12)	515677.0	3711278.0	7.27441	(164,14)
515777.0	3711278.0	7.57767	(164,14)	515877.0	3711278.0	6.31909	(164,14)
515977.0	3711278.0	7.26367	(164,13)	516077.0	3711278.0	9.01974	(301,13)
516177.0	3711278.0	11.11840	(20, 7)	516277.0	3711278.0	7.93112	(20, 4)
516377.0	3711278.0	9.59752	(323,21)	516477.0	3711278.0	9.02632	(20, 5)
516577.0	3711278.0	8.53875	(214,14)	516677.0	3711278.0	7.54520	(214,14)
516777.0	3711278.0	8.31051	(95,13)	516877.0	3711278.0	7.30433	(197,11)
516977.0	3711278.0	6.20160	(134,15)	517077.0	3711278.0	6.40200	(136,13)
517177.0	3711278.0	6.30951	(105,13)	515277.0	3711178.0	7.39786	(198,14)
515377.0	3711178.0	7.55393	(198,14)	515477.0	3711178.0	7.29288	(198,12)
515577.0	3711178.0	7.20117	(180,14)	515677.0	3711178.0	7.54703	(123,11)
515777.0	3711178.0	6.64400	(164,14)	515877.0	3711178.0	6.84804	(208,14)
515977.0	3711178.0	8.03845	(164,13)	516077.0	3711178.0	8.38095	(164,13)
516177.0	3711178.0	8.08739	(166,13)	516277.0	3711178.0	7.00835	(230,11)
516377.0	3711178.0	5.95335	(303,12)	516477.0	3711178.0	6.95841	(166,14)
516577.0	3711178.0	8.54338	(214,14)	516677.0	3711178.0	6.59065	(197,11)

*** I. P. - CANDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516777.0	3711178.0	6.45343	(220,14)	516877.0	3711178.0	7.20308	(197,11)
516977.0	3711178.0	5.91921	(220,14)	517077.0	3711178.0	6.09048	(224,12)
517177.0	3711178.0	6.86094	(136,13)	515277.0	3711078.0	7.27072	(198,14)
515377.0	3711078.0	7.34098	(198,12)	515477.0	3711078.0	7.17192	(180,14)
515577.0	3711078.0	7.69207	(198,12)	515677.0	3711078.0	6.69538	(199,11)
515777.0	3711078.0	7.49062	(237,13)	515877.0	3711078.0	7.00289	(220,13)
515977.0	3711078.0	7.60186	(208,14)	516077.0	3711078.0	7.28872	(164,13)
516177.0	3711078.0	7.96828	(230,11)	516277.0	3711078.0	7.49907	(166,14)
516377.0	3711078.0	5.91358	(128,14)	516477.0	3711078.0	6.96950	(166,14)
516577.0	3711078.0	7.89168	(144,12)	516677.0	3711078.0	6.68252	(224,14)
516777.0	3711078.0	6.32781	(220,14)	516877.0	3711078.0	6.75171	(220,14)
516977.0	3711078.0	6.26838	(220,14)	517077.0	3711078.0	6.19628	(163,14)
517177.0	3711078.0	6.72841	(163,14)	515277.0	3710978.0	7.29198	(299,13)
515377.0	3710978.0	7.39593	(180,14)	515477.0	3710978.0	7.06092	(198,12)
515577.0	3710978.0	6.92113	(199,11)	515677.0	3710978.0	7.38652	(237,13)
515777.0	3710978.0	8.07618	(237,13)	515877.0	3710978.0	7.55846	(97,12)
515977.0	3710978.0	7.66248	(301,13)	516077.0	3710978.0	8.19095	(20, 7)
516177.0	3710978.0	9.16956	(19,22)	516277.0	3710978.0	7.09477	(187,14)
516377.0	3710978.0	7.06742	(128,14)	516477.0	3710978.0	6.22256	(166,14)
516577.0	3710978.0	7.94569	(144,12)	516677.0	3710978.0	7.04788	(144,12)
516777.0	3710978.0	6.81881	(105,11)	516877.0	3710978.0	6.12769	(220,14)
516977.0	3710978.0	7.01076	(42,15)	517077.0	3710978.0	6.59614	(163,15)
517177.0	3710978.0	6.80449	(95,15)	515277.0	3710878.0	7.12225	(180,14)
515377.0	3710878.0	6.80335	(198,12)	515477.0	3710878.0	6.65617	(123,11)
515577.0	3710878.0	6.67944	(237,13)	515677.0	3710878.0	8.03859	(237,13)
515777.0	3710878.0	9.18706	(97,12)	515877.0	3710878.0	8.89751	(301, 1)
515977.0	3710878.0	9.08206	(301,10)	516077.0	3710878.0	10.52301	(19,22)
516177.0	3710878.0	8.36213	(19,23)	516277.0	3710878.0	7.56267	(187,14)
516377.0	3710878.0	7.30094	(187,13)	516477.0	3710878.0	6.85193	(163,13)
516577.0	3710878.0	8.46942	(197,12)	516677.0	3710878.0	8.92326	(179,13)
516777.0	3710878.0	8.66616	(179,12)	516877.0	3710878.0	7.53389	(105,11)
516977.0	3710878.0	7.15264	(42,15)	517077.0	3710878.0	6.72253	(42,15)
517177.0	3710878.0	7.00163	(163,15)	515277.0	3710778.0	6.59759	(135,13)
515377.0	3710778.0	6.38690	(256,15)	515477.0	3710778.0	6.58111	(197,16)
515577.0	3710778.0	7.19973	(237,13)	515677.0	3710778.0	7.88168	(97,12)
515777.0	3710778.0	9.99008	(97,12)	515877.0	3710778.0	10.38524	(301,13)
515977.0	3710778.0	10.64165	(301,11)	516077.0	3710778.0	13.01321	(147,11)
516177.0	3710778.0	8.53681	(114,15)	516277.0	3710778.0	8.05744	(300,23)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
516377.0	3710778.0	7.74315	(128,14)	516477.0	3710778.0	7.55156	(144,14)
516577.0	3710778.0	8.98781	(179,14)	516677.0	3710778.0	10.92922	(179,13)
516777.0	3710778.0	7.81293	(42,17)	516877.0	3710778.0	10.31788	(179,12)
516977.0	3710778.0	7.79688	(105,11)	517077.0	3710778.0	9.72334	(266,13)
517177.0	3710778.0	7.08012	(163,15)	515277.0	3710678.0	6.46141	(199,11)
515377.0	3710678.0	6.47141	(199,11)	515477.0	3710678.0	7.02947	(274,11)
515577.0	3710678.0	7.24932	(237,13)	515677.0	3710678.0	7.91342	(197,16)
515777.0	3710678.0	9.35016	(20, 6)	515877.0	3710678.0	10.17353	(301, 2)
515977.0	3710678.0	11.81232	(20, 7)	516077.0	3710678.0	12.71763	(191,22)
516177.0	3710678.0	9.93295	(302,20)	516277.0	3710678.0	8.19710	(300,23)
516377.0	3710678.0	7.83692	(302,13)	516477.0	3710678.0	7.57701	(144,14)
516577.0	3710678.0	9.29406	(207,17)	516677.0	3710678.0	10.79864	(179,13)
516777.0	3710678.0	8.88363	(207,17)	516877.0	3710678.0	9.38826	(179,12)
516977.0	3710678.0	8.18106	(42,17)	517077.0	3710678.0	7.53537	(266,13)
517177.0	3710678.0	7.56952	(42,15)	515277.0	3710578.0	6.85684	(223,15)
515377.0	3710578.0	7.09765	(274,11)	515477.0	3710578.0	7.54864	(20, 2)
515577.0	3710578.0	8.40957	(97,12)	515677.0	3710578.0	8.91337	(97,12)
515777.0	3710578.0	10.79902	(301,13)	515877.0	3710578.0	11.56589	(301,12)
515977.0	3710578.0	11.81157	(301, 8)	516077.0	3710578.0	10.52537	(301, 4)
516177.0	3710578.0	10.91373	(191,22)	516277.0	3710578.0	9.17335	(302,19)
516377.0	3710578.0	9.59855	(323,21)	516477.0	3710578.0	8.50726	(137,15)
516577.0	3710578.0	9.45586	(183,22)	516677.0	3710578.0	10.09864	(179,13)
516777.0	3710578.0	9.05769	(179,13)	516877.0	3710578.0	7.25006	(43,12)
516977.0	3710578.0	7.87132	(42,17)	517077.0	3710578.0	6.64646	(158,16)
517177.0	3710578.0	6.92141	(266,13)	515277.0	3710478.0	6.70566	(223,17)
515377.0	3710478.0	7.61378	(274,11)	515477.0	3710478.0	8.21094	(106,12)
515577.0	3710478.0	8.71673	(301, 1)	515677.0	3710478.0	9.70940	(20, 6)
515777.0	3710478.0	10.37930	(301,17)	515877.0	3710478.0	12.51361	(301,11)
515977.0	3710478.0	12.44689	(301, 9)	516077.0	3710478.0	11.72712	(301, 4)
516177.0	3710478.0	10.91265	(301, 7)	516277.0	3710478.0	10.13014	(302,19)
516377.0	3710478.0	9.38056	(323,21)	516477.0	3710478.0	9.06518	(302,13)
516577.0	3710478.0	9.24934	(183,22)	516677.0	3710478.0	9.82883	(179,14)
516777.0	3710478.0	9.72014	(179,13)	516877.0	3710478.0	6.98074	(179,13)
516977.0	3710478.0	8.60574	(179,12)	517077.0	3710478.0	7.43184	(158,16)
517177.0	3710478.0	6.56707	(114, 7)	515277.0	3710378.0	7.09852	(274,11)
515377.0	3710378.0	6.85886	(106,12)	515477.0	3710378.0	8.23742	(106,12)
515577.0	3710378.0	9.07121	(97,12)	515677.0	3710378.0	10.83450	(301, 1)
515777.0	3710378.0	11.71632	(301,13)	515877.0	3710378.0	12.25997	(301,11)

*** I. P. - CANDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515977.0	3710378.0	12.45393	(301, 9)	516077.0	3710378.0	10.51401	(302,18)
516177.0	3710378.0	9.75001	(301, 7)	516277.0	3710378.0	9.01431	(302,19)
516377.0	3710378.0	8.26916	(323,21)	516477.0	3710378.0	7.90968	(245,12)
516577.0	3710378.0	8.45625	(163,13)	516677.0	3710378.0	8.87400	(98,15)
516777.0	3710378.0	9.47705	(179,13)	516877.0	3710378.0	8.37802	(179,13)
516977.0	3710378.0	7.32697	(179,12)	517077.0	3710378.0	7.85227	(42,17)
517177.0	3710378.0	6.62375	(158,16)	515277.0	3712276.0	5.84442	(183,14)
515377.0	3712276.0	6.35581	(238,13)	515477.0	3712276.0	7.11189	(183,12)
515577.0	3712276.0	7.72923	(216,12)	515677.0	3712276.0	8.50953	(239,13)
515777.0	3712276.0	7.78916	(165,14)	515877.0	3712276.0	4.76250	(239,13)
515977.0	3712276.0	2.84075	(9,19)	516077.0	3712276.0	6.00369	(111,11)
516177.0	3712276.0	7.61404	(150,12)	516277.0	3712276.0	12.96821	(133,18)
516377.0	3712276.0	10.94194	(150,14)	516477.0	3712276.0	6.90710	(62,18)
516577.0	3712276.0	10.59348	(94,12)	516677.0	3712276.0	9.97913	(69,13)
516777.0	3712276.0	5.77239	(206,14)	516877.0	3712276.0	8.21175	(189,12)
516977.0	3712276.0	8.18485	(183,11)	517077.0	3712276.0	7.66234	(217,13)
517177.0	3712276.0	6.78659	(164,11)	515277.0	3712376.0	7.18735	(238,13)
515377.0	3712376.0	7.75706	(238,13)	515477.0	3712376.0	7.61341	(238,13)
515577.0	3712376.0	7.32022	(239,13)	515677.0	3712376.0	7.92798	(239,13)
515777.0	3712376.0	7.39396	(234,12)	515877.0	3712376.0	5.92919	(209,14)
515977.0	3712376.0	8.69567	(112,20)	516077.0	3712376.0	8.65670	(133,20)
516177.0	3712376.0	12.05308	(150,12)	516277.0	3712376.0	11.00052	(109,13)
516377.0	3712376.0	11.03176	(150,14)	516477.0	3712376.0	6.79697	(62,18)
516577.0	3712376.0	8.75844	(93,12)	516677.0	3712376.0	8.55175	(69,13)
516777.0	3712376.0	7.57377	(94,13)	516877.0	3712376.0	8.16384	(145,11)
516977.0	3712376.0	7.87860	(183,11)	517077.0	3712376.0	7.15102	(183,11)
517177.0	3712376.0	6.62432	(217,13)	515277.0	3712476.0	7.61419	(238,13)
515377.0	3712476.0	7.38516	(96,13)	515477.0	3712476.0	6.42212	(188,11)
515577.0	3712476.0	6.71510	(186,14)	515677.0	3712476.0	7.57607	(186,14)
515777.0	3712476.0	7.26940	(186,14)	515877.0	3712476.0	7.06934	(186,12)
515977.0	3712476.0	8.13256	(186,12)	516077.0	3712476.0	6.73441	(248,13)
516177.0	3712476.0	10.95237	(253,18)	516277.0	3712476.0	8.98296	(109,13)
516377.0	3712476.0	9.49071	(149,13)	516477.0	3712476.0	6.92170	(231,13)
516577.0	3712476.0	6.04618	(231,13)	516677.0	3712476.0	8.22040	(189,13)
516777.0	3712476.0	8.35180	(69,13)	516877.0	3712476.0	7.50548	(193,13)
516977.0	3712476.0	7.32584	(206,14)	517077.0	3712476.0	7.26557	(195,14)
517177.0	3712476.0	7.05077	(207,12)	515277.0	3712576.0	6.99425	(209,13)
515377.0	3712576.0	6.82525	(188,11)	515477.0	3712576.0	6.50765	(244,12)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515577.0	3712576.0	6.37179	(234,12)	515677.0	3712576.0	6.68064	(186,14)
515777.0	3712576.0	7.03558	(127,12)	515877.0	3712576.0	8.02757	(127,12)
515977.0	3712576.0	7.40294	(135,14)	516077.0	3712576.0	7.15619	(160,11)
516177.0	3712576.0	9.04900	(109,13)	516277.0	3712576.0	7.40715	(109,13)
516377.0	3712576.0	8.47421	(160,14)	516477.0	3712576.0	8.51408	(149,13)
516577.0	3712576.0	7.33756	(93,12)	516677.0	3712576.0	7.30788	(93,12)
516777.0	3712576.0	7.57314	(177,14)	516877.0	3712576.0	7.75502	(69,13)
516977.0	3712576.0	6.87617	(193,13)	517077.0	3712576.0	6.63994	(151,14)
517177.0	3712576.0	7.46977	(195,14)	515277.0	3712676.0	6.38848	(188,11)
515377.0	3712676.0	6.20720	(209,12)	515477.0	3712676.0	6.60479	(255,12)
515577.0	3712676.0	6.75102	(171,14)	515677.0	3712676.0	6.19012	(209,14)
515777.0	3712676.0	6.63823	(242,13)	515877.0	3712676.0	7.21191	(135,14)
515977.0	3712676.0	7.13766	(124,11)	516077.0	3712676.0	7.15072	(150,12)
516177.0	3712676.0	8.91677	(133,11)	516277.0	3712676.0	7.93091	(235,12)
516377.0	3712676.0	8.49061	(160,14)	516477.0	3712676.0	8.31129	(231,13)
516577.0	3712676.0	7.32100	(195,12)	516677.0	3712676.0	6.50634	(189,13)
516777.0	3712676.0	7.00936	(189,13)	516877.0	3712676.0	7.03206	(94,12)
516977.0	3712676.0	8.24931	(69,13)	517077.0	3712676.0	6.92965	(206,13)
517177.0	3712676.0	7.11180	(195,14)	515277.0	3712776.0	6.15057	(209,12)
515377.0	3712776.0	6.27318	(255,12)	515477.0	3712776.0	6.50084	(171,14)
515577.0	3712776.0	6.42752	(221,12)	515677.0	3712776.0	5.73103	(139,16)
515777.0	3712776.0	6.03473	(124,13)	515877.0	3712776.0	6.50750	(135,14)
515977.0	3712776.0	7.28724	(112,15)	516077.0	3712776.0	7.01635	(133,11)
516177.0	3712776.0	7.42209	(133,11)	516277.0	3712776.0	7.57135	(235,12)
516377.0	3712776.0	7.44066	(160,14)	516477.0	3712776.0	7.39512	(167,14)
516577.0	3712776.0	6.62517	(195,12)	516677.0	3712776.0	6.24537	(193,12)
516777.0	3712776.0	6.74638	(93,12)	516877.0	3712776.0	7.00001	(94,12)
516977.0	3712776.0	7.80983	(94,12)	517077.0	3712776.0	8.58871	(94,13)
517177.0	3712776.0	7.06023	(206,13)	515277.0	3712876.0	6.10952	(255,12)
515377.0	3712876.0	6.41268	(171,14)	515477.0	3712876.0	6.24981	(221,12)
515577.0	3712876.0	5.72006	(139,16)	515677.0	3712876.0	6.01399	(260,11)
515777.0	3712876.0	5.49894	(130,15)	515877.0	3712876.0	6.53711	(249,13)
515977.0	3712876.0	6.80976	(112,15)	516077.0	3712876.0	8.21167	(133,11)
516177.0	3712876.0	6.74367	(133,11)	516277.0	3712876.0	6.68062	(235,12)
516377.0	3712876.0	6.66191	(146,13)	516477.0	3712876.0	6.75367	(150,14)
516577.0	3712876.0	6.31899	(193,12)	516677.0	3712876.0	6.14650	(93,12)
516777.0	3712876.0	6.05273	(250,12)	516877.0	3712876.0	6.85207	(250,12)
516977.0	3712876.0	7.08870	(175,14)	517077.0	3712876.0	8.49697	(69,13)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
517177.0	3712876.0	7.83447	(94,13)	515277.0	3712976.0	6.13797	(171,14)
515377.0	3712976.0	6.16398	(171,14)	515477.0	3712976.0	5.78415	(139,16)
515577.0	3712976.0	6.01183	(133,19)	515677.0	3712976.0	6.14431	(148,11)
515777.0	3712976.0	6.23279	(234,13)	515877.0	3712976.0	7.11247	(249,13)
515977.0	3712976.0	7.45016	(149,14)	516077.0	3712976.0	8.80555	(133,11)
516177.0	3712976.0	6.82340	(133,11)	516277.0	3712976.0	6.87292	(140,14)
516377.0	3712976.0	6.91791	(146,13)	516477.0	3712976.0	7.47063	(150,14)
516577.0	3712976.0	6.71142	(126,11)	516677.0	3712976.0	5.95041	(176,13)
516777.0	3712976.0	6.29094	(235,14)	516877.0	3712976.0	7.49478	(93,12)
516977.0	3712976.0	7.08063	(152, 8)	517077.0	3712976.0	7.54866	(152, 8)
517177.0	3712976.0	8.04745	(69,13)	515277.0	3713076.0	6.04551	(261,15)
515377.0	3713076.0	6.11063	(265,15)	515477.0	3713076.0	6.29176	(108,13)
515577.0	3713076.0	5.64828	(148,11)	515677.0	3713076.0	6.16498	(148,13)
515777.0	3713076.0	6.42522	(148,12)	515877.0	3713076.0	6.62828	(249,13)
515977.0	3713076.0	7.08300	(149,14)	516077.0	3713076.0	7.52448	(150,12)
516177.0	3713076.0	6.46317	(109,11)	516277.0	3713076.0	6.88085	(140,14)
516377.0	3713076.0	6.74503	(146,13)	516477.0	3713076.0	7.89737	(150,14)
516577.0	3713076.0	6.94002	(151,13)	516677.0	3713076.0	6.56311	(176,13)
516777.0	3713076.0	6.73412	(235,14)	516877.0	3713076.0	6.40233	(212,14)
516977.0	3713076.0	7.27584	(151,12)	517077.0	3713076.0	7.67052	(151,11)
517177.0	3713076.0	8.07816	(94,12)	515277.0	3713176.0	6.23876	(265,14)
515377.0	3713176.0	6.33822	(108,13)	515477.0	3713176.0	6.28351	(260,11)
515577.0	3713176.0	6.38412	(148,13)	515677.0	3713176.0	6.18718	(148,11)
515777.0	3713176.0	6.72823	(265,12)	515877.0	3713176.0	6.72341	(149,14)
515977.0	3713176.0	7.29143	(248,12)	516077.0	3713176.0	8.21366	(109,13)
516177.0	3713176.0	6.79542	(109,11)	516277.0	3713176.0	6.73178	(140,14)
516377.0	3713176.0	6.80791	(146,13)	516477.0	3713176.0	7.99389	(149,13)
516577.0	3713176.0	7.30215	(151,13)	516677.0	3713176.0	6.51896	(176,13)
516777.0	3713176.0	6.41841	(235,13)	516877.0	3713176.0	6.97978	(156,10)
516977.0	3713176.0	6.89130	(93,12)	517077.0	3713176.0	8.17811	(151,11)
517177.0	3713176.0	8.81848	(94,12)	515277.0	3712176.0	5.71035	(263,11)
515377.0	3712176.0	6.18190	(183,14)	515477.0	3712176.0	6.97430	(224,13)
515577.0	3712176.0	7.32568	(224,13)	515677.0	3712176.0	7.17865	(96,13)
515777.0	3712176.0	6.54375	(188,12)	515877.0	3712176.0	3.29286	(188,12)
515977.0	3712176.0	3.20862	(262,11)	516077.0	3712176.0	6.35342	(112,20)
516177.0	3712176.0	11.53181	(133,20)	515277.0	3712076.0	5.81391	(240,12)
515377.0	3712076.0	6.41161	(124,14)	515477.0	3712076.0	7.66830	(224,13)
515577.0	3712076.0	7.53295	(160,12)	515677.0	3712076.0	5.91587	(160,12)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
515777.0	3712076.0	4.31171	(161, 6)	515877.0	3712076.0	5.32577	(161, 6)
515977.0	3712076.0	4.02080	(286,17)	516077.0	3712076.0	4.90193	(96,13)
516177.0	3712076.0	15.36044	(112,20)	515277.0	3711976.0	6.51574	(239,12)
515377.0	3711976.0	6.49896	(160,12)	515477.0	3711976.0	6.53638	(224,13)
515577.0	3711976.0	7.19232	(160,12)	515677.0	3711976.0	5.60342	(160,12)
515777.0	3711976.0	4.28160	(224,13)	515877.0	3711976.0	2.01312	(252,13)
515977.0	3711976.0	2.56654	(161, 6)	516077.0	3711976.0	7.11911	(96,13)
516177.0	3711976.0	6.57368	(51, 9)	515277.0	3711876.0	6.79978	(240,12)
515377.0	3711876.0	6.06873	(240,12)	515477.0	3711876.0	5.80658	(240,12)
515577.0	3711876.0	5.54181	(223,12)	515677.0	3711876.0	4.94593	(223,12)
515777.0	3711876.0	3.75904	(170,12)	515877.0	3711876.0	4.30096	(74,12)
515977.0	3711876.0	5.73866	(74,12)	516077.0	3711876.0	8.57730	(74,12)
516177.0	3711876.0	15.82605	(74,12)	515277.0	3711776.0	5.94050	(198,11)
515377.0	3711776.0	5.80672	(223,12)	515477.0	3711776.0	7.11202	(223,12)
515577.0	3711776.0	7.89030	(170,12)	515677.0	3711776.0	6.81639	(170,12)
515777.0	3711776.0	3.53259	(170,12)	515877.0	3711776.0	1.57289	(26, 6)
515977.0	3711776.0	2.56437	(71, 9)	516077.0	3711776.0	9.26932	(71, 9)
516177.0	3711776.0	6.18928	(64, 9)	515277.0	3711676.0	7.21310	(106,13)
515377.0	3711676.0	6.46780	(223,12)	515477.0	3711676.0	6.73851	(188,13)
515577.0	3711676.0	8.05538	(188,13)	515677.0	3711676.0	8.31140	(188,13)
515777.0	3711676.0	5.24613	(223,12)	515877.0	3711676.0	5.14596	(71, 9)
515977.0	3711676.0	2.25950	(71, 9)	516077.0	3711676.0	5.06656	(64, 9)
516177.0	3711676.0	11.80666	(302, 6)	515277.0	3711576.0	6.21545	(261,14)
515377.0	3711576.0	6.00444	(188,13)	515477.0	3711576.0	7.27877	(198,13)
515577.0	3711576.0	7.95436	(198,13)	515677.0	3711576.0	7.20075	(198,13)
515777.0	3711576.0	5.36591	(98,12)	515877.0	3711576.0	3.33262	(98,12)
515977.0	3711576.0	5.21318	(64, 9)	516077.0	3711576.0	6.19403	(289,10)
516177.0	3711576.0	19.89992	(301, 1)	515277.0	3711476.0	6.74683	(242,12)
515377.0	3711476.0	6.37359	(214,15)	515477.0	3711476.0	7.11521	(198,13)
515577.0	3711476.0	7.12027	(170,13)	515677.0	3711476.0	7.50066	(170,13)
515777.0	3711476.0	6.32651	(135,12)	515877.0	3711476.0	5.39758	(267, 9)
515977.0	3711476.0	5.22084	(289,10)	516077.0	3711476.0	5.93137	(301, 1)
516177.0	3711476.0	14.29152	(301,10)	511277.0	3709378.0	10.57792	(51, 6)
512277.0	3709378.0	11.19408	(51, 1)	513277.0	3709378.0	9.73644	(192, 2)
514277.0	3709378.0	10.45745	(299,21)	515277.0	3709378.0	9.98455	(273,24)
516277.0	3709378.0	7.22974	(302,21)	517277.0	3709378.0	5.55967	(178,16)
518277.0	3709378.0	10.58910	(179,23)	519277.0	3709378.0	4.47850	(335, 5)
520277.0	3709378.0	4.64199	(228, 4)	521277.0	3709378.0	4.62216	(14,23)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522277.0	3709378.0	4.30149	(7,18)	511277.0	3708378.0	9.86214	(255, 6)
512277.0	3708378.0	7.43378	(50,24)	513277.0	3708378.0	10.96389	(123,22)
514277.0	3708378.0	11.17143	(164, 5)	515277.0	3708378.0	8.06812	(123,19)
516277.0	3708378.0	5.25573	(117,15)	517277.0	3708378.0	10.35981	(8, 6)
518277.0	3708378.0	8.09824	(294, 3)	519277.0	3708378.0	4.44389	(18,20)
520277.0	3708378.0	4.57953	(114, 3)	521277.0	3708378.0	4.58863	(305,19)
522277.0	3708378.0	4.71508	(308, 8)	511277.0	3707378.0	8.68427	(50,24)
512277.0	3707378.0	10.26101	(97,23)	513277.0	3707378.0	11.43747	(269,23)
514277.0	3707378.0	10.16716	(288,19)	515277.0	3707378.0	11.41253	(294, 6)
516277.0	3707378.0	8.49448	(169,24)	517277.0	3707378.0	10.37311	(163, 3)
518277.0	3707378.0	7.47042	(58, 1)	519277.0	3707378.0	5.47267	(137,20)
520277.0	3707378.0	4.73225	(294, 2)	521277.0	3707378.0	4.65021	(178,21)
522277.0	3707378.0	4.82452	(351, 9)	511277.0	3706378.0	9.36116	(275,18)
512277.0	3706378.0	11.05211	(59, 7)	513277.0	3706378.0	9.89128	(48, 9)
514277.0	3706378.0	11.21123	(139, 4)	515277.0	3706378.0	11.14508	(294, 5)
516277.0	3706378.0	8.54792	(306,19)	517277.0	3706378.0	7.89008	(192, 3)
518277.0	3706378.0	9.81656	(192, 5)	519277.0	3706378.0	5.16950	(345,19)
520277.0	3706378.0	4.38227	(278,18)	521277.0	3706378.0	5.70642	(294, 2)
522277.0	3706378.0	4.57889	(339, 2)	523277.0	3706378.0	4.70429	(22, 9)
522402.0	3710378.0	4.18458	(90, 3)	522402.0	3711378.0	5.34098	(57,23)
522402.0	3712378.0	3.75706	(18, 9)	511277.0	3714176.0	6.04749	(355,18)
512277.0	3714176.0	5.78416	(129,23)	513277.0	3714176.0	4.83049	(210, 5)
514277.0	3714176.0	5.43170	(118,16)	515277.0	3714176.0	8.28410	(314,21)
516277.0	3714176.0	9.27808	(94,23)	517277.0	3714176.0	9.99376	(154, 4)
518277.0	3714176.0	4.91306	(195, 9)	519277.0	3714176.0	4.29813	(190,14)
520277.0	3714176.0	4.90806	(203,20)	521277.0	3714176.0	5.26197	(184,22)
522277.0	3714176.0	5.23808	(157,20)	511277.0	3715176.0	7.68730	(96,19)
512277.0	3715176.0	11.87853	(242, 1)	513277.0	3715176.0	6.56995	(161,21)
514277.0	3715176.0	9.18807	(317,24)	515277.0	3715176.0	9.97406	(132, 4)
516277.0	3715176.0	6.12828	(94,23)	517277.0	3715176.0	5.02755	(70,13)
518277.0	3715176.0	4.86332	(248,16)	519277.0	3715176.0	4.08459	(54,21)
520277.0	3715176.0	4.07505	(146, 7)	521277.0	3715176.0	5.16760	(59,19)
522277.0	3715176.0	5.46104	(190, 7)	511277.0	3716176.0	11.92236	(198,22)
512277.0	3716176.0	7.11592	(117,19)	513277.0	3716176.0	9.79734	(202, 5)
514277.0	3716176.0	11.50510	(247,20)	515277.0	3716176.0	11.72920	(152,22)
516277.0	3716176.0	4.17772	(85,14)	517277.0	3716176.0	4.69780	(168,20)
518277.0	3716176.0	4.82936	(247,19)	519277.0	3716176.0	5.16895	(190,20)
520277.0	3716176.0	5.21448	(54,20)	521277.0	3716176.0	4.62973	(146, 7)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522277.0	3716176.0	3.77351	(152, 5)	511277.0	3717176.0	9.40337	(117,19)
512277.0	3717176.0	10.60747	(230,23)	513277.0	3717176.0	11.72663	(172, 2)
514277.0	3717176.0	11.81687	(285,19)	515277.0	3717176.0	7.07573	(211, 7)
516277.0	3717176.0	5.15359	(189, 7)	517277.0	3717176.0	4.92692	(185,24)
518277.0	3717176.0	5.89879	(157, 5)	519277.0	3717176.0	6.02525	(230, 6)
520277.0	3717176.0	5.50732	(212,20)	521277.0	3717176.0	4.62888	(277, 7)
522277.0	3717176.0	4.09538	(157, 4)	511277.0	3713176.0	7.32548	(249,20)
512277.0	3713176.0	5.67388	(251,19)	513277.0	3713176.0	4.75845	(84,17)
514277.0	3713176.0	6.07184	(171,11)	511277.0	3712176.0	5.60603	(106, 3)
512277.0	3712176.0	5.79221	(118,19)	513277.0	3712176.0	5.34774	(224,16)
514277.0	3712176.0	6.24791	(262,17)	511277.0	3711176.0	7.83083	(254,21)
512277.0	3711176.0	11.77232	(245, 2)	513277.0	3711176.0	5.38108	(255,24)
514277.0	3711176.0	6.45427	(241,10)	511277.0	3709378.0	10.57792	(51, 6)
512277.0	3709378.0	11.19408	(51, 1)	513277.0	3709378.0	9.73644	(192, 2)
514277.0	3709378.0	10.45745	(299,21)	515277.0	3709378.0	9.98455	(273,24)
516277.0	3709378.0	7.22974	(302,21)	517277.0	3709378.0	5.55967	(178,16)
518277.0	3709378.0	10.58910	(179,23)	519277.0	3709378.0	4.47850	(335, 5)
520277.0	3709378.0	4.64199	(228, 4)	521277.0	3709378.0	4.62216	(14,23)
522277.0	3709378.0	4.30149	(7,18)	511277.0	3708378.0	9.86214	(255, 6)
512277.0	3708378.0	7.43378	(50,24)	513277.0	3708378.0	10.96389	(123,22)
514277.0	3708378.0	11.17143	(164, 5)	515277.0	3708378.0	8.06812	(123,19)
516277.0	3708378.0	5.25573	(117,15)	517277.0	3708378.0	10.35981	(8, 6)
518277.0	3708378.0	8.09824	(294, 3)	519277.0	3708378.0	4.44389	(18,20)
520277.0	3708378.0	4.57953	(114, 3)	521277.0	3708378.0	4.58863	(305,19)
522277.0	3708378.0	4.71508	(308, 8)	511277.0	3707378.0	8.68427	(50,24)
512277.0	3707378.0	10.26101	(97,23)	513277.0	3707378.0	11.43747	(269,23)
514277.0	3707378.0	10.16716	(288,19)	515277.0	3707378.0	11.41253	(294, 6)
516277.0	3707378.0	8.49448	(169,24)	517277.0	3707378.0	10.37311	(163, 3)
518277.0	3707378.0	7.47042	(58, 1)	519277.0	3707378.0	5.47267	(137,20)
520277.0	3707378.0	4.73225	(294, 2)	521277.0	3707378.0	4.65021	(178,21)
522277.0	3707378.0	4.82452	(351, 9)	511277.0	3706378.0	9.36116	(275,18)
512277.0	3706378.0	11.05211	(59, 7)	513277.0	3706378.0	9.89128	(48, 9)
514277.0	3706378.0	11.21123	(139, 4)	515277.0	3706378.0	11.14508	(294, 5)
516277.0	3706378.0	8.54792	(306,19)	517277.0	3706378.0	7.89008	(192, 3)
518277.0	3706378.0	9.81656	(192, 5)	519277.0	3706378.0	5.16950	(345,19)
520277.0	3706378.0	4.38227	(278,18)	521277.0	3706378.0	5.70642	(294, 2)
522277.0	3706378.0	4.57889	(339, 2)	523277.0	3706378.0	4.70429	(22, 9)
522402.0	3710378.0	4.18458	(90, 3)	522402.0	3711378.0	5.34098	(57,23)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,HOUR)	- X -	- Y -	CON.	(DAY,HOUR)
522402.0	3712378.0	3.75706	(18, 9)	511277.0	3714176.0	6.04749	(355,18)
512277.0	3714176.0	5.78416	(129,23)	513277.0	3714176.0	4.83049	(210, 5)
514277.0	3714176.0	5.43170	(118,16)	515277.0	3714176.0	8.28410	(314,21)
516277.0	3714176.0	9.27808	(94,23)	517277.0	3714176.0	9.99376	(154, 4)
518277.0	3714176.0	4.91306	(195, 9)	519277.0	3714176.0	4.29813	(190,14)
520277.0	3714176.0	4.90806	(203,20)	521277.0	3714176.0	5.26197	(184,22)
522277.0	3714176.0	5.23808	(157,20)	511277.0	3715176.0	7.68730	(96,19)
512277.0	3715176.0	11.87853	(242, 1)	513277.0	3715176.0	6.56995	(161,21)
514277.0	3715176.0	9.18807	(317,24)	515277.0	3715176.0	9.97406	(132, 4)
516277.0	3715176.0	6.12828	(94,23)	517277.0	3715176.0	5.02755	(70,13)
518277.0	3715176.0	4.86332	(248,16)	519277.0	3715176.0	4.08459	(54,21)
520277.0	3715176.0	4.07505	(146, 7)	521277.0	3715176.0	5.16760	(59,19)
522277.0	3715176.0	5.46104	(190, 7)	511277.0	3716176.0	11.92236	(198,22)
512277.0	3716176.0	7.11592	(117,19)	513277.0	3716176.0	9.79734	(202, 5)
514277.0	3716176.0	11.50510	(247,20)	515277.0	3716176.0	11.72920	(152,22)
516277.0	3716176.0	4.17772	(85,14)	517277.0	3716176.0	4.69780	(168,20)
518277.0	3716176.0	4.82936	(247,19)	519277.0	3716176.0	5.16895	(190,20)
520277.0	3716176.0	5.21448	(54,20)	521277.0	3716176.0	4.62973	(146, 7)
522277.0	3716176.0	3.77351	(152, 5)	511277.0	3717176.0	9.40337	(117,19)
512277.0	3717176.0	10.60747	(230,23)	513277.0	3717176.0	11.72663	(172, 2)
514277.0	3717176.0	11.81687	(285,19)	515277.0	3717176.0	7.07573	(211, 7)
516277.0	3717176.0	5.15359	(189, 7)	517277.0	3717176.0	4.92692	(185,24)
518277.0	3717176.0	5.89879	(157, 5)	519277.0	3717176.0	6.02525	(230, 6)
520277.0	3717176.0	5.50732	(212,20)	521277.0	3717176.0	4.62888	(277, 7)
522277.0	3717176.0	4.09538	(157, 4)	511277.0	3713176.0	7.32548	(249,20)
512277.0	3713176.0	5.67388	(251,19)	513277.0	3713176.0	4.75845	(84,17)
514277.0	3713176.0	6.07184	(171,11)	511277.0	3712176.0	5.60603	(106, 3)
512277.0	3712176.0	5.79221	(118,19)	513277.0	3712176.0	5.34774	(224,16)
514277.0	3712176.0	6.24791	(262,17)	511277.0	3711176.0	7.83083	(254,21)
512277.0	3711176.0	11.77232	(245, 2)	513277.0	3711176.0	5.38108	(255,24)
514277.0	3711176.0	6.45427	(241,10)	516500.0	3708100.0	10.83724	(288,20)
518100.0	3709350.0	10.36977	(18,19)	514500.0	3708800.0	10.54922	(198, 3)
517300.0	3714400.0	10.03771	(154, 4)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* 50 MAXIMUM 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	HOUR	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	HOUR	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	36.99385	19	133	516179.3	3712122.0	26	15.39872	12	150	516264.6	3712122.0
2	35.79667	22	19	516264.6	3711598.0	27	15.39739	17	112	516264.6	3712122.0
3	23.82314	18	253	516264.6	3712122.0	28	15.39739	17	112	516264.6	3712122.0
4	23.82314	18	253	516264.6	3712122.0	29	15.39152	11	111	516179.3	3712122.0
5	22.70790	6	20	516177.0	3711576.0	30	15.36832	17	52	516264.6	3712122.0
6	22.34412	19	133	516115.2	3712189.0	31	15.36832	17	52	516264.6	3712122.0
7	19.89992	1	301	516177.0	3711576.0	32	15.36832	16	52	516264.6	3712122.0
8	19.28209	12	71	516177.0	3711876.0	33	15.36832	16	52	516264.6	3712122.0
9	18.80752	12	85	516264.6	3712122.0	34	15.36044	20	112	516177.0	3712076.0
10	18.80752	12	85	516264.6	3712122.0	35	14.75283	2	301	516177.0	3711476.0
11	17.95999	15	94	516411.0	3712159.0	36	14.55087	11	133	516264.6	3712122.0
12	17.90841	15	112	516177.0	3712276.0	37	14.55087	11	133	516264.6	3712122.0
13	17.78486	14	112	516264.6	3712122.0	38	14.43400	17	207	516477.0	3711278.0
14	17.78486	14	112	516264.6	3712122.0	39	14.41452	20	62	516264.6	3712122.0
15	17.46657	22	191	516264.6	3711598.0	40	14.41452	20	62	516264.6	3712122.0
16	17.11345	18	62	516411.0	3712159.0	41	14.35501	20	112	516179.3	3712061.0
17	16.52012	19	133	516177.0	3712076.0	42	14.29792	22	191	516077.0	3710478.0
18	16.42199	9	267	516177.0	3711776.0	43	14.29152	10	301	516177.0	3711476.0
19	15.86647	19	133	516077.0	3712276.0	44	14.11020	12	301	516177.0	3711476.0
20	15.86142	15	112	516264.6	3712122.0	45	14.07652	11	147	516264.6	3711598.0
21	15.86142	15	112	516264.6	3712122.0	46	13.98542	11	54	516179.3	3712122.0
22	15.82605	12	74	516177.0	3711876.0	47	13.95931	13	301	516177.0	3711476.0
23	15.66529	19	133	516177.0	3712176.0	48	13.93377	13	301	516177.0	3711576.0
24	15.41599	24	88	516179.3	3712061.0	49	13.85847	2	20	516177.0	3711676.0
25	15.39872	12	150	516264.6	3712122.0	50	13.84924	15	112	516177.0	3712376.0

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515977.0	3710378.0	6.31115	(301, 1)	516077.0	3710378.0	5.26328	(301, 1)
516177.0	3710378.0	6.76030	(302, 3)	516277.0	3710378.0	6.48949	(302, 3)
516377.0	3710378.0	3.77547	(302, 3)	516477.0	3710378.0	3.29257	(269, 2)
516577.0	3710378.0	3.16550	(269, 2)	516677.0	3710378.0	3.57083	(179, 2)
516777.0	3710378.0	4.02706	(358, 2)	516877.0	3710378.0	3.30430	(358, 2)
516977.0	3710378.0	2.29256	(339, 2)	517077.0	3710378.0	1.91617	(104, 2)
517177.0	3710378.0	1.86023	(136, 2)	515277.0	3712276.0	1.74947	(239, 2)
515377.0	3712276.0	1.99672	(216, 2)	515477.0	3712276.0	2.24397	(216, 2)
515577.0	3712276.0	2.33227	(216, 2)	515677.0	3712276.0	2.12891	(216, 2)
515777.0	3712276.0	1.49763	(165, 2)	515877.0	3712276.0	0.89050	(165, 2)
515977.0	3712276.0	0.49077	(88, 3)	516077.0	3712276.0	2.62493	(133, 3)
516177.0	3712276.0	3.52133	(112, 2)	516277.0	3712276.0	3.98468	(62, 3)
516377.0	3712276.0	2.26381	(94, 3)	516477.0	3712276.0	1.44609	(94, 2)
516577.0	3712276.0	2.87784	(94, 2)	516677.0	3712276.0	2.13243	(151, 2)
516777.0	3712276.0	1.44899	(206, 2)	516877.0	3712276.0	2.06331	(206, 2)
516977.0	3712276.0	1.74431	(196, 2)	517077.0	3712276.0	1.84135	(182, 2)
517177.0	3712276.0	2.19045	(182, 2)	515277.0	3712376.0	2.05244	(240, 2)
515377.0	3712376.0	2.14497	(188, 2)	515477.0	3712376.0	2.29755	(188, 2)
515577.0	3712376.0	2.23535	(188, 2)	515677.0	3712376.0	2.11448	(165, 2)
515777.0	3712376.0	1.70907	(165, 2)	515877.0	3712376.0	1.24458	(186, 2)
515977.0	3712376.0	2.33914	(112, 3)	516077.0	3712376.0	2.31602	(133, 3)
516177.0	3712376.0	3.61973	(112, 2)	516277.0	3712376.0	3.23346	(109, 2)
516377.0	3712376.0	2.23559	(62, 3)	516477.0	3712376.0	1.10743	(94, 2)
516577.0	3712376.0	1.65421	(94, 2)	516677.0	3712376.0	2.40321	(94, 2)
516777.0	3712376.0	1.68883	(206, 2)	516877.0	3712376.0	2.28926	(206, 2)
516977.0	3712376.0	2.38117	(206, 2)	517077.0	3712376.0	2.25367	(177, 2)
517177.0	3712376.0	2.33967	(182, 2)	515277.0	3712476.0	2.46268	(240, 2)
515377.0	3712476.0	2.49359	(188, 2)	515477.0	3712476.0	2.24695	(188, 2)
515577.0	3712476.0	2.18892	(165, 2)	515677.0	3712476.0	2.03936	(165, 2)
515777.0	3712476.0	1.55686	(186, 2)	515877.0	3712476.0	1.56558	(186, 2)
515977.0	3712476.0	2.33572	(133, 3)	516077.0	3712476.0	2.11233	(112, 2)
516177.0	3712476.0	2.68417	(62, 3)	516277.0	3712476.0	2.86897	(109, 2)
516377.0	3712476.0	2.21067	(62, 3)	516477.0	3712476.0	1.04381	(149, 2)
516577.0	3712476.0	1.21689	(93, 2)	516677.0	3712476.0	1.95079	(94, 2)
516777.0	3712476.0	2.10631	(94, 2)	516877.0	3712476.0	2.31414	(206, 2)
516977.0	3712476.0	2.57698	(206, 2)	517077.0	3712476.0	2.79122	(177, 2)
517177.0	3712476.0	2.78989	(177, 2)	515277.0	3712576.0	2.46646	(188, 2)
515377.0	3712576.0	2.27746	(255, 2)	515477.0	3712576.0	2.17719	(165, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515577.0	3712576.0	2.01587	(165, 2)	515677.0	3712576.0	1.77085	(184, 2)
515777.0	3712576.0	1.52118	(184, 2)	515877.0	3712576.0	1.53435	(124, 2)
515977.0	3712576.0	1.53514	(148, 2)	516077.0	3712576.0	2.19077	(112, 2)
516177.0	3712576.0	2.34851	(62, 3)	516277.0	3712576.0	2.54442	(109, 2)
516377.0	3712576.0	2.09369	(62, 3)	516477.0	3712576.0	1.86913	(167, 2)
516577.0	3712576.0	1.44058	(167, 2)	516677.0	3712576.0	1.32950	(151, 2)
516777.0	3712576.0	1.80579	(94, 2)	516877.0	3712576.0	2.00229	(145, 2)
516977.0	3712576.0	2.50929	(206, 2)	517077.0	3712576.0	2.71157	(191, 2)
517177.0	3712576.0	3.04590	(177, 2)	515277.0	3712676.0	2.44580	(255, 2)
515377.0	3712676.0	2.44922	(255, 2)	515477.0	3712676.0	2.31100	(255, 2)
515577.0	3712676.0	2.10252	(184, 2)	515677.0	3712676.0	1.94503	(184, 2)
515777.0	3712676.0	1.53253	(124, 2)	515877.0	3712676.0	2.10286	(148, 2)
515977.0	3712676.0	1.90777	(148, 2)	516077.0	3712676.0	1.78007	(130, 2)
516177.0	3712676.0	2.25184	(150, 2)	516277.0	3712676.0	2.21037	(109, 2)
516377.0	3712676.0	2.31231	(167, 2)	516477.0	3712676.0	2.35908	(167, 2)
516577.0	3712676.0	1.91999	(167, 2)	516677.0	3712676.0	1.40418	(167, 2)
516777.0	3712676.0	1.48393	(151, 2)	516877.0	3712676.0	1.83144	(94, 2)
516977.0	3712676.0	2.12011	(145, 2)	517077.0	3712676.0	2.75836	(191, 2)
517177.0	3712676.0	3.09842	(191, 2)	515277.0	3712776.0	2.49634	(255, 2)
515377.0	3712776.0	2.24576	(255, 2)	515477.0	3712776.0	2.14536	(184, 2)
515577.0	3712776.0	2.23278	(184, 2)	515677.0	3712776.0	1.92381	(259, 2)
515777.0	3712776.0	1.86585	(148, 2)	515877.0	3712776.0	2.57816	(148, 2)
515977.0	3712776.0	1.83280	(148, 2)	516077.0	3712776.0	1.91919	(130, 2)
516177.0	3712776.0	2.09972	(150, 2)	516277.0	3712776.0	2.15624	(130, 2)
516377.0	3712776.0	2.40873	(167, 2)	516477.0	3712776.0	2.43077	(167, 2)
516577.0	3712776.0	2.06133	(167, 2)	516677.0	3712776.0	1.56231	(167, 2)
516777.0	3712776.0	1.49243	(151, 2)	516877.0	3712776.0	1.65277	(94, 2)
516977.0	3712776.0	2.07017	(94, 2)	517077.0	3712776.0	2.52130	(191, 2)
517177.0	3712776.0	3.06796	(191, 2)	515277.0	3712876.0	2.33410	(255, 2)
515377.0	3712876.0	2.24841	(184, 2)	515477.0	3712876.0	2.23089	(184, 2)
515577.0	3712876.0	2.04271	(259, 2)	515677.0	3712876.0	1.95891	(148, 2)
515777.0	3712876.0	2.45227	(148, 2)	515877.0	3712876.0	2.49731	(148, 2)
515977.0	3712876.0	2.00576	(126, 2)	516077.0	3712876.0	2.23362	(150, 2)
516177.0	3712876.0	2.04072	(150, 2)	516277.0	3712876.0	2.17359	(174, 2)
516377.0	3712876.0	2.26384	(167, 2)	516477.0	3712876.0	2.35451	(167, 2)
516577.0	3712876.0	2.07002	(167, 2)	516677.0	3712876.0	1.63550	(167, 2)
516777.0	3712876.0	1.39123	(235, 2)	516877.0	3712876.0	1.90989	(151, 2)
516977.0	3712876.0	1.87368	(175, 2)	517077.0	3712876.0	2.12508	(94, 2)

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* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
517177.0	3712876.0	2.70937	(191, 2)	515277.0	3712976.0	2.26493	(184, 2)
515377.0	3712976.0	2.29970	(184, 2)	515477.0	3712976.0	2.23731	(259, 2)
515577.0	3712976.0	1.98802	(259, 2)	515677.0	3712976.0	2.38021	(148, 2)
515777.0	3712976.0	2.75760	(148, 2)	515877.0	3712976.0	2.47704	(148, 2)
515977.0	3712976.0	2.39361	(126, 2)	516077.0	3712976.0	2.45865	(150, 2)
516177.0	3712976.0	2.34916	(150, 2)	516277.0	3712976.0	2.49777	(174, 2)
516377.0	3712976.0	2.44159	(153, 2)	516477.0	3712976.0	2.56520	(153, 2)
516577.0	3712976.0	2.04021	(153, 2)	516677.0	3712976.0	1.66278	(235, 2)
516777.0	3712976.0	1.57980	(235, 2)	516877.0	3712976.0	1.79172	(151, 2)
516977.0	3712976.0	2.02434	(152, 2)	517077.0	3712976.0	2.00935	(175, 2)
517177.0	3712976.0	2.20610	(191, 2)	515277.0	3713076.0	2.29021	(184, 2)
515377.0	3713076.0	2.32633	(259, 2)	515477.0	3713076.0	2.20403	(259, 2)
515577.0	3713076.0	2.13661	(148, 2)	515677.0	3713076.0	2.81784	(148, 2)
515777.0	3713076.0	2.76719	(148, 2)	515877.0	3713076.0	2.27365	(126, 2)
515977.0	3713076.0	2.36789	(126, 2)	516077.0	3713076.0	2.21035	(150, 2)
516177.0	3713076.0	2.08923	(174, 2)	516277.0	3713076.0	2.76580	(174, 2)
516377.0	3713076.0	2.49009	(174, 2)	516477.0	3713076.0	2.81551	(153, 2)
516577.0	3713076.0	2.37890	(153, 2)	516677.0	3713076.0	1.86623	(153, 2)
516777.0	3713076.0	1.72970	(235, 2)	516877.0	3713076.0	1.54293	(153, 2)
516977.0	3713076.0	1.97747	(151, 2)	517077.0	3713076.0	2.23797	(152, 2)
517177.0	3713076.0	2.11705	(175, 2)	515277.0	3713176.0	2.35332	(265, 2)
515377.0	3713176.0	2.31706	(259, 2)	515477.0	3713176.0	2.04062	(259, 2)
515577.0	3713176.0	2.63087	(148, 2)	515677.0	3713176.0	2.99376	(148, 2)
515777.0	3713176.0	2.68575	(148, 2)	515877.0	3713176.0	2.56821	(126, 2)
515977.0	3713176.0	2.44297	(126, 2)	516077.0	3713176.0	2.42333	(150, 2)
516177.0	3713176.0	2.33982	(174, 2)	516277.0	3713176.0	2.97699	(174, 2)
516377.0	3713176.0	2.84777	(174, 2)	516477.0	3713176.0	2.98196	(153, 2)
516577.0	3713176.0	2.65027	(153, 2)	516677.0	3713176.0	2.01613	(153, 2)
516777.0	3713176.0	1.70620	(235, 2)	516877.0	3713176.0	1.70773	(153, 2)
516977.0	3713176.0	1.71885	(151, 2)	517077.0	3713176.0	2.22299	(152, 2)
517177.0	3713176.0	2.88924	(87, 2)	515277.0	3712176.0	1.69672	(239, 2)
515377.0	3712176.0	1.62275	(239, 2)	515477.0	3712176.0	1.90149	(216, 2)
515577.0	3712176.0	2.00944	(216, 2)	515677.0	3712176.0	1.83710	(216, 2)
515777.0	3712176.0	1.20332	(96, 2)	515877.0	3712176.0	1.02422	(96, 2)
515977.0	3712176.0	0.86985	(51, 2)	516077.0	3712176.0	1.27648	(112, 3)
516177.0	3712176.0	3.40018	(133, 3)	515277.0	3712076.0	1.69598	(240, 2)
515377.0	3712076.0	1.49112	(240, 2)	515477.0	3712076.0	1.42848	(239, 2)
515577.0	3712076.0	1.35961	(183, 2)	515677.0	3712076.0	1.15598	(216, 2)

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* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515777.0	3712076.0	0.66842	(224, 2)	515877.0	3712076.0	1.12584	(96, 2)
515977.0	3712076.0	1.71442	(96, 2)	516077.0	3712076.0	1.28799	(51, 2)
516177.0	3712076.0	3.62677	(112, 3)	515277.0	3711976.0	1.95456	(240, 2)
515377.0	3711976.0	1.76492	(240, 2)	515477.0	3711976.0	1.42628	(240, 2)
515577.0	3711976.0	1.11274	(224, 2)	515677.0	3711976.0	0.97270	(224, 2)
515777.0	3711976.0	0.69654C	(161, 2)	515877.0	3711976.0	0.69803C	(161, 2)
515977.0	3711976.0	0.49407C	(161, 2)	516077.0	3711976.0	1.21670	(161, 1)
516177.0	3711976.0	1.64518	(51, 2)	515277.0	3711876.0	1.72118	(240, 2)
515377.0	3711876.0	1.41786	(240, 2)	515477.0	3711876.0	1.26770	(240, 2)
515577.0	3711876.0	1.05667	(170, 2)	515677.0	3711876.0	0.91270	(170, 2)
515777.0	3711876.0	0.59067	(244, 2)	515877.0	3711876.0	0.61926	(244, 2)
515977.0	3711876.0	0.77170	(244, 2)	516077.0	3711876.0	1.23458	(71, 2)
516177.0	3711876.0	2.99193	(71, 2)	515277.0	3711776.0	1.29511	(262, 2)
515377.0	3711776.0	1.27267	(198, 2)	515477.0	3711776.0	1.24761	(198, 2)
515577.0	3711776.0	1.14260	(223, 2)	515677.0	3711776.0	1.04322	(223, 2)
515777.0	3711776.0	0.63658	(223, 2)	515877.0	3711776.0	0.67105	(71, 2)
515977.0	3711776.0	0.77239	(71, 2)	516077.0	3711776.0	1.51010	(245, 2)
516177.0	3711776.0	2.05275	(267, 2)	515277.0	3711676.0	1.59896	(198, 2)
515377.0	3711676.0	1.66881	(198, 2)	515477.0	3711676.0	1.74441	(198, 2)
515577.0	3711676.0	1.65652	(198, 2)	515677.0	3711676.0	1.33313	(198, 2)
515777.0	3711676.0	0.74261	(188, 2)	515877.0	3711676.0	0.89140	(245, 2)
515977.0	3711676.0	0.48945	(245, 2)	516077.0	3711676.0	1.04020	(267, 2)
516177.0	3711676.0	1.93814	(20, 1)	515277.0	3711576.0	2.06412	(198, 2)
515377.0	3711576.0	2.25824	(198, 2)	515477.0	3711576.0	2.39496	(198, 2)
515577.0	3711576.0	2.36067	(198, 2)	515677.0	3711576.0	1.91933	(198, 2)
515777.0	3711576.0	1.18084	(198, 2)	515877.0	3711576.0	0.61979	(267, 2)
515977.0	3711576.0	0.82072	(267, 2)	516077.0	3711576.0	0.86770	(71, 1)
516177.0	3711576.0	4.55424	(20, 1)	515277.0	3711476.0	2.55010	(198, 2)
515377.0	3711476.0	2.72718	(198, 2)	515477.0	3711476.0	2.81070	(198, 2)
515577.0	3711476.0	2.62875	(198, 2)	515677.0	3711476.0	2.23856	(198, 2)
515777.0	3711476.0	1.67941	(198, 2)	515877.0	3711476.0	0.94794	(135, 2)
515977.0	3711476.0	0.69227	(289, 2)	516077.0	3711476.0	1.50297	(20, 1)
516177.0	3711476.0	8.63916	(301, 2)	511277.0	3709378.0	2.62522	(199, 1)
512277.0	3709378.0	3.95380	(50, 1)	513277.0	3709378.0	1.84979	(258, 3)
514277.0	3709378.0	3.41851	(299, 3)	515277.0	3709378.0	3.20263C	(289, 1)
516277.0	3709378.0	5.10907	(302, 3)	517277.0	3709378.0	2.73206	(339, 2)
518277.0	3709378.0	3.05433C	(95, 3)	519277.0	3709378.0	1.77074	(42, 2)
520277.0	3709378.0	1.45762	(90, 2)	521277.0	3709378.0	1.46198	(4, 1)

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* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3709378.0	0.90441	(43, 1)	511277.0	3708378.0	2.22375	(64, 3)
512277.0	3708378.0	1.06197C	(50, 3)	513277.0	3708378.0	3.56455	(299, 3)
514277.0	3708378.0	2.62013	(59, 1)	515277.0	3708378.0	3.93967	(301, 2)
516277.0	3708378.0	3.50930	(302, 3)	517277.0	3708378.0	3.93878	(358, 2)
518277.0	3708378.0	1.81211	(294, 1)	519277.0	3708378.0	1.74116C	(158, 3)
520277.0	3708378.0	1.64231	(42, 2)	521277.0	3708378.0	1.28027	(14, 3)
522277.0	3708378.0	1.74505	(121, 3)	511277.0	3707378.0	1.48773	(352, 3)
512277.0	3707378.0	2.73254	(299, 3)	513277.0	3707378.0	2.17387	(46, 1)
514277.0	3707378.0	3.13898C	(128, 3)	515277.0	3707378.0	3.76507	(273, 3)
516277.0	3707378.0	3.39883	(302, 3)	517277.0	3707378.0	4.30594	(163, 3)
518277.0	3707378.0	2.47155	(63, 3)	519277.0	3707378.0	1.59665	(304, 1)
520277.0	3707378.0	1.55356C	(158, 3)	521277.0	3707378.0	1.73195	(339, 1)
522277.0	3707378.0	1.27748	(114, 1)	511277.0	3706378.0	2.07417	(299, 3)
512277.0	3706378.0	2.47188	(299, 1)	513277.0	3706378.0	2.19446	(59, 1)
514277.0	3706378.0	2.70594C	(84, 1)	515277.0	3706378.0	3.17897	(273, 3)
516277.0	3706378.0	2.78272C	(123, 1)	517277.0	3706378.0	3.34753	(25, 3)
518277.0	3706378.0	3.08976	(63, 3)	519277.0	3706378.0	1.15138	(273, 2)
520277.0	3706378.0	1.42499	(17, 2)	521277.0	3706378.0	1.50672C	(158, 3)
522277.0	3706378.0	1.95701	(339, 1)	523277.0	3706378.0	1.25848	(278, 1)
522402.0	3710378.0	0.92275	(14, 3)	522402.0	3711378.0	1.34831C	(45, 3)
522402.0	3712378.0	0.84844	(18, 2)	511277.0	3714176.0	1.34954	(84, 3)
512277.0	3714176.0	1.91815	(290, 3)	513277.0	3714176.0	1.90646	(272, 1)
514277.0	3714176.0	1.75351	(265, 2)	515277.0	3714176.0	2.58272	(148, 2)
516277.0	3714176.0	4.73114	(85, 2)	517277.0	3714176.0	4.13153	(151, 1)
518277.0	3714176.0	1.89938	(151, 2)	519277.0	3714176.0	1.78443	(212, 2)
520277.0	3714176.0	1.45712	(356, 2)	521277.0	3714176.0	1.48194	(184, 3)
522277.0	3714176.0	1.80289	(113, 3)	511277.0	3715176.0	2.27406C	(342, 3)
512277.0	3715176.0	4.15734C	(364, 1)	513277.0	3715176.0	2.15673	(344, 3)
514277.0	3715176.0	2.60926	(296, 3)	515277.0	3715176.0	2.83047	(249, 1)
516277.0	3715176.0	3.46426	(113, 2)	517277.0	3715176.0	1.51930	(360, 2)
518277.0	3715176.0	1.61842	(87, 2)	519277.0	3715176.0	1.70590	(151, 2)
520277.0	3715176.0	1.01529	(206, 2)	521277.0	3715176.0	1.75440	(356, 3)
522277.0	3715176.0	1.36515	(356, 2)	511277.0	3716176.0	3.84723	(261, 1)
512277.0	3716176.0	2.10933	(116, 3)	513277.0	3716176.0	2.88510C	(230, 3)
514277.0	3716176.0	3.61304C	(341, 3)	515277.0	3716176.0	4.18424	(171, 3)
516277.0	3716176.0	2.44569	(113, 2)	517277.0	3716176.0	1.61062C	(185, 3)
518277.0	3716176.0	1.73851	(151, 1)	519277.0	3716176.0	1.67840	(87, 2)
520277.0	3716176.0	1.98829	(183, 1)	521277.0	3716176.0	0.89101C	(213, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3716176.0	0.82163	(356, 2)	511277.0	3717176.0	2.33049C	(250, 1)
512277.0	3717176.0	3.26282	(210, 1)	513277.0	3717176.0	3.24034C	(252, 3)
514277.0	3717176.0	4.22287	(285, 3)	515277.0	3717176.0	2.16418	(313, 2)
516277.0	3717176.0	2.39051	(113, 2)	517277.0	3717176.0	1.75243C	(185, 3)
518277.0	3717176.0	1.66332	(151, 1)	519277.0	3717176.0	1.81334	(93, 1)
520277.0	3717176.0	1.66564	(151, 3)	521277.0	3717176.0	1.56898	(183, 1)
522277.0	3717176.0	0.95688C	(17, 3)	511277.0	3713176.0	1.87314	(240, 3)
512277.0	3713176.0	1.74564	(261, 3)	513277.0	3713176.0	1.67666	(84, 3)
514277.0	3713176.0	2.27681	(39, 2)	511277.0	3712176.0	1.92915	(38, 3)
512277.0	3712176.0	1.91708	(38, 3)	513277.0	3712176.0	1.64033	(262, 3)
514277.0	3712176.0	1.70895	(240, 2)	511277.0	3711176.0	2.55517C	(294, 3)
512277.0	3711176.0	4.45258	(255, 3)	513277.0	3711176.0	1.82707	(255, 3)
514277.0	3711176.0	1.85340	(106, 2)	511277.0	3709378.0	2.62522	(199, 1)
512277.0	3709378.0	3.95380	(50, 1)	513277.0	3709378.0	1.84979	(258, 3)
514277.0	3709378.0	3.41851	(299, 3)	515277.0	3709378.0	3.20263C	(289, 1)
516277.0	3709378.0	5.10907	(302, 3)	517277.0	3709378.0	2.73206	(339, 2)
518277.0	3709378.0	3.05433C	(95, 3)	519277.0	3709378.0	1.77074	(42, 2)
520277.0	3709378.0	1.45762	(90, 2)	521277.0	3709378.0	1.46198	(4, 1)
522277.0	3709378.0	0.90441	(43, 1)	511277.0	3708378.0	2.22375	(64, 3)
512277.0	3708378.0	1.06197C	(50, 3)	513277.0	3708378.0	3.56455	(299, 3)
514277.0	3708378.0	2.62013	(59, 1)	515277.0	3708378.0	3.93967	(301, 2)
516277.0	3708378.0	3.50930	(302, 3)	517277.0	3708378.0	3.93878	(358, 2)
518277.0	3708378.0	1.81211	(294, 1)	519277.0	3708378.0	1.74116C	(158, 3)
520277.0	3708378.0	1.64231	(42, 2)	521277.0	3708378.0	1.28027	(14, 3)
522277.0	3708378.0	1.74505	(121, 3)	511277.0	3707378.0	1.48773	(352, 3)
512277.0	3707378.0	2.73254	(299, 3)	513277.0	3707378.0	2.17387	(46, 1)
514277.0	3707378.0	3.13898C	(128, 3)	515277.0	3707378.0	3.76507	(273, 3)
516277.0	3707378.0	3.39883	(302, 3)	517277.0	3707378.0	4.30594	(163, 3)
518277.0	3707378.0	2.47155	(63, 3)	519277.0	3707378.0	1.59665	(304, 1)
520277.0	3707378.0	1.55356C	(158, 3)	521277.0	3707378.0	1.73195	(339, 1)
522277.0	3707378.0	1.27748	(114, 1)	511277.0	3706378.0	2.07417	(299, 3)
512277.0	3706378.0	2.47188	(299, 1)	513277.0	3706378.0	2.19446	(59, 1)
514277.0	3706378.0	2.70594C	(84, 1)	515277.0	3706378.0	3.17897	(273, 3)
516277.0	3706378.0	2.78272C	(123, 1)	517277.0	3706378.0	3.34753	(25, 3)
518277.0	3706378.0	3.08976	(63, 3)	519277.0	3706378.0	1.15138	(273, 2)
520277.0	3706378.0	1.42499	(17, 2)	521277.0	3706378.0	1.50672C	(158, 3)
522277.0	3706378.0	1.95701	(339, 1)	523277.0	3706378.0	1.25848	(278, 1)
522402.0	3710378.0	0.92275	(14, 3)	522402.0	3711378.0	1.34831C	(45, 3)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522402.0	3712378.0	0.84844	(18, 2)	511277.0	3714176.0	1.34954	(84, 3)
512277.0	3714176.0	1.91815	(290, 3)	513277.0	3714176.0	1.90646	(272, 1)
514277.0	3714176.0	1.75351	(265, 2)	515277.0	3714176.0	2.58272	(148, 2)
516277.0	3714176.0	4.73114	(85, 2)	517277.0	3714176.0	4.13153	(151, 1)
518277.0	3714176.0	1.89938	(151, 2)	519277.0	3714176.0	1.78443	(212, 2)
520277.0	3714176.0	1.45712	(356, 2)	521277.0	3714176.0	1.48194	(184, 3)
522277.0	3714176.0	1.80289	(113, 3)	511277.0	3715176.0	2.27406C	(342, 3)
512277.0	3715176.0	4.15734C	(364, 1)	513277.0	3715176.0	2.15673	(344, 3)
514277.0	3715176.0	2.60926	(296, 3)	515277.0	3715176.0	2.83047	(249, 1)
516277.0	3715176.0	3.46426	(113, 2)	517277.0	3715176.0	1.51930	(360, 2)
518277.0	3715176.0	1.61842	(87, 2)	519277.0	3715176.0	1.70590	(151, 2)
520277.0	3715176.0	1.01529	(206, 2)	521277.0	3715176.0	1.75440	(356, 3)
522277.0	3715176.0	1.36515	(356, 2)	511277.0	3716176.0	3.84723	(261, 1)
512277.0	3716176.0	2.10933	(116, 3)	513277.0	3716176.0	2.88510C	(230, 3)
514277.0	3716176.0	3.61304C	(341, 3)	515277.0	3716176.0	4.18424	(171, 3)
516277.0	3716176.0	2.44569	(113, 2)	517277.0	3716176.0	1.61062C	(185, 3)
518277.0	3716176.0	1.73851	(151, 1)	519277.0	3716176.0	1.67840	(87, 2)
520277.0	3716176.0	1.98829	(183, 1)	521277.0	3716176.0	0.89101C	(213, 1)
522277.0	3716176.0	0.82163	(356, 2)	511277.0	3717176.0	2.33049C	(250, 1)
512277.0	3717176.0	3.26282	(210, 1)	513277.0	3717176.0	3.24034C	(252, 3)
514277.0	3717176.0	4.22287	(285, 3)	515277.0	3717176.0	2.16418	(313, 2)
516277.0	3717176.0	2.39051	(113, 2)	517277.0	3717176.0	1.75243C	(185, 3)
518277.0	3717176.0	1.66332	(151, 1)	519277.0	3717176.0	1.81334	(93, 1)
520277.0	3717176.0	1.66564	(151, 3)	521277.0	3717176.0	1.56898	(183, 1)
522277.0	3717176.0	0.95688C	(17, 3)	511277.0	3713176.0	1.87314	(240, 3)
512277.0	3713176.0	1.74564	(261, 3)	513277.0	3713176.0	1.67666	(84, 3)
514277.0	3713176.0	2.27681	(39, 2)	511277.0	3712176.0	1.92915	(38, 3)
512277.0	3712176.0	1.91708	(38, 3)	513277.0	3712176.0	1.64033	(262, 3)
514277.0	3712176.0	1.70895	(240, 2)	511277.0	3711176.0	2.55517C	(294, 3)
512277.0	3711176.0	4.45258	(255, 3)	513277.0	3711176.0	1.82707	(255, 3)
514277.0	3711176.0	1.85340	(106, 2)	516500.0	3708100.0	3.32238	(303, 1)
518100.0	3709350.0	2.75985	(266, 3)	514500.0	3708800.0	2.59293	(164, 1)
517300.0	3714400.0	3.87617	(151, 1)				

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516276.8	3711378.0	3.03625	(300, 3)	516411.0	3712159.0	2.19697	(62, 3)
516679.3	3711159.0	1.14570	(224, 2)	516679.3	3711378.0	2.14464	(42, 2)
517079.3	3711378.0	1.12411	(136, 2)	517079.3	3711549.0	0.81310	(158, 2)
517530.5	3711488.0	1.45383C	(203, 2)	517530.5	3711317.0	1.41647	(90, 2)
518743.9	3711171.0	1.38018	(14, 2)	518743.9	3711573.0	1.62835	(121, 2)
519914.6	3711573.0	1.16311	(213, 2)	519914.6	3711171.0	1.34330	(14, 2)
520304.8	3711171.0	1.22750	(14, 2)	520304.8	3711024.0	1.24104	(14, 2)
520707.2	3711024.0	1.13292	(14, 2)	520817.0	3711628.0	0.86235C	(351, 3)
520402.3	3712176.0	1.10701	(142, 2)	518707.2	3712176.0	2.03760C	(83, 2)
518707.2	3712030.0	2.00008	(219, 2)	518280.4	3712030.0	2.32002	(142, 2)
518280.4	3712250.0	2.33047	(142, 2)	518060.9	3712335.0	2.38602	(211, 2)
518060.9	3712878.0	2.43634	(212, 2)	517426.8	3712878.0	3.06175	(177, 2)
517426.8	3713079.0	2.75871	(151, 2)	516993.9	3713079.0	2.12727	(151, 2)
516993.9	3713280.0	1.68783	(151, 2)	516603.7	3713280.0	2.56401	(176, 2)
516603.7	3712884.0	1.86850	(176, 2)	516372.0	3712884.0	2.65102	(174, 2)
516372.0	3712798.0	2.44391	(167, 2)	516256.2	3712774.0	2.17609	(130, 2)
516276.8	3711378.0	3.03625	(300, 3)	516264.6	3712122.0	5.24210	(112, 2)
516264.6	3711598.0	8.06322	(301, 1)	516008.5	3712006.0	1.02374	(96, 2)
516008.5	3712122.0	1.07097	(96, 2)	516115.2	3712189.0	3.32944	(112, 3)
516179.3	3712061.0	1.99093	(9, 2)	516179.3	3712122.0	4.12704	(112, 3)
516264.6	3712122.0	5.24210	(112, 2)	515277.0	3711278.0	2.02306	(241, 2)
515377.0	3711278.0	2.08671	(199, 2)	515477.0	3711278.0	2.18609	(199, 2)
515577.0	3711278.0	2.23467	(199, 2)	515677.0	3711278.0	2.04886	(256, 2)
515777.0	3711278.0	1.66603C	(164, 2)	515877.0	3711278.0	1.23970	(135, 2)
515977.0	3711278.0	1.01794	(208, 2)	516077.0	3711278.0	2.60904	(20, 1)
516177.0	3711278.0	5.14427	(301, 1)	516277.0	3711278.0	2.96893	(300, 3)
516377.0	3711278.0	2.38592	(323, 3)	516477.0	3711278.0	2.40567C	(207, 3)
516577.0	3711278.0	1.28589C	(197, 2)	516677.0	3711278.0	1.01154	(42, 1)
516777.0	3711278.0	1.70189C	(197, 2)	516877.0	3711278.0	1.65547C	(197, 2)
516977.0	3711278.0	1.42554	(95, 2)	517077.0	3711278.0	1.35191	(305, 2)
517177.0	3711278.0	1.30020	(305, 2)	515277.0	3711178.0	2.17471	(199, 2)
515377.0	3711178.0	2.47119	(256, 2)	515477.0	3711178.0	2.38551	(199, 2)
515577.0	3711178.0	2.29522	(199, 2)	515677.0	3711178.0	2.00005	(199, 2)
515777.0	3711178.0	1.61612C	(164, 2)	515877.0	3711178.0	1.31552	(97, 2)
515977.0	3711178.0	1.46463C	(230, 2)	516077.0	3711178.0	2.51451	(301, 3)
516177.0	3711178.0	3.00966	(301, 1)	516277.0	3711178.0	2.05753	(300, 3)
516377.0	3711178.0	1.56572	(303, 2)	516477.0	3711178.0	1.48395	(358, 2)
516577.0	3711178.0	1.52277C	(197, 2)	516677.0	3711178.0	1.12201	(224, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516777.0	3711178.0	1.28105	(224, 2)	516877.0	3711178.0	1.78070C	(197, 2)
516977.0	3711178.0	1.76640	(42, 2)	517077.0	3711178.0	1.85193	(95, 2)
517177.0	3711178.0	1.65803	(42, 2)	515277.0	3711078.0	2.41367	(199, 2)
515377.0	3711078.0	2.46481	(199, 2)	515477.0	3711078.0	2.29112	(199, 2)
515577.0	3711078.0	2.16089	(199, 2)	515677.0	3711078.0	1.69885	(199, 2)
515777.0	3711078.0	1.57775	(180, 2)	515877.0	3711078.0	1.66464C	(187, 2)
515977.0	3711078.0	1.83284	(301, 2)	516077.0	3711078.0	2.36913	(301, 1)
516177.0	3711078.0	3.00690	(301, 1)	516277.0	3711078.0	1.73324	(300, 3)
516377.0	3711078.0	1.62443	(303, 1)	516477.0	3711078.0	1.70230C	(197, 2)
516577.0	3711078.0	1.91490	(358, 2)	516677.0	3711078.0	1.27933	(179, 2)
516777.0	3711078.0	1.23062	(224, 2)	516877.0	3711078.0	1.48000	(95, 2)
516977.0	3711078.0	1.77648	(42, 2)	517077.0	3711078.0	1.97387	(42, 2)
517177.0	3711078.0	1.98793	(95, 2)	515277.0	3710978.0	2.42540	(199, 2)
515377.0	3710978.0	2.37941	(199, 2)	515477.0	3710978.0	2.07193	(199, 2)
515577.0	3710978.0	1.78205	(199, 2)	515677.0	3710978.0	1.75794	(289, 2)
515777.0	3710978.0	2.00560C	(187, 2)	515877.0	3710978.0	2.06610C	(230, 2)
515977.0	3710978.0	2.45439	(301, 3)	516077.0	3710978.0	3.55182	(301, 1)
516177.0	3710978.0	2.88871C	(19, 3)	516277.0	3710978.0	2.34719	(123, 2)
516377.0	3710978.0	1.87476	(123, 2)	516477.0	3710978.0	1.83408C	(197, 2)
516577.0	3710978.0	1.86256C	(197, 2)	516677.0	3710978.0	1.62398C	(197, 2)
516777.0	3710978.0	1.31161	(179, 2)	516877.0	3710978.0	1.43923C	(197, 2)
516977.0	3710978.0	1.75029	(136, 2)	517077.0	3710978.0	1.92737	(42, 2)
517177.0	3710978.0	2.14556	(42, 2)	515277.0	3710878.0	2.30428	(199, 2)
515377.0	3710878.0	2.08528	(199, 2)	515477.0	3710878.0	1.78018	(199, 2)
515577.0	3710878.0	1.75882	(289, 2)	515677.0	3710878.0	2.06369C	(187, 2)
515777.0	3710878.0	2.20185C	(187, 2)	515877.0	3710878.0	2.44905C	(230, 2)
515977.0	3710878.0	3.58692	(301, 3)	516077.0	3710878.0	5.23261	(301, 1)
516177.0	3710878.0	3.59236	(301, 1)	516277.0	3710878.0	2.51940	(123, 2)
516377.0	3710878.0	2.12726	(269, 2)	516477.0	3710878.0	2.05935	(269, 2)
516577.0	3710878.0	2.29732	(358, 2)	516677.0	3710878.0	2.43935	(358, 2)
516777.0	3710878.0	1.51440	(104, 2)	516877.0	3710878.0	1.44291	(104, 2)
516977.0	3710878.0	1.61913	(158, 2)	517077.0	3710878.0	1.80360	(136, 2)
517177.0	3710878.0	2.04706	(42, 2)	515277.0	3710778.0	2.16960	(299, 2)
515377.0	3710778.0	1.75988	(199, 2)	515477.0	3710778.0	2.00553	(289, 2)
515577.0	3710778.0	1.82721	(289, 2)	515677.0	3710778.0	2.18684C	(187, 2)
515777.0	3710778.0	2.34844C	(230, 2)	515877.0	3710778.0	2.87657	(301, 3)
515977.0	3710778.0	4.48317	(301, 3)	516077.0	3710778.0	5.77137	(301, 2)
516177.0	3710778.0	3.46042	(301, 1)	516277.0	3710778.0	2.83229	(300, 3)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
516377.0	3710778.0	2.36790	(303, 1)	516477.0	3710778.0	2.37210	(144, 2)
516577.0	3710778.0	2.44210	(358, 2)	516677.0	3710778.0	3.80224	(179, 2)
516777.0	3710778.0	2.34936	(339, 2)	516877.0	3710778.0	1.80937	(335, 2)
516977.0	3710778.0	1.87294	(104, 2)	517077.0	3710778.0	2.29349	(95, 2)
517177.0	3710778.0	1.89233	(158, 2)	515277.0	3710678.0	1.86585	(299, 2)
515377.0	3710678.0	1.91691	(289, 2)	515477.0	3710678.0	2.05111	(289, 2)
515577.0	3710678.0	2.07051C	(187, 2)	515677.0	3710678.0	2.08093C	(187, 2)
515777.0	3710678.0	2.42014C	(230, 2)	515877.0	3710678.0	3.76211	(301, 3)
515977.0	3710678.0	5.19396	(301, 1)	516077.0	3710678.0	5.13947	(301, 2)
516177.0	3710678.0	3.73778	(301, 1)	516277.0	3710678.0	2.90019	(300, 3)
516377.0	3710678.0	2.91736	(302, 3)	516477.0	3710678.0	2.33807	(144, 2)
516577.0	3710678.0	2.55603	(269, 2)	516677.0	3710678.0	4.04016	(179, 2)
516777.0	3710678.0	2.94428	(358, 2)	516877.0	3710678.0	1.94241	(104, 2)
516977.0	3710678.0	1.88893	(136, 2)	517077.0	3710678.0	1.75860	(158, 2)
517177.0	3710678.0	2.01348	(95, 2)	515277.0	3710578.0	2.07528	(289, 2)
515377.0	3710578.0	2.11482	(289, 2)	515477.0	3710578.0	2.24086	(289, 2)
515577.0	3710578.0	2.24705C	(187, 2)	515677.0	3710578.0	2.15046C	(230, 2)
515777.0	3710578.0	3.20071	(97, 2)	515877.0	3710578.0	4.80455	(301, 3)
515977.0	3710578.0	5.53685	(301, 1)	516077.0	3710578.0	4.17075	(301, 2)
516177.0	3710578.0	3.95074	(300, 3)	516277.0	3710578.0	3.32979	(300, 3)
516377.0	3710578.0	3.74648	(303, 1)	516477.0	3710578.0	3.17328	(303, 1)
516577.0	3710578.0	2.99686	(269, 2)	516677.0	3710578.0	4.08772	(179, 2)
516777.0	3710578.0	2.86606	(358, 2)	516877.0	3710578.0	2.12550	(179, 2)
516977.0	3710578.0	1.47111	(179, 2)	517077.0	3710578.0	1.70220	(104, 2)
517177.0	3710578.0	1.70357	(158, 2)	515277.0	3710478.0	2.14842	(289, 2)
515377.0	3710478.0	2.21285	(256, 2)	515477.0	3710478.0	2.32343C	(187, 2)
515577.0	3710478.0	2.17854C	(187, 2)	515677.0	3710478.0	2.31786C	(230, 2)
515777.0	3710478.0	3.63175	(301, 3)	515877.0	3710478.0	5.46963	(301, 3)
515977.0	3710478.0	6.21953	(301, 1)	516077.0	3710478.0	4.48502	(301, 3)
516177.0	3710478.0	4.39888	(300, 3)	516277.0	3710478.0	3.73006	(300, 3)
516377.0	3710478.0	3.76486	(303, 1)	516477.0	3710478.0	3.39367	(303, 1)
516577.0	3710478.0	3.02216	(179, 2)	516677.0	3710478.0	3.97861	(179, 2)
516777.0	3710478.0	3.40730	(179, 2)	516877.0	3710478.0	2.34198	(179, 2)
516977.0	3710478.0	1.90181	(339, 2)	517077.0	3710478.0	1.64697	(136, 2)
517177.0	3710478.0	1.56234	(158, 2)	515277.0	3710378.0	2.08272	(289, 2)
515377.0	3710378.0	2.06663	(289, 2)	515477.0	3710378.0	2.09319C	(187, 2)
515577.0	3710378.0	2.06193C	(230, 2)	515677.0	3710378.0	3.01374	(301, 2)
515777.0	3710378.0	4.63300	(301, 3)	515877.0	3710378.0	5.47048	(301, 3)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515977.0	3710378.0	6.01776	(301, 2)	516077.0	3710378.0	4.06264	(300, 3)
516177.0	3710378.0	3.90838	(300, 3)	516277.0	3710378.0	3.33674	(300, 3)
516377.0	3710378.0	3.41987	(269, 2)	516477.0	3710378.0	2.87026	(303, 1)
516577.0	3710378.0	2.62060	(179, 2)	516677.0	3710378.0	3.28093	(358, 2)
516777.0	3710378.0	3.55481	(179, 2)	516877.0	3710378.0	3.24036	(339, 2)
516977.0	3710378.0	1.87578	(179, 2)	517077.0	3710378.0	1.53899	(43, 2)
517177.0	3710378.0	1.71133	(104, 2)	515277.0	3712276.0	1.71856	(216, 2)
515377.0	3712276.0	1.81123	(183, 2)	515477.0	3712276.0	1.93481	(183, 2)
515577.0	3712276.0	2.00408	(188, 2)	515677.0	3712276.0	1.99034	(188, 2)
515777.0	3712276.0	1.44346	(188, 2)	515877.0	3712276.0	0.71250	(188, 2)
515977.0	3712276.0	0.48621	(112, 3)	516077.0	3712276.0	1.79006	(112, 3)
516177.0	3712276.0	1.54889C	(133, 2)	516277.0	3712276.0	3.55033	(109, 2)
516377.0	3712276.0	2.15778	(322, 2)	516477.0	3712276.0	1.43261	(151, 1)
516577.0	3712276.0	2.06906	(87, 2)	516677.0	3712276.0	1.99489	(94, 2)
516777.0	3712276.0	1.10980	(151, 2)	516877.0	3712276.0	1.71762	(93, 2)
516977.0	3712276.0	1.59991	(189, 2)	517077.0	3712276.0	1.75134	(196, 2)
517177.0	3712276.0	1.65356	(189, 2)	515277.0	3712376.0	2.01988	(115, 2)
515377.0	3712376.0	2.11742	(216, 2)	515477.0	3712376.0	2.21821	(216, 2)
515577.0	3712376.0	2.13619	(216, 2)	515677.0	3712376.0	1.93503	(188, 2)
515777.0	3712376.0	1.51770	(209, 2)	515877.0	3712376.0	1.00643	(165, 2)
515977.0	3712376.0	2.03039	(133, 3)	516077.0	3712376.0	1.57563	(111, 2)
516177.0	3712376.0	2.12520C	(133, 2)	516277.0	3712376.0	2.86987	(62, 3)
516377.0	3712376.0	2.18976	(94, 3)	516477.0	3712376.0	0.86781	(62, 3)
516577.0	3712376.0	1.21452	(151, 2)	516677.0	3712376.0	1.26165	(151, 2)
516777.0	3712376.0	1.65069	(151, 2)	516877.0	3712376.0	1.97297	(145, 2)
516977.0	3712376.0	2.22865	(177, 2)	517077.0	3712376.0	2.07034	(207, 2)
517177.0	3712376.0	2.19519	(207, 2)	515277.0	3712476.0	2.43939	(188, 2)
515377.0	3712476.0	2.27207	(240, 2)	515477.0	3712476.0	2.16754	(165, 2)
515577.0	3712476.0	2.00063	(209, 2)	515677.0	3712476.0	1.88486	(209, 2)
515777.0	3712476.0	1.51739	(165, 2)	515877.0	3712476.0	1.11581	(124, 2)
515977.0	3712476.0	1.33451	(186, 2)	516077.0	3712476.0	1.09572C	(133, 2)
516177.0	3712476.0	2.31342	(150, 2)	516277.0	3712476.0	2.47662	(85, 2)
516377.0	3712476.0	2.09717	(94, 3)	516477.0	3712476.0	1.03287	(94, 3)
516577.0	3712476.0	1.09215	(151, 1)	516677.0	3712476.0	1.40937	(151, 2)
516777.0	3712476.0	1.60681	(206, 2)	516877.0	3712476.0	2.15038	(145, 2)
516977.0	3712476.0	2.42081	(145, 2)	517077.0	3712476.0	2.72734	(206, 2)
517177.0	3712476.0	2.49992	(207, 2)	515277.0	3712576.0	2.35186	(240, 2)
515377.0	3712576.0	2.23435	(188, 2)	515477.0	3712576.0	2.17198	(255, 2)

*** I. P. - CAMDEN - CO SCREEN - SNV/LONG 1985 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515577.0	3712576.0	1.91579	(255, 2)	515677.0	3712576.0	1.73573	(165, 2)
515777.0	3712576.0	1.51715	(186, 2)	515877.0	3712576.0	1.51130	(186, 2)
515977.0	3712576.0	1.46709	(124, 2)	516077.0	3712576.0	1.38865	(130, 2)
516177.0	3712576.0	2.05816	(150, 2)	516277.0	3712576.0	2.31332	(85, 2)
516377.0	3712576.0	1.98496	(94, 3)	516477.0	3712576.0	1.35131	(125, 2)
516577.0	3712576.0	1.28034	(195, 2)	516677.0	3712576.0	1.24830	(195, 2)
516777.0	3712576.0	1.40887	(177, 2)	516877.0	3712576.0	1.97892	(206, 2)
516977.0	3712576.0	2.40404	(145, 2)	517077.0	3712576.0	2.68625	(206, 2)
517177.0	3712576.0	2.89113	(191, 2)	515277.0	3712676.0	2.13042	(115, 2)
515377.0	3712676.0	2.10694	(165, 2)	515477.0	3712676.0	2.05134	(165, 2)
515577.0	3712676.0	1.88041	(259, 2)	515677.0	3712676.0	1.82335	(259, 2)
515777.0	3712676.0	1.49971	(184, 2)	515877.0	3712676.0	1.65493	(124, 2)
515977.0	3712676.0	1.62969	(130, 2)	516077.0	3712676.0	1.53233	(112, 2)
516177.0	3712676.0	2.15175	(62, 3)	516277.0	3712676.0	2.11424	(130, 2)
516377.0	3712676.0	2.01403	(130, 2)	516477.0	3712676.0	1.69789	(125, 2)
516577.0	3712676.0	1.39234	(195, 2)	516677.0	3712676.0	1.38522	(195, 2)
516777.0	3712676.0	1.32883	(195, 2)	516877.0	3712676.0	1.61614	(145, 2)
516977.0	3712676.0	2.09261	(191, 2)	517077.0	3712676.0	2.51587	(206, 2)
517177.0	3712676.0	2.77145	(206, 2)	515277.0	3712776.0	1.98663	(115, 2)
515377.0	3712776.0	2.02882	(184, 2)	515477.0	3712776.0	1.92208	(259, 2)
515577.0	3712776.0	2.12452	(259, 2)	515677.0	3712776.0	1.90182	(184, 2)
515777.0	3712776.0	1.49312	(124, 2)	515877.0	3712776.0	1.62038	(130, 2)
515977.0	3712776.0	1.82343	(130, 2)	516077.0	3712776.0	1.87135	(150, 2)
516177.0	3712776.0	2.06043	(130, 2)	516277.0	3712776.0	2.00002	(174, 2)
516377.0	3712776.0	2.20848	(150, 2)	516477.0	3712776.0	1.83795	(125, 2)
516577.0	3712776.0	1.53484	(125, 2)	516677.0	3712776.0	1.37673	(235, 2)
516777.0	3712776.0	1.29004	(195, 2)	516877.0	3712776.0	1.64313	(151, 2)
516977.0	3712776.0	1.88086	(175, 2)	517077.0	3712776.0	2.14872	(145, 2)
517177.0	3712776.0	2.51078	(206, 2)	515277.0	3712876.0	2.10142	(184, 2)
515377.0	3712876.0	2.03103	(259, 2)	515477.0	3712876.0	2.13000	(259, 2)
515577.0	3712876.0	2.00263	(184, 2)	515677.0	3712876.0	1.83410	(259, 2)
515777.0	3712876.0	1.49965	(249, 2)	515877.0	3712876.0	1.71397	(249, 2)
515977.0	3712876.0	1.77597	(130, 2)	516077.0	3712876.0	2.07704	(126, 2)
516177.0	3712876.0	1.92659	(130, 2)	516277.0	3712876.0	1.99576	(130, 2)
516377.0	3712876.0	2.24843	(150, 2)	516477.0	3712876.0	2.22812	(153, 2)
516577.0	3712876.0	1.75664	(176, 2)	516677.0	3712876.0	1.57364	(235, 2)
516777.0	3712876.0	1.38933	(151, 2)	516877.0	3712876.0	1.64949	(152, 2)
516977.0	3712876.0	1.87174	(94, 2)	517077.0	3712876.0	2.07810	(191, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
517177.0	3712876.0	2.09197	(145, 2)	515277.0	3712976.0	2.05786	(259, 2)
515377.0	3712976.0	2.21804	(259, 2)	515477.0	3712976.0	2.16620	(184, 2)
515577.0	3712976.0	1.83418C	(139, 2)	515677.0	3712976.0	1.52859	(107, 2)
515777.0	3712976.0	1.76810	(249, 2)	515877.0	3712976.0	2.13163	(126, 2)
515977.0	3712976.0	1.76256	(112, 2)	516077.0	3712976.0	2.24133	(126, 2)
516177.0	3712976.0	2.20621	(109, 2)	516277.0	3712976.0	2.14688	(175, 2)
516377.0	3712976.0	2.43179	(174, 2)	516477.0	3712976.0	2.23846	(176, 2)
516577.0	3712976.0	2.02397	(176, 2)	516677.0	3712976.0	1.63430	(167, 2)
516777.0	3712976.0	1.39292	(153, 2)	516877.0	3712976.0	1.50361	(152, 2)
516977.0	3712976.0	1.95948	(151, 2)	517077.0	3712976.0	1.94272	(94, 2)
517177.0	3712976.0	1.99127	(175, 2)	515277.0	3713076.0	2.22530	(259, 2)
515377.0	3713076.0	2.26262	(265, 2)	515477.0	3713076.0	2.03081C	(139, 2)
515577.0	3713076.0	1.79888	(259, 2)	515677.0	3713076.0	1.80740	(249, 2)
515777.0	3713076.0	1.90616	(249, 2)	515877.0	3713076.0	1.91022	(148, 2)
515977.0	3713076.0	1.74720	(150, 2)	516077.0	3713076.0	2.15470	(126, 2)
516177.0	3713076.0	2.04790	(150, 2)	516277.0	3713076.0	2.30675	(175, 2)
516377.0	3713076.0	2.45320	(153, 2)	516477.0	3713076.0	2.37425	(176, 2)
516577.0	3713076.0	2.21817	(176, 2)	516677.0	3713076.0	1.84107	(176, 2)
516777.0	3713076.0	1.63645	(153, 2)	516877.0	3713076.0	1.51628	(151, 2)
516977.0	3713076.0	1.93812	(152, 2)	517077.0	3713076.0	1.89897	(175, 2)
517177.0	3713076.0	2.10398	(152, 2)	515277.0	3713176.0	2.33360	(259, 2)
515377.0	3713176.0	2.19678	(265, 2)	515477.0	3713176.0	1.88305	(260, 2)
515577.0	3713176.0	1.75787	(249, 2)	515677.0	3713176.0	1.98503	(249, 2)
515777.0	3713176.0	2.20949	(126, 2)	515877.0	3713176.0	1.72113	(249, 2)
515977.0	3713176.0	2.00332	(150, 2)	516077.0	3713176.0	2.25492	(126, 2)
516177.0	3713176.0	2.13074	(175, 2)	516277.0	3713176.0	2.40730	(175, 2)
516377.0	3713176.0	2.70180	(153, 2)	516477.0	3713176.0	2.45080	(176, 2)
516577.0	3713176.0	2.34501	(176, 2)	516677.0	3713176.0	1.96466	(176, 2)
516777.0	3713176.0	1.67982	(153, 2)	516877.0	3713176.0	1.57185	(235, 2)
516977.0	3713176.0	1.63361	(152, 2)	517077.0	3713176.0	1.97211	(151, 2)
517177.0	3713176.0	2.80323	(152, 2)	515277.0	3712176.0	1.51335	(240, 2)
515377.0	3712176.0	1.61711	(183, 2)	515477.0	3712176.0	1.81750	(183, 2)
515577.0	3712176.0	1.77822	(183, 2)	515677.0	3712176.0	1.42003	(183, 2)
515777.0	3712176.0	1.18752	(216, 2)	515877.0	3712176.0	0.70850	(51, 2)
515977.0	3712176.0	0.61593	(96, 2)	516077.0	3712176.0	0.96384	(88, 3)
516177.0	3712176.0	2.14051	(111, 2)	515277.0	3712076.0	1.50749	(239, 2)
515377.0	3712076.0	1.45568	(239, 2)	515477.0	3712076.0	1.39989	(183, 2)
515577.0	3712076.0	1.30769	(216, 2)	515677.0	3712076.0	1.07735	(224, 2)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
515777.0	3712076.0	0.64768	(216, 2)	515877.0	3712076.0	0.66572	(161, 1)
515977.0	3712076.0	0.62042	(51, 2)	516077.0	3712076.0	0.86433	(96, 2)
516177.0	3712076.0	2.43412	(133, 3)	515277.0	3711976.0	1.44744	(239, 2)
515377.0	3711976.0	1.36289	(239, 2)	515477.0	3711976.0	1.16112	(224, 2)
515577.0	3711976.0	1.02469	(240, 2)	515677.0	3711976.0	0.70043	(160, 2)
515777.0	3711976.0	0.55439	(224, 2)	515877.0	3711976.0	0.25164	(252, 2)
515977.0	3711976.0	0.32082	(161, 1)	516077.0	3711976.0	0.88989	(96, 2)
516177.0	3711976.0	1.26220	(96, 2)	515277.0	3711876.0	1.69144	(244, 2)
515377.0	3711876.0	1.20920	(244, 2)	515477.0	3711876.0	1.09770	(244, 2)
515577.0	3711876.0	0.91823	(240, 2)	515677.0	3711876.0	0.70500	(244, 2)
515777.0	3711876.0	0.47240	(170, 2)	515877.0	3711876.0	0.53807	(74, 2)
515977.0	3711876.0	0.72517	(71, 2)	516077.0	3711876.0	1.07217	(74, 2)
516177.0	3711876.0	1.97826	(74, 2)	515277.0	3711776.0	1.28295	(198, 2)
515377.0	3711776.0	0.99224	(262, 2)	515477.0	3711776.0	1.07689	(223, 2)
515577.0	3711776.0	1.12042	(170, 2)	515677.0	3711776.0	0.95271	(170, 2)
515777.0	3711776.0	0.63611	(71, 2)	515877.0	3711776.0	0.19661	(26, 1)
515977.0	3711776.0	0.29635	(245, 2)	516077.0	3711776.0	1.24989	(71, 2)
516177.0	3711776.0	0.77366	(64, 2)	515277.0	3711676.0	1.51681	(106, 2)
515377.0	3711676.0	1.29933	(106, 2)	515477.0	3711676.0	1.26434	(223, 2)
515577.0	3711676.0	1.28644	(223, 2)	515677.0	3711676.0	1.13755	(223, 2)
515777.0	3711676.0	0.70656	(198, 2)	515877.0	3711676.0	0.66533	(71, 2)
515977.0	3711676.0	0.28301	(71, 2)	516077.0	3711676.0	0.63334	(64, 2)
516177.0	3711676.0	1.49228	(302, 1)	515277.0	3711576.0	1.57648	(106, 2)
515377.0	3711576.0	1.33587	(106, 2)	515477.0	3711576.0	1.14237	(223, 2)
515577.0	3711576.0	1.08310	(188, 2)	515677.0	3711576.0	1.03276	(188, 2)
515777.0	3711576.0	0.72337	(98, 2)	515877.0	3711576.0	0.54994	(198, 2)
515977.0	3711576.0	0.66233	(64, 2)	516077.0	3711576.0	0.77541	(289, 2)
516177.0	3711576.0	4.18164	(301, 2)	515277.0	3711476.0	1.45549	(199, 2)
515377.0	3711476.0	1.45135	(199, 2)	515477.0	3711476.0	1.44874	(199, 2)
515577.0	3711476.0	1.34923	(199, 2)	515677.0	3711476.0	1.24273	(199, 2)
515777.0	3711476.0	1.15985	(199, 2)	515877.0	3711476.0	0.87810	(198, 2)
515977.0	3711476.0	0.67072	(71, 1)	516077.0	3711476.0	0.79958	(301, 1)
516177.0	3711476.0	5.81222	(301, 3)	511277.0	3709378.0	2.29443	(295, 1)
512277.0	3709378.0	1.84592C	(294, 3)	513277.0	3709378.0	1.57422	(227, 2)
514277.0	3709378.0	3.28199	(361, 3)	515277.0	3709378.0	2.72349	(324, 3)
516277.0	3709378.0	2.71722	(300, 3)	517277.0	3709378.0	2.40876	(358, 2)
518277.0	3709378.0	2.95862C	(158, 3)	519277.0	3709378.0	1.51531	(43, 1)
520277.0	3709378.0	1.31021	(121, 3)	521277.0	3709378.0	1.40023	(3, 3)

*** I. P. - CANDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3709378.0	0.84653	(90, 1)	511277.0	3708378.0	1.98041	(59, 1)
512277.0	3708378.0	1.04373	(352, 3)	513277.0	3708378.0	2.86316	(361, 3)
514277.0	3708378.0	2.60404	(164, 1)	515277.0	3708378.0	2.99514	(301, 3)
516277.0	3708378.0	1.99023	(365, 2)	517277.0	3708378.0	3.53558	(336, 1)
518277.0	3708378.0	1.62129	(335, 2)	519277.0	3708378.0	1.57588	(335, 1)
520277.0	3708378.0	1.49982	(43, 1)	521277.0	3708378.0	1.14359	(136, 3)
522277.0	3708378.0	1.32118	(3, 3)	511277.0	3707378.0	1.24061C	(50, 3)
512277.0	3707378.0	1.99836	(361, 3)	513277.0	3707378.0	1.63635C	(275, 3)
514277.0	3707378.0	2.66331C	(289, 1)	515277.0	3707378.0	3.00072	(288, 3)
516277.0	3707378.0	2.81059C	(123, 1)	517277.0	3707378.0	3.65834	(25, 3)
518277.0	3707378.0	1.69645	(339, 2)	519277.0	3707378.0	1.36307	(277, 3)
520277.0	3707378.0	1.44233	(335, 1)	521277.0	3707378.0	1.36760	(42, 2)
522277.0	3707378.0	1.26292	(136, 3)	511277.0	3706378.0	1.97227C	(289, 1)
512277.0	3706378.0	1.99768C	(289, 1)	513277.0	3706378.0	2.16139	(256, 3)
514277.0	3706378.0	2.69680	(336, 3)	515277.0	3706378.0	2.61822	(164, 1)
516277.0	3706378.0	2.75825	(302, 3)	517277.0	3706378.0	2.97037	(163, 3)
518277.0	3706378.0	2.24420	(359, 1)	519277.0	3706378.0	1.06058	(335, 2)
520277.0	3706378.0	1.26655	(266, 3)	521277.0	3706378.0	1.36337C	(134, 3)
522277.0	3706378.0	1.32792	(17, 1)	523277.0	3706378.0	1.23661	(43, 1)
522402.0	3710378.0	0.89573	(90, 1)	522402.0	3711378.0	0.95900C	(25, 1)
522402.0	3712378.0	0.77980	(357, 2)	511277.0	3714176.0	1.33351C	(226, 1)
512277.0	3714176.0	1.85411	(261, 3)	513277.0	3714176.0	1.81007	(101, 3)
514277.0	3714176.0	1.61517	(138, 2)	515277.0	3714176.0	2.39819	(343, 2)
516277.0	3714176.0	4.57396	(113, 2)	517277.0	3714176.0	2.74537	(154, 1)
518277.0	3714176.0	1.57498	(183, 1)	519277.0	3714176.0	1.66618	(206, 2)
520277.0	3714176.0	1.22069C	(203, 3)	521277.0	3714176.0	1.31529	(356, 3)
522277.0	3714176.0	1.73689C	(23, 1)	511277.0	3715176.0	2.25210	(79, 1)
512277.0	3715176.0	4.09549	(261, 1)	513277.0	3715176.0	2.09934	(116, 3)
514277.0	3715176.0	2.60752	(281, 2)	515277.0	3715176.0	2.77601	(322, 3)
516277.0	3715176.0	3.22758	(85, 2)	517277.0	3715176.0	1.50203	(93, 3)
518277.0	3715176.0	1.45444	(93, 1)	519277.0	3715176.0	1.65210	(183, 1)
520277.0	3715176.0	0.99082C	(191, 3)	521277.0	3715176.0	1.21941C	(192, 3)
522277.0	3715176.0	1.34588C	(13, 3)	511277.0	3716176.0	3.43849C	(364, 1)
512277.0	3716176.0	1.99349	(344, 3)	513277.0	3716176.0	2.88102	(281, 1)
514277.0	3716176.0	3.01962C	(56, 3)	515277.0	3716176.0	3.85413	(247, 3)
516277.0	3716176.0	2.16408	(85, 2)	517277.0	3716176.0	1.53566	(168, 3)
518277.0	3716176.0	1.32787C	(145, 3)	519277.0	3716176.0	1.48787	(151, 3)
520277.0	3716176.0	1.59533	(151, 2)	521277.0	3716176.0	0.78711C	(17, 3)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522277.0	3716176.0	0.78764	(206, 2)	511277.0	3717176.0	2.25078C	(291, 3)
512277.0	3717176.0	2.96329	(283, 3)	513277.0	3717176.0	3.09885C	(260, 1)
514277.0	3717176.0	3.79906C	(348, 3)	515277.0	3717176.0	2.01855	(146, 3)
516277.0	3717176.0	1.89992	(316, 3)	517277.0	3717176.0	1.30799	(168, 3)
518277.0	3717176.0	1.38982	(360, 2)	519277.0	3717176.0	1.37035C	(185, 1)
520277.0	3717176.0	1.16716C	(70, 3)	521277.0	3717176.0	1.27250	(151, 2)
522277.0	3717176.0	0.89158	(24, 1)	511277.0	3713176.0	1.70502	(48, 3)
512277.0	3713176.0	1.59031	(84, 3)	513277.0	3713176.0	1.08695	(71, 3)
514277.0	3713176.0	2.16503	(171, 2)	511277.0	3712176.0	1.72800C	(8, 3)
512277.0	3712176.0	1.57053C	(8, 3)	513277.0	3712176.0	1.47243	(215, 2)
514277.0	3712176.0	1.51024	(215, 2)	511277.0	3711176.0	2.30091C	(263, 3)
512277.0	3711176.0	2.92648C	(294, 3)	513277.0	3711176.0	1.41918	(71, 2)
514277.0	3711176.0	1.70746	(362, 2)	511277.0	3709378.0	2.29443	(295, 1)
512277.0	3709378.0	1.84592C	(294, 3)	513277.0	3709378.0	1.57422	(227, 2)
514277.0	3709378.0	3.28199	(361, 3)	515277.0	3709378.0	2.72349	(324, 3)
516277.0	3709378.0	2.71722	(300, 3)	517277.0	3709378.0	2.40876	(358, 2)
518277.0	3709378.0	2.95862C	(158, 3)	519277.0	3709378.0	1.51531	(43, 1)
520277.0	3709378.0	1.31021	(121, 3)	521277.0	3709378.0	1.40023	(3, 3)
522277.0	3709378.0	0.84653	(90, 1)	511277.0	3708378.0	1.98041	(59, 1)
512277.0	3708378.0	1.04373	(352, 3)	513277.0	3708378.0	2.86316	(361, 3)
514277.0	3708378.0	2.60404	(164, 1)	515277.0	3708378.0	2.99514	(301, 3)
516277.0	3708378.0	1.99023	(365, 2)	517277.0	3708378.0	3.53558	(336, 1)
518277.0	3708378.0	1.62129	(335, 2)	519277.0	3708378.0	1.57588	(335, 1)
520277.0	3708378.0	1.49982	(43, 1)	521277.0	3708378.0	1.14359	(136, 3)
522277.0	3708378.0	1.32118	(3, 3)	511277.0	3707378.0	1.24061C	(50, 3)
512277.0	3707378.0	1.99836	(361, 3)	513277.0	3707378.0	1.63635C	(275, 3)
514277.0	3707378.0	2.66331C	(289, 1)	515277.0	3707378.0	3.00072	(288, 3)
516277.0	3707378.0	2.81059C	(123, 1)	517277.0	3707378.0	3.65834	(25, 3)
518277.0	3707378.0	1.69645	(339, 2)	519277.0	3707378.0	1.36307	(277, 3)
520277.0	3707378.0	1.44233	(335, 1)	521277.0	3707378.0	1.36760	(42, 2)
522277.0	3707378.0	1.26292	(136, 3)	511277.0	3706378.0	1.97227C	(289, 1)
512277.0	3706378.0	1.99768C	(289, 1)	513277.0	3706378.0	2.16139	(256, 3)
514277.0	3706378.0	2.69680	(336, 3)	515277.0	3706378.0	2.61822	(164, 1)
516277.0	3706378.0	2.75825	(302, 3)	517277.0	3706378.0	2.97037	(163, 3)
518277.0	3706378.0	2.24420	(359, 1)	519277.0	3706378.0	1.06058	(335, 2)
520277.0	3706378.0	1.26655	(266, 3)	521277.0	3706378.0	1.36337C	(134, 3)
522277.0	3706378.0	1.32792	(17, 1)	523277.0	3706378.0	1.23661	(43, 1)
522402.0	3710378.0	0.89573	(90, 1)	522402.0	3711378.0	0.95900C	(25, 1)

*** I. P. - CAMDEN - CO SCREEN - SHV/LONG 1985 BINARY ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- X -	- Y -	CON.	(DAY,PER.)	- X -	- Y -	CON.	(DAY,PER.)
522402.0	3712378.0	0.77980	(357, 2)	511277.0	3714176.0	1.33351C	(226, 1)
512277.0	3714176.0	1.85411	(261, 3)	513277.0	3714176.0	1.81007	(101, 3)
514277.0	3714176.0	1.61517	(138, 2)	515277.0	3714176.0	2.39819	(343, 2)
516277.0	3714176.0	4.57396	(113, 2)	517277.0	3714176.0	2.74537	(154, 1)
518277.0	3714176.0	1.57498	(183, 1)	519277.0	3714176.0	1.66618	(206, 2)
520277.0	3714176.0	1.22069C	(203, 3)	521277.0	3714176.0	1.31529	(356, 3)
522277.0	3714176.0	1.73689C	(23, 1)	511277.0	3715176.0	2.25210	(79, 1)
512277.0	3715176.0	4.09549	(261, 1)	513277.0	3715176.0	2.09934	(116, 3)
514277.0	3715176.0	2.60752	(281, 2)	515277.0	3715176.0	2.77601	(322, 3)
516277.0	3715176.0	3.22758	(85, 2)	517277.0	3715176.0	1.50203	(93, 3)
518277.0	3715176.0	1.45444	(93, 1)	519277.0	3715176.0	1.65210	(183, 1)
520277.0	3715176.0	0.99082C	(191, 3)	521277.0	3715176.0	1.21941C	(192, 3)
522277.0	3715176.0	1.34588C	(13, 3)	511277.0	3716176.0	3.43849C	(364, 1)
512277.0	3716176.0	1.99349	(344, 3)	513277.0	3716176.0	2.88102	(281, 1)
514277.0	3716176.0	3.01962C	(56, 3)	515277.0	3716176.0	3.85413	(247, 3)
516277.0	3716176.0	2.16408	(85, 2)	517277.0	3716176.0	1.53566	(168, 3)
518277.0	3716176.0	1.32787C	(145, 3)	519277.0	3716176.0	1.48787	(151, 3)
520277.0	3716176.0	1.59533	(151, 2)	521277.0	3716176.0	0.78711C	(17, 3)
522277.0	3716176.0	0.78764	(206, 2)	511277.0	3717176.0	2.25078C	(291, 3)
512277.0	3717176.0	2.96329	(283, 3)	513277.0	3717176.0	3.09885C	(260, 1)
514277.0	3717176.0	3.79906C	(348, 3)	515277.0	3717176.0	2.01855	(146, 3)
516277.0	3717176.0	1.89992	(316, 3)	517277.0	3717176.0	1.30799	(168, 3)
518277.0	3717176.0	1.38982	(360, 2)	519277.0	3717176.0	1.37035C	(185, 1)
520277.0	3717176.0	1.16716C	(70, 3)	521277.0	3717176.0	1.27250	(151, 2)
522277.0	3717176.0	0.89158	(24, 1)	511277.0	3713176.0	1.70502	(48, 3)
512277.0	3713176.0	1.59031	(84, 3)	513277.0	3713176.0	1.08695	(71, 3)
514277.0	3713176.0	2.16503	(171, 2)	511277.0	3712176.0	1.72800C	(8, 3)
512277.0	3712176.0	1.57053C	(8, 3)	513277.0	3712176.0	1.47243	(215, 2)
514277.0	3712176.0	1.51024	(215, 2)	511277.0	3711176.0	2.30091C	(263, 3)
512277.0	3711176.0	2.92648C	(294, 3)	513277.0	3711176.0	1.41918	(71, 2)
514277.0	3711176.0	1.70746	(362, 2)	516500.0	3708100.0	2.63103	(31, 3)
518100.0	3709350.0	2.70226	(17, 2)	514500.0	3708800.0	2.50922	(59, 1)
517300.0	3714400.0	2.56180C	(176, 3)				

Woodward-Clyde
Consultants

SECTION H.16

1981 MODELING OUTPUT FOR CO COMPLEX I

COMPLEX I (DATED 90095)
BOWMAN ENVIRONMENTAL ENGINEERING VER. 6.27

SESSION INFORMATION

INPUT DATA FILE NAME : ICC081.DTA
OUTPUT LIST FILE NAME : ICC081.LST
NET DATA FILE NAME : C:\BEE\SNVGGGB1.BIN

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
CO SCREEN - 1981 SHREVEPORT/LONGVIEW BINARY MET. DATA

GENERAL INPUT INFORMATION

THIS RUN OF COMPLEX I -VERSION 2.0 IS FOR THE POLLUTANT PART FOR 365 24-HOUR PERIODS.
CONCENTRATION ESTIMATES BEGIN ON HOUR- 1,JULIAN DAY- 1, YEAR-1981.
A FACTOR OF 1.0000000 HAS BEEN SPECIFIED TO CONVERT USER LENGTH UNITS TO KILOMETERS.
0 SIGNIFICANT SOURCES ARE TO BE CONSIDERED.
THIS RUN WILL NOT CONSIDER ANY POLLUTANT LOSS.
HIGH-FIVE SUMMARY CONCENTRATION TABLES WILL BE OUTPUT FOR 4 AVERAGING PERIODS.
AVG TIMES OF 1,3,8, AND 24 HOURS ARE AUTOMATICALLY DISPLAYED.

OPTION	OPTION LIST	OPTION SPECIFICATION : 0= IGNORE OPTION 1= USE OPTION
	TECHNICAL OPTIONS	
1	TERRAIN ADJUSTMENTS	0
2	DO NOT INCLUDE STACK DOWNWASH CALCULATIONS	0
3	DO NOT INCLUDE GRADUAL PLUME RISE CALCULATIONS	1
4	CALCULATE INITIAL PLUME SIZE	1
	INPUT OPTIONS	
5	READ MET DATA FROM CARDS	0
6	READ HOURLY EMISSIONS	0
7	SPECIFY SIGNIFICANT SOURCES	0
8	READ RADIAL DISTANCES TO GENERATE RECEPTORS	0
	PRINTED OUTPUT OPTIONS	
9	DELETE EMISSIONS WITH HEIGHT TABLE	1
10	DELETE MET DATA SUMMARY FOR AVG PERIOD	1
11	DELETE HOURLY CONTRIBUTIONS	1
12	DELETE MET DATA ON HOURLY CONTRIBUTIONS	1
13	DELETE FINAL PLUME RISE CALC ON HRLY CONTRIBUTIONS	1
14	DELETE HOURLY SUMMARY	1
15	DELETE MET DATA ON HRLY SUMMARY	1
16	DELETE FINAL PLUME RISE CALC ON HRLY SUMMARY	1
17	DELETE AVG-PERIOD CONTRIBUTIONS	1
18	DELETE AVERAGING PERIOD SUMMARY	1
19	DELETE AVG CONCENTRATIONS AND HI-5 TABLES	0
	OTHER CONTROL AND OUTPUT OPTIONS	
20	RUN IS PART OF A SEGMENTED RUN	0
21	WRITE PARTIAL CONC TO DISK OR TAPE	0
22	WRITE HOURLY CONC TO DISK OR TAPE	0
23	WRITE AVG-PERIOD CONC TO DISK OR TAPE	0
24	PUNCH AVG-PERIOD CONC ONTO CARDS	0
25	COMPLEX TERRAIN OPTION	1
26	CALM PROCESSING OPTION	0
27	VALLEY SCREENING OPTION	0

ANEMOMETER HEIGHT= 10.00
WIND PROFILE WITH HEIGHT EXPONENTS CORRESPONDING TO STABILITY ARE AS FOLLOWS:
FOR STABILITY A: 0.07
STABILITY B: 0.07
STABILITY C: 0.10
STABILITY D: 0.15
STABILITY E: 0.35
STABILITY F: 0.55

POINT SOURCE INFORMATION

SOURCE		EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	SO2(G/SEC) EMISSIONS	PART(G/SEC) EMISSIONS	STACK HT(M)	STACK TEMP(K)	STACK DIAM(M)	STACK VEL(M/SEC)	POTEN. IMPACT (MICRO G/M**3)	EFF HT(M)	GRD-LVL ELEV (USER HT UNITS)	BUOY FLUX F M**4/S**3
1 1	EDGEN	516.32	3711.89	0.00	6.51	22.9	427.6	3.4	16.6	5.03	283.88	34.40	150.19

ADDITIONAL INFORMATION ON SOURCES.

EMISSION INFORMATION FOR 1 (NPT) POINT SOURCES HAS BEEN INPUT
0 SIGNIFICANT POINT SOURCES(NSIGP) ARE TO BE USED FOR THIS RUN
THE ORDER OF SIGNIFICANCE(IMPS) FOR 25 OR LESS POINT SOURCES USED IN THIS RUN AS LISTED BY POINT SOURCE NUMBER:

SURFACE MET DATA FROM STATION(ISFCD) 13957, YEAR(ISFCYR) 1981
MIXING HEIGHT DATA FROM STATION(INXD) 3951, YEAR(INXYR) 1981

RECEPTOR INFORMATION

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)
1		515.977	3710.478	0.0	57.9
2		515.877	3710.478	0.0	57.9
3		515.777	3710.378	0.0	57.9
4		515.877	3710.378	0.0	57.9
5		515.677	3710.378	0.0	57.9
6		515.977	3710.378	0.0	57.9
7		511.277	3709.378	0.0	64.0
8		512.277	3709.378	0.0	61.0
9		513.277	3709.378	0.0	73.2
10		514.277	3709.378	0.0	64.0
11		515.277	3709.378	0.0	57.9
12		518.277	3709.378	0.0	61.0
13		511.277	3708.378	0.0	67.1
14		513.277	3708.378	0.0	76.2
15		514.277	3708.378	0.0	70.1
16		517.277	3708.378	0.0	64.0
17		513.277	3707.378	0.0	64.0
18		512.277	3707.378	0.0	67.1
19		515.277	3707.378	0.0	61.0
20		517.277	3707.378	0.0	67.1
21		511.277	3706.378	0.0	73.2
22		512.277	3706.378	0.0	73.2
23		513.277	3706.378	0.0	64.0
24		514.277	3706.378	0.0	64.0
25		515.277	3706.378	0.0	67.1
26		517.277	3714.176	0.0	70.1
27		512.277	3715.176	0.0	61.0
28		514.277	3716.176	0.0	61.0
29		515.277	3716.176	0.0	70.1
30		513.277	3717.176	0.0	61.0
31		514.277	3717.176	0.0	61.0
32		512.277	3711.176	0.0	64.0
33		511.277	3709.378	0.0	64.0
34		511.277	3709.378	0.0	61.0
35		513.277	3709.378	0.0	73.2
36		514.277	3709.378	0.0	64.0
37		515.277	3709.378	0.0	57.9
38		511.277	3708.378	0.0	67.1
39		513.277	3708.378	0.0	76.2
40		514.277	3708.378	0.0	70.1
41		517.277	3708.378	0.0	64.0
42		513.277	3707.378	0.0	64.0

43	512.277	3707.378	0.0	67.1
44	515.277	3707.378	0.0	61.0
45	517.277	3707.378	0.0	67.1
46	511.277	3706.378	0.0	73.2
47	512.277	3706.378	0.0	73.2
48	513.277	3706.378	0.0	64.0
49	514.277	3706.378	0.0	64.0
50	515.277	3706.378	0.0	67.1
51	517.277	3714.176	0.0	70.1
52	512.277	3715.176	0.0	61.0
53	511.277	3716.176	0.0	61.0
54	514.277	3716.176	0.0	61.0
55	515.277	3716.176	0.0	70.1
56	513.277	3717.176	0.0	61.0
57	514.277	3717.176	0.0	61.0
58	512.277	3711.176	0.0	64.0
59	516.500	3708.100	0.0	67.7
60	518.100	3709.350	0.0	79.3
61	514.500	3708.800	0.0	80.5
62	517.300	3714.400	0.0	76.2

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
CO SCREEN - 1981 SHREVEPORT/LONGVIEW BINARY MET. DATA

RECEPTORS

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)	DAY	AVG CONC FOR PERIOD 1.HR 1. TO DAY365.HR24. (MICROGRAMS/M**3)
1		515.98	3710.48	0.0	57.9		0.03
2		515.88	3710.48	0.0	57.9		0.02
3		515.78	3710.38	0.0	57.9		0.02
4		515.88	3710.38	0.0	57.9		0.02
5		515.68	3710.38	0.0	57.9		0.02
6		515.98	3710.38	0.0	57.9		0.03
7		511.28	3709.38	0.0	64.0		0.03
8		512.28	3709.38	0.0	61.0		0.03
9		513.28	3709.38	0.0	73.2		0.03
10		514.28	3709.38	0.0	64.0		0.02
11		515.28	3709.38	0.0	57.9		0.03
12		518.28	3709.38	0.0	61.0		0.03
13		511.28	3708.38	0.0	67.1		0.03
14		513.28	3708.38	0.0	76.2		0.02
15		514.28	3708.38	0.0	70.1		0.02
16		517.28	3708.38	0.0	64.0		0.04
17		513.28	3707.38	0.0	64.0		0.02
18		512.28	3707.38	0.0	67.1		0.02
19		515.28	3707.38	0.0	61.0		0.03
20		517.28	3707.38	0.0	67.1		0.04
21		511.28	3706.38	0.0	73.2		0.02
22		512.28	3706.38	0.0	73.2		0.02
23		513.28	3706.38	0.0	64.0		0.02
24		514.28	3706.38	0.0	64.0		0.02
25		515.28	3706.38	0.0	67.1		0.03
26		517.28	3714.18	0.0	70.1		0.05
27		512.28	3715.18	0.0	61.0		0.04
28		514.28	3716.18	0.0	61.0		0.04
29		515.28	3716.18	0.0	70.1		0.06
30		513.28	3717.18	0.0	61.0		0.04
31		514.28	3717.18	0.0	61.0		0.05
32		512.28	3711.18	0.0	64.0		0.03
33		511.28	3709.38	0.0	64.0		0.03

34	511.28	3709.38	0.0	61.0	0.03
35	513.28	3709.38	0.0	73.2	0.03
36	514.28	3709.38	0.0	64.0	0.02
37	515.28	3709.38	0.0	57.9	0.03
38	511.28	3708.38	0.0	67.1	0.03
39	513.28	3708.38	0.0	76.2	0.02
40	514.28	3708.38	0.0	70.1	0.02
41	517.28	3708.38	0.0	64.0	0.04
42	513.28	3707.38	0.0	64.0	0.02
43	512.28	3707.38	0.0	67.1	0.02
44	515.28	3707.38	0.0	61.0	0.03
45	517.28	3707.38	0.0	67.1	0.04
46	511.28	3706.38	0.0	73.2	0.02
47	512.28	3706.38	0.0	73.2	0.02
48	513.28	3706.38	0.0	64.0	0.02
49	514.28	3706.38	0.0	64.0	0.02
50	515.28	3706.38	0.0	67.1	0.03
51	517.28	3714.18	0.0	70.1	0.05
52	512.28	3715.18	0.0	61.0	0.04
53	511.28	3716.18	0.0	61.0	0.04
54	514.28	3716.18	0.0	61.0	0.04
55	515.28	3716.18	0.0	70.1	0.06
56	513.28	3717.18	0.0	61.0	0.04
57	514.28	3717.18	0.0	61.0	0.05
58	512.28	3711.18	0.0	64.0	0.03
59	516.50	3708.10	0.0	67.7	0.04
60	518.10	3709.35	0.0	79.3	0.03
61	514.50	3708.80	0.0	80.5	0.02
62	517.30	3714.40	0.0	76.2	0.05

FIVE HIGHEST 1-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1	2	3	4	5
1(515.98,3710.48) *	5.15 (234,13) *	5.11 (220,11)	5.10 (234,12)	4.98 (232,12)	4.80 (255,13)
2(515.88,3710.48)	5.10 (234,13)	5.04 (234,12)	4.80 (255,13)	4.67 (91,13)	4.60 (252,10)
3(515.78,3710.38)	4.83 (234,13)	4.75 (255,13)	4.70 (234,12)	4.64 (91,13)	4.57 (252,10)
4(515.88,3710.38)	4.90 (234,13)	4.79 (234,12)	4.77 (255,13)	4.65 (91,13)	4.59 (252,10)
5(515.68,3710.38)	4.74 (234,13)	4.71 (255,13)	4.61 (91,13)	4.55 (190,15)	4.55 (192,13)
6(515.98,3710.38)	4.96 (234,13)	4.92 (220,11)	4.87 (232,12)	4.86 (234,12)	4.78 (255,13)
7(511.28,3709.38)	1.57 (174,11)	1.57 (189,16)	1.56 (207,13)	1.54 (193, 9)	1.51 (342,15)
8(512.28,3709.38)	1.79 (249,16)	1.77 (210,17)	1.75 (223,17)	1.75 (193, 9)	1.73 (183,18)
9(513.28,3709.38)	2.29 (316,14)	2.24 (222,16)	2.24 (238,12)	2.16 (83,12)	2.09 (223,17)
10(514.28,3709.38)	2.86 (222,16)	2.86 (218,13)	2.69 (205,16)	2.66 (191,10)	2.60 (316,14)
11(515.28,3709.38)	3.35 (205,16)	3.34 (204,11)	3.30 (222,15)	3.29 (255,12)	3.28 (255,14)
12(518.28,3709.38)	2.93 (198,15)	2.92 (274,15)	2.90 (190,10)	2.86 (266,10)	2.85 (254,16)
13(511.28,3708.38)	1.48 (212,13)	1.42 (193, 9)	1.39 (342,15)	1.37 (27,14)	1.36 (249,16)
14(513.28,3708.38)	2.03 (218,13)	1.93 (316,14)	1.83 (241,16)	1.82 (249,16)	1.80 (210,17)
15(514.28,3708.38)	2.38 (218,13)	2.19 (315,11)	2.14 (255,12)	2.10 (320,13)	2.01 (258,14)
16(517.28,3708.38)	2.66 (218,15)	2.60 (224,10)	2.58 (91,16)	2.55 (208,14)	2.49 (308,13)
17(513.28,3707.38)	1.64 (241,16)	1.62 (218,13)	1.59 (252,16)	1.56 (233, 8)	1.56 (316,14)
18(512.28,3707.38)	1.49 (212,13)	1.48 (241,16)	1.47 (255,18)	1.42 (147,11)	1.38 (249,16)
19(515.28,3707.38)	2.10 (191,13)	1.99 (51,14)	1.96 (308,14)	1.91 (315,11)	1.79 (183, 8)
20(517.28,3707.38)	2.02 (224,10)	2.00 (208,14)	1.97 (308,13)	1.95 (83,11)	1.91 (317,15)
21(511.28,3706.38)	1.24 (212,13)	1.23 (255,18)	1.20 (147,11)	1.16 (241,16)	1.15 (45,16)
22(512.28,3706.38)	1.33 (255,18)	1.30 (147,11)	1.29 (241,16)	1.25 (233, 8)	1.21 (45,15)
23(513.28,3706.38)	1.43 (255,18)	1.42 (241,16)	1.39 (240, 8)	1.38 (252,16)	1.37 (233, 8)
24(514.28,3706.38)	1.70 (191,13)	1.48 (252,16)	1.48 (121,17)	1.47 (255, 9)	1.46 (233, 8)
25(515.28,3706.38)	1.79 (191,13)	1.55 (114,17)	1.54 (121,17)	1.52 (51,14)	1.52 (234, 8)
26(517.28,3714.18)	3.62 (200,16)	3.61 (180,15)	3.56 (274,12)	3.53 (250,11)	3.50 (114,14)
27(512.28,3715.18)	1.70 (245,12)	1.68 (175,18)	1.67 (79,13)	1.67 (292,16)	1.66 (316,15)
28(514.28,3716.18)	1.98 (218,16)	1.95 (192, 9)	1.89 (301,15)	1.81 (214,14)	1.77 (179, 9)
29(515.28,3716.18)	2.17 (218,16)	2.14 (192, 9)	2.10 (104,10)	2.08 (307,15)	1.99 (359,12)
30(513.28,3717.18)	1.55 (301,15)	1.48 (207,12)	1.47 (238,13)	1.46 (214,14)	1.46 (175,18)
31(514.28,3717.18)	1.67 (301,15)	1.57 (214,14)	1.56 (237,16)	1.56 (184,14)	1.55 (214,16)

32(512.28,3711.18)	2.28	(175, 9)	2.20	(71,13)	2.11	(274,14)	2.04	(207,14)	2.03	(315,12)
33(511.28,3709.38)	1.57	(174,11)	1.57	(189,16)	1.56	(207,13)	1.54	(193, 9)	1.51	(342,15)
34(511.28,3709.38)	1.57	(174,11)	1.57	(189,16)	1.56	(207,13)	1.54	(193, 9)	1.51	(342,15)
35(513.28,3709.38)	2.29	(316,14)	2.24	(222,16)	2.24	(238,12)	2.16	(83,12)	2.09	(223,17)
36(514.28,3709.38)	2.86	(222,16)	2.86	(218,13)	2.69	(205,16)	2.66	(191,10)	2.60	(316,14)
37(515.28,3709.38)	3.35	(205,16)	3.34	(204,11)	3.30	(222,15)	3.29	(255,12)	3.28	(255,14)
38(511.28,3708.38)	1.48	(212,13)	1.42	(193, 9)	1.39	(342,15)	1.37	(27,14)	1.36	(249,16)
39(513.28,3708.38)	2.03	(218,13)	1.93	(316,14)	1.83	(241,16)	1.82	(249,16)	1.80	(210,17)
40(514.28,3708.38)	2.38	(218,13)	2.19	(315,11)	2.14	(255,12)	2.10	(320,13)	2.01	(258,14)
41(517.28,3708.38)	2.66	(218,15)	2.60	(224,10)	2.58	(91,16)	2.55	(208,14)	2.49	(308,13)
42(513.28,3707.38)	1.64	(241,16)	1.62	(218,13)	1.59	(252,16)	1.56	(233, 8)	1.56	(316,14)
43(512.28,3707.38)	1.49	(212,13)	1.48	(241,16)	1.47	(255,18)	1.42	(147,11)	1.38	(249,16)
44(515.28,3707.38)	2.10	(191,13)	1.99	(51,14)	1.96	(308,14)	1.91	(315,11)	1.79	(183, 8)
45(517.28,3707.38)	2.02	(224,10)	2.00	(208,14)	1.97	(308,13)	1.95	(83,11)	1.91	(317,15)
46(511.28,3706.38)	1.24	(212,13)	1.23	(255,18)	1.20	(147,11)	1.16	(241,16)	1.15	(45,16)
47(512.28,3706.38)	1.33	(255,18)	1.30	(147,11)	1.29	(241,16)	1.25	(233, 8)	1.21	(45,15)
48(513.28,3706.38)	1.43	(255,18)	1.42	(241,16)	1.39	(240, 8)	1.38	(252,16)	1.37	(233, 8)
49(514.28,3706.38)	1.70	(191,13)	1.48	(252,16)	1.48	(121,17)	1.47	(255, 9)	1.46	(233, 8)
50(515.28,3706.38)	1.79	(191,13)	1.55	(114,17)	1.54	(121,17)	1.52	(51,14)	1.52	(234, 8)
51(517.28,3714.18)	3.62	(200,16)	3.61	(180,15)	3.56	(274,12)	3.53	(250,11)	3.50	(114,14)
52(512.28,3715.18)	1.70	(245,12)	1.68	(175,18)	1.67	(79,13)	1.67	(292,16)	1.66	(316,15)
53(511.28,3716.18)	1.36	(237, 9)	1.33	(175,18)	1.33	(308,16)	1.32	(208, 9)	1.32	(308,15)
54(514.28,3716.18)	1.98	(218,16)	1.95	(192, 9)	1.89	(301,15)	1.81	(214,14)	1.77	(179, 9)
55(515.28,3716.18)	2.17	(218,16)	2.14	(192, 9)	2.10	(104,10)	2.08	(307,15)	1.99	(359,12)
56(513.28,3717.18)	1.55	(301,15)	1.48	(207,12)	1.47	(238,13)	1.46	(214,14)	1.46	(175,18)
57(514.28,3717.18)	1.67	(301,15)	1.57	(214,14)	1.56	(237,16)	1.56	(184,14)	1.55	(214,16)
58(512.28,3711.18)	2.28	(175, 9)	2.20	(71,13)	2.11	(274,14)	2.04	(207,14)	2.03	(315,12)
59(516.50,3708.10)	2.38	(292,13)	2.35	(213,10)	2.33	(249,11)	2.28	(72,14)	2.20	(44,13)
60(518.10,3709.35)	3.01	(198,15)	2.98	(190,10)	2.94	(218,15)	2.94	(266,10)	2.88	(254,16)
61(514.50,3708.80)	2.67	(218,13)	2.53	(255,12)	2.47	(320,13)	2.41	(315,11)	2.32	(205,16)
62(517.30,3714.40)	3.35	(200,16)	3.33	(180,15)	3.33	(270,14)	3.30	(274,12)	3.28	(239,12)

FIVE HIGHEST 3-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	2.84	(234,12)	2.78	(255,15)	1.97	(131,12)	1.83	(252,15)	1.72	(234,15)
2(515.88,3710.48)	2.84	(234,12)	2.81	(255,15)	2.65	(310,12)	1.70	(234,15)	1.67	(131, 9)
3(515.78,3710.38)	2.87	(255,15)	2.82	(234,12)	2.73	(310,12)	1.79	(140,12)	1.73	(131, 9)
4(515.88,3710.38)	2.86	(255,15)	2.83	(234,12)	1.72	(131, 9)	1.63	(234,15)	1.55	(91,15)
5(515.68,3710.38)	2.88	(255,15)	2.75	(310,12)	1.85	(140,12)	1.58	(234,15)	1.56	(45,12)
6(515.98,3710.38)	3.02	(190,15)	2.85	(255,15)	2.83	(234,12)	2.17	(227,18)	2.02	(252,15)
7(511.28,3709.38)	0.88	(247,18)	0.82	(363,15)	0.81	(105, 9)	0.76	(177,15)	0.72	(122,15)
8(512.28,3709.38)	1.27	(177,15)	1.26	(140,18)	1.10	(331,15)	1.07	(234,15)	0.97	(67,12)
9(513.28,3709.38)	1.90	(342,12)	1.89	(342,15)	1.82	(67,12)	1.33	(234,15)	1.29	(331,15)
10(514.28,3709.38)	2.23	(342,12)	1.56	(105,15)	1.55	(191,12)	1.48	(342,15)	1.47	(70,18)
11(515.28,3709.38)	2.21	(45,12)	2.05	(255,15)	2.00	(310,12)	1.64	(261,18)	1.59	(27,12)
12(518.28,3709.38)	2.12	(146,15)	1.69	(258,15)	1.59	(158,18)	1.49	(14,15)	1.48	(292,15)
13(511.28,3708.38)	1.23	(342,15)	1.02	(67,12)	0.96	(140,18)	0.96	(177,15)	0.81	(331,15)
14(513.28,3708.38)	1.58	(342,12)	1.51	(67,12)	1.10	(342,15)	1.03	(27,12)	0.98	(44,12)
15(514.28,3708.38)	1.79	(45,12)	1.75	(352,12)	1.27	(70,18)	1.20	(27,12)	1.17	(105,15)
16(517.28,3708.38)	2.21	(190,18)	2.01	(314,15)	2.00	(320,12)	1.84	(75,15)	1.63	(1,15)
17(513.28,3707.38)	1.29	(45,12)	0.93	(70,18)	0.84	(352,12)	0.84	(331,12)	0.84	(27,12)
18(512.28,3707.38)	1.11	(342,12)	1.05	(67,12)	0.78	(342,15)	0.74	(44,12)	0.72	(45,15)
19(515.28,3707.38)	1.60	(252,15)	1.24	(234,18)	1.21	(191,15)	1.15	(114,18)	1.14	(259,12)
20(517.28,3707.38)	1.73	(190,18)	1.40	(320,12)	1.36	(1,15)	1.21	(75,15)	1.17	(211,18)
21(511.28,3706.38)	0.80	(342,12)	0.75	(67,12)	0.61	(30,18)	0.59	(358, 9)	0.58	(44,12)
22(512.28,3706.38)	0.73	(104,24)	0.68	(70,18)	0.66	(342,15)	0.62	(342,12)	0.61	(352,12)
23(513.28,3706.38)	1.06	(45,12)	1.04	(352,12)	0.77	(70,18)	0.71	(261,18)	0.68	(27,12)
24(514.28,3706.38)	1.17	(45,12)	0.88	(343,15)	0.87	(121,18)	0.85	(259,12)	0.82	(15,12)
25(515.28,3706.38)	1.27	(4,15)	1.23	(252,15)	1.10	(121,18)	1.01	(234,18)	0.96	(114,18)
26(517.28,3714.18) *	3.04	(169,12) *	3.02	(269,15)	2.28	(254,12)	2.00	(160,15)	1.96	(180,18)
27(512.28,3715.18)	1.43	(316,12)	1.38	(303,12)	1.34	(302,15)	1.13	(272,12)	1.03	(117,15)
28(514.28,3716.18)	1.58	(339,15)	1.30	(294,15)	1.26	(137,12)	1.17	(301,15)	1.08	(311,12)
29(515.28,3716.18)	1.82	(307,15)	1.79	(301,15)	1.68	(326,12)	1.41	(137,12)	1.21	(99,18)

30(513.28,3717.18)	0.95	(207,12)	0.90	(301,15)	0.88	(286,24)	0.87	(92,12)	0.87	(294,15)
31(514.28,3717.18)	1.27	(339,15)	1.18	(311,15)	1.02	(238,15)	0.99	(142,12)	0.98	(301,15)
32(512.28,3711.18)	1.87	(247,15)	1.69	(5,12)	1.58	(178,15)	1.32	(247,18)	1.27	(175, 9)
33(511.28,3709.38)	0.88	(247,18)	0.82	(363,15)	0.81	(105, 9)	0.76	(177,15)	0.72	(122,15)
34(511.28,3709.38)	0.88	(247,18)	0.82	(363,15)	0.81	(105, 9)	0.76	(177,15)	0.72	(122,15)
35(513.28,3709.38)	1.90	(342,12)	1.89	(342,15)	1.82	(67,12)	1.33	(234,15)	1.29	(331,15)
36(514.28,3709.38)	2.23	(342,12)	1.56	(105,15)	1.55	(191,12)	1.48	(342,15)	1.47	(70,18)
37(515.28,3709.38)	2.21	(45,12)	2.05	(255,15)	2.00	(310,12)	1.64	(261,18)	1.59	(27,12)
38(511.28,3708.38)	1.23	(342,15)	1.02	(67,12)	0.96	(140,18)	0.96	(177,15)	0.81	(331,15)
39(513.28,3708.38)	1.58	(342,12)	1.51	(67,12)	1.10	(342,15)	1.03	(27,12)	0.98	(44,12)
40(514.28,3708.38)	1.79	(45,12)	1.75	(352,12)	1.27	(70,18)	1.20	(27,12)	1.17	(105,15)
41(517.28,3708.38)	2.21	(190,18)	2.01	(314,15)	2.00	(320,12)	1.84	(75,15)	1.63	(1,15)
42(513.28,3707.38)	1.29	(45,12)	0.93	(70,18)	0.84	(352,12)	0.84	(331,12)	0.84	(27,12)
43(512.28,3707.38)	1.11	(342,12)	1.05	(67,12)	0.78	(342,15)	0.74	(44,12)	0.72	(45,15)
44(515.28,3707.38)	1.60	(252,15)	1.24	(234,18)	1.21	(191,15)	1.15	(114,18)	1.14	(259,12)
45(517.28,3707.38)	1.73	(190,18)	1.40	(320,12)	1.36	(1,15)	1.21	(75,15)	1.17	(211,18)
46(511.28,3706.38)	0.80	(342,12)	0.75	(67,12)	0.61	(30,18)	0.59	(358, 9)	0.58	(44,12)
47(512.28,3706.38)	0.73	(104,24)	0.68	(70,18)	0.66	(342,15)	0.62	(342,12)	0.61	(352,12)
48(513.28,3706.38)	1.06	(45,12)	1.04	(352,12)	0.77	(70,18)	0.71	(261,18)	0.68	(27,12)
49(514.28,3706.38)	1.17	(45,12)	0.88	(343,15)	0.87	(121,18)	0.85	(259,12)	0.82	(15,12)
50(515.28,3706.38)	1.27	(4,15)	1.23	(252,15)	1.10	(121,18)	1.01	(234,18)	0.96	(114,18)
51(517.28,3714.18)	3.04	(169,12)	3.02	(269,15)	2.28	(254,12)	2.00	(160,15)	1.96	(180,18)
52(512.28,3715.18)	1.43	(316,12)	1.38	(303,12)	1.34	(302,15)	1.13	(272,12)	1.03	(117,15)
53(511.28,3716.18)	1.06	(316,12)	0.98	(303,12)	0.94	(302,15)	0.84	(361,12)	0.76	(272,12)
54(514.28,3716.18)	1.58	(339,15)	1.30	(294,15)	1.26	(137,12)	1.17	(301,15)	1.08	(311,12)
55(515.28,3716.18)	1.82	(307,15)	1.79	(301,15)	1.68	(326,12)	1.41	(137,12)	1.21	(99,18)
56(513.28,3717.18)	0.95	(207,12)	0.90	(301,15)	0.88	(286,24)	0.87	(92,12)	0.87	(294,15)
57(514.28,3717.18)	1.27	(339,15)	1.18	(311,15)	1.02	(238,15)	0.99	(142,12)	0.98	(301,15)
58(512.28,3711.18)	1.87	(247,15)	1.69	(5,12)	1.58	(178,15)	1.32	(247,18)	1.27	(175, 9)
59(516.50,3708.10)	1.49	(232,18)	1.48	(251,15)	1.42	(211,18)	1.41	(213,12)	1.35	(191,18)
60(518.10,3709.35)	2.21	(146,15)	1.73	(258,15)	1.49	(78,12)	1.48	(95,12)	1.45	(220,15)
61(514.50,3708.80)	1.98	(45,12)	1.93	(352,12)	1.39	(70,18)	1.38	(105,15)	1.35	(27,12)
62(517.30,3714.40)	2.79	(169,12)	2.43	(196,18)	2.07	(254,12)	2.02	(269,15)	1.90	(160,15)

FIVE HIGHEST 8-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	1.95	(234,16) *	1.78	(131,16)	1.47	(232,16)	1.32	(252,16)	1.08	(255,16)
2(515.88,3710.48) *	1.95	(234,16)	1.46	(310,16)	1.41	(255,16)	1.32	(131,16)	0.86	(232,16)
3(515.78,3710.38)	1.94	(234,16)	1.48	(255,16)	1.38	(131,16)	1.03	(310,16)	1.01	(140,16)
4(515.88,3710.38)	1.94	(234,16)	1.47	(255,16)	1.37	(131,16)	1.02	(310,16)	0.88	(232,16)
5(515.68,3710.38)	1.50	(255,16)	1.39	(131,16)	1.35	(234,16)	1.03	(310,16)	0.88	(252,16)
6(515.98,3710.38)	1.95	(234,16)	1.75	(131,16)	1.48	(232,16)	1.33	(252,16)	1.13	(190,16)
7(511.28,3709.38)	0.54	(363,16)	0.52	(280,16)	0.49	(346, 8)	0.48	(275,16)	0.41	(12, 8)
8(512.28,3709.38)	0.78	(177,16)	0.58	(234,16)	0.55	(67,16)	0.55	(275,16)	0.53	(346, 8)
9(513.28,3709.38)	1.42	(342,16)	0.92	(67,16)	0.71	(331,16)	0.65	(70,16)	0.57	(223,16)
10(514.28,3709.38)	1.40	(342,16)	1.08	(140,16)	0.86	(191,16)	0.59	(16,16)	0.59	(105,16)
11(515.28,3709.38)	1.32	(255,16)	1.17	(27,16)	1.11	(131,16)	1.04	(234,16)	0.87	(252,16)
12(518.28,3709.38)	0.89	(176,16)	0.89	(258,16)	0.84	(14,16)	0.79	(146,16)	0.76	(78,16)
13(511.28,3708.38)	0.73	(342,16)	0.56	(177,16)	0.52	(67,16)	0.49	(346, 8)	0.47	(105, 8)
14(513.28,3708.38)	1.02	(342,16)	0.69	(140,16)	0.57	(67,16)	0.46	(16,16)	0.46	(191,16)
15(514.28,3708.38)	0.88	(45,16)	0.69	(27,16)	0.66	(352,16)	0.61	(105,16)	0.60	(140,16)
16(517.28,3708.38)	1.04	(1,16)	1.03	(144,16)	1.00	(75,16)	0.99	(82,16)	0.83	(308,16)
17(513.28,3707.38)	0.70	(45,16)	0.51	(296,16)	0.49	(27,16)	0.46	(104,24)	0.40	(16,16)
18(512.28,3707.38)	0.74	(342,16)	0.47	(45,16)	0.46	(140,16)	0.40	(296,16)	0.39	(67,16)
19(515.28,3707.38)	0.83	(259,16)	0.75	(252,16)	0.64	(231,16)	0.63	(4,16)	0.63	(310,16)
20(517.28,3707.38)	0.76	(82,16)	0.75	(144,16)	0.71	(75,16)	0.65	(308,16)	0.65	(174,16)
21(511.28,3706.38)	0.55	(342,16)	0.38	(45,16)	0.37	(346,16)	0.35	(363, 8)	0.32	(126,24)
22(512.28,3706.38)	0.51	(342,16)	0.46	(104,24)	0.40	(363, 8)	0.39	(296,16)	0.33	(60, 8)
23(513.28,3706.38)	0.60	(296,16)	0.56	(45,16)	0.52	(259,16)	0.40	(27,16)	0.39	(352,16)
24(514.28,3706.38)	0.63	(259,16)	0.54	(255,16)	0.54	(296,16)	0.52	(352,16)	0.44	(27,16)
25(515.28,3706.38)	0.67	(4,16)	0.62	(261,16)	0.57	(15,16)	0.54	(259,16)	0.51	(81,16)
26(517.28,3714.18)	1.76	(269,16)	1.50	(160,16)	1.48	(169,16)	1.18	(263,16)	1.13	(180,16)
27(512.28,3715.18)	0.92	(316,16)	0.88	(302,16)	0.85	(297,16)	0.72	(303,16)	0.69	(271,16)

28(514.28,3716.18)	0.79 (339,16)	0.79 (137,16)	0.69 (294,16)	0.67 (285,16)	0.67 (87,16)
29(515.28,3716.18)	1.17 (142,16)	0.96 (137,16)	0.96 (84,16)	0.95 (326,16)	0.95 (87,24)
30(513.28,3717.18)	0.67 (287, 8)	0.55 (286,24)	0.54 (92,16)	0.54 (285,16)	0.53 (87,16)
31(514.28,3717.18)	0.69 (137,16)	0.66 (142,16)	0.65 (311,16)	0.63 (339,16)	0.56 (87,24)
32(512.28,3711.18)	1.07 (5,16)	0.95 (247,16)	0.84 (178,16)	0.71 (207,16)	0.68 (276,16)
33(511.28,3709.38)	0.54 (363,16)	0.52 (280,16)	0.49 (346, 8)	0.48 (275,16)	0.41 (12, 8)
34(511.28,3709.38)	0.54 (363,16)	0.52 (280,16)	0.49 (346, 8)	0.48 (275,16)	0.41 (12, 8)
35(513.28,3709.38)	1.42 (342,16)	0.92 (67,16)	0.71 (331,16)	0.65 (70,16)	0.57 (223,16)
36(514.28,3709.38)	1.40 (342,16)	1.08 (140,16)	0.86 (191,16)	0.59 (16,16)	0.59 (105,16)
37(515.28,3709.38)	1.32 (255,16)	1.17 (27,16)	1.11 (131,16)	1.04 (234,16)	0.87 (252,16)
38(511.28,3708.38)	0.73 (342,16)	0.56 (177,16)	0.52 (67,16)	0.49 (346, 8)	0.47 (105, 8)
39(513.28,3708.38)	1.02 (342,16)	0.69 (140,16)	0.57 (67,16)	0.46 (16,16)	0.46 (191,16)
40(514.28,3708.38)	0.88 (45,16)	0.69 (27,16)	0.66 (352,16)	0.61 (105,16)	0.60 (140,16)
41(517.28,3708.38)	1.04 (1,16)	1.03 (144,16)	1.00 (75,16)	0.99 (82,16)	0.83 (308,16)
42(513.28,3707.38)	0.70 (45,16)	0.51 (296,16)	0.49 (27,16)	0.46 (104,24)	0.40 (16,16)
43(512.28,3707.38)	0.74 (342,16)	0.47 (45,16)	0.46 (140,16)	0.40 (296,16)	0.39 (67,16)
44(515.28,3707.38)	0.83 (259,16)	0.75 (252,16)	0.64 (231,16)	0.63 (4,16)	0.63 (310,16)
45(517.28,3707.38)	0.76 (82,16)	0.75 (144,16)	0.71 (75,16)	0.65 (308,16)	0.65 (174,16)
46(511.28,3706.38)	0.55 (342,16)	0.38 (45,16)	0.37 (346,16)	0.35 (363, 8)	0.32 (126,24)
47(512.28,3706.38)	0.51 (342,16)	0.46 (104,24)	0.40 (363, 8)	0.39 (296,16)	0.33 (60, 8)
48(513.28,3706.38)	0.60 (296,16)	0.56 (45,16)	0.52 (259,16)	0.40 (27,16)	0.39 (352,16)
49(514.28,3706.38)	0.63 (259,16)	0.54 (255,16)	0.54 (296,16)	0.52 (352,16)	0.44 (27,16)
50(515.28,3706.38)	0.67 (4,16)	0.62 (261,16)	0.57 (15,16)	0.54 (259,16)	0.51 (81,16)
51(517.28,3714.18)	1.76 (269,16)	1.50 (160,16)	1.48 (169,16)	1.18 (263,16)	1.13 (180,16)
52(512.28,3715.18)	0.92 (316,16)	0.88 (302,16)	0.85 (297,16)	0.72 (303,16)	0.69 (271,16)
53(511.28,3716.18)	0.70 (316,16)	0.63 (302,16)	0.61 (297,16)	0.57 (286, 8)	0.53 (303,16)
54(514.28,3716.18)	0.79 (339,16)	0.79 (137,16)	0.69 (294,16)	0.67 (285,16)	0.67 (87,16)
55(515.28,3716.18)	1.17 (142,16)	0.96 (137,16)	0.96 (84,16)	0.95 (326,16)	0.95 (87,24)
56(513.28,3717.18)	0.67 (287, 8)	0.55 (286,24)	0.54 (92,16)	0.54 (285,16)	0.53 (87,16)
57(514.28,3717.18)	0.69 (137,16)	0.66 (142,16)	0.65 (311,16)	0.63 (339,16)	0.56 (87,24)
58(512.28,3711.18)	1.07 (5,16)	0.95 (247,16)	0.84 (178,16)	0.71 (207,16)	0.68 (276,16)
59(516.50,3708.10)	0.94 (15,16)	0.91 (232,16)	0.81 (317,16)	0.78 (191,16)	0.75 (174,16)
60(518.10,3709.35)	1.20 (258,16)	0.91 (176,16)	0.84 (78,16)	0.83 (146,16)	0.65 (41,24)
61(514.50,3708.80)	0.95 (45,16)	0.76 (27,16)	0.73 (105,16)	0.72 (352,16)	0.71 (140,16)
62(517.30,3714.40)	1.43 (160,16)	1.38 (169,16)	1.31 (187,16)	1.12 (263,16)	1.07 (180,16)

FIVE HIGHEST 24-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1	2	3	4	5
1(515.98,3710.48)	0.74 (234,24) *	0.62 (131,24)	0.49 (232,24)	0.44 (252,24)	0.36 (255,24)
2(515.88,3710.48)	0.67 (234,24)	0.49 (310,24)	0.47 (255,24)	0.47 (131,24)	0.29 (232,24)
3(515.78,3710.38)	0.65 (234,24)	0.49 (131,24)	0.49 (255,24)	0.34 (310,24)	0.34 (140,24)
4(515.88,3710.38)	0.68 (234,24)	0.49 (255,24)	0.49 (131,24)	0.34 (310,24)	0.30 (232,24)
5(515.68,3710.38)	0.52 (255,24)	0.46 (131,24)	0.45 (234,24)	0.34 (310,24)	0.30 (252,24)
6(515.98,3710.38) *	0.75 (234,24)	0.62 (131,24)	0.50 (232,24)	0.45 (252,24)	0.38 (190,24)
7(511.28,3709.38)	0.37 (280,24)	0.35 (275,24)	0.31 (105,24)	0.24 (177,24)	0.22 (363,24)
8(512.28,3709.38)	0.38 (280,24)	0.38 (105,24)	0.33 (275,24)	0.33 (177,24)	0.28 (67,24)
9(513.28,3709.38)	0.48 (342,24)	0.40 (67,24)	0.33 (280,24)	0.29 (223,24)	0.24 (363,24)
10(514.28,3709.38)	0.47 (342,24)	0.36 (140,24)	0.29 (70,24)	0.29 (191,24)	0.25 (67,24)
11(515.28,3709.38)	0.44 (255,24)	0.39 (27,24)	0.37 (131,24)	0.36 (234,24)	0.31 (261,24)
12(518.28,3709.38)	0.41 (32,24)	0.37 (134,24)	0.35 (146,24)	0.33 (176,24)	0.32 (78,24)
13(511.28,3708.38)	0.40 (105,24)	0.36 (280,24)	0.32 (275,24)	0.30 (67,24)	0.27 (177,24)
14(513.28,3708.38)	0.34 (342,24)	0.29 (67,24)	0.23 (140,24)	0.23 (105,24)	0.22 (363,24)
15(514.28,3708.38)	0.30 (45,24)	0.29 (296,24)	0.24 (70,24)	0.23 (27,24)	0.23 (259,24)
16(517.28,3708.38)	0.46 (190,24)	0.42 (75,24)	0.42 (1,24)	0.40 (220,24)	0.39 (82,24)
17(513.28,3707.38)	0.29 (296,24)	0.24 (45,24)	0.19 (16,24)	0.18 (60,24)	0.18 (70,24)
18(512.28,3707.38)	0.25 (67,24)	0.25 (342,24)	0.24 (280,24)	0.24 (363,24)	0.22 (346,24)
19(515.28,3707.38)	0.38 (234,24)	0.35 (261,24)	0.35 (259,24)	0.27 (296,24)	0.27 (231,24)
20(517.28,3707.38)	0.39 (260,24)	0.37 (232,24)	0.37 (190,24)	0.36 (220,24)	0.35 (351,24)
21(511.28,3706.38)	0.24 (363,24)	0.22 (67,24)	0.21 (346,24)	0.21 (280,24)	0.20 (105,24)
22(512.28,3706.38)	0.23 (296,24)	0.21 (280,24)	0.21 (363,24)	0.17 (342,24)	0.17 (60,24)
23(513.28,3706.38)	0.36 (296,24)	0.26 (358,24)	0.22 (259,24)	0.21 (231,24)	0.19 (45,24)
24(514.28,3706.38)	0.32 (296,24)	0.27 (259,24)	0.22 (358,24)	0.22 (16,24)	0.22 (352,24)
25(515.28,3706.38)	0.36 (261,24)	0.31 (234,24)	0.26 (259,24)	0.25 (296,24)	0.24 (125,24)

26(517.28,3714.18)	0.64	(169,24)	0.59	(269,24)	0.54	(160,24)	0.48	(180,24)	0.40	(263,24)
27(512.28,3715.18)	0.50	(286,24)	0.46	(354,24)	0.36	(62,24)	0.34	(303,24)	0.34	(302,24)
28(514.28,3716.18)	0.38	(137,24)	0.37	(87,24)	0.30	(339,24)	0.25	(287,24)	0.25	(92,24)
29(515.28,3716.18)	0.57	(137,24)	0.49	(142,24)	0.49	(164,24)	0.46	(165,24)	0.44	(93,24)
30(513.28,3717.18)	0.38	(287,24)	0.36	(87,24)	0.33	(92,24)	0.28	(286,24)	0.26	(137,24)
31(514.28,3717.18)	0.45	(87,24)	0.41	(137,24)	0.32	(165,24)	0.31	(80,24)	0.30	(98,24)
32(512.28,3711.18)	0.47	(5,24)	0.42	(247,24)	0.35	(178,24)	0.29	(122,24)	0.26	(276,24)
33(511.28,3709.38)	0.37	(280,24)	0.35	(275,24)	0.31	(105,24)	0.24	(177,24)	0.22	(363,24)
34(511.28,3709.38)	0.37	(280,24)	0.35	(275,24)	0.31	(105,24)	0.24	(177,24)	0.22	(363,24)
35(513.28,3709.38)	0.48	(342,24)	0.40	(67,24)	0.33	(280,24)	0.29	(223,24)	0.24	(363,24)
36(514.28,3709.38)	0.47	(342,24)	0.36	(140,24)	0.29	(70,24)	0.29	(191,24)	0.25	(67,24)
37(515.28,3709.38)	0.44	(255,24)	0.39	(27,24)	0.37	(131,24)	0.36	(234,24)	0.31	(261,24)
38(511.28,3708.38)	0.40	(105,24)	0.36	(280,24)	0.32	(275,24)	0.30	(67,24)	0.27	(177,24)
39(513.28,3708.38)	0.34	(342,24)	0.29	(67,24)	0.23	(140,24)	0.23	(105,24)	0.22	(363,24)
40(514.28,3708.38)	0.30	(45,24)	0.29	(296,24)	0.24	(70,24)	0.23	(27,24)	0.23	(259,24)
41(517.28,3708.38)	0.46	(190,24)	0.42	(75,24)	0.42	(1,24)	0.40	(220,24)	0.39	(82,24)
42(513.28,3707.38)	0.29	(296,24)	0.24	(45,24)	0.19	(16,24)	0.18	(60,24)	0.18	(70,24)
43(512.28,3707.38)	0.25	(67,24)	0.25	(342,24)	0.24	(280,24)	0.24	(363,24)	0.22	(346,24)
44(515.28,3707.38)	0.38	(234,24)	0.35	(261,24)	0.35	(259,24)	0.27	(296,24)	0.27	(231,24)
45(517.28,3707.38)	0.39	(260,24)	0.37	(232,24)	0.37	(190,24)	0.36	(220,24)	0.35	(351,24)
46(511.28,3706.38)	0.24	(363,24)	0.22	(67,24)	0.21	(346,24)	0.21	(280,24)	0.20	(105,24)
47(512.28,3706.38)	0.23	(296,24)	0.21	(280,24)	0.21	(363,24)	0.17	(342,24)	0.17	(60,24)
48(513.28,3706.38)	0.36	(296,24)	0.26	(358,24)	0.22	(259,24)	0.21	(231,24)	0.19	(45,24)
49(514.28,3706.38)	0.32	(296,24)	0.27	(259,24)	0.22	(358,24)	0.22	(16,24)	0.22	(352,24)
50(515.28,3706.38)	0.36	(261,24)	0.31	(234,24)	0.26	(259,24)	0.25	(296,24)	0.24	(125,24)
51(517.28,3714.18)	0.64	(169,24)	0.59	(269,24)	0.54	(160,24)	0.48	(180,24)	0.40	(263,24)
52(512.28,3715.18)	0.50	(286,24)	0.46	(354,24)	0.36	(62,24)	0.34	(303,24)	0.34	(302,24)
53(511.28,3716.18)	0.50	(286,24)	0.46	(354,24)	0.40	(62,24)	0.34	(123,24)	0.30	(303,24)
54(514.28,3716.18)	0.38	(137,24)	0.37	(87,24)	0.30	(339,24)	0.25	(287,24)	0.25	(92,24)
55(515.28,3716.18)	0.57	(137,24)	0.49	(142,24)	0.49	(164,24)	0.46	(165,24)	0.44	(93,24)
56(513.28,3717.18)	0.38	(287,24)	0.36	(87,24)	0.33	(92,24)	0.28	(286,24)	0.26	(137,24)
57(514.28,3717.18)	0.45	(87,24)	0.41	(137,24)	0.32	(165,24)	0.31	(80,24)	0.30	(98,24)
58(512.28,3711.18)	0.47	(5,24)	0.42	(247,24)	0.35	(178,24)	0.29	(122,24)	0.26	(276,24)
59(516.50,3708.10)	0.52	(232,24)	0.41	(260,24)	0.37	(357,24)	0.35	(191,24)	0.34	(251,24)
60(518.10,3709.35)	0.40	(258,24)	0.36	(146,24)	0.35	(78,24)	0.35	(32,24)	0.33	(176,24)
61(514.50,3708.80)	0.32	(45,24)	0.27	(70,24)	0.27	(296,24)	0.26	(27,24)	0.25	(105,24)
62(517.30,3714.40)	0.62	(169,24)	0.55	(160,24)	0.46	(180,24)	0.45	(187,24)	0.38	(263,24)

SECTION H.17

1982 MODELING OUTPUT FOR CO COMPLEX I

COMPLEX I (DATED 90095)
BOWMAN ENVIRONMENTAL ENGINEERING VER. 6.27

SESSION INFORMATION

INPUT DATA FILE NAME : ICC082.DTA
OUTPUT LIST FILE NAME : ICC082.LST
MET DATA FILE NAME : C:\BEE\SHVGGG82.BIN

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
CO SCREEN - 1982 SHREVEPORT/LONGVIEW BINARY MET. DATA

GENERAL INPUT INFORMATION

THIS RUN OF COMPLEX I -VERSION 2.0 IS FOR THE POLLUTANT PART FOR 365 24-HOUR PERIODS.
CONCENTRATION ESTIMATES BEGIN ON HOUR- 1,JULIAN DAY- 1, YEAR-1982.
A FACTOR OF 1.0000000 HAS BEEN SPECIFIED TO CONVERT USER LENGTH UNITS TO KILOMETERS.
0 SIGNIFICANT SOURCES ARE TO BE CONSIDERED.
THIS RUN WILL NOT CONSIDER ANY POLLUTANT LOSS.
HIGH-FIVE SUMMARY CONCENTRATION TABLES WILL BE OUTPUT FOR 4 AVERAGING PERIODS.
AVG TIMES OF 1,3,8, AND 24 HOURS ARE AUTOMATICALLY DISPLAYED.

OPTION	OPTION LIST	OPTION SPECIFICATION : 0= IGNORE OPTION 1= USE OPTION
	TECHNICAL OPTIONS	
1	TERRAIN ADJUSTMENTS	0
2	DO NOT INCLUDE STACK DOWNWASH CALCULATIONS	0
3	DO NOT INCLUDE GRADUAL PLUME RISE CALCULATIONS	1
4	CALCULATE INITIAL PLUME SIZE	1
	INPUT OPTIONS	
5	READ MET DATA FROM CARDS	0
6	READ HOURLY EMISSIONS	0
7	SPECIFY SIGNIFICANT SOURCES	0
8	READ RADIAL DISTANCES TO GENERATE RECEPTORS	0
	PRINTED OUTPUT OPTIONS	
9	DELETE EMISSIONS WITH HEIGHT TABLE	1
10	DELETE MET DATA SUMMARY FOR AVG PERIOD	1
11	DELETE HOURLY CONTRIBUTIONS	1
12	DELETE MET DATA ON HOURLY CONTRIBUTIONS	1
13	DELETE FINAL PLUME RISE CALC ON HRLY CONTRIBUTIONS	1
14	DELETE HOURLY SUMMARY	1
15	DELETE MET DATA ON HRLY SUMMARY	1
16	DELETE FINAL PLUME RISE CALC ON HRLY SUMMARY	1
17	DELETE AVG-PERIOD CONTRIBUTIONS	1
18	DELETE AVERAGING PERIOD SUMMARY	1
19	DELETE AVG CONCENTRATIONS AND HI-5 TABLES	0
	OTHER CONTROL AND OUTPUT OPTIONS	
20	RUN IS PART OF A SEGMENTED RUN	0
21	WRITE PARTIAL CONC TO DISK OR TAPE	0
22	WRITE HOURLY CONC TO DISK OR TAPE	0
23	WRITE AVG-PERIOD CONC TO DISK OR TAPE	0
24	PUNCH AVG-PERIOD CONC ONTO CARDS	0
25	COMPLEX TERRAIN OPTION	1
26	CALM PROCESSING OPTION	0
27	VALLEY SCREENING OPTION	0

ANEMOMETER HEIGHT= 10.00
WIND PROFILE WITH HEIGHT EXPONENTS CORRESPONDING TO STABILITY ARE AS FOLLOWS:
FOR STABILITY A: 0.07
STABILITY B: 0.07
STABILITY C: 0.10
STABILITY D: 0.15
STABILITY E: 0.35
STABILITY F: 0.55

POINT SOURCE INFORMATION

SOURCE		EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	SO2(G/SEC) EMISSIONS	PART(G/SEC) EMISSIONS	STACK HT(M)	STACK TEMP(K)	STACK DIAM(M)	STACK VEL(M/SEC)	POTEN. IMPACT (MICRO G/M**3)	EFF HT(M)	GRD-LVL ELEV USER HT UNITS	BUOY FLUX F M**4/S**3
1 1	COGEN	516.32	3711.89	8.00	6.51	22.9	427.6	3.4	16.6	5.03	283.88	34.40	150.19

ADDITIONAL INFORMATION ON SOURCES.

EMISSION INFORMATION FOR 1 (NPT) POINT SOURCES HAS BEEN INPUT
0 SIGNIFICANT POINT SOURCES(NSIGP) ARE TO BE USED FOR THIS RUN
THE ORDER OF SIGNIFICANCE(INPS) FOR 25 OR LESS POINT SOURCES USED IN THIS RUN AS LISTED BY POINT SOURCE NUMBER:

SURFACE MET DATA FROM STATION(ISFCD) 13957, YEAR(ISFCYR) 1982
MIXING HEIGHT DATA FROM STATION(IMXD) 3951, YEAR(IMXYR) 1982

RECEPTOR INFORMATION

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)
1		515.977	3710.478	0.0	57.9
2		515.877	3710.478	0.0	57.9
3		515.777	3710.378	0.0	57.9
4		515.877	3710.378	0.0	57.9
5		515.677	3710.378	0.0	57.9
6		515.977	3710.378	0.0	57.9
7		511.277	3709.378	0.0	64.0
8		512.277	3709.378	0.0	61.0
9		513.277	3709.378	0.0	73.2
10		514.277	3709.378	0.0	64.0
11		515.277	3709.378	0.0	57.9
12		518.277	3709.378	0.0	61.0
13		511.277	3708.378	0.0	67.1
14		513.277	3708.378	0.0	76.2
15		514.277	3708.378	0.0	70.1
16		517.277	3708.378	0.0	64.0
17		513.277	3707.378	0.0	64.0
18		512.277	3707.378	0.0	67.1
19		515.277	3707.378	0.0	61.0
20		517.277	3707.378	0.0	67.1
21		511.277	3706.378	0.0	73.2
22		512.277	3706.378	0.0	73.2
23		513.277	3706.378	0.0	64.0
24		514.277	3706.378	0.0	64.0
25		515.277	3706.378	0.0	67.1
26		517.277	3714.176	0.0	70.1
27		512.277	3715.176	0.0	61.0
28		514.277	3716.176	0.0	61.0
29		515.277	3716.176	0.0	70.1
30		513.277	3717.176	0.0	61.0
31		514.277	3717.176	0.0	61.0
32		512.277	3711.176	0.0	64.0
33		511.277	3709.378	0.0	64.0
34		511.277	3709.378	0.0	61.0
35		513.277	3709.378	0.0	73.2
36		514.277	3709.378	0.0	64.0
37		515.277	3709.378	0.0	57.9
38		511.277	3708.378	0.0	67.1
39		513.277	3708.378	0.0	76.2
40		514.277	3708.378	0.0	70.1
41		517.277	3708.378	0.0	64.0
42		513.277	3707.378	0.0	64.0

43	512.277	3707.378	0.0	67.1
44	515.277	3707.378	0.0	61.0
45	517.277	3707.378	0.0	67.1
46	511.277	3706.378	0.0	73.2
47	512.277	3706.378	0.0	73.2
48	513.277	3706.378	0.0	64.0
49	514.277	3706.378	0.0	64.0
50	515.277	3706.378	0.0	67.1
51	517.277	3714.176	0.0	70.1
52	512.277	3715.176	0.0	61.0
53	511.277	3716.176	0.0	61.0
54	514.277	3716.176	0.0	61.0
55	515.277	3716.176	0.0	70.1
56	513.277	3717.176	0.0	61.0
57	514.277	3717.176	0.0	61.0
58	512.277	3711.176	0.0	64.0
59	516.500	3708.100	0.0	67.7
60	518.100	3709.350	0.0	79.3
61	514.500	3708.800	0.0	80.5
62	517.300	3714.400	0.0	76.2

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
CO SCREEN - 1982 SHREVEPORT/LONGVIEW BINARY MET. DATA

RECEPTORS

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)	DAY	AVG CONC FOR PERIOD 1.HR 1. TO DAY365.HR24. (MICROGRAMS/M**3)
1		515.98	3710.48	0.0	57.9		0.02
2		515.88	3710.48	0.0	57.9		0.02
3		515.78	3710.38	0.0	57.9		0.02
4		515.88	3710.38	0.0	57.9		0.02
5		515.68	3710.38	0.0	57.9		0.02
6		515.98	3710.38	0.0	57.9		0.03
7		511.28	3709.38	0.0	64.0		0.03
8		512.28	3709.38	0.0	61.0		0.03
9		513.28	3709.38	0.0	73.2		0.03
10		514.28	3709.38	0.0	64.0		0.03
11		515.28	3709.38	0.0	57.9		0.03
12		518.28	3709.38	0.0	61.0		0.03
13		511.28	3708.38	0.0	67.1		0.03
14		513.28	3708.38	0.0	76.2		0.03
15		514.28	3708.38	0.0	70.1		0.03
16		517.28	3708.38	0.0	64.0		0.04
17		513.28	3707.38	0.0	64.0		0.03
18		512.28	3707.38	0.0	67.1		0.03
19		515.28	3707.38	0.0	61.0		0.04
20		517.28	3707.38	0.0	67.1		0.04
21		511.28	3706.38	0.0	73.2		0.02
22		512.28	3706.38	0.0	73.2		0.02
23		513.28	3706.38	0.0	64.0		0.03
24		514.28	3706.38	0.0	64.0		0.03
25		515.28	3706.38	0.0	67.1		0.04
26		517.28	3714.18	0.0	70.1		0.04
27		512.28	3715.18	0.0	61.0		0.04
28		514.28	3716.18	0.0	61.0		0.05
29		515.28	3716.18	0.0	70.1	*	0.07
30		513.28	3717.18	0.0	61.0		0.05
31		514.28	3717.18	0.0	61.0		0.06
32		512.28	3711.18	0.0	64.0		0.02
33		511.28	3709.38	0.0	64.0		0.03

34	511.28	3709.38	0.0	61.0	0.03
35	513.28	3709.38	0.0	73.2	0.03
36	514.28	3709.38	0.0	64.0	0.03
37	515.28	3709.38	0.0	57.9	0.03
38	511.28	3708.38	0.0	67.1	0.03
39	513.28	3708.38	0.0	76.2	0.03
40	514.28	3708.38	0.0	70.1	0.03
41	517.28	3708.38	0.0	64.0	0.04
42	513.28	3707.38	0.0	64.0	0.03
43	512.28	3707.38	0.0	67.1	0.03
44	515.28	3707.38	0.0	61.0	0.04
45	517.28	3707.38	0.0	67.1	0.04
46	511.28	3706.38	0.0	73.2	0.02
47	512.28	3706.38	0.0	73.2	0.02
48	513.28	3706.38	0.0	64.0	0.03
49	514.28	3706.38	0.0	64.0	0.03
50	515.28	3706.38	0.0	67.1	0.04
51	517.28	3714.18	0.0	70.1	0.04
52	512.28	3715.18	0.0	61.0	0.04
53	511.28	3716.18	0.0	61.0	0.04
54	514.28	3716.18	0.0	61.0	0.05
55	515.28	3716.18	0.0	70.1	0.07
56	513.28	3717.18	0.0	61.0	0.05
57	514.28	3717.18	0.0	61.0	0.06
58	512.28	3711.18	0.0	64.0	0.02
59	516.50	3708.10	0.0	67.7	0.05
60	518.10	3709.35	0.0	79.3	0.03
61	514.50	3708.80	0.0	80.5	0.03
62	517.30	3714.40	0.0	76.2	0.04

FIVE HIGHEST 1-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48) *	6.38	(156,15) *	5.12	(230,12)	5.11	(205,13)	4.92	(218,12)	4.80	(248,15)
2(515.88,3710.48)	6.15	(156,15)	5.09	(205,13)	5.07	(230,12)	4.78	(156,14)	4.76	(173,15)
3(515.78,3710.38)	5.15	(156,15)	4.90	(205,13)	4.88	(218,16)	4.87	(250,12)	4.81	(230,12)
4(515.88,3710.38)	5.39	(156,15)	4.95	(205,13)	4.88	(230,12)	4.87	(218,12)	4.75	(156,14)
5(515.68,3710.38)	4.89	(156,15)	4.84	(218,16)	4.83	(205,13)	4.82	(233,12)	4.81	(250,12)
6(515.98,3710.38)	5.58	(156,15)	4.99	(205,13)	4.98	(194,13)	4.93	(230,12)	4.89	(218,12)
7(511.28,3709.38)	1.50	(213,13)	1.50	(248, 8)	1.50	(93,15)	1.44	(265, 9)	1.43	(343,15)
8(512.28,3709.38)	1.89	(93,15)	1.78	(213,13)	1.77	(231, 9)	1.75	(231,17)	1.75	(152,17)
9(513.28,3709.38)	2.30	(298,16)	2.20	(122,14)	2.09	(206,15)	2.09	(231,17)	2.05	(194,10)
10(514.28,3709.38)	2.65	(249,11)	2.65	(262,12)	2.61	(298,16)	2.59	(265,15)	2.53	(85,14)
11(515.28,3709.38)	3.24	(276,11)	3.17	(265,15)	3.07	(85,14)	3.03	(297,10)	3.03	(52,14)
12(518.28,3709.38)	2.95	(237,15)	2.92	(227,15)	2.82	(262,13)	2.81	(121,11)	2.77	(269,11)
13(511.28,3708.38)	1.47	(201,18)	1.42	(152,17)	1.38	(248, 8)	1.36	(213,13)	1.35	(231, 9)
14(513.28,3708.38)	1.93	(298,16)	1.86	(203,13)	1.86	(201,18)	1.83	(171,15)	1.83	(194,10)
15(514.28,3708.38)	2.06	(203,13)	2.05	(261,16)	2.03	(240,17)	2.02	(171,15)	2.01	(194,10)
16(517.28,3708.38)	2.63	(195,14)	2.48	(233,10)	2.45	(260,10)	2.22	(122,15)	2.22	(261,15)
17(513.28,3707.38)	1.65	(201,18)	1.62	(277,15)	1.59	(203,13)	1.58	(173,10)	1.57	(171,15)
18(512.28,3707.38)	1.49	(201,18)	1.44	(152,17)	1.43	(173,10)	1.40	(248, 8)	1.39	(171,15)
19(515.28,3707.38)	2.00	(90,14)	1.99	(173,11)	1.80	(204,18)	1.80	(205,18)	1.80	(240,17)
20(517.28,3707.38)	2.04	(195,14)	1.92	(101,10)	1.89	(201,17)	1.85	(169,18)	1.84	(168,17)
21(511.28,3706.38)	1.21	(260,18)	1.16	(201,18)	1.14	(152,17)	1.13	(173,10)	1.11	(248, 8)
22(512.28,3706.38)	1.32	(277,10)	1.30	(201,18)	1.26	(260,18)	1.26	(173,10)	1.24	(50,15)
23(513.28,3706.38)	1.41	(277,15)	1.41	(277,10)	1.38	(173,10)	1.35	(50,15)	1.34	(203,13)
24(514.28,3706.38)	1.51	(277,15)	1.47	(277,10)	1.46	(203,13)	1.44	(50,15)	1.42	(90,14)
25(515.28,3706.38)	1.53	(90,14)	1.52	(173,11)	1.51	(163, 9)	1.50	(90,12)	1.48	(122,11)
26(517.28,3714.18)	3.57	(221,13)	3.55	(231,16)	3.52	(217,16)	3.50	(231,14)	3.49	(200,12)
27(512.28,3715.18)	1.71	(171,12)	1.70	(241,17)	1.67	(189,18)	1.67	(220,12)	1.65	(229,16)
28(514.28,3716.18)	1.91	(269,16)	1.89	(287,11)	1.87	(309,16)	1.83	(317,15)	1.82	(244,16)
29(515.28,3716.18)	1.99	(317,15)	1.95	(227,17)	1.93	(224,17)	1.90	(184,16)	1.90	(223,16)
30(513.28,3717.18)	1.56	(287,11)	1.49	(244,17)	1.47	(244,16)	1.47	(234,16)	1.47	(214,17)
31(514.28,3717.18)	1.59	(244,16)	1.58	(214,17)	1.57	(237,17)	1.57	(200,18)	1.56	(244,17)

32(512.28,3711.18)	2.27	(163,11)	2.17	(350,13)	2.13	(241,15)	2.09	(250, 9)	2.02	(249,16)
33(511.28,3709.38)	1.50	(213,13)	1.50	(248, 8)	1.50	(93,15)	1.44	(265, 9)	1.43	(343,15)
34(511.28,3709.38)	1.50	(213,13)	1.50	(248, 8)	1.50	(93,15)	1.44	(265, 9)	1.43	(343,15)
35(513.28,3709.38)	2.30	(298,16)	2.20	(122,14)	2.09	(206,15)	2.09	(231,17)	2.05	(194,10)
36(514.28,3709.38)	2.65	(249,11)	2.65	(262,12)	2.61	(298,16)	2.59	(265,15)	2.53	(85,14)
37(515.28,3709.38)	3.24	(276,11)	3.17	(265,15)	3.07	(85,14)	3.03	(297,10)	3.03	(52,14)
38(511.28,3708.38)	1.47	(201,18)	1.42	(152,17)	1.38	(248, 8)	1.36	(213,13)	1.35	(231, 9)
39(513.28,3708.38)	1.93	(298,16)	1.86	(203,13)	1.86	(201,18)	1.83	(171,15)	1.83	(194,10)
40(514.28,3708.38)	2.06	(203,13)	2.05	(261,16)	2.03	(240,17)	2.02	(171,15)	2.01	(194,10)
41(517.28,3708.38)	2.63	(195,14)	2.48	(233,10)	2.45	(260,10)	2.22	(122,15)	2.22	(261,15)
42(513.28,3707.38)	1.65	(201,18)	1.62	(277,15)	1.59	(203,13)	1.58	(173,10)	1.57	(171,15)
43(512.28,3707.38)	1.49	(201,18)	1.44	(152,17)	1.43	(173,10)	1.40	(248, 8)	1.39	(171,15)
44(515.28,3707.38)	2.00	(90,14)	1.99	(173,11)	1.80	(204,18)	1.80	(205,18)	1.80	(240,17)
45(517.28,3707.38)	2.04	(195,14)	1.92	(101,10)	1.89	(201,17)	1.85	(169,18)	1.84	(168,17)
46(511.28,3706.38)	1.21	(260,18)	1.16	(201,18)	1.14	(152,17)	1.13	(173,10)	1.11	(248, 8)
47(512.28,3706.38)	1.32	(277,10)	1.30	(201,18)	1.26	(260,18)	1.26	(173,10)	1.24	(50,15)
48(513.28,3706.38)	1.41	(277,15)	1.41	(277,10)	1.38	(173,10)	1.35	(50,15)	1.34	(203,13)
49(514.28,3706.38)	1.51	(277,15)	1.47	(277,10)	1.46	(203,13)	1.44	(50,15)	1.42	(90,14)
50(515.28,3706.38)	1.53	(90,14)	1.52	(173,11)	1.51	(163, 9)	1.50	(90,12)	1.48	(122,11)
51(517.28,3714.18)	3.57	(221,13)	3.55	(231,16)	3.52	(217,16)	3.50	(231,14)	3.49	(200,12)
52(512.28,3715.18)	1.71	(171,12)	1.70	(241,17)	1.67	(189,18)	1.67	(220,12)	1.65	(229,16)
53(511.28,3716.18)	1.38	(276,16)	1.37	(174,18)	1.37	(220,13)	1.33	(189,18)	1.33	(220,12)
54(514.28,3716.18)	1.91	(269,16)	1.89	(287,11)	1.87	(309,16)	1.83	(317,15)	1.82	(244,16)
55(515.28,3716.18)	1.99	(317,15)	1.95	(227,17)	1.93	(224,17)	1.90	(184,16)	1.90	(223,16)
56(513.28,3717.18)	1.56	(287,11)	1.49	(244,17)	1.47	(244,16)	1.47	(234,16)	1.47	(214,17)
57(514.28,3717.18)	1.59	(244,16)	1.58	(214,17)	1.57	(237,17)	1.57	(200,18)	1.56	(244,17)
58(512.28,3711.18)	2.27	(163,11)	2.17	(350,13)	2.13	(241,15)	2.09	(250, 9)	2.02	(249,16)
59(516.50,3708.10)	2.54	(195,14)	2.47	(173,11)	2.43	(163, 9)	2.40	(201,16)	2.33	(163,12)
60(518.10,3709.35)	3.03	(237,15)	2.95	(227,15)	2.85	(262,13)	2.82	(258,13)	2.81	(221,16)
61(514.50,3708.80)	2.25	(265,15)	2.25	(261,16)	2.24	(233,15)	2.21	(259,12)	2.21	(85,14)
62(517.30,3714.40)	3.30	(221,13)	3.24	(146,12)	3.22	(144, 9)	3.18	(217,16)	3.16	(231,14)

FIVE HIGHEST 3-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48) *	3.72	(156,15)	1.99	(90,15)	1.89	(96,12)	1.76	(205,15)	1.71	(230,12)
2(515.88,3710.48)	3.64	(156,15)	2.01	(90,15)	1.75	(205,15)	1.69	(230,12)	1.66	(247,15)
3(515.78,3710.38)	3.29	(156,15)	1.81	(107,12)	1.81	(247,15)	1.70	(205,15)	1.69	(297,12)
4(515.88,3710.38)	3.38	(156,15)	2.07	(90,15)	1.83	(193,15)	1.78	(247,15)	1.72	(205,15)
5(515.68,3710.38)	3.19	(156,15) *	2.70	(265,15)	1.83	(107,12)	1.73	(297,12)	1.68	(205,15)
6(515.98,3710.38)	2.48	(194,15)	2.06	(90,15)	1.93	(96,12)	1.86	(156,15)	1.81	(193,15)
7(511.28,3709.38)	0.87	(50,12)	0.84	(254,18)	0.83	(85,18)	0.76	(86,15)	0.74	(120,12)
8(512.28,3709.38)	1.52	(251,12)	1.08	(117, 9)	1.06	(50,12)	0.95	(120,12)	0.92	(48,15)
9(513.28,3709.38)	1.92	(251,12)	1.89	(295,12)	1.31	(269,15)	1.29	(50,12)	1.29	(117, 9)
10(514.28,3709.38)	2.19	(295,12)	1.62	(44,12)	1.55	(249,12)	1.54	(251,12)	1.50	(113,15)
11(515.28,3709.38)	2.00	(265,15)	1.82	(297,12)	1.60	(203,15)	1.60	(107,12)	1.46	(277,15)
12(518.28,3709.38)	1.82	(237,15)	1.75	(121,12)	1.69	(269,12)	1.59	(204,15)	1.59	(170,18)
13(511.28,3708.38)	1.06	(251,12)	0.84	(56, 3)	0.83	(56, 6)	0.81	(276,15)	0.79	(80, 9)
14(513.28,3708.38)	1.59	(295,12)	1.16	(44,12)	1.07	(81,15)	1.05	(269,15)	1.04	(284,12)
15(514.28,3708.38)	1.34	(44,12)	1.24	(277,15)	1.22	(284,12)	1.21	(297,12)	1.11	(265,15)
16(517.28,3708.38)	1.45	(240,15)	1.44	(173,18)	1.42	(52,12)	1.41	(261,15)	1.41	(208,18)
17(513.28,3707.38)	1.07	(50,15)	0.98	(44,12)	0.94	(277,15)	0.89	(295,12)	0.88	(60,18)
18(512.28,3707.38)	1.13	(295,12)	0.88	(247,18)	0.86	(44,12)	0.75	(81,15)	0.74	(143,18)
19(515.28,3707.38)	1.29	(193,15)	1.13	(163, 9)	1.11	(205,18)	1.07	(363,12)	1.05	(90,15)
20(517.28,3707.38)	1.64	(261,15)	1.60	(293,15)	1.54	(168,18)	1.11	(173,18)	1.09	(286, 9)
21(511.28,3706.38)	0.82	(295,12)	0.77	(247,18)	0.74	(143,18)	0.70	(56,18)	0.59	(246,21)
22(512.28,3706.38)	0.77	(50,15)	0.75	(111, 9)	0.75	(44,12)	0.71	(96, 6)	0.65	(295,12)
23(513.28,3706.38)	0.81	(60,18)	0.80	(81,18)	0.79	(277,15)	0.77	(111, 9)	0.74	(246,15)
24(514.28,3706.38)	0.99	(247,15)	0.90	(203,15)	0.86	(277,15)	0.83	(81,18)	0.81	(363,12)
25(515.28,3706.38)	1.40	(163, 9)	1.10	(297,12)	1.05	(193,15)	0.93	(204,18)	0.87	(364,15)
26(517.28,3714.18)	2.03	(146,15)	2.02	(165, 9)	1.92	(149,18)	1.89	(183,15)	1.88	(141,15)
27(512.28,3715.18)	1.32	(273,15)	1.12	(88,15)	0.98	(347,12)	0.97	(290,12)	0.97	(220,12)
28(514.28,3716.18)	1.46	(270,15)	1.17	(244,18)	1.12	(135,12)	1.07	(347,15)	1.04	(272,15)
29(515.28,3716.18)	1.68	(126,12)	1.56	(300,12)	1.47	(242,15)	1.43	(197,12)	1.43	(153,18)

30(513.28,3717.18)	1.01	(270,15)	0.99	(244,18)	0.97	(174,18)	0.97	(347,12)	0.91	(287,12)
31(514.28,3717.18)	1.20	(126,12)	1.14	(270,15)	1.05	(244,18)	0.92	(135,12)	0.92	(30,12)
32(512.28,3711.18)	1.39	(85,18)	1.31	(249,18)	1.28	(230,18)	1.25	(120,18)	1.24	(82,12)
33(511.28,3709.38)	0.87	(50,12)	0.84	(254,18)	0.83	(85,18)	0.76	(86,15)	0.74	(120,12)
34(511.28,3709.38)	0.87	(50,12)	0.84	(254,18)	0.83	(85,18)	0.76	(86,15)	0.74	(120,12)
35(513.28,3709.38)	1.92	(251,12)	1.89	(295,12)	1.31	(269,15)	1.29	(50,12)	1.29	(117, 9)
36(514.28,3709.38)	2.19	(295,12)	1.62	(44,12)	1.55	(249,12)	1.54	(251,12)	1.50	(113,15)
37(515.28,3709.38)	2.00	(265,15)	1.82	(297,12)	1.60	(203,15)	1.60	(107,12)	1.46	(277,15)
38(511.28,3708.38)	1.06	(251,12)	0.84	(56, 3)	0.83	(56, 6)	0.81	(276,15)	0.79	(80, 9)
39(513.28,3708.38)	1.59	(295,12)	1.16	(44,12)	1.07	(81,15)	1.05	(269,15)	1.04	(284,12)
40(514.28,3708.38)	1.34	(44,12)	1.24	(277,15)	1.22	(284,12)	1.21	(297,12)	1.11	(265,15)
41(517.28,3708.38)	1.45	(240,15)	1.44	(173,18)	1.42	(52,12)	1.41	(261,15)	1.41	(208,18)
42(513.28,3707.38)	1.07	(50,15)	0.98	(44,12)	0.94	(277,15)	0.89	(295,12)	0.88	(60,18)
43(512.28,3707.38)	1.13	(295,12)	0.88	(247,18)	0.86	(44,12)	0.75	(81,15)	0.74	(143,18)
44(515.28,3707.38)	1.29	(193,15)	1.13	(163, 9)	1.11	(205,18)	1.07	(363,12)	1.05	(90,15)
45(517.28,3707.38)	1.64	(261,15)	1.60	(293,15)	1.54	(168,18)	1.11	(173,18)	1.09	(286, 9)
46(511.28,3706.38)	0.82	(295,12)	0.77	(247,18)	0.74	(143,18)	0.70	(56,18)	0.59	(246,21)
47(512.28,3706.38)	0.77	(50,15)	0.75	(111, 9)	0.75	(44,12)	0.71	(96, 6)	0.65	(295,12)
48(513.28,3706.38)	0.81	(60,18)	0.80	(81,18)	0.79	(277,15)	0.77	(111, 9)	0.74	(246,15)
49(514.28,3706.38)	0.99	(247,15)	0.90	(203,15)	0.86	(277,15)	0.83	(81,18)	0.81	(363,12)
50(515.28,3706.38)	1.40	(163, 9)	1.10	(297,12)	1.05	(193,15)	0.93	(204,18)	0.87	(364,15)
51(517.28,3714.18)	2.03	(146,15)	2.02	(165, 9)	1.92	(149,18)	1.89	(183,15)	1.88	(141,15)
52(512.28,3715.18)	1.32	(273,15)	1.12	(88,15)	0.98	(347,12)	0.97	(290,12)	0.97	(220,12)
53(511.28,3716.18)	0.96	(278,15)	0.92	(273,15)	0.86	(220,12)	0.84	(88,15)	0.79	(347,12)
54(514.28,3716.18)	1.46	(270,15)	1.17	(244,18)	1.12	(135,12)	1.07	(347,15)	1.04	(272,15)
55(515.28,3716.18)	1.68	(126,12)	1.56	(300,12)	1.47	(242,15)	1.43	(197,12)	1.43	(153,18)
56(513.28,3717.18)	1.01	(270,15)	0.99	(244,18)	0.97	(174,18)	0.97	(347,12)	0.91	(287,12)
57(514.28,3717.18)	1.20	(126,12)	1.14	(270,15)	1.05	(244,18)	0.92	(135,12)	0.92	(30,12)
58(512.28,3711.18)	1.39	(85,18)	1.31	(249,18)	1.28	(230,18)	1.25	(120,18)	1.24	(82,12)
59(516.50,3708.10)	1.97	(293,15)	1.48	(163, 9)	1.47	(260,12)	1.45	(173,12)	1.43	(204,18)
60(518.10,3709.35)	1.78	(127,12)	1.63	(204,15)	1.61	(170,18)	1.60	(240,15)	1.57	(362,15)
61(514.50,3708.80)	1.50	(44,12)	1.41	(297,12)	1.37	(284,12)	1.36	(265,15)	1.35	(277,15)
62(517.30,3714.40)	1.89	(165, 9)	1.82	(149,18)	1.80	(146,15)	1.77	(153,15)	1.74	(183,15)

FIVE HIGHEST 8-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	1.47	(230,16) *	1.39	(156,16)	1.34	(205,16)	1.17	(193,16)	0.99	(248,16)
2(515.88,3710.48)	1.48	(230,16)	1.37	(156,16)	1.33	(205,16)	0.90	(193,16)	0.81	(107,16)
3(515.78,3710.38) *	1.53	(230,16)	1.24	(156,16)	1.07	(107,16)	0.97	(297,16)	0.94	(193,16)
4(515.88,3710.38)	1.52	(230,16)	1.27	(205,16)	1.27	(156,16)	1.25	(193,16)	0.83	(107,16)
5(515.68,3710.38)	1.22	(230,16)	1.20	(156,16)	1.16	(297,16)	1.01	(265,16)	0.96	(52,16)
6(515.98,3710.38)	1.51	(230,16)	1.37	(194,16)	1.29	(205,16)	1.24	(193,16)	1.11	(107,16)
7(511.28,3709.38)	0.66	(35,16)	0.63	(56, 8)	0.49	(96,16)	0.49	(120,16)	0.46	(42,16)
8(512.28,3709.38)	0.76	(251,16)	0.60	(120,16)	0.56	(96,16)	0.55	(48,16)	0.53	(80,16)
9(513.28,3709.38)	0.72	(56, 8)	0.72	(251,16)	0.71	(295,16)	0.69	(113,16)	0.68	(50,16)
10(514.28,3709.38)	1.14	(81,16)	0.88	(328,16)	0.87	(52,16)	0.85	(249,16)	0.82	(295,16)
11(515.28,3709.38)	1.50	(297,16)	0.98	(52,16)	0.96	(230,16)	0.75	(265,16)	0.73	(276,16)
12(518.28,3709.38)	1.23	(121,16)	0.88	(204,16)	0.77	(66,16)	0.74	(23,16)	0.72	(362,16)
13(511.28,3708.38)	0.72	(56, 8)	0.62	(56,24)	0.57	(80,16)	0.52	(251,16)	0.48	(87, 8)
14(513.28,3708.38)	0.84	(81,16)	0.63	(328,16)	0.60	(295,16)	0.47	(296,16)	0.46	(249,16)
15(514.28,3708.38)	1.16	(297,16)	0.68	(52,16)	0.66	(277,16)	0.64	(328,16)	0.60	(230,16)
16(517.28,3708.38)	1.08	(293,16)	1.03	(308,16)	1.00	(52,16)	0.97	(286,16)	0.84	(127,16)
17(513.28,3707.38)	0.58	(81,16)	0.58	(328,16)	0.55	(277,16)	0.52	(297,16)	0.48	(7,24)
18(512.28,3707.38)	0.46	(81,16)	0.46	(328,16)	0.44	(56,24)	0.42	(295,16)	0.40	(56, 8)
19(515.28,3707.38)	0.79	(295,16)	0.75	(194,16)	0.69	(230,16)	0.65	(193,16)	0.61	(264, 8)
20(517.28,3707.38)	0.87	(293,16)	0.81	(95,24)	0.80	(52,16)	0.77	(286,16)	0.76	(261,16)
21(511.28,3706.38)	0.43	(246,24)	0.43	(56,24)	0.40	(112, 8)	0.40	(111,24)	0.37	(56, 8)
22(512.28,3706.38)	0.57	(81,16)	0.46	(328,16)	0.46	(10, 8)	0.45	(96, 8)	0.41	(112, 8)
23(513.28,3706.38)	0.67	(297,16)	0.61	(7,24)	0.50	(57, 8)	0.47	(277,16)	0.40	(111, 8)
24(514.28,3706.38)	0.57	(297,16)	0.56	(264, 8)	0.51	(277,16)	0.50	(264,16)	0.47	(230,16)
25(515.28,3706.38)	0.64	(264, 8)	0.62	(295,16)	0.57	(84,24)	0.57	(194,16)	0.52	(345,16)
26(517.28,3714.18)	1.33	(141,16)	1.20	(146,16)	1.07	(239,16)	1.06	(183,16)	1.04	(236,16)
27(512.28,3715.18)	0.80	(273,16)	0.66	(278,16)	0.56	(220,16)	0.52	(274,16)	0.52	(108,16)

28(514.28,3716.18)	1.21	(270,16)	0.87	(336, 8)	0.76	(272,16)	0.71	(94,16)	0.56	(132,16)
29(515.28,3716.18)	1.01	(300,16)	0.92	(30,16)	0.85	(126,16)	0.76	(197,16)	0.72	(336,24)
30(513.28,3717.18)	0.87	(270,16)	0.64	(129,16)	0.64	(336, 8)	0.59	(272,16)	0.59	(132, 8)
31(514.28,3717.18)	0.97	(270,16)	0.75	(30,16)	0.75	(336, 8)	0.64	(272,16)	0.63	(30, 8)
32(512.28,3711.18)	1.13	(250,16)	0.69	(82,16)	0.68	(249,16)	0.62	(38,16)	0.52	(85,24)
33(511.28,3709.38)	0.66	(35,16)	0.63	(56, 8)	0.49	(96,16)	0.49	(120,16)	0.46	(42,16)
34(511.28,3709.38)	0.66	(35,16)	0.63	(56, 8)	0.49	(96,16)	0.49	(120,16)	0.46	(42,16)
35(513.28,3709.38)	0.72	(56, 8)	0.72	(251,16)	0.71	(295,16)	0.69	(113,16)	0.68	(50,16)
36(514.28,3709.38)	1.14	(81,16)	0.88	(328,16)	0.87	(52,16)	0.85	(249,16)	0.82	(295,16)
37(515.28,3709.38)	1.30	(297,16)	0.98	(52,16)	0.96	(230,16)	0.75	(265,16)	0.73	(276,16)
38(511.28,3708.38)	0.72	(56, 8)	0.62	(56,24)	0.57	(80,16)	0.52	(251,16)	0.48	(87, 8)
39(513.28,3708.38)	0.84	(81,16)	0.63	(328,16)	0.60	(295,16)	0.47	(296,16)	0.46	(249,16)
40(514.28,3708.38)	1.16	(297,16)	0.68	(52,16)	0.66	(277,16)	0.64	(328,16)	0.60	(230,16)
41(517.28,3708.38)	1.08	(293,16)	1.03	(308,16)	1.00	(52,16)	0.97	(286,16)	0.84	(127,16)
42(513.28,3707.38)	0.58	(81,16)	0.58	(328,16)	0.55	(277,16)	0.52	(297,16)	0.48	(7,24)
43(512.28,3707.38)	0.46	(81,16)	0.46	(328,16)	0.44	(56,24)	0.42	(295,16)	0.40	(56, 8)
44(515.28,3707.38)	0.79	(295,16)	0.75	(194,16)	0.69	(230,16)	0.65	(193,16)	0.61	(264, 8)
45(517.28,3707.38)	0.87	(293,16)	0.81	(95,24)	0.80	(52,16)	0.77	(286,16)	0.76	(261,16)
46(511.28,3706.38)	0.43	(246,24)	0.43	(56,24)	0.40	(112, 8)	0.40	(111,24)	0.37	(56, 8)
47(512.28,3706.38)	0.57	(81,16)	0.46	(328,16)	0.46	(10, 8)	0.45	(96, 8)	0.41	(112, 8)
48(513.28,3706.38)	0.67	(297,16)	0.61	(7,24)	0.50	(57, 8)	0.47	(277,16)	0.40	(111, 8)
49(514.28,3706.38)	0.57	(297,16)	0.56	(264, 8)	0.51	(277,16)	0.50	(264,16)	0.47	(230,16)
50(515.28,3706.38)	0.64	(264, 8)	0.62	(295,16)	0.57	(84,24)	0.57	(194,16)	0.52	(345,16)
51(517.28,3714.18)	1.33	(141,16)	1.20	(146,16)	1.07	(239,16)	1.06	(183,16)	1.04	(236,16)
52(512.28,3715.18)	0.80	(273,16)	0.66	(278,16)	0.56	(220,16)	0.52	(274,16)	0.52	(108,16)
53(511.28,3716.18)	0.59	(273,16)	0.52	(278,16)	0.49	(220,16)	0.45	(46,24)	0.43	(270,24)
54(514.28,3716.18)	1.21	(270,16)	0.87	(336, 8)	0.76	(272,16)	0.71	(94,16)	0.56	(132,16)
55(515.28,3716.18)	1.01	(300,16)	0.92	(30,16)	0.85	(126,16)	0.76	(197,16)	0.72	(336,24)
56(513.28,3717.18)	0.87	(270,16)	0.64	(129,16)	0.64	(336, 8)	0.59	(272,16)	0.59	(132, 8)
57(514.28,3717.18)	0.97	(270,16)	0.75	(30,16)	0.75	(336, 8)	0.64	(272,16)	0.63	(30, 8)
58(512.28,3711.18)	1.13	(250,16)	0.69	(82,16)	0.68	(249,16)	0.62	(38,16)	0.52	(85,24)
59(516.50,3708.10)	1.04	(194,16)	0.98	(296,16)	0.97	(340,16)	0.96	(293,16)	0.91	(117,16)
60(518.10,3709.35)	1.06	(127,16)	0.90	(204,16)	0.77	(240,16)	0.74	(23,16)	0.71	(362,16)
61(514.50,3708.80)	1.30	(297,16)	0.79	(52,16)	0.71	(230,16)	0.69	(277,16)	0.67	(328,16)
62(517.30,3714.40)	1.29	(236,16)	1.22	(141,16)	1.08	(146,16)	1.00	(239,16)	0.88	(149,16)

FIVE HIGHEST 24-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	0.50	(205,24)	0.50	(230,24)	0.46	(156,24)	0.46	(193,24)	0.33	(248,24)
2(515.88,3710.48)	0.50	(230,24)	0.50	(205,24)	0.46	(156,24)	0.37	(193,24)	0.28	(107,24)
3(515.78,3710.38)	0.52	(230,24)	0.41	(156,24)	0.40	(193,24)	0.37	(205,24)	0.37	(107,24)
4(515.88,3710.38)	0.52	(230,24)	0.49	(193,24)	0.48	(205,24)	0.42	(156,24)	0.29	(107,24)
5(515.68,3710.38)	0.42	(230,24)	0.40	(156,24)	0.39	(297,24)	0.37	(205,24)	0.34	(265,24)
6(515.98,3710.38)	0.51	(230,24)	0.49	(205,24)	0.49	(193,24)	0.46	(194,24)	0.38	(107,24)
7(511.28,3709.38)	0.36	(56,24)	0.33	(35,24)	0.28	(120,24)	0.24	(42,24)	0.23	(96,24)
8(512.28,3709.38)	0.42	(56,24)	0.31	(87,24)	0.30	(120,24)	0.30	(251,24)	0.30	(80,24)
9(513.28,3709.38)	0.54	(56,24)	0.30	(117,24)	0.30	(87,24)	0.29	(247,24)	0.29	(248,24)
10(514.28,3709.38)	0.44	(81,24)	0.34	(117,24)	0.34	(328,24)	0.32	(284,24)	0.30	(52,24)
11(515.28,3709.38)	0.51	(297,24)	0.35	(230,24)	0.33	(52,24)	0.29	(81,24)	0.26	(205,24)
12(518.28,3709.38)	0.41	(121,24)	0.35	(23,24)	0.32	(170,24)	0.29	(204,24)	0.29	(127,24)
13(511.28,3708.38)	0.54	(56,24)	0.32	(80,24)	0.32	(87,24)	0.26	(35,24)	0.26	(247,24)
14(513.28,3708.38)	0.34	(56,24)	0.34	(81,24)	0.28	(111,24)	0.26	(284,24)	0.26	(328,24)
15(514.28,3708.38)	0.39	(297,24)	0.31	(328,24)	0.28	(111,24)	0.27	(81,24)	0.27	(230,24)
16(517.28,3708.38)	0.51	(293,24)	0.44	(286,24)	0.43	(307,24)	0.39	(152,24)	0.38	(308,24)
17(513.28,3707.38)	0.35	(111,24)	0.33	(81,24)	0.31	(56,24)	0.28	(328,24)	0.26	(246,24)
18(512.28,3707.38)	0.41	(56,24)	0.32	(111,24)	0.23	(112,24)	0.23	(284,24)	0.23	(81,24)
19(515.28,3707.38)	0.38	(264,24)	0.36	(57,24)	0.34	(84,24)	0.33	(295,24)	0.29	(230,24)
20(517.28,3707.38)	0.53	(307,24)	0.46	(293,24)	0.40	(286,24)	0.33	(36,24)	0.32	(261,24)
21(511.28,3706.38)	0.39	(56,24)	0.30	(111,24)	0.24	(112,24)	0.20	(87,24)	0.20	(81,24)
22(512.28,3706.38)	0.39	(111,24)	0.35	(81,24)	0.27	(56,24)	0.25	(328,24)	0.25	(112,24)
23(513.28,3706.38)	0.36	(111,24)	0.25	(112,24)	0.24	(264,24)	0.24	(81,24)	0.24	(328,24)
24(514.28,3706.38)	0.41	(264,24)	0.28	(57,24)	0.26	(81,24)	0.23	(8,24)	0.23	(230,24)
25(515.28,3706.38)	0.40	(264,24)	0.35	(57,24)	0.32	(84,24)	0.31	(10,24)	0.31	(295,24)

26(517.28,3714.18)	0.47	(183,24)	0.45	(141,24)	0.41	(149,24)	0.40	(239,24)	0.40	(146,24)
27(512.28,3715.18)	0.32	(273,24)	0.30	(278,24)	0.25	(88,24)	0.22	(97,24)	0.22	(162,24)
28(514.28,3716.18)	0.47	(270,24)	0.41	(132,24)	0.40	(336,24)	0.35	(30,24)	0.32	(281,24)
29(515.28,3716.18) *	0.58	(336,24) *	0.55	(30,24)	0.43	(335,24)	0.41	(68,24)	0.40	(300,24)
30(513.28,3717.18)	0.48	(132,24)	0.39	(270,24)	0.33	(281,24)	0.29	(336,24)	0.28	(88,24)
31(514.28,3717.18)	0.50	(30,24)	0.48	(336,24)	0.44	(132,24)	0.41	(357,24)	0.38	(270,24)
32(512.28,3711.18)	0.45	(250,24)	0.30	(249,24)	0.27	(120,24)	0.26	(82,24)	0.25	(85,24)
33(511.28,3709.38)	0.36	(56,24)	0.33	(35,24)	0.28	(120,24)	0.24	(42,24)	0.23	(96,24)
34(511.28,3709.38)	0.36	(56,24)	0.33	(35,24)	0.28	(120,24)	0.24	(42,24)	0.23	(96,24)
35(513.28,3709.38)	0.54	(56,24)	0.30	(117,24)	0.30	(87,24)	0.29	(247,24)	0.29	(248,24)
36(514.28,3709.38)	0.44	(81,24)	0.34	(117,24)	0.34	(328,24)	0.32	(284,24)	0.30	(52,24)
37(515.28,3709.38)	0.51	(297,24)	0.35	(230,24)	0.33	(52,24)	0.29	(81,24)	0.26	(205,24)
38(511.28,3708.38)	0.54	(56,24)	0.32	(80,24)	0.32	(87,24)	0.26	(35,24)	0.26	(247,24)
39(513.28,3708.38)	0.34	(56,24)	0.34	(81,24)	0.28	(111,24)	0.26	(284,24)	0.26	(328,24)
40(514.28,3708.38)	0.39	(297,24)	0.31	(328,24)	0.28	(111,24)	0.27	(81,24)	0.27	(230,24)
41(517.28,3708.38)	0.51	(293,24)	0.44	(286,24)	0.43	(307,24)	0.39	(152,24)	0.38	(308,24)
42(513.28,3707.38)	0.35	(111,24)	0.33	(81,24)	0.31	(56,24)	0.28	(328,24)	0.26	(246,24)
43(512.28,3707.38)	0.41	(56,24)	0.32	(111,24)	0.23	(112,24)	0.23	(284,24)	0.23	(81,24)
44(515.28,3707.38)	0.38	(264,24)	0.36	(57,24)	0.34	(84,24)	0.33	(295,24)	0.29	(230,24)
45(517.28,3707.38)	0.53	(307,24)	0.46	(293,24)	0.40	(286,24)	0.33	(36,24)	0.32	(261,24)
46(511.28,3706.38)	0.39	(56,24)	0.30	(111,24)	0.24	(112,24)	0.20	(87,24)	0.20	(81,24)
47(512.28,3706.38)	0.39	(111,24)	0.35	(81,24)	0.27	(56,24)	0.25	(328,24)	0.25	(112,24)
48(513.28,3706.38)	0.36	(111,24)	0.25	(112,24)	0.24	(264,24)	0.24	(81,24)	0.24	(328,24)
49(514.28,3706.38)	0.41	(264,24)	0.28	(57,24)	0.26	(81,24)	0.23	(8,24)	0.23	(230,24)
50(515.28,3706.38)	0.40	(264,24)	0.35	(57,24)	0.32	(84,24)	0.31	(10,24)	0.31	(295,24)
51(517.28,3714.18)	0.47	(183,24)	0.45	(141,24)	0.41	(149,24)	0.40	(239,24)	0.40	(146,24)
52(512.28,3715.18)	0.32	(273,24)	0.30	(278,24)	0.25	(88,24)	0.22	(97,24)	0.22	(162,24)
53(511.28,3716.18)	0.28	(273,24)	0.26	(278,24)	0.25	(88,24)	0.21	(46,24)	0.20	(220,24)
54(514.28,3716.18)	0.47	(270,24)	0.41	(132,24)	0.40	(336,24)	0.35	(30,24)	0.32	(281,24)
55(515.28,3716.18)	0.58	(336,24)	0.55	(30,24)	0.43	(335,24)	0.41	(68,24)	0.40	(300,24)
56(513.28,3717.18)	0.48	(132,24)	0.39	(270,24)	0.33	(281,24)	0.29	(336,24)	0.28	(88,24)
57(514.28,3717.18)	0.50	(30,24)	0.48	(336,24)	0.44	(132,24)	0.41	(357,24)	0.38	(270,24)
58(512.28,3711.18)	0.45	(250,24)	0.30	(249,24)	0.27	(120,24)	0.26	(82,24)	0.25	(85,24)
59(516.50,3708.10)	0.47	(307,24)	0.47	(163,24)	0.39	(293,24)	0.38	(296,24)	0.37	(345,24)
60(518.10,3709.35)	0.43	(127,24)	0.35	(23,24)	0.30	(204,24)	0.27	(362,24)	0.26	(240,24)
61(514.50,3708.80)	0.43	(297,24)	0.31	(328,24)	0.29	(230,24)	0.27	(52,24)	0.26	(81,24)
62(517.30,3714.40)	0.47	(236,24)	0.41	(141,24)	0.41	(149,24)	0.39	(239,24)	0.36	(146,24)

SECTION H.18

1983 MODELING OUTPUT FOR CO COMPLEX I

COMPLEX I (DATED 90095)
BOWMAN ENVIRONMENTAL ENGINEERING VER. 6.27

SESSION INFORMATION

INPUT DATA FILE NAME : ICC083.DTA
OUTPUT LIST FILE NAME : ICC083.LST
MET DATA FILE NAME : C:\BEE\SHVGGG83.BIN

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
CO SCREEN - 1983 SHREVEPORT/LONGVIEW BINARY MET. DATA

GENERAL INPUT INFORMATION

THIS RUN OF COMPLEX I -VERSION 2.0 IS FOR THE POLLUTANT PART FOR 365 24-HOUR PERIODS.
CONCENTRATION ESTIMATES BEGIN ON HOUR- 1,JULIAN DAY- 1, YEAR-1983.
A FACTOR OF 1.0000000 HAS BEEN SPECIFIED TO CONVERT USER LENGTH UNITS TO KILOMETERS.
0 SIGNIFICANT SOURCES ARE TO BE CONSIDERED.
THIS RUN WILL NOT CONSIDER ANY POLLUTANT LOSS.
HIGH-FIVE SUMMARY CONCENTRATION TABLES WILL BE OUTPUT FOR 4 AVERAGING PERIODS.
AVG TIMES OF 1,3,8, AND 24 HOURS ARE AUTOMATICALLY DISPLAYED.

OPTION	OPTION LIST	OPTION SPECIFICATION : 0= IGNORE OPTION 1= USE OPTION
	TECHNICAL OPTIONS	
1	TERRAIN ADJUSTMENTS	0
2	DO NOT INCLUDE STACK DOWNWASH CALCULATIONS	0
3	DO NOT INCLUDE GRADUAL PLUME RISE CALCULATIONS	1
4	CALCULATE INITIAL PLUME SIZE	1
	INPUT OPTIONS	
5	READ MET DATA FROM CARDS	0
6	READ HOURLY EMISSIONS	0
7	SPECIFY SIGNIFICANT SOURCES	0
8	READ RADIAL DISTANCES TO GENERATE RECEPTORS	0
	PRINTED OUTPUT OPTIONS	
9	DELETE EMISSIONS WITH HEIGHT TABLE	1
10	DELETE MET DATA SUMMARY FOR AVG PERIOD	1
11	DELETE HOURLY CONTRIBUTIONS	1
12	DELETE MET DATA ON HOURLY CONTRIBUTIONS	1
13	DELETE FINAL PLUME RISE CALC ON HRLY CONTRIBUTIONS	1
14	DELETE HOURLY SUMMARY	1
15	DELETE MET DATA ON HRLY SUMMARY	1
16	DELETE FINAL PLUME RISE CALC ON HRLY SUMMARY	1
17	DELETE AVG-PERIOD CONTRIBUTIONS	1
18	DELETE AVERAGING PERIOD SUMMARY	1
19	DELETE AVG CONCENTRATIONS AND HI-5 TABLES	0
	OTHER CONTROL AND OUTPUT OPTIONS	
20	RUN IS PART OF A SEGMENTED RUN	0
21	WRITE PARTIAL CONC TO DISK OR TAPE	0
22	WRITE HOURLY CONC TO DISK OR TAPE	0
23	WRITE AVG-PERIOD CONC TO DISK OR TAPE	0
24	PUNCH AVG-PERIOD CONC ONTO CARDS	0
25	COMPLEX TERRAIN OPTION	1
26	CALM PROCESSING OPTION	0
27	VALLEY SCREENING OPTION	0

ANEMOMETER HEIGHT= 10.00
WIND PROFILE WITH HEIGHT EXPONENTS CORRESPONDING TO STABILITY ARE AS FOLLOWS:
FOR STABILITY A: 0.07
STABILITY B: 0.07
STABILITY C: 0.10
STABILITY D: 0.15
STABILITY E: 0.35
STABILITY F: 0.55

POINT SOURCE INFORMATION

SOURCE		EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	SO2(G/SEC) EMISSIONS	PART(G/SEC) EMISSIONS	STACK HT(M)	STACK TEMP(K)	STACK DIAM(M)	STACK VEL(M/SEC)	POTEN. IMPACT (MICRO G/M**3)	EFF HT(M)	GRD-LVL ELEV USER HT UNITS	BUOY FLUX F M**4/S**3
1 1	COGEN	516.32	3711.89	0.00	6.51	22.9	427.6	3.4	16.6	5.03	283.88	34.40	150.19

ADDITIONAL INFORMATION ON SOURCES.

EMISSION INFORMATION FOR 1 (NPT) POINT SOURCES HAS BEEN INPUT
0 SIGNIFICANT POINT SOURCES(NSIGP) ARE TO BE USED FOR THIS RUN
THE ORDER OF SIGNIFICANCE(INPS) FOR 25 OR LESS POINT SOURCES USED IN THIS RUN AS LISTED BY POINT SOURCE NUMBER:

SURFACE MET DATA FROM STATION(ISFCD) 13957, YEAR(ISFCYR) 1983
MIXING HEIGHT DATA FROM STATION(INXD) 3951, YEAR(INXYR) 1983

RECEPTOR INFORMATION

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)
1		515.977	3710.478	0.0	57.9
2		515.877	3710.478	0.0	57.9
3		515.777	3710.378	0.0	57.9
4		515.877	3710.378	0.0	57.9
5		515.677	3710.378	0.0	57.9
6		515.977	3710.378	0.0	57.9
7		511.277	3709.378	0.0	64.0
8		512.277	3709.378	0.0	61.0
9		513.277	3709.378	0.0	73.2
10		514.277	3709.378	0.0	64.0
11		515.277	3709.378	0.0	57.9
12		518.277	3709.378	0.0	61.0
13		511.277	3708.378	0.0	67.1
14		513.277	3708.378	0.0	76.2
15		514.277	3708.378	0.0	70.1
16		517.277	3708.378	0.0	64.0
17		513.277	3707.378	0.0	64.0
18		512.277	3707.378	0.0	67.1
19		515.277	3707.378	0.0	61.0
20		517.277	3707.378	0.0	67.1
21		511.277	3706.378	0.0	73.2
22		512.277	3706.378	0.0	73.2
23		513.277	3706.378	0.0	64.0
24		514.277	3706.378	0.0	64.0
25		515.277	3706.378	0.0	67.1
26		517.277	3714.176	0.0	70.1
27		512.277	3715.176	0.0	61.0
28		514.277	3716.176	0.0	61.0
29		515.277	3716.176	0.0	70.1
30		513.277	3717.176	0.0	61.0
31		514.277	3717.176	0.0	61.0
32		512.277	3711.176	0.0	64.0
33		511.277	3709.378	0.0	64.0
34		511.277	3709.378	0.0	61.0
35		513.277	3709.378	0.0	73.2
36		514.277	3709.378	0.0	64.0
37		515.277	3709.378	0.0	57.9
38		511.277	3708.378	0.0	67.1
39		513.277	3708.378	0.0	76.2
40		514.277	3708.378	0.0	70.1
41		517.277	3708.378	0.0	64.0
42		513.277	3707.378	0.0	64.0

43	512.277	3707.378	0.0	67.1
44	515.277	3707.378	0.0	61.0
45	517.277	3707.378	0.0	67.1
46	511.277	3706.378	0.0	73.2
47	512.277	3706.378	0.0	73.2
48	513.277	3706.378	0.0	64.0
49	514.277	3706.378	0.0	64.0
50	515.277	3706.378	0.0	67.1
51	517.277	3714.176	0.0	70.1
52	512.277	3715.176	0.0	61.0
53	511.277	3716.176	0.0	61.0
54	514.277	3716.176	0.0	61.0
55	515.277	3716.176	0.0	70.1
56	513.277	3717.176	0.0	61.0
57	514.277	3717.176	0.0	61.0
58	512.277	3711.176	0.0	64.0
59	516.500	3708.100	0.0	67.7
60	518.100	3709.350	0.0	79.3
61	514.500	3708.800	0.0	80.5
62	517.300	3714.400	0.0	76.2

COMPLEX I (DATED 90095)

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COMPLEX
CO SCREEN - 1983 SHREVEPORT/LONGVIEW BINARY MET. DATA

RECEPTORS

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)	DAY	AVG CONC FOR PERIOD 1.HR 1. TO DAY365.HR24. (MICROGRAMS/M**3)
1		515.98	3710.48	0.0	57.9		0.03
2		515.88	3710.48	0.0	57.9		0.03
3		515.78	3710.38	0.0	57.9		0.03
4		515.88	3710.38	0.0	57.9		0.03
5		515.68	3710.38	0.0	57.9		0.03
6		515.98	3710.38	0.0	57.9		0.03
7		511.28	3709.38	0.0	64.0		0.02
8		512.28	3709.38	0.0	61.0		0.03
9		513.28	3709.38	0.0	73.2		0.03
10		514.28	3709.38	0.0	64.0		0.03
11		515.28	3709.38	0.0	57.9		0.03
12		518.28	3709.38	0.0	61.0		0.04
13		511.28	3708.38	0.0	67.1		0.02
14		513.28	3708.38	0.0	76.2		0.02
15		514.28	3708.38	0.0	70.1		0.02
16		517.28	3708.38	0.0	64.0		0.04
17		513.28	3707.38	0.0	64.0		0.02
18		512.28	3707.38	0.0	67.1		0.02
19		515.28	3707.38	0.0	61.0		0.03
20		517.28	3707.38	0.0	67.1		0.04
21		511.28	3706.38	0.0	73.2		0.02
22		512.28	3706.38	0.0	73.2		0.02
23		513.28	3706.38	0.0	64.0		0.02
24		514.28	3706.38	0.0	64.0		0.02
25		515.28	3706.38	0.0	67.1		0.03
26		517.28	3714.18	0.0	70.1		0.04
27		512.28	3715.18	0.0	61.0	*	0.05
28		514.28	3716.18	0.0	61.0		0.04
29		515.28	3716.18	0.0	70.1		0.05
30		513.28	3717.18	0.0	61.0		0.04
31		514.28	3717.18	0.0	61.0		0.04
32		512.28	3711.18	0.0	64.0		0.03
33		511.28	3709.38	0.0	64.0		0.02

34	511.28	3709.38	0.0	61.0	0.02
35	513.28	3709.38	0.0	73.2	0.03
36	514.28	3709.38	0.0	64.0	0.03
37	515.28	3709.38	0.0	57.9	0.03
38	511.28	3708.38	0.0	67.1	0.02
39	513.28	3708.38	0.0	76.2	0.02
40	514.28	3708.38	0.0	70.1	0.02
41	517.28	3708.38	0.0	64.0	0.04
42	513.28	3707.38	0.0	64.0	0.02
43	512.28	3707.38	0.0	67.1	0.02
44	515.28	3707.38	0.0	61.0	0.03
45	517.28	3707.38	0.0	67.1	0.04
46	511.28	3706.38	0.0	73.2	0.02
47	512.28	3706.38	0.0	73.2	0.02
48	513.28	3706.38	0.0	64.0	0.02
49	514.28	3706.38	0.0	64.0	0.02
50	515.28	3706.38	0.0	67.1	0.03
51	517.28	3714.18	0.0	70.1	0.04
52	512.28	3715.18	0.0	61.0	0.05
53	511.28	3716.18	0.0	61.0	0.05
54	514.28	3716.18	0.0	61.0	0.04
55	515.28	3716.18	0.0	70.1	0.05
56	513.28	3717.18	0.0	61.0	0.04
57	514.28	3717.18	0.0	61.0	0.04
58	512.28	3711.18	0.0	64.0	0.03
59	516.50	3708.10	0.0	67.7	0.04
60	518.10	3709.35	0.0	79.3	0.04
61	514.50	3708.80	0.0	80.5	0.02
62	517.30	3714.40	0.0	76.2	0.04

FIVE HIGHEST 1-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48) *	6.27	(300,14) *	5.17	(212,14)	5.13	(211,14)	5.13	(246,14)	5.05	(245,11)
2(515.88,3710.48)	5.15	(245,12)	5.14	(212,14)	5.10	(211,14)	4.94	(237,13)	4.88	(243,11)
3(515.78,3710.38)	4.94	(212,14)	4.91	(211,14)	4.87	(245,12)	4.86	(237,13)	4.81	(243,11)
4(515.88,3710.38)	5.00	(212,14)	4.97	(211,14)	4.94	(245,12)	4.89	(237,13)	4.84	(243,11)
5(515.68,3710.38)	4.87	(212,14)	4.85	(211,14)	4.82	(237,13)	4.78	(245,12)	4.78	(243,11)
6(515.98,3710.38)	5.51	(300,14)	5.04	(212,14)	5.01	(246,14)	4.93	(245,11)	4.91	(237,13)
7(511.28,3709.38)	1.55	(243,15)	1.52	(254,10)	1.51	(243,17)	1.51	(257,17)	1.49	(253, 9)
8(512.28,3709.38)	1.94	(273,16)	1.93	(254,10)	1.91	(266,14)	1.85	(320,11)	1.85	(17,15)
9(513.28,3709.38)	2.40	(273,16)	2.39	(190, 9)	2.36	(266,14)	2.26	(17,15)	2.25	(225,15)
10(514.28,3709.38)	2.87	(232,14)	2.86	(202,10)	2.83	(257,14)	2.82	(269,13)	2.79	(254, 9)
11(515.28,3709.38)	3.41	(238,14)	3.38	(218,15)	3.33	(235,14)	3.30	(226,12)	3.26	(253,10)
12(518.28,3709.38)	2.97	(238,15)	2.87	(221, 9)	2.74	(286,11)	2.74	(67,11)	2.73	(235,10)
13(511.28,3708.38)	1.47	(243,15)	1.44	(283,15)	1.42	(253, 9)	1.42	(169,15)	1.39	(283,10)
14(513.28,3708.38)	2.00	(273,16)	1.99	(190, 9)	1.97	(266,14)	1.92	(87,17)	1.92	(54,11)
15(514.28,3708.38)	2.32	(270,11)	2.23	(87,17)	2.22	(54,11)	2.17	(238,14)	2.15	(232,14)
16(517.28,3708.38)	2.52	(241,14)	2.47	(220,11)	2.47	(245,10)	2.39	(54,10)	2.38	(49,14)
17(513.28,3707.38)	1.60	(246,16)	1.59	(219,12)	1.57	(278,10)	1.56	(87,17)	1.56	(159, 9)
18(512.28,3707.38)	1.50	(246,16)	1.45	(283,15)	1.44	(169,15)	1.44	(173,15)	1.43	(278,10)
19(515.28,3707.38)	2.04	(246,17)	2.00	(270,11)	1.97	(300,13)	1.83	(174,17)	1.80	(202, 9)
20(517.28,3707.38)	2.00	(175,18)	1.92	(44,16)	1.92	(54,10)	1.80	(202,13)	1.80	(124,17)
21(511.28,3706.38)	1.25	(246,16)	1.22	(283,15)	1.21	(173,15)	1.19	(283,17)	1.19	(283,10)
22(512.28,3706.38)	1.36	(246,16)	1.31	(173,15)	1.26	(278,10)	1.25	(159, 9)	1.20	(15,16)
23(513.28,3706.38)	1.46	(246,16)	1.40	(173,15)	1.36	(159, 9)	1.33	(87,18)	1.33	(219,12)
24(514.28,3706.38)	1.47	(167, 8)	1.45	(297,17)	1.45	(219,12)	1.43	(174,17)	1.42	(87,18)
25(515.28,3706.38)	1.57	(202, 9)	1.57	(212, 9)	1.55	(246,17)	1.53	(167, 8)	1.51	(300,13)
26(517.28,3714.18)	3.63	(209,16)	3.63	(240,14)	3.52	(235,13)	3.52	(240,15)	3.48	(209,12)
27(512.28,3715.18)	1.88	(269,16)	1.82	(265,16)	1.74	(238,17)	1.73	(218,17)	1.72	(220,17)
28(514.28,3716.18)	1.97	(224,15)	1.93	(150,17)	1.80	(229,17)	1.79	(170,17)	1.79	(239, 9)
29(515.28,3716.18)	2.11	(199,13)	1.93	(216,17)	1.92	(229,17)	1.90	(228, 9)	1.89	(227,10)
30(513.28,3717.18)	1.58	(265,16)	1.48	(190,16)	1.45	(259,12)	1.45	(260,12)	1.44	(145,18)
31(514.28,3717.18)	1.56	(259,12)	1.56	(260,12)	1.54	(168,18)	1.53	(152,17)	1.53	(269,10)

32(512.28,3711.18)	2.36	(246,15)	2.33	(193,10)	2.32	(191,11)	2.30	(145,17)	2.10	(274,15)
33(511.28,3709.38)	1.55	(243,15)	1.52	(254,10)	1.51	(243,17)	1.51	(257,17)	1.49	(253, 9)
34(511.28,3709.38)	1.55	(243,15)	1.52	(254,10)	1.51	(243,17)	1.51	(257,17)	1.49	(253, 9)
35(513.28,3709.38)	2.40	(273,16)	2.39	(190, 9)	2.36	(266,14)	2.26	(17,15)	2.25	(225,15)
36(514.28,3709.38)	2.87	(232,14)	2.86	(202,10)	2.83	(257,14)	2.82	(269,13)	2.79	(254, 9)
37(515.28,3709.38)	3.41	(238,14)	3.38	(218,15)	3.33	(235,14)	3.30	(226,12)	3.26	(253,10)
38(511.28,3708.38)	1.47	(243,15)	1.44	(283,15)	1.42	(253, 9)	1.42	(169,15)	1.39	(283,10)
39(513.28,3708.38)	2.00	(273,16)	1.99	(190, 9)	1.97	(266,14)	1.92	(87,17)	1.92	(54,11)
40(514.28,3708.38)	2.32	(270,11)	2.23	(87,17)	2.22	(54,11)	2.17	(238,14)	2.15	(232,14)
41(517.28,3708.38)	2.52	(241,14)	2.47	(220,11)	2.47	(245,10)	2.39	(54,10)	2.38	(49,14)
42(513.28,3707.38)	1.60	(246,16)	1.59	(219,12)	1.57	(278,10)	1.56	(87,17)	1.56	(159, 9)
43(512.28,3707.38)	1.50	(246,16)	1.45	(283,15)	1.44	(169,15)	1.44	(173,15)	1.43	(278,10)
44(515.28,3707.38)	2.04	(246,17)	2.00	(270,11)	1.97	(300,13)	1.83	(174,17)	1.80	(202, 9)
45(517.28,3707.38)	2.00	(175,18)	1.92	(44,16)	1.92	(54,10)	1.80	(202,13)	1.80	(124,17)
46(511.28,3706.38)	1.25	(246,16)	1.22	(283,15)	1.21	(173,15)	1.19	(283,17)	1.19	(283,10)
47(512.28,3706.38)	1.36	(246,16)	1.31	(173,15)	1.26	(278,10)	1.25	(159, 9)	1.20	(15,16)
48(513.28,3706.38)	1.46	(246,16)	1.40	(173,15)	1.36	(159, 9)	1.33	(87,18)	1.33	(219,12)
49(514.28,3706.38)	1.47	(167, 8)	1.45	(297,17)	1.45	(219,12)	1.43	(174,17)	1.42	(87,18)
50(515.28,3706.38)	1.57	(202, 9)	1.57	(212, 9)	1.55	(246,17)	1.53	(167, 8)	1.51	(300,13)
51(517.28,3714.18)	3.63	(209,16)	3.63	(240,14)	3.52	(235,13)	3.52	(240,15)	3.48	(209,12)
52(512.28,3715.18)	1.88	(269,16)	1.82	(265,16)	1.74	(238,17)	1.73	(218,17)	1.72	(220,17)
53(511.28,3716.18)	1.46	(269,16)	1.43	(265,16)	1.36	(273,17)	1.36	(202,18)	1.35	(270,10)
54(514.28,3716.18)	1.97	(224,15)	1.93	(150,17)	1.80	(229,17)	1.79	(170,17)	1.79	(239, 9)
55(515.28,3716.18)	2.11	(199,13)	1.93	(216,17)	1.92	(229,17)	1.90	(228, 9)	1.89	(227,10)
56(513.28,3717.18)	1.58	(265,16)	1.48	(190,16)	1.45	(259,12)	1.45	(260,12)	1.44	(145,18)
57(514.28,3717.18)	1.56	(259,12)	1.56	(260,12)	1.54	(168,18)	1.53	(152,17)	1.53	(269,10)
58(512.28,3711.18)	2.36	(246,15)	2.33	(193,10)	2.32	(191,11)	2.30	(145,17)	2.10	(274,15)
59(516.50,3708.10)	2.56	(246,17)	2.44	(300,13)	2.34	(245,10)	2.33	(175,16)	2.33	(44,16)
60(518.10,3709.35)	3.05	(238,15)	2.82	(235,10)	2.82	(253,14)	2.82	(202,12)	2.81	(286,11)
61(514.50,3708.80)	2.60	(270,11)	2.58	(238,14)	2.55	(232,14)	2.52	(257,14)	2.51	(253,10)
62(517.30,3714.40)	3.35	(209,16)	3.35	(240,14)	3.32	(246,10)	3.31	(194,10)	3.31	(253,11)

FIVE HIGHEST 3-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48) *	3.25	(300,15)	2.41	(188,15)	2.39	(243,12)	2.37	(158,15)	2.05	(143,12)
2(515.88,3710.48)	2.43	(188,15)	2.41	(243,12)	2.00	(158, 9)	1.88	(15,12)	1.72	(245,12)
3(515.78,3710.38)	2.48	(188,15)	2.46	(243,12)	1.97	(15,12)	1.65	(212,15)	1.64	(211,15)
4(515.88,3710.38)	2.47	(188,15)	2.46	(243,12)	2.06	(158, 9)	1.95	(15,12)	1.67	(212,15)
5(515.68,3710.38)	3.13	(211,15) *	2.47	(243,12)	2.21	(221,12)	1.62	(212,15)	1.61	(237,15)
6(515.98,3710.38)	3.15	(300,15)	2.46	(188,15)	2.45	(243,12)	2.37	(158,15)	2.05	(158, 9)
7(511.28,3709.38)	0.92	(189,12)	0.83	(44,12)	0.82	(189, 9)	0.81	(188, 9)	0.77	(214,12)
8(512.28,3709.38)	1.43	(57,12)	1.26	(189,12)	1.06	(282,15)	1.05	(257, 9)	1.03	(188,18)
9(513.28,3709.38)	1.98	(188,18)	1.78	(57,12)	1.73	(266,12)	1.44	(257, 9)	1.44	(266,15)
10(514.28,3709.38)	2.18	(266,12)	1.74	(264,12)	1.67	(188,18)	1.64	(48,15)	1.64	(59,15)
11(515.28,3709.38)	1.93	(211,15)	1.86	(243,12)	1.75	(245,18)	1.75	(213,12)	1.19	(221,12)
12(518.28,3709.38)	1.67	(286,12)	1.65	(34,15)	1.57	(70,12)	1.53	(159,18)	1.50	(106,18)
13(511.28,3708.38)	1.00	(57,12)	0.98	(245,15)	0.83	(157,15)	0.76	(283,12)	0.74	(282,15)
14(513.28,3708.38)	1.39	(266,12)	1.16	(269,15)	1.15	(266,15)	1.15	(157,15)	1.11	(59,15)
15(514.28,3708.38)	1.38	(245,18)	1.32	(59,15)	1.31	(87,18)	1.04	(159,12)	1.00	(211,15)
16(517.28,3708.38)	1.94	(49,15)	1.40	(297,15)	1.35	(67,15)	1.35	(124,18)	1.32	(186,18)
17(513.28,3707.38)	0.89	(47,12)	0.89	(59,15)	0.82	(266,12)	0.81	(144,18)	0.80	(281,15)
18(512.28,3707.38)	0.94	(266,12)	0.85	(157,15)	0.77	(47,12)	0.76	(266,15)	0.75	(59,15)
19(515.28,3707.38)	1.41	(300,15)	1.15	(158, 9)	1.11	(245,18)	1.10	(245, 9)	1.10	(15,12)
20(517.28,3707.38)	1.27	(175,18)	1.21	(186,18)	1.16	(186,15)	1.14	(49,15)	1.12	(297,15)
21(511.28,3706.38)	0.66	(266,12)	0.63	(157,15)	0.57	(47,12)	0.54	(264,12)	0.53	(59,15)
22(512.28,3706.38)	0.87	(264,12)	0.77	(266,12)	0.69	(20, 9)	0.65	(47,12)	0.62	(59,15)
23(513.28,3706.38)	0.86	(87,18)	0.72	(245,18)	0.71	(59,15)	0.62	(20, 6)	0.61	(157,12)
24(514.28,3706.38)	0.84	(15,12)	0.84	(245, 9)	0.80	(245,18)	0.77	(213,12)	0.65	(157,12)
25(515.28,3706.38)	1.07	(300,15)	1.03	(256,12)	0.93	(158, 9)	0.85	(256, 9)	0.85	(245, 9)
26(517.28,3714.18)	2.38	(240,15)	1.97	(181,15)	1.96	(247,15)	1.88	(184,15)	1.84	(154,18)
27(512.28,3715.18)	1.63	(218,18)	1.49	(162,18)	1.48	(279,15)	1.35	(280,15)	1.17	(269,18)
28(514.28,3716.18)	1.51	(287,15)	1.33	(305,15)	1.30	(163,12)	1.08	(115,18)	1.08	(131,15)
29(515.28,3716.18)	1.74	(338,15)	1.71	(177,12)	1.23	(258,15)	1.21	(204,18)	1.20	(73,18)

30(513.28,3717.18)	1.10	(250,12)	1.09	(163,18)	1.06	(305,15)	0.92	(288,12)	0.88	(163,12)
31(514.28,3717.18)	0.86	(115,18)	0.86	(85, 3)	0.86	(153, 9)	0.86	(131,15)	0.85	(338,15)
32(512.28,3711.18)	1.44	(257,18)	1.32	(193,12)	1.29	(171,18)	1.26	(221,15)	1.22	(212,18)
33(511.28,3709.38)	0.92	(189,12)	0.83	(44,12)	0.82	(189, 9)	0.81	(188, 9)	0.77	(214,12)
34(511.28,3709.38)	0.92	(189,12)	0.83	(44,12)	0.82	(189, 9)	0.81	(188, 9)	0.77	(214,12)
35(513.28,3709.38)	1.98	(188,18)	1.78	(57,12)	1.73	(266,12)	1.44	(257, 9)	1.44	(266,15)
36(514.28,3709.38)	2.18	(266,12)	1.74	(264,12)	1.67	(188,18)	1.64	(48,15)	1.64	(59,15)
37(515.28,3709.38)	1.93	(211,15)	1.86	(243,12)	1.75	(245,18)	1.75	(213,12)	1.19	(221,12)
38(511.28,3708.38)	1.00	(57,12)	0.98	(245,15)	0.83	(157,15)	0.76	(283,12)	0.74	(282,15)
39(513.28,3708.38)	1.39	(266,12)	1.16	(269,15)	1.15	(266,15)	1.15	(157,15)	1.11	(59,15)
40(514.28,3708.38)	1.38	(245,18)	1.32	(59,15)	1.31	(87,18)	1.04	(159,12)	1.00	(211,15)
41(517.28,3708.38)	1.94	(49,15)	1.40	(297,15)	1.35	(67,15)	1.35	(124,18)	1.32	(186,18)
42(513.28,3707.38)	0.89	(47,12)	0.89	(59,15)	0.82	(266,12)	0.81	(144,18)	0.80	(281,15)
43(512.28,3707.38)	0.94	(266,12)	0.85	(157,15)	0.77	(47,12)	0.76	(266,15)	0.75	(59,15)
44(515.28,3707.38)	1.41	(300,15)	1.15	(158, 9)	1.11	(245,18)	1.10	(245, 9)	1.10	(15,12)
45(517.28,3707.38)	1.27	(175,18)	1.21	(186,18)	1.16	(186,15)	1.14	(49,15)	1.12	(297,15)
46(511.28,3706.38)	0.66	(266,12)	0.63	(157,15)	0.57	(47,12)	0.54	(264,12)	0.53	(59,15)
47(512.28,3706.38)	0.87	(264,12)	0.77	(266,12)	0.69	(20, 9)	0.65	(47,12)	0.62	(59,15)
48(513.28,3706.38)	0.86	(87,18)	0.72	(245,18)	0.71	(59,15)	0.62	(20, 6)	0.61	(157,12)
49(514.28,3706.38)	0.84	(15,12)	0.84	(245, 9)	0.80	(245,18)	0.77	(213,12)	0.65	(157,12)
50(515.28,3706.38)	1.07	(300,15)	1.03	(256,12)	0.93	(158, 9)	0.85	(256, 9)	0.85	(245, 9)
51(517.28,3714.18)	2.38	(240,15)	1.97	(181,15)	1.96	(247,15)	1.88	(184,15)	1.84	(154,18)
52(512.28,3715.18)	1.63	(218,18)	1.49	(162,18)	1.48	(279,15)	1.35	(280,15)	1.17	(269,18)
53(511.28,3716.18)	1.16	(218,18)	1.08	(162,18)	1.04	(279,15)	0.98	(273,12)	0.94	(280,15)
54(514.28,3716.18)	1.51	(287,15)	1.33	(305,15)	1.30	(163,12)	1.08	(115,18)	1.08	(131,15)
55(515.28,3716.18)	1.74	(338,15)	1.71	(177,12)	1.23	(258,15)	1.21	(204,18)	1.20	(73,18)
56(513.28,3717.18)	1.10	(250,12)	1.09	(163,18)	1.06	(305,15)	0.92	(288,12)	0.88	(163,12)
57(514.28,3717.18)	0.86	(115,18)	0.86	(85, 3)	0.86	(153, 9)	0.86	(131,15)	0.85	(338,15)
58(512.28,3711.18)	1.44	(257,18)	1.32	(193,12)	1.29	(171,18)	1.26	(221,15)	1.22	(212,18)
59(516.50,3708.10)	2.10	(175,18)	1.57	(278,15)	1.40	(173,18)	1.33	(124,18)	1.31	(187, 9)
60(518.10,3709.35)	1.71	(286,12)	1.67	(34,15)	1.63	(70,12)	1.57	(159,18)	1.52	(106,18)
61(514.50,3708.80)	1.54	(245,18)	1.50	(59,15)	1.29	(159,12)	1.24	(211,15)	0.95	(264,12)
62(517.30,3714.40)	2.18	(240,15)	1.85	(154,18)	1.81	(247,15)	1.80	(184,15)	1.80	(181,15)

FIVE HIGHEST 8-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	1.45	(158,16)	1.34	(243,16)	1.30	(245,16)	1.25	(143,16)	1.22	(300,16)
2(515.88,3710.48)	1.35	(243,16)	1.33	(245,16)	1.02	(227,16)	0.94	(218,16)	0.91	(188,16)
3(515.78,3710.38)	1.38	(243,16)	1.35	(245,16)	0.98	(218,16)	0.95	(15,16)	0.93	(227,16)
4(515.88,3710.38)	1.38	(243,16)	1.35	(245,16)	1.16	(158,16)	1.04	(256,16)	0.97	(218,16)
5(515.68,3710.38)	1.38	(243,16)	1.36	(245,16)	1.17	(211,16)	0.98	(218,16)	0.92	(244,16)
6(515.98,3710.38)	1.45	(158,16) *	1.37	(243,16)	1.34	(245,16)	1.32	(256,16)	1.18	(300,16)
7(511.28,3709.38)	0.66	(57,16)	0.51	(214,16)	0.49	(18, 8)	0.48	(189,16)	0.42	(308,24)
8(512.28,3709.38)	0.96	(57,16)	0.65	(189,16)	0.59	(188,16)	0.59	(283,16)	0.55	(282,16)
9(513.28,3709.38)	1.21	(266,16)	1.01	(57,16)	0.86	(189,16)	0.78	(244,16)	0.76	(225,16)
10(514.28,3709.38)	1.16	(266,16)	1.10	(244,16)	0.93	(257,16)	0.79	(159,16)	0.73	(264,16)
11(515.28,3709.38)	1.08	(243,16)	1.04	(245,16)	0.97	(187,16)	0.80	(59,16)	0.78	(218,16)
12(518.28,3709.38)	0.91	(242,16)	0.90	(104,16)	0.88	(114,16)	0.83	(159,16)	0.79	(91,24)
13(511.28,3708.38)	0.74	(57,16)	0.52	(266,16)	0.49	(283,16)	0.38	(225,16)	0.38	(282,16)
14(513.28,3708.38)	0.98	(266,16)	0.62	(257,16)	0.58	(244,16)	0.55	(144,16)	0.52	(159,16)
15(514.28,3708.38)	0.95	(59,16)	0.65	(15,16)	0.61	(159,16)	0.54	(54,16)	0.53	(270,16)
16(517.28,3708.38)	0.80	(297,16)	0.75	(105,16)	0.73	(49,16)	0.72	(167,16)	0.72	(59,16)
17(513.28,3707.38)	0.51	(59,16)	0.48	(47,16)	0.46	(20, 8)	0.46	(15,16)	0.43	(244,16)
18(512.28,3707.38)	0.67	(266,16)	0.42	(257,16)	0.38	(20,16)	0.36	(144,16)	0.36	(159,16)
19(515.28,3707.38)	0.99	(256,16)	0.79	(255,16)	0.61	(15,16)	0.60	(243,16)	0.57	(70,16)
20(517.28,3707.38)	0.76	(358,16)	0.73	(59,16)	0.72	(105,16)	0.66	(128, 8)	0.63	(362,24)
21(511.28,3706.38)	0.49	(266,16)	0.39	(20,16)	0.37	(257, 8)	0.30	(283,16)	0.30	(335, 8)
22(512.28,3706.38)	0.42	(264,16)	0.42	(257, 8)	0.42	(266,16)	0.40	(20, 8)	0.37	(59,16)
23(513.28,3706.38)	0.56	(59,16)	0.41	(15,16)	0.38	(20, 8)	0.35	(350, 8)	0.34	(159,16)
24(514.28,3706.38)	0.45	(15,16)	0.44	(187,16)	0.43	(243,16)	0.34	(245,16)	0.33	(245, 8)
25(515.28,3706.38)	0.85	(256,16)	0.71	(255,16)	0.57	(278,16)	0.45	(70,16)	0.43	(315,16)
26(517.28,3714.18)	1.13	(184,16)	1.12	(247,16)	1.09	(181,16)	0.99	(301,16)	0.89	(240,16)
27(512.28,3715.18)	0.92	(279,16)	0.92	(161,16)	0.79	(88,16)	0.70	(162,24)	0.70	(137,16)

28(514.28,3716.18)	0.75	(131,16)	0.75	(287,16)	0.64	(268,16)	0.63	(163,16)	0.58	(164,16)
29(515.28,3716.18)	0.93	(248,16)	0.85	(177,16)	0.84	(258,16)	0.83	(131,16)	0.80	(228,16)
30(513.28,3717.18)	0.65	(163,16)	0.55	(164,16)	0.52	(178,24)	0.52	(231, 8)	0.51	(250,16)
31(514.28,3717.18)	0.66	(131,16)	0.54	(323, 8)	0.53	(117,16)	0.53	(162,16)	0.51	(63, 8)
32(512.28,3711.18)	0.79	(257,16)	0.70	(172,16)	0.70	(239,16)	0.67	(173,16)	0.63	(187,16)
33(511.28,3709.38)	0.66	(57,16)	0.51	(214,16)	0.49	(18, 8)	0.48	(189,16)	0.42	(308,24)
34(511.28,3709.38)	0.66	(57,16)	0.51	(214,16)	0.49	(18, 8)	0.48	(189,16)	0.42	(308,24)
35(513.28,3709.38)	1.21	(266,16)	1.01	(57,16)	0.86	(189,16)	0.78	(244,16)	0.76	(225,16)
36(514.28,3709.38)	1.16	(266,16)	1.10	(244,16)	0.93	(257,16)	0.79	(159,16)	0.73	(264,16)
37(515.28,3709.38)	1.08	(243,16)	1.04	(245,16)	0.97	(187,16)	0.80	(59,16)	0.78	(218,16)
38(511.28,3708.38)	0.74	(57,16)	0.52	(266,16)	0.49	(283,16)	0.38	(225,16)	0.38	(282,16)
39(513.28,3708.38)	0.98	(266,16)	0.62	(257,16)	0.58	(244,16)	0.55	(144,16)	0.52	(159,16)
40(514.28,3708.38)	0.95	(59,16)	0.65	(15,16)	0.61	(159,16)	0.54	(54,16)	0.53	(270,16)
41(517.28,3708.38)	0.80	(297,16)	0.75	(105,16)	0.73	(49,16)	0.72	(167,16)	0.72	(59,16)
42(513.28,3707.38)	0.51	(59,16)	0.48	(47,16)	0.46	(20, 8)	0.46	(15,16)	0.43	(244,16)
43(512.28,3707.38)	0.67	(266,16)	0.42	(257,16)	0.38	(20,16)	0.36	(144,16)	0.36	(159,16)
44(515.28,3707.38)	0.99	(256,16)	0.79	(255,16)	0.61	(15,16)	0.60	(243,16)	0.57	(70,16)
45(517.28,3707.38)	0.76	(358,16)	0.73	(59,16)	0.72	(105,16)	0.66	(128, 8)	0.63	(362,24)
46(511.28,3706.38)	0.49	(266,16)	0.39	(20,16)	0.37	(257, 8)	0.30	(283,16)	0.30	(335, 8)
47(512.28,3706.38)	0.42	(264,16)	0.42	(257, 8)	0.42	(266,16)	0.40	(20, 8)	0.37	(59,16)
48(513.28,3706.38)	0.56	(59,16)	0.41	(15,16)	0.38	(20, 8)	0.35	(350, 8)	0.34	(159,16)
49(514.28,3706.38)	0.45	(15,16)	0.44	(187,16)	0.43	(243,16)	0.34	(245,16)	0.33	(245, 8)
50(515.28,3706.38)	0.85	(256,16)	0.71	(255,16)	0.57	(278,16)	0.45	(70,16)	0.43	(315,16)
51(517.28,3714.18)	1.13	(184,16)	1.12	(247,16)	1.09	(181,16)	0.99	(301,16)	0.89	(240,16)
52(512.28,3715.18)	0.92	(279,16)	0.92	(161,16)	0.79	(88,16)	0.70	(162,24)	0.70	(137,16)
53(511.28,3716.18)	0.67	(279,16)	0.60	(273,16)	0.58	(280,16)	0.58	(162,24)	0.57	(330,16)
54(514.28,3716.18)	0.75	(131,16)	0.75	(287,16)	0.64	(268,16)	0.63	(163,16)	0.58	(164,16)
55(515.28,3716.18)	0.93	(248,16)	0.85	(177,16)	0.84	(258,16)	0.83	(131,16)	0.80	(228,16)
56(513.28,3717.18)	0.65	(163,16)	0.55	(164,16)	0.52	(178,24)	0.52	(231, 8)	0.51	(250,16)
57(514.28,3717.18)	0.66	(131,16)	0.54	(323, 8)	0.53	(117,16)	0.53	(162,16)	0.51	(63, 8)
58(512.28,3711.18)	0.79	(257,16)	0.70	(172,16)	0.70	(239,16)	0.67	(173,16)	0.63	(187,16)
59(516.50,3708.10)	1.14	(105,16)	1.03	(278,16)	0.94	(70,16)	0.93	(136,16)	0.90	(298,16)
60(518.10,3709.35)	1.18	(104,16)	0.93	(242,16)	0.91	(114,16)	0.79	(319,16)	0.77	(34,16)
61(514.50,3708.80)	0.79	(59,16)	0.71	(159,16)	0.70	(15,16)	0.61	(54,16)	0.61	(270,16)
62(517.30,3714.40) *	1.47	(247,16)	1.09	(184,16)	1.01	(181,16)	0.97	(182,16)	0.95	(301,16)

FIVE HIGHEST 24-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	0.55	(158,24)	0.53	(245,24)	0.45	(243,24)	0.42	(143,24)	0.41	(300,24)
2(515.88,3710.48)	0.55	(245,24)	0.45	(243,24)	0.34	(227,24)	0.31	(218,24)	0.31	(244,24)
3(515.78,3710.38)	0.57	(245,24)	0.46	(243,24)	0.33	(218,24)	0.32	(244,24)	0.32	(15,24)
4(515.88,3710.38)	0.57	(245,24)	0.46	(158,24)	0.46	(243,24)	0.35	(256,24)	0.32	(218,24)
5(515.68,3710.38)	0.54	(245,24)	0.46	(243,24)	0.39	(211,24)	0.33	(218,24)	0.32	(244,24)
6(515.98,3710.38) *	0.61	(158,24) *	0.56	(245,24)	0.46	(243,24)	0.45	(256,24)	0.39	(300,24)
7(511.28,3709.38)	0.35	(57,24)	0.29	(19,24)	0.29	(214,24)	0.28	(188,24)	0.26	(18,24)
8(512.28,3709.38)	0.43	(57,24)	0.40	(188,24)	0.29	(283,24)	0.28	(214,24)	0.25	(189,24)
9(513.28,3709.38)	0.45	(188,24)	0.40	(266,24)	0.40	(57,24)	0.32	(257,24)	0.29	(283,24)
10(514.28,3709.38)	0.39	(244,24)	0.39	(266,24)	0.37	(257,24)	0.29	(144,24)	0.26	(159,24)
11(515.28,3709.38)	0.46	(245,24)	0.37	(243,24)	0.33	(187,24)	0.27	(244,24)	0.27	(59,24)
12(518.28,3709.38)	0.52	(104,24)	0.43	(114,24)	0.37	(159,24)	0.37	(319,24)	0.37	(79,24)
13(511.28,3708.38)	0.38	(57,24)	0.28	(283,24)	0.27	(188,24)	0.22	(282,24)	0.18	(257,24)
14(513.28,3708.38)	0.33	(266,24)	0.32	(257,24)	0.27	(144,24)	0.23	(244,24)	0.23	(188,24)
15(514.28,3708.38)	0.32	(59,24)	0.25	(20,24)	0.24	(245,24)	0.23	(87,24)	0.22	(15,24)
16(517.28,3708.38)	0.49	(358,24)	0.38	(128,24)	0.35	(105,24)	0.32	(363,24)	0.28	(362,24)
17(513.28,3707.38)	0.37	(20,24)	0.19	(244,24)	0.18	(245,24)	0.17	(59,24)	0.16	(47,24)
18(512.28,3707.38)	0.27	(20,24)	0.25	(257,24)	0.23	(283,24)	0.22	(266,24)	0.19	(1,24)
19(515.28,3707.38)	0.38	(256,24)	0.36	(158,24)	0.34	(245,24)	0.26	(255,24)	0.26	(244,24)
20(517.28,3707.38)	0.57	(358,24)	0.38	(363,24)	0.35	(128,24)	0.34	(264,24)	0.33	(105,24)
21(511.28,3706.38)	0.28	(20,24)	0.22	(257,24)	0.22	(283,24)	0.20	(1,24)	0.17	(188,24)
22(512.28,3706.38)	0.29	(20,24)	0.18	(257,24)	0.15	(353,24)	0.15	(245,24)	0.14	(244,24)
23(513.28,3706.38)	0.30	(20,24)	0.19	(351,24)	0.19	(59,24)	0.17	(353,24)	0.17	(151,24)
24(514.28,3706.38)	0.27	(245,24)	0.27	(20,24)	0.21	(244,24)	0.20	(297,24)	0.20	(351,24)
25(515.28,3706.38)	0.35	(256,24)	0.30	(158,24)	0.25	(278,24)	0.24	(352,24)	0.24	(97,24)

26(517.28,3714.18)	0.41	(240,24)	0.40	(181,24)	0.39	(184,24)	0.39	(247,24)	0.36	(208,24)
27(512.28,3715.18)	0.47	(137,24)	0.42	(161,24)	0.39	(169,24)	0.36	(162,24)	0.36	(176,24)
28(514.28,3716.18)	0.37	(163,24)	0.31	(131,24)	0.26	(326,24)	0.26	(62,24)	0.25	(287,24)
29(515.28,3716.18)	0.43	(153,24)	0.38	(131,24)	0.38	(228,24)	0.38	(322,24)	0.38	(248,24)
30(513.28,3717.18)	0.40	(163,24)	0.30	(326,24)	0.30	(231,24)	0.30	(288,24)	0.29	(330,24)
31(514.28,3717.18)	0.33	(131,24)	0.27	(326,24)	0.26	(248,24)	0.26	(231,24)	0.26	(153,24)
32(512.28,3711.18)	0.38	(257,24)	0.32	(18,24)	0.28	(172,24)	0.26	(171,24)	0.24	(173,24)
33(511.28,3709.38)	0.35	(57,24)	0.29	(19,24)	0.29	(214,24)	0.28	(188,24)	0.26	(18,24)
34(511.28,3709.38)	0.35	(57,24)	0.29	(19,24)	0.29	(214,24)	0.28	(188,24)	0.26	(18,24)
35(513.28,3709.38)	0.45	(188,24)	0.40	(266,24)	0.40	(57,24)	0.32	(257,24)	0.29	(283,24)
36(514.28,3709.38)	0.39	(244,24)	0.39	(266,24)	0.37	(257,24)	0.29	(144,24)	0.26	(159,24)
37(515.28,3709.38)	0.46	(245,24)	0.37	(243,24)	0.33	(187,24)	0.27	(244,24)	0.27	(59,24)
38(511.28,3708.38)	0.38	(57,24)	0.28	(283,24)	0.27	(188,24)	0.22	(282,24)	0.18	(257,24)
39(513.28,3708.38)	0.33	(266,24)	0.32	(257,24)	0.27	(144,24)	0.23	(244,24)	0.23	(188,24)
40(514.28,3708.38)	0.32	(59,24)	0.25	(20,24)	0.24	(245,24)	0.23	(87,24)	0.22	(15,24)
41(517.28,3708.38)	0.49	(358,24)	0.38	(128,24)	0.35	(105,24)	0.32	(363,24)	0.28	(362,24)
42(513.28,3707.38)	0.37	(20,24)	0.19	(244,24)	0.18	(245,24)	0.17	(59,24)	0.16	(47,24)
43(512.28,3707.38)	0.27	(20,24)	0.25	(257,24)	0.23	(283,24)	0.22	(266,24)	0.19	(1,24)
44(515.28,3707.38)	0.38	(256,24)	0.36	(158,24)	0.34	(245,24)	0.26	(255,24)	0.26	(244,24)
45(517.28,3707.38)	0.57	(358,24)	0.38	(363,24)	0.35	(128,24)	0.34	(264,24)	0.33	(105,24)
46(511.28,3706.38)	0.28	(20,24)	0.22	(257,24)	0.22	(283,24)	0.20	(1,24)	0.17	(188,24)
47(512.28,3706.38)	0.29	(20,24)	0.18	(257,24)	0.15	(353,24)	0.15	(245,24)	0.14	(244,24)
48(513.28,3706.38)	0.30	(20,24)	0.19	(351,24)	0.19	(59,24)	0.17	(353,24)	0.17	(151,24)
49(514.28,3706.38)	0.27	(245,24)	0.27	(20,24)	0.21	(244,24)	0.20	(297,24)	0.20	(351,24)
50(515.28,3706.38)	0.35	(256,24)	0.30	(158,24)	0.25	(278,24)	0.24	(352,24)	0.24	(97,24)
51(517.28,3714.18)	0.41	(240,24)	0.40	(181,24)	0.39	(184,24)	0.39	(247,24)	0.36	(208,24)
52(512.28,3715.18)	0.47	(137,24)	0.42	(161,24)	0.39	(169,24)	0.36	(162,24)	0.36	(176,24)
53(511.28,3716.18)	0.38	(137,24)	0.37	(330,24)	0.33	(51,24)	0.33	(169,24)	0.32	(162,24)
54(514.28,3716.18)	0.37	(163,24)	0.31	(131,24)	0.26	(326,24)	0.26	(62,24)	0.25	(287,24)
55(515.28,3716.18)	0.43	(153,24)	0.38	(131,24)	0.38	(228,24)	0.38	(322,24)	0.38	(248,24)
56(513.28,3717.18)	0.40	(163,24)	0.30	(326,24)	0.30	(231,24)	0.30	(288,24)	0.29	(330,24)
57(514.28,3717.18)	0.33	(131,24)	0.27	(326,24)	0.26	(248,24)	0.26	(231,24)	0.26	(153,24)
58(512.28,3711.18)	0.38	(257,24)	0.32	(18,24)	0.28	(172,24)	0.26	(171,24)	0.24	(173,24)
59(516.50,3708.10)	0.47	(358,24)	0.41	(264,24)	0.40	(105,24)	0.39	(278,24)	0.38	(298,24)
60(518.10,3709.35)	0.58	(104,24)	0.42	(114,24)	0.40	(319,24)	0.32	(314,24)	0.31	(68,24)
61(514.50,3708.80)	0.27	(245,24)	0.26	(59,24)	0.24	(159,24)	0.23	(15,24)	0.22	(20,24)
62(517.30,3714.40)	0.55	(182,24)	0.51	(247,24)	0.39	(240,24)	0.39	(184,24)	0.38	(181,24)

Woodward-Clyde
Consultants

SECTION H.19

1984 MODELING OUTPUT FOR CO COMPLEX I

COMPLEX I (DATED 90095)
BOWMAN ENVIRONMENTAL ENGINEERING VER. 6.27

SESSION INFORMATION

INPUT DATA FILE NAME : ICC084.DTA
OUTPUT LIST FILE NAME : ICC084.LST
MET DATA FILE NAME : C:\BEE\SHVGGG84.BIN

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
CO SCREEN - 1984 SHREVEPORT/LONGVIEW BINARY MET. DATA

GENERAL INPUT INFORMATION

THIS RUN OF COMPLEX I -VERSION 2.0 IS FOR THE POLLUTANT PART FOR 366 24-HOUR PERIODS.
CONCENTRATION ESTIMATES BEGIN ON HOUR- 1,JULIAN DAY- 1, YEAR-1984.
A FACTOR OF 1.0000000 HAS BEEN SPECIFIED TO CONVERT USER LENGTH UNITS TO KILOMETERS.
0 SIGNIFICANT SOURCES ARE TO BE CONSIDERED.
THIS RUN WILL NOT CONSIDER ANY POLLUTANT LOSS.
HIGH-FIVE SUMMARY CONCENTRATION TABLES WILL BE OUTPUT FOR 4 AVERAGING PERIODS.
AVG TIMES OF 1,3,8, AND 24 HOURS ARE AUTOMATICALLY DISPLAYED.

OPTION	OPTION LIST	OPTION SPECIFICATION : 0= IGNORE OPTION 1= USE OPTION
	TECHNICAL OPTIONS	
1	TERRAIN ADJUSTMENTS	0
2	DO NOT INCLUDE STACK DOWNWASH CALCULATIONS	0
3	DO NOT INCLUDE GRADUAL PLUME RISE CALCULATIONS	1
4	CALCULATE INITIAL PLUME SIZE	1
	INPUT OPTIONS	
5	READ MET DATA FROM CARDS	0
6	READ HOURLY EMISSIONS	0
7	SPECIFY SIGNIFICANT SOURCES	0
8	READ RADIAL DISTANCES TO GENERATE RECEPTORS	0
	PRINTED OUTPUT OPTIONS	
9	DELETE EMISSIONS WITH HEIGHT TABLE	1
10	DELETE MET DATA SUMMARY FOR AVG PERIOD	1
11	DELETE HOURLY CONTRIBUTIONS	1
12	DELETE MET DATA ON HOURLY CONTRIBUTIONS	1
13	DELETE FINAL PLUME RISE CALC ON HRLY CONTRIBUTIONS	1
14	DELETE HOURLY SUMMARY	1
15	DELETE MET DATA ON HRLY SUMMARY	1
16	DELETE FINAL PLUME RISE CALC ON HRLY SUMMARY	1
17	DELETE AVG-PERIOD CONTRIBUTIONS	1
18	DELETE AVERAGING PERIOD SUMMARY	1
19	DELETE AVG CONCENTRATIONS AND HI-5 TABLES	0
	OTHER CONTROL AND OUTPUT OPTIONS	
20	RUN IS PART OF A SEGMENTED RUN	0
21	WRITE PARTIAL CONC TO DISK OR TAPE	0
22	WRITE HOURLY CONC TO DISK OR TAPE	0
23	WRITE AVG-PERIOD CONC TO DISK OR TAPE	0
24	PUNCH AVG-PERIOD CONC ONTO CARDS	0
25	COMPLEX TERRAIN OPTION	1
26	CALM PROCESSING OPTION	0
27	VALLEY SCREENING OPTION	0

ANEMOMETER HEIGHT= 10.00
WIND PROFILE WITH HEIGHT EXPONENTS CORRESPONDING TO STABILITY ARE AS FOLLOWS:
FOR STABILITY A: 0.07
STABILITY B: 0.07
STABILITY C: 0.10
STABILITY D: 0.15
STABILITY E: 0.35
STABILITY F: 0.55

POINT SOURCE INFORMATION

SOURCE		EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	SO2(G/SEC) EMISSIONS	PART(G/SEC) EMISSIONS	STACK HT(M)	STACK TEMP(K)	STACK DIAM(M)	STACK VEL(M/SEC)	POTEN. IMPACT (MICRO G/M**3)	EFF HT(M)	GRD-LVL ELEV USER HT UNITS	BUOY FLUX F M**4/S**3
1 1	COGEN	516.32	3711.89	0.00	6.51	22.9	427.6	3.4	16.6	5.03	283.88	34.40	150.19

ADDITIONAL INFORMATION ON SOURCES.

EMISSION INFORMATION FOR 1 (NPT) POINT SOURCES HAS BEEN INPUT
0 SIGNIFICANT POINT SOURCES(NSIGP) ARE TO BE USED FOR THIS RUN
THE ORDER OF SIGNIFICANCE(IMPS) FOR 25 OR LESS POINT SOURCES USED IN THIS RUN AS LISTED BY POINT SOURCE NUMBER:

SURFACE MET DATA FROM STATION(ISFCD) 13957, YEAR(ISFCYR) 1984
MIXING HEIGHT DATA FROM STATION(IMXD) 3951, YEAR(IMXYR) 1984

RECEPTOR INFORMATION

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)
1		515.977	3710.478	0.0	57.9
2		515.877	3710.478	0.0	57.9
3		515.777	3710.378	0.0	57.9
4		515.877	3710.378	0.0	57.9
5		515.677	3710.378	0.0	57.9
6		515.977	3710.378	0.0	57.9
7		511.277	3709.378	0.0	64.0
8		512.277	3709.378	0.0	61.0
9		513.277	3709.378	0.0	73.2
10		514.277	3709.378	0.0	64.0
11		515.277	3709.378	0.0	57.9
12		518.277	3709.378	0.0	61.0
13		511.277	3708.378	0.0	67.1
14		513.277	3708.378	0.0	76.2
15		514.277	3708.378	0.0	70.1
16		517.277	3708.378	0.0	64.0
17		513.277	3707.378	0.0	64.0
18		512.277	3707.378	0.0	67.1
19		515.277	3707.378	0.0	61.0
20		517.277	3707.378	0.0	67.1
21		511.277	3706.378	0.0	73.2
22		512.277	3706.378	0.0	73.2
23		513.277	3706.378	0.0	64.0
24		514.277	3706.378	0.0	64.0
25		515.277	3706.378	0.0	67.1
26		517.277	3714.176	0.0	70.1
27		512.277	3715.176	0.0	61.0
28		514.277	3716.176	0.0	61.0
29		515.277	3716.176	0.0	70.1
30		513.277	3717.176	0.0	61.0
31		514.277	3717.176	0.0	61.0
32		512.277	3711.176	0.0	64.0
33		511.277	3709.378	0.0	64.0
34		511.277	3709.378	0.0	61.0
35		513.277	3709.378	0.0	73.2
36		514.277	3709.378	0.0	64.0
37		515.277	3709.378	0.0	57.9
38		511.277	3708.378	0.0	67.1
39		513.277	3708.378	0.0	76.2
40		514.277	3708.378	0.0	70.1
41		517.277	3708.378	0.0	64.0
42		513.277	3707.378	0.0	64.0

43	512.277	3707.378	0.0	67.1
44	515.277	3707.378	0.0	61.0
45	517.277	3707.378	0.0	67.1
46	511.277	3706.378	0.0	73.2
47	512.277	3706.378	0.0	73.2
48	513.277	3706.378	0.0	64.0
49	514.277	3706.378	0.0	64.0
50	515.277	3706.378	0.0	67.1
51	517.277	3714.176	0.0	70.1
52	512.277	3715.176	0.0	61.0
53	511.277	3716.176	0.0	61.0
54	514.277	3716.176	0.0	61.0
55	515.277	3716.176	0.0	70.1
56	513.277	3717.176	0.0	61.0
57	514.277	3717.176	0.0	61.0
58	512.277	3711.176	0.0	64.0
59	516.500	3708.100	0.0	67.7
60	518.100	3709.350	0.0	79.3
61	514.500	3708.800	0.0	80.5
62	517.300	3714.400	0.0	76.2

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
CO SCREEN - 1984 SHREVEPORT/LONGVIEW BINARY MET. DATA

RECEPTORS

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)	DAY	AVG CONC FOR PERIOD 1.HR 1. TO DAY366.HR24. (MICROGRAMS/M**3)
1		515.98	3710.48	0.0	57.9		0.03
2		515.88	3710.48	0.0	57.9		0.02
3		515.78	3710.38	0.0	57.9		0.02
4		515.88	3710.38	0.0	57.9		0.02
5		515.68	3710.38	0.0	57.9		0.02
6		515.98	3710.38	0.0	57.9		0.03
7		511.28	3709.38	0.0	64.0		0.02
8		512.28	3709.38	0.0	61.0		0.03
9		513.28	3709.38	0.0	73.2		0.03
10		514.28	3709.38	0.0	64.0		0.03
11		515.28	3709.38	0.0	57.9		0.02
12		518.28	3709.38	0.0	61.0		0.03
13		511.28	3708.38	0.0	67.1		0.02
14		513.28	3708.38	0.0	76.2		0.03
15		514.28	3708.38	0.0	70.1		0.03
16		517.28	3708.38	0.0	64.0		0.03
17		513.28	3707.38	0.0	64.0		0.03
18		512.28	3707.38	0.0	67.1		0.03
19		515.28	3707.38	0.0	61.0		0.03
20		517.28	3707.38	0.0	67.1		0.03
21		511.28	3706.38	0.0	73.2		0.02
22		512.28	3706.38	0.0	73.2		0.02
23		513.28	3706.38	0.0	64.0		0.02
24		514.28	3706.38	0.0	64.0		0.02
25		515.28	3706.38	0.0	67.1		0.03
26		517.28	3714.18	0.0	70.1		0.04
27		512.28	3715.18	0.0	61.0		0.05
28		514.28	3716.18	0.0	61.0		0.06
29		515.28	3716.18	0.0	70.1		* 0.07
30		513.28	3717.18	0.0	61.0		0.06
31		514.28	3717.18	0.0	61.0		0.06
32		512.28	3711.18	0.0	64.0		0.03
33		511.28	3709.38	0.0	64.0		0.02

34	511.28	3709.38	0.0	61.0	0.02
35	513.28	3709.38	0.0	73.2	0.03
36	514.28	3709.38	0.0	64.0	0.03
37	515.28	3709.38	0.0	57.9	0.02
38	511.28	3708.38	0.0	67.1	0.02
39	513.28	3708.38	0.0	76.2	0.03
40	514.28	3708.38	0.0	70.1	0.03
41	517.28	3708.38	0.0	64.0	0.03
42	513.28	3707.38	0.0	64.0	0.03
43	512.28	3707.38	0.0	67.1	0.03
44	515.28	3707.38	0.0	61.0	0.03
45	517.28	3707.38	0.0	67.1	0.03
46	511.28	3706.38	0.0	73.2	0.02
47	512.28	3706.38	0.0	73.2	0.02
48	513.28	3706.38	0.0	64.0	0.02
49	514.28	3706.38	0.0	64.0	0.02
50	515.28	3706.38	0.0	67.1	0.03
51	517.28	3714.18	0.0	70.1	0.04
52	512.28	3715.18	0.0	61.0	0.05
53	511.28	3716.18	0.0	61.0	0.04
54	514.28	3716.18	0.0	61.0	0.06
55	515.28	3716.18	0.0	70.1	0.07
56	513.28	3717.18	0.0	61.0	0.06
57	514.28	3717.18	0.0	61.0	0.06
58	512.28	3711.18	0.0	64.0	0.03
59	516.50	3708.10	0.0	67.7	0.03
60	518.10	3709.35	0.0	79.3	0.03
61	514.50	3708.80	0.0	80.5	0.03
62	517.30	3714.40	0.0	76.2	0.04

FIVE HIGHEST 1-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48) *	6.22	(275,15) *	5.14	(227,12)	5.08	(200,12)	5.06	(212,11)	5.05	(200,11)
2(515.88,3710.48)	5.05	(200,12)	5.02	(212,11)	5.00	(238,13)	4.99	(213,13)	4.98	(248,13)
3(515.78,3710.38)	4.90	(230,15)	4.88	(243,14)	4.87	(200,12)	4.82	(213,13)	4.76	(212,11)
4(515.88,3710.38)	4.93	(230,15)	4.92	(200,12)	4.91	(243,14)	4.88	(238,13)	4.87	(213,13)
5(515.68,3710.38)	4.86	(230,15)	4.84	(243,14)	4.81	(200,12)	4.76	(213,13)	4.68	(212,15)
6(515.98,3710.38)	5.47	(275,15)	4.96	(200,12)	4.95	(227,12)	4.95	(230,15)	4.93	(200,11)
7(511.28,3709.38)	1.77	(135,17)	1.76	(135,15)	1.57	(249,17)	1.56	(236,13)	1.55	(205, 9)
8(512.28,3709.38)	2.03	(135,15)	2.03	(135,17)	1.91	(206, 9)	1.79	(201,17)	1.79	(238,17)
9(513.28,3709.38)	2.30	(275,11)	2.29	(317,14)	2.16	(135,17)	2.14	(317,12)	2.12	(258,16)
10(514.28,3709.38)	2.85	(205,13)	2.63	(136,15)	2.61	(261,11)	2.61	(275,11)	2.60	(317,14)
11(515.28,3709.38)	3.32	(205,11)	3.28	(207,10)	3.15	(73,14)	3.10	(205,12)	3.07	(213,11)
12(518.28,3709.38)	2.89	(167,10)	2.82	(166,10)	2.80	(176, 9)	2.69	(282,12)	2.41	(53,13)
13(511.28,3708.38)	1.62	(135,17)	1.60	(135,15)	1.47	(214,18)	1.44	(249,17)	1.43	(205, 9)
14(513.28,3708.38)	2.02	(205,13)	1.93	(275,11)	1.93	(317,14)	1.88	(231,17)	1.86	(257,17)
15(514.28,3708.38)	2.37	(205,13)	2.31	(213,10)	2.23	(317,14)	2.15	(205,11)	2.13	(207,10)
16(517.28,3708.38)	2.65	(257,16)	2.64	(224,15)	2.63	(199,18)	2.57	(176, 8)	2.51	(229,15)
17(513.28,3707.38)	1.62	(249,16)	1.62	(205,13)	1.60	(167,16)	1.60	(231,17)	1.60	(230,17)
18(512.28,3707.38)	1.50	(167,16)	1.47	(249,16)	1.45	(205, 9)	1.43	(100,17)	1.41	(264, 9)
19(515.28,3707.38)	1.99	(213,10)	1.99	(214, 9)	1.96	(209,14)	1.94	(73,13)	1.92	(5,12)
20(517.28,3707.38)	2.05	(257,16)	2.05	(224,15)	2.01	(176, 8)	1.93	(53,11)	1.81	(172,18)
21(511.28,3706.38)	1.25	(167,16)	1.21	(100,17)	1.16	(361,14)	1.16	(357,12)	1.15	(249,16)
22(512.28,3706.38)	1.36	(167,16)	1.31	(100,17)	1.28	(249,16)	1.25	(361,14)	1.25	(357,12)
23(513.28,3706.38)	1.40	(100,17)	1.38	(213, 9)	1.36	(212, 8)	1.34	(231,17)	1.34	(230,17)
24(514.28,3706.38)	1.64	(209,14)	1.46	(230,17)	1.46	(212, 8)	1.45	(257,17)	1.45	(176,13)
25(515.28,3706.38)	1.72	(209,14)	1.60	(229,17)	1.56	(228,17)	1.55	(243, 8)	1.54	(209, 9)
26(517.28,3714.18)	3.65	(234,14)	3.61	(165,16)	3.56	(168,10)	3.53	(197,16)	3.51	(174,16)
27(512.28,3715.18)	1.84	(246,13)	1.70	(239,17)	1.68	(232,14)	1.67	(178,12)	1.66	(317,15)
28(514.28,3716.18)	1.97	(204,15)	1.97	(218,17)	1.96	(170,18)	1.81	(171,13)	1.80	(163,14)
29(515.28,3716.18)	2.17	(188,15)	2.17	(204,15)	2.16	(170,14)	2.10	(244,10)	1.97	(31,11)
30(513.28,3717.18)	1.50	(256,16)	1.49	(196,18)	1.46	(235,18)	1.46	(222,17)	1.46	(170,19)
31(514.28,3717.18)	1.56	(164,18)	1.56	(196,18)	1.53	(152,17)	1.53	(170,19)	1.52	(188,15)

32(512.28,3711.18)	2.36	(197,15)	2.35	(226,16)	2.34	(214,17)	2.33	(243,11)	2.32	(207,11)
33(511.28,3709.38)	1.77	(135,17)	1.76	(135,15)	1.57	(249,17)	1.56	(236,13)	1.55	(205, 9)
34(511.28,3709.38)	1.77	(135,17)	1.76	(135,15)	1.57	(249,17)	1.56	(236,13)	1.55	(205, 9)
35(513.28,3709.38)	2.30	(275,11)	2.29	(317,14)	2.16	(135,17)	2.14	(317,12)	2.12	(258,16)
36(514.28,3709.38)	2.85	(205,13)	2.63	(136,15)	2.61	(261,11)	2.61	(275,11)	2.60	(317,14)
37(515.28,3709.38)	3.32	(205,11)	3.28	(207,10)	3.15	(73,14)	3.10	(205,12)	3.07	(213,11)
38(511.28,3708.38)	1.62	(135,17)	1.60	(135,15)	1.47	(214,18)	1.44	(249,17)	1.43	(205, 9)
39(513.28,3708.38)	2.02	(205,13)	1.93	(275,11)	1.93	(317,14)	1.88	(231,17)	1.86	(257,17)
40(514.28,3708.38)	2.37	(205,13)	2.31	(213,10)	2.23	(317,14)	2.15	(205,11)	2.13	(207,10)
41(517.28,3708.38)	2.65	(257,16)	2.64	(224,15)	2.63	(199,18)	2.57	(176, 8)	2.51	(229,15)
42(513.28,3707.38)	1.62	(249,16)	1.62	(205,13)	1.60	(167,16)	1.60	(231,17)	1.60	(230,17)
43(512.28,3707.38)	1.50	(167,16)	1.47	(249,16)	1.45	(205, 9)	1.43	(100,17)	1.41	(264, 9)
44(515.28,3707.38)	1.99	(213,10)	1.99	(214, 9)	1.96	(209,14)	1.94	(73,13)	1.92	(5,12)
45(517.28,3707.38)	2.05	(257,16)	2.05	(224,15)	2.01	(176, 8)	1.93	(53,11)	1.81	(172,18)
46(511.28,3706.38)	1.25	(167,16)	1.21	(100,17)	1.16	(361,14)	1.16	(357,12)	1.15	(249,16)
47(512.28,3706.38)	1.36	(167,16)	1.31	(100,17)	1.28	(249,16)	1.25	(361,14)	1.25	(357,12)
48(513.28,3706.38)	1.40	(100,17)	1.38	(213, 9)	1.36	(212, 8)	1.34	(231,17)	1.34	(230,17)
49(514.28,3706.38)	1.64	(209,14)	1.46	(230,17)	1.46	(212, 8)	1.45	(257,17)	1.45	(176,13)
50(515.28,3706.38)	1.72	(209,14)	1.60	(229,17)	1.56	(228,17)	1.55	(243, 8)	1.54	(209, 9)
51(517.28,3714.18)	3.65	(234,14)	3.61	(165,16)	3.56	(168,10)	3.53	(197,16)	3.51	(174,16)
52(512.28,3715.18)	1.84	(246,13)	1.70	(239,17)	1.68	(232,14)	1.67	(178,12)	1.66	(317,15)
53(511.28,3716.18)	1.44	(246,13)	1.41	(256,16)	1.34	(239,17)	1.34	(239, 9)	1.33	(178,12)
54(514.28,3716.18)	1.97	(204,15)	1.97	(218,17)	1.96	(170,18)	1.81	(171,13)	1.80	(163,14)
55(515.28,3716.18)	2.17	(188,15)	2.17	(204,15)	2.16	(170,14)	2.10	(244,10)	1.97	(31,11)
56(513.28,3717.18)	1.50	(256,16)	1.49	(196,18)	1.46	(235,18)	1.46	(222,17)	1.46	(170,19)
57(514.28,3717.18)	1.56	(164,18)	1.56	(196,18)	1.53	(152,17)	1.53	(170,19)	1.52	(188,15)
58(512.28,3711.18)	2.36	(197,15)	2.35	(226,16)	2.34	(214,17)	2.33	(243,11)	2.32	(207,11)
59(516.50,3708.10)	2.55	(257,16)	2.48	(176, 8)	2.38	(73,13)	2.36	(249,14)	2.33	(281,14)
60(518.10,3709.35)	3.02	(229,15)	2.96	(167,10)	2.90	(199,18)	2.85	(166,10)	2.85	(189,15)
61(514.50,3708.80)	2.67	(205,13)	2.58	(213,10)	2.54	(205,11)	2.52	(207,10)	2.47	(317,14)
62(517.30,3714.40)	3.38	(197,16)	3.37	(234,14)	3.33	(165,16)	3.30	(168,10)	3.29	(221,15)

FIVE HIGHEST 3-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	4.14	(212,12) *	3.37	(200,12)	3.11	(213,12)	2.90	(208,15)	2.21	(243,15)
2(515.88,3710.48) *	4.14	(212,12)	3.08	(213,12)	2.33	(205,12)	2.23	(243,15)	2.15	(327,12)
3(515.78,3710.38)	4.10	(212,12)	2.95	(213,12)	2.47	(205,12)	2.29	(327,12)	2.29	(243,15)
4(515.88,3710.38)	4.12	(212,12)	2.97	(213,12)	2.45	(205,12)	2.28	(243,15)	2.26	(327,12)
5(515.68,3710.38)	4.08	(212,12)	2.91	(213,12)	2.50	(205,12)	2.32	(327,12)	2.30	(243,15)
6(515.98,3710.38)	3.30	(200,12)	3.00	(213,12)	2.62	(238,15)	2.50	(212,12)	2.43	(208,15)
7(511.28,3709.38)	1.01	(206, 9)	0.96	(137,18)	0.96	(214,18)	0.89	(183,18)	0.87	(236,15)
8(512.28,3709.38)	1.21	(206, 9)	1.12	(201,18)	1.10	(214,18)	1.08	(136, 9)	1.07	(236,15)
9(513.28,3709.38)	1.64	(211,12)	1.56	(200,18)	1.31	(136, 9)	1.31	(248, 9)	1.28	(249,18)
10(514.28,3709.38)	2.34	(264,15)	1.60	(264,12)	1.59	(261,12)	1.54	(262,12)	1.52	(211, 9)
11(515.28,3709.38)	2.62	(212,12)	2.16	(213,12)	2.14	(205,12)	1.97	(327,12)	1.95	(205,15)
12(518.28,3709.38)	1.55	(231,12)	1.49	(108,12)	1.47	(55,12)	1.47	(53,15)	1.46	(35,12)
13(511.28,3708.38)	0.88	(214,18)	0.83	(206,18)	0.81	(201,18)	0.77	(136, 9)	0.71	(293,12)
14(513.28,3708.38)	1.34	(200,18)	1.25	(264,15)	1.11	(211, 9)	1.08	(260,12)	1.06	(262,12)
15(514.28,3708.38)	1.86	(212, 9)	1.32	(213,12)	1.17	(34,15)	1.16	(19,12)	1.11	(264,15)
16(517.28,3708.38)	2.11	(225,12)	1.48	(224,15)	1.47	(316,15)	1.28	(129,12)	1.24	(129,15)
17(513.28,3707.38)	1.08	(262,15)	1.07	(338,15)	0.93	(264,15)	0.92	(357,12)	0.91	(100,18)
18(512.28,3707.38)	1.02	(200,18)	0.89	(100,18)	0.84	(357,12)	0.81	(248, 9)	0.78	(211, 9)
19(515.28,3707.38)	1.20	(207,12)	1.19	(213,12)	1.19	(209,15)	1.11	(5,12)	1.11	(212, 9)
20(517.28,3707.38)	1.26	(176, 9)	1.14	(316,15)	1.07	(310,12)	1.07	(224,15)	0.92	(10,15)
21(511.28,3706.38)	0.79	(200,18)	0.70	(260,18)	0.67	(357,12)	0.65	(144,18)	0.60	(262,21)
22(512.28,3706.38)	0.85	(136,18)	0.84	(338,15)	0.84	(100,18)	0.82	(262,15)	0.74	(210,18)
23(513.28,3706.38)	1.23	(212, 9)	0.88	(100,18)	0.83	(259,18)	0.71	(19,12)	0.70	(259,21)
24(514.28,3706.38)	1.11	(205,15)	0.93	(209,15)	0.87	(207,12)	0.87	(212, 9)	0.84	(259,18)
25(515.28,3706.38)	0.96	(5,12)	0.94	(326,15)	0.88	(228,18)	0.85	(325,15)	0.84	(6,15)
26(517.28,3714.18)	2.33	(171,15)	2.20	(174,15)	2.16	(174,18)	1.97	(199,15)	1.91	(133,12)
27(512.28,3715.18)	1.26	(251,12)	1.13	(101,15)	1.03	(39,15)	1.02	(73,18)	1.01	(92,18)
28(514.28,3716.18)	1.68	(8,15)	1.40	(286,12)	1.15	(164,18)	1.14	(300,15)	1.12	(29,15)
29(515.28,3716.18)	1.77	(318,12)	1.55	(254,15)	1.45	(286,12)	1.40	(153,15)	1.39	(140,15)

30(513.28,3717.18)	0.98	(222,18)	0.90	(286,12)	0.89	(117,12)	0.88	(164,18)	0.88	(312,15)
31(514.28,3717.18)	1.23	(286,12)	1.08	(191,18)	0.93	(111,24)	0.92	(120, 9)	0.92	(29,15)
32(512.28,3711.18)	1.34	(190,18)	1.32	(204,18)	1.21	(177,18)	1.16	(263,15)	0.89	(207,15)
33(511.28,3709.38)	1.01	(206, 9)	0.96	(137,18)	0.96	(214,18)	0.89	(183,18)	0.87	(236,15)
34(511.28,3709.38)	1.01	(206, 9)	0.96	(137,18)	0.96	(214,18)	0.89	(183,18)	0.87	(236,15)
35(513.28,3709.38)	1.64	(211,12)	1.56	(200,18)	1.31	(136, 9)	1.31	(248, 9)	1.28	(249,18)
36(514.28,3709.38)	2.34	(264,15)	1.60	(264,12)	1.59	(261,12)	1.54	(262,12)	1.52	(211, 9)
37(515.28,3709.38)	2.62	(212,12)	2.16	(213,12)	2.14	(205,12)	1.97	(327,12)	1.95	(205,15)
38(511.28,3708.38)	0.88	(214,18)	0.83	(206,18)	0.81	(201,18)	0.77	(136, 9)	0.71	(293,12)
39(513.28,3708.38)	1.34	(200,18)	1.25	(264,15)	1.11	(211, 9)	1.08	(260,12)	1.06	(262,12)
40(514.28,3708.38)	1.86	(212, 9)	1.32	(213,12)	1.17	(34,15)	1.16	(19,12)	1.11	(264,15)
41(517.28,3708.38)	2.11	(225,12)	1.48	(224,15)	1.47	(316,15)	1.28	(129,12)	1.24	(129,15)
42(513.28,3707.38)	1.08	(262,15)	1.07	(338,15)	0.93	(264,15)	0.92	(357,12)	0.91	(100,18)
43(512.28,3707.38)	1.02	(200,18)	0.89	(100,18)	0.84	(357,12)	0.81	(248, 9)	0.78	(211, 9)
44(515.28,3707.38)	1.20	(207,12)	1.19	(213,12)	1.19	(209,15)	1.11	(5,12)	1.11	(212, 9)
45(517.28,3707.38)	1.26	(176, 9)	1.14	(316,15)	1.07	(310,12)	1.07	(224,15)	0.92	(10,15)
46(511.28,3706.38)	0.79	(200,18)	0.70	(260,18)	0.67	(357,12)	0.65	(144,18)	0.60	(262,21)
47(512.28,3706.38)	0.85	(136,18)	0.84	(338,15)	0.84	(100,18)	0.82	(262,15)	0.74	(210,18)
48(513.28,3706.38)	1.23	(212, 9)	0.88	(100,18)	0.83	(259,18)	0.71	(19,12)	0.70	(259,21)
49(514.28,3706.38)	1.11	(205,15)	0.93	(209,15)	0.87	(207,12)	0.87	(212, 9)	0.84	(259,18)
50(515.28,3706.38)	0.96	(5,12)	0.94	(326,15)	0.88	(228,18)	0.85	(325,15)	0.84	(6,15)
51(517.28,3714.18)	2.33	(171,15)	2.20	(174,15)	2.16	(174,18)	1.97	(199,15)	1.91	(133,12)
52(512.28,3715.18)	1.26	(251,12)	1.13	(101,15)	1.03	(39,15)	1.02	(73,18)	1.01	(92,18)
53(511.28,3716.18)	0.91	(244,18)	0.88	(92,18)	0.87	(251,12)	0.86	(101,15)	0.85	(73,18)
54(514.28,3716.18)	1.68	(8,15)	1.40	(286,12)	1.15	(164,18)	1.14	(300,15)	1.12	(29,15)
55(515.28,3716.18)	1.77	(318,12)	1.55	(254,15)	1.45	(286,12)	1.40	(153,15)	1.39	(140,15)
56(513.28,3717.18)	0.98	(222,18)	0.90	(286,12)	0.89	(117,12)	0.88	(164,18)	0.88	(312,15)
57(514.28,3717.18)	1.23	(286,12)	1.08	(191,18)	0.93	(111,24)	0.92	(120, 9)	0.92	(29,15)
58(512.28,3711.18)	1.34	(190,18)	1.32	(204,18)	1.21	(177,18)	1.16	(263,15)	0.89	(207,15)
59(516.50,3708.10)	1.45	(176, 9)	1.41	(316,15)	1.41	(249,15)	1.33	(282,15)	1.30	(310,12)
60(518.10,3709.35)	1.66	(225,12)	1.60	(231,12)	1.59	(199,18)	1.54	(335,15)	1.52	(108,12)
61(514.50,3708.80)	1.97	(212, 9)	1.54	(213,12)	1.37	(264,15)	1.32	(34,15)	1.27	(19,12)
62(517.30,3714.40)	2.46	(174,18)	2.10	(171,15)	1.96	(174,15)	1.79	(133,12)	1.73	(199,15)

FIVE HIGHEST 8-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	1.83	(213,16)	1.77	(212,16)	1.56	(208,16)	1.55	(200,16)	1.31	(327,16)
2(515.88,3710.48)	1.81	(213,16) *	1.78	(212,16)	1.23	(230,16)	1.09	(205,16)	0.96	(209,16)
3(515.78,3710.38) *	2.38	(212,16)	1.75	(213,16)	1.39	(205,16)	0.93	(200,16)	0.89	(209,16)
4(515.88,3710.38)	1.79	(212,16)	1.77	(213,16)	1.22	(230,16)	1.16	(205,16)	0.97	(209,16)
5(515.68,3710.38)	2.38	(212,16)	1.73	(213,16)	1.42	(205,16)	0.93	(200,16)	0.87	(327,16)
6(515.98,3710.38)	1.74	(213,16)	1.71	(200,16)	1.37	(327,16)	1.31	(208,16)	1.23	(230,16)
7(511.28,3709.38)	0.55	(263,16)	0.53	(183,16)	0.51	(206,16)	0.42	(264,24)	0.38	(137,16)
8(512.28,3709.38)	0.64	(211,16)	0.60	(258,16)	0.57	(200,16)	0.57	(264,16)	0.48	(261,16)
9(513.28,3709.38)	1.08	(261,16)	1.03	(211,16)	0.93	(248,16)	0.83	(260,16)	0.74	(200,16)
10(514.28,3709.38)	1.69	(264,16)	1.47	(262,16)	1.42	(248,16)	0.93	(260,16)	0.90	(136,16)
11(515.28,3709.38)	1.66	(212,16)	1.53	(205,16)	1.27	(213,16)	0.77	(19,16)	0.74	(327,16)
12(518.28,3709.38)	0.95	(108,16)	0.90	(89,16)	0.87	(231,16)	0.84	(55,16)	0.82	(50,16)
13(511.28,3708.38)	0.52	(260,16)	0.46	(92, 8)	0.43	(360,16)	0.43	(211,16)	0.41	(258,16)
14(513.28,3708.38)	1.01	(264,16)	1.01	(260,16)	0.95	(262,16)	0.95	(248,16)	0.56	(325,16)
15(514.28,3708.38)	1.06	(213,16)	0.81	(262,16)	0.68	(205,16)	0.66	(248,16)	0.66	(19,16)
16(517.28,3708.38)	1.03	(129,16)	0.86	(225,16)	0.83	(316,16)	0.75	(230,16)	0.73	(52,16)
17(513.28,3707.38)	0.87	(262,16)	0.76	(248,16)	0.57	(338,16)	0.52	(205,16)	0.47	(264,16)
18(512.28,3707.38)	0.77	(248,16)	0.77	(260,16)	0.66	(264,16)	0.64	(262,16)	0.56	(338,16)
19(515.28,3707.38)	0.93	(326,16)	0.78	(19,16)	0.76	(209,16)	0.67	(200,16)	0.61	(66,16)
20(517.28,3707.38)	0.63	(30,16)	0.57	(10,16)	0.57	(52,16)	0.56	(176, 8)	0.55	(129, 8)
21(511.28,3706.38)	0.60	(260,16)	0.55	(261,24)	0.46	(262,24)	0.46	(264,16)	0.45	(248,16)
22(512.28,3706.38)	0.63	(262,16)	0.56	(263, 8)	0.53	(248,16)	0.51	(338,16)	0.47	(259,24)
23(513.28,3706.38)	0.58	(213,16)	0.54	(205,16)	0.48	(262,16)	0.47	(259,24)	0.46	(272,16)
24(514.28,3706.38)	0.70	(326,16)	0.67	(205,16)	0.57	(213,16)	0.51	(212,16)	0.44	(19,16)
25(515.28,3706.38)	0.67	(326,16)	0.56	(66,16)	0.50	(151,16)	0.50	(200,16)	0.47	(209,16)
26(517.28,3714.18)	1.26	(174,16)	1.23	(171,16)	1.01	(131,16)	0.96	(154,16)	0.96	(190,16)
27(512.28,3715.18)	0.85	(251,16)	0.80	(39,16)	0.76	(109,16)	0.66	(91,16)	0.57	(101,16)

28(514.28,3716.18)	0.89	(312,16)	0.72	(300,16)	0.63	(8,16)	0.61	(239,16)	0.56	(170,24)
29(515.28,3716.18)	1.13	(286,16)	0.90	(111,24)	0.89	(153,16)	0.82	(319,16)	0.80	(146,16)
30(513.28,3717.18)	0.85	(312,16)	0.61	(348, 8)	0.60	(57, 8)	0.60	(294, 8)	0.58	(83,16)
31(514.28,3717.18)	0.87	(312,16)	0.67	(319,16)	0.65	(117,16)	0.64	(286,16)	0.59	(128, 8)
32(512.28,3711.18)	0.76	(263,16)	0.67	(204,24)	0.67	(182,16)	0.65	(207,16)	0.62	(237,16)
33(511.28,3709.38)	0.55	(263,16)	0.53	(183,16)	0.51	(206,16)	0.42	(264,24)	0.38	(137,16)
34(511.28,3709.38)	0.55	(263,16)	0.53	(183,16)	0.51	(206,16)	0.42	(264,24)	0.38	(137,16)
35(513.28,3709.38)	1.08	(261,16)	1.03	(211,16)	0.93	(248,16)	0.83	(260,16)	0.74	(200,16)
36(514.28,3709.38)	1.69	(264,16)	1.47	(262,16)	1.42	(248,16)	0.93	(260,16)	0.90	(136,16)
37(515.28,3709.38)	1.66	(212,16)	1.53	(205,16)	1.27	(213,16)	0.77	(19,16)	0.74	(327,16)
38(511.28,3708.38)	0.52	(260,16)	0.46	(92, 8)	0.43	(360,16)	0.43	(211,16)	0.41	(258,16)
39(513.28,3708.38)	1.01	(264,16)	1.01	(260,16)	0.95	(262,16)	0.95	(248,16)	0.56	(325,16)
40(514.28,3708.38)	1.06	(213,16)	0.81	(262,16)	0.68	(205,16)	0.66	(248,16)	0.66	(19,16)
41(517.28,3708.38)	1.03	(129,16)	0.86	(225,16)	0.83	(316,16)	0.75	(230,16)	0.73	(52,16)
42(513.28,3707.38)	0.87	(262,16)	0.76	(248,16)	0.57	(338,16)	0.52	(205,16)	0.47	(264,16)
43(512.28,3707.38)	0.77	(248,16)	0.77	(260,16)	0.66	(264,16)	0.64	(262,16)	0.56	(338,16)
44(515.28,3707.38)	0.93	(326,16)	0.78	(19,16)	0.76	(209,16)	0.67	(200,16)	0.61	(66,16)
45(517.28,3707.38)	0.63	(30,16)	0.57	(10,16)	0.57	(52,16)	0.56	(176, 8)	0.55	(129, 8)
46(511.28,3706.38)	0.60	(260,16)	0.55	(261,24)	0.46	(262,24)	0.46	(264,16)	0.45	(248,16)
47(512.28,3706.38)	0.63	(262,16)	0.56	(263, 8)	0.53	(248,16)	0.51	(338,16)	0.47	(259,24)
48(513.28,3706.38)	0.58	(213,16)	0.54	(205,16)	0.48	(262,16)	0.47	(259,24)	0.46	(272,16)
49(514.28,3706.38)	0.70	(326,16)	0.67	(205,16)	0.57	(213,16)	0.51	(212,16)	0.44	(19,16)
50(515.28,3706.38)	0.67	(326,16)	0.56	(66,16)	0.50	(151,16)	0.50	(200,16)	0.47	(209,16)
51(517.28,3714.18)	1.26	(174,16)	1.23	(171,16)	1.01	(131,16)	0.96	(154,16)	0.96	(190,16)
52(512.28,3715.18)	0.85	(251,16)	0.80	(39,16)	0.76	(109,16)	0.66	(91,16)	0.57	(101,16)
53(511.28,3716.18)	0.64	(39,16)	0.54	(251,16)	0.52	(22,24)	0.52	(292, 8)	0.52	(98,16)
54(514.28,3716.18)	0.89	(312,16)	0.72	(300,16)	0.63	(8,16)	0.61	(239,16)	0.56	(170,24)
55(515.28,3716.18)	1.13	(286,16)	0.90	(111,24)	0.89	(153,16)	0.82	(319,16)	0.80	(146,16)
56(513.28,3717.18)	0.85	(312,16)	0.61	(348, 8)	0.60	(57, 8)	0.60	(294, 8)	0.58	(83,16)
57(514.28,3717.18)	0.87	(312,16)	0.67	(319,16)	0.65	(117,16)	0.64	(286,16)	0.59	(128, 8)
58(512.28,3711.18)	0.76	(263,16)	0.67	(204,24)	0.67	(182,16)	0.65	(207,16)	0.62	(237,16)
59(516.50,3708.10)	1.12	(151,16)	0.90	(150,16)	0.81	(316,16)	0.68	(231,16)	0.68	(100,16)
60(518.10,3709.35)	1.10	(60,16)	1.00	(89,16)	0.96	(108,16)	0.90	(231,16)	0.85	(335,16)
61(514.50,3708.80)	1.01	(213,16)	0.91	(262,16)	0.77	(264,16)	0.76	(248,16)	0.75	(205,16)
62(517.30,3714.40)	1.13	(174,16)	1.13	(171,16)	0.95	(131,16)	0.85	(154,16)	0.80	(190,16)

FIVE HIGHEST 24-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	0.61	(212,24) *	0.61	(213,24)	0.52	(208,24)	0.52	(200,24)	0.45	(230,24)
2(515.88,3710.48)	0.62	(212,24)	0.61	(213,24)	0.45	(230,24)	0.36	(205,24)	0.32	(121,24)
3(515.78,3710.38) *	0.82	(212,24)	0.59	(213,24)	0.46	(205,24)	0.34	(121,24)	0.31	(200,24)
4(515.88,3710.38)	0.63	(212,24)	0.59	(213,24)	0.45	(230,24)	0.39	(205,24)	0.34	(121,24)
5(515.68,3710.38)	0.82	(212,24)	0.58	(213,24)	0.47	(205,24)	0.31	(200,24)	0.29	(248,24)
6(515.98,3710.38)	0.58	(213,24)	0.57	(200,24)	0.46	(327,24)	0.45	(230,24)	0.44	(208,24)
7(511.28,3709.38)	0.29	(206,24)	0.27	(360,24)	0.27	(137,24)	0.26	(263,24)	0.26	(183,24)
8(512.28,3709.38)	0.34	(211,24)	0.31	(261,24)	0.30	(206,24)	0.30	(264,24)	0.28	(200,24)
9(513.28,3709.38)	0.50	(211,24)	0.47	(261,24)	0.39	(248,24)	0.39	(200,24)	0.37	(136,24)
10(514.28,3709.38)	0.57	(264,24)	0.54	(262,24)	0.50	(248,24)	0.49	(261,24)	0.44	(260,24)
11(515.28,3709.38)	0.63	(212,24)	0.51	(205,24)	0.44	(213,24)	0.27	(19,24)	0.25	(327,24)
12(518.28,3709.38)	0.54	(89,24)	0.36	(88,24)	0.34	(108,24)	0.33	(310,24)	0.33	(58,24)
13(511.28,3708.38)	0.27	(261,24)	0.27	(211,24)	0.26	(360,24)	0.25	(136,24)	0.25	(260,24)
14(513.28,3708.38)	0.54	(260,24)	0.42	(262,24)	0.40	(261,24)	0.37	(264,24)	0.36	(248,24)
15(514.28,3708.38)	0.46	(212,24)	0.38	(213,24)	0.36	(262,24)	0.32	(211,24)	0.31	(260,24)
16(517.28,3708.38)	0.51	(129,24)	0.31	(274,24)	0.30	(316,24)	0.29	(225,24)	0.29	(10,24)
17(513.28,3707.38)	0.39	(260,24)	0.36	(262,24)	0.30	(248,24)	0.26	(259,24)	0.23	(212,24)
18(512.28,3707.38)	0.48	(260,24)	0.36	(248,24)	0.36	(262,24)	0.34	(261,24)	0.30	(211,24)
19(515.28,3707.38)	0.37	(326,24)	0.35	(10,24)	0.32	(19,24)	0.28	(51,24)	0.28	(325,24)
20(517.28,3707.38)	0.38	(129,24)	0.37	(10,24)	0.34	(30,24)	0.28	(274,24)	0.27	(19,24)
21(511.28,3706.38)	0.44	(260,24)	0.31	(261,24)	0.31	(262,24)	0.26	(296,24)	0.26	(14,24)
22(512.28,3706.38)	0.43	(260,24)	0.32	(262,24)	0.25	(263,24)	0.25	(321,24)	0.25	(297,24)
23(513.28,3706.38)	0.35	(297,24)	0.31	(212,24)	0.31	(260,24)	0.30	(272,24)	0.29	(259,24)
24(514.28,3706.38)	0.28	(326,24)	0.28	(212,24)	0.27	(259,24)	0.27	(297,24)	0.24	(213,24)
25(515.28,3706.38)	0.36	(10,24)	0.33	(65,24)	0.32	(150,24)	0.29	(326,24)	0.29	(66,24)

26(	517.28,3714.18)	0.55	(174,24)	0.43	(185,24)	0.41	(171,24)	0.37	(131,24)	0.33	(143,24)
27(	512.28,3715.18)	0.43	(251,24)	0.34	(109,24)	0.32	(39,24)	0.29	(350,24)	0.26	(98,24)
28(	514.28,3716.18)	0.43	(312,24)	0.38	(348,24)	0.37	(252,24)	0.30	(161,24)	0.28	(266,24)
29(	515.28,3716.18)	0.56	(111,24)	0.50	(160,24)	0.47	(116,24)	0.45	(319,24)	0.43	(117,24)
30(	513.28,3717.18)	0.43	(348,24)	0.40	(57,24)	0.39	(312,24)	0.37	(266,24)	0.34	(294,24)
31(	514.28,3717.18)	0.44	(117,24)	0.41	(160,24)	0.40	(312,24)	0.38	(319,24)	0.38	(116,24)
32(	512.28,3711.18)	0.32	(182,24)	0.32	(263,24)	0.31	(339,24)	0.30	(137,24)	0.30	(237,24)
33(	511.28,3709.38)	0.29	(206,24)	0.27	(360,24)	0.27	(137,24)	0.26	(263,24)	0.26	(183,24)
34(	511.28,3709.38)	0.29	(206,24)	0.27	(360,24)	0.27	(137,24)	0.26	(263,24)	0.26	(183,24)
35(	513.28,3709.38)	0.50	(211,24)	0.47	(261,24)	0.39	(248,24)	0.39	(200,24)	0.37	(136,24)
36(	514.28,3709.38)	0.57	(264,24)	0.54	(262,24)	0.50	(248,24)	0.49	(261,24)	0.44	(260,24)
37(	515.28,3709.38)	0.63	(212,24)	0.51	(205,24)	0.44	(213,24)	0.27	(19,24)	0.25	(327,24)
38(	511.28,3708.38)	0.27	(261,24)	0.27	(211,24)	0.26	(360,24)	0.25	(136,24)	0.25	(260,24)
39(	513.28,3708.38)	0.54	(260,24)	0.42	(262,24)	0.40	(261,24)	0.37	(264,24)	0.36	(248,24)
40(	514.28,3708.38)	0.46	(212,24)	0.38	(213,24)	0.36	(262,24)	0.32	(211,24)	0.31	(260,24)
41(	517.28,3708.38)	0.51	(129,24)	0.31	(274,24)	0.30	(316,24)	0.29	(225,24)	0.29	(10,24)
42(	513.28,3707.38)	0.39	(260,24)	0.36	(262,24)	0.30	(248,24)	0.26	(259,24)	0.23	(212,24)
43(	512.28,3707.38)	0.48	(260,24)	0.36	(248,24)	0.36	(262,24)	0.34	(261,24)	0.30	(211,24)
44(	515.28,3707.38)	0.37	(326,24)	0.35	(10,24)	0.32	(19,24)	0.28	(51,24)	0.28	(325,24)
45(	517.28,3707.38)	0.38	(129,24)	0.37	(10,24)	0.34	(30,24)	0.28	(274,24)	0.27	(19,24)
46(	511.28,3706.38)	0.44	(260,24)	0.31	(261,24)	0.31	(262,24)	0.26	(296,24)	0.26	(14,24)
47(	512.28,3706.38)	0.43	(260,24)	0.32	(262,24)	0.25	(263,24)	0.25	(321,24)	0.25	(297,24)
48(	513.28,3706.38)	0.35	(297,24)	0.31	(212,24)	0.31	(260,24)	0.30	(272,24)	0.29	(259,24)
49(	514.28,3706.38)	0.28	(326,24)	0.28	(212,24)	0.27	(259,24)	0.27	(297,24)	0.24	(213,24)
50(	515.28,3706.38)	0.36	(10,24)	0.33	(65,24)	0.32	(150,24)	0.29	(326,24)	0.29	(66,24)
51(	517.28,3714.18)	0.55	(174,24)	0.43	(185,24)	0.41	(171,24)	0.37	(131,24)	0.33	(143,24)
52(	512.28,3715.18)	0.43	(251,24)	0.34	(109,24)	0.32	(39,24)	0.29	(350,24)	0.26	(98,24)
53(	511.28,3716.18)	0.35	(251,24)	0.34	(350,24)	0.28	(39,24)	0.28	(349,24)	0.27	(98,24)
54(	514.28,3716.18)	0.43	(312,24)	0.38	(348,24)	0.37	(252,24)	0.30	(161,24)	0.28	(266,24)
55(	515.28,3716.18)	0.56	(111,24)	0.50	(160,24)	0.47	(116,24)	0.45	(319,24)	0.43	(117,24)
56(	513.28,3717.18)	0.43	(348,24)	0.40	(57,24)	0.39	(312,24)	0.37	(266,24)	0.34	(294,24)
57(	514.28,3717.18)	0.44	(117,24)	0.41	(160,24)	0.40	(312,24)	0.38	(319,24)	0.38	(116,24)
58(	512.28,3711.18)	0.32	(182,24)	0.32	(263,24)	0.31	(339,24)	0.30	(137,24)	0.30	(237,24)
59(	516.50,3708.10)	0.45	(10,24)	0.39	(150,24)	0.38	(151,24)	0.36	(65,24)	0.35	(66,24)
60(	518.10,3709.35)	0.61	(89,24)	0.37	(60,24)	0.34	(108,24)	0.34	(274,24)	0.33	(310,24)
61(	514.50,3708.80)	0.51	(212,24)	0.38	(262,24)	0.36	(213,24)	0.34	(211,24)	0.31	(260,24)
62(	517.30,3714.40)	0.56	(174,24)	0.49	(185,24)	0.38	(171,24)	0.35	(131,24)	0.33	(143,24)

SECTION H.20

1985 MODELING OUTPUT FOR CO COMPLEX I

COMPLEX I (DATED 90095)
BOWMAN ENVIRONMENTAL ENGINEERING VER. 6.27

SESSION INFORMATION

INPUT DATA FILE NAME : ICCOB5.DTA
OUTPUT LIST FILE NAME : ICCOB5.LST
MET DATA FILE NAME : C:\BEE\BNVGGGB5.BIN

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
CO SCREEN - 1985 SHREVEPORT/LONGVIEW BINARY MET. DATA

GENERAL INPUT INFORMATION

THIS RUN OF COMPLEX I -VERSION 2.0 IS FOR THE POLLUTANT PART FOR 365 24-HOUR PERIODS.
CONCENTRATION ESTIMATES BEGIN ON HOUR- 1,JULIAN DAY- 1, YEAR-1985.
A FACTOR OF 1.0000000 HAS BEEN SPECIFIED TO CONVERT USER LENGTH UNITS TO KILOMETERS.
0 SIGNIFICANT SOURCES ARE TO BE CONSIDERED.
THIS RUN WILL NOT CONSIDER ANY POLLUTANT LOSS.
HIGH-FIVE SUMMARY CONCENTRATION TABLES WILL BE OUTPUT FOR 4 AVERAGING PERIODS.
AVG TIMES OF 1,3,8, AND 24 HOURS ARE AUTOMATICALLY DISPLAYED.

OPTION	OPTION LIST	OPTION SPECIFICATION : 0= IGNORE OPTION 1= USE OPTION
	TECHNICAL OPTIONS	
1	TERRAIN ADJUSTMENTS	0
2	DO NOT INCLUDE STACK DOWNWASH CALCULATIONS	0
3	DO NOT INCLUDE GRADUAL PLUME RISE CALCULATIONS	1
4	CALCULATE INITIAL PLUME SIZE	1
	INPUT OPTIONS	
5	READ MET DATA FROM CARDS	0
6	READ HOURLY EMISSIONS	0
7	SPECIFY SIGNIFICANT SOURCES	0
8	READ RADIAL DISTANCES TO GENERATE RECEPTORS	0
	PRINTED OUTPUT OPTIONS	
9	DELETE EMISSIONS WITH HEIGHT TABLE	1
10	DELETE MET DATA SUMMARY FOR AVG PERIOD	1
11	DELETE HOURLY CONTRIBUTIONS	1
12	DELETE MET DATA ON HOURLY CONTRIBUTIONS	1
13	DELETE FINAL PLUME RISE CALC ON HRLY CONTRIBUTIONS	1
14	DELETE HOURLY SUMMARY	1
15	DELETE MET DATA ON HRLY SUMMARY	1
16	DELETE FINAL PLUME RISE CALC ON HRLY SUMMARY	1
17	DELETE AVG-PERIOD CONTRIBUTIONS	1
18	DELETE AVERAGING PERIOD SUMMARY	1
19	DELETE AVG CONCENTRATIONS AND HI-5 TABLES	0
	OTHER CONTROL AND OUTPUT OPTIONS	
20	RUN IS PART OF A SEGMENTED RUN	0
21	WRITE PARTIAL CONC TO DISK OR TAPE	0
22	WRITE HOURLY CONC TO DISK OR TAPE	0
23	WRITE AVG-PERIOD CONC TO DISK OR TAPE	0
24	PUNCH AVG-PERIOD CONC ONTO CARDS	0
25	COMPLEX TERRAIN OPTION	1
26	CALM PROCESSING OPTION	0
27	VALLEY SCREENING OPTION	0

ANEMOMETER HEIGHT= 10.00
WIND PROFILE WITH HEIGHT EXPONENTS CORRESPONDING TO STABILITY ARE AS FOLLOWS:
FOR STABILITY A: 0.07
STABILITY B: 0.07
STABILITY C: 0.10
STABILITY D: 0.15
STABILITY E: 0.35
STABILITY F: 0.55

POINT SOURCE INFORMATION

SOURCE		EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	SO2(G/SEC) EMISSIONS	PART(G/SEC) EMISSIONS	STACK HT(M)	STACK TEMP(K)	STACK DIAM(M)	STACK VEL(M/SEC)	POTEN. IMPACT (MICRO G/M**3)	EFF HT(M)	GRD-LVL ELEV USER HT UNITS	BUOY FLUX F M**4/S**3
1 1	COGEN	516.32	3711.89	0.00	6.51	22.9	427.6	3.4	16.6	5.03	283.88	34.40	150.19

ADDITIONAL INFORMATION ON SOURCES.

EMISSION INFORMATION FOR 1 (NPT) POINT SOURCES HAS BEEN INPUT
0 SIGNIFICANT POINT SOURCES(NSIGP) ARE TO BE USED FOR THIS RUN
THE ORDER OF SIGNIFICANCE(IMPS) FOR 25 OR LESS POINT SOURCES USED IN THIS RUN AS LISTED BY POINT SOURCE NUMBER:

SURFACE MET DATA FROM STATION(ISFCD) 13957, YEAR(ISFCYR) 1985
MIXING HEIGHT DATA FROM STATION(IMXD) 3951, YEAR(IMXYR) 1985

RECEPTOR INFORMATION

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)
1		515.977	3710.478	0.0	57.9
2		515.877	3710.478	0.0	57.9
3		515.777	3710.378	0.0	57.9
4		515.877	3710.378	0.0	57.9
5		515.677	3710.378	0.0	57.9
6		515.977	3710.378	0.0	57.9
7		511.277	3709.378	0.0	64.0
8		512.277	3709.378	0.0	61.0
9		513.277	3709.378	0.0	73.2
10		514.277	3709.378	0.0	64.0
11		515.277	3709.378	0.0	57.9
12		518.277	3709.378	0.0	61.0
13		511.277	3708.378	0.0	67.1
14		513.277	3708.378	0.0	76.2
15		514.277	3708.378	0.0	70.1
16		517.277	3708.378	0.0	64.0
17		513.277	3707.378	0.0	64.0
18		512.277	3707.378	0.0	67.1
19		515.277	3707.378	0.0	61.0
20		517.277	3707.378	0.0	67.1
21		511.277	3706.378	0.0	73.2
22		512.277	3706.378	0.0	73.2
23		513.277	3706.378	0.0	64.0
24		514.277	3706.378	0.0	64.0
25		515.277	3706.378	0.0	67.1
26		517.277	3714.176	0.0	70.1
27		512.277	3715.176	0.0	61.0
28		514.277	3716.176	0.0	61.0
29		515.277	3716.176	0.0	70.1
30		513.277	3717.176	0.0	61.0
31		514.277	3717.176	0.0	61.0
32		512.277	3711.176	0.0	64.0
33		511.277	3709.378	0.0	64.0
34		511.277	3709.378	0.0	61.0
35		513.277	3709.378	0.0	73.2
36		514.277	3709.378	0.0	64.0
37		515.277	3709.378	0.0	57.9
38		511.277	3708.378	0.0	67.1
39		513.277	3708.378	0.0	76.2
40		514.277	3708.378	0.0	70.1
41		517.277	3708.378	0.0	64.0
42		513.277	3707.378	0.0	64.0

43	512.277	3707.378	0.0	67.1
44	515.277	3707.378	0.0	61.0
45	517.277	3707.378	0.0	67.1
46	511.277	3706.378	0.0	73.2
47	512.277	3706.378	0.0	73.2
48	513.277	3706.378	0.0	64.0
49	514.277	3706.378	0.0	64.0
50	515.277	3706.378	0.0	67.1
51	517.277	3714.176	0.0	70.1
52	512.277	3715.176	0.0	61.0
53	511.277	3716.176	0.0	61.0
54	514.277	3716.176	0.0	61.0
55	515.277	3716.176	0.0	70.1
56	513.277	3717.176	0.0	61.0
57	514.277	3717.176	0.0	61.0
58	512.277	3711.176	0.0	64.0
59	516.500	3708.100	0.0	67.7
60	518.100	3709.350	0.0	79.3
61	514.500	3708.800	0.0	80.5
62	517.300	3714.400	0.0	76.2

COMPLEX I (DATED 90095)

INTERNATIONAL PAPER - COGEN.
COMPLEX
CD SCREEN - 1985 SHREVEPORT/LONGVIEW BINARY MET. DATA

RECEPTORS

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)	DAY	AVG CONC FOR PERIOD 1.HR 1. TO DAY365.HR24. (MICROGRAMS/M**3)
1		515.98	3710.48	0.0	57.9		0.03
2		515.88	3710.48	0.0	57.9		0.03
3		515.78	3710.38	0.0	57.9		0.03
4		515.88	3710.38	0.0	57.9		0.03
5		515.68	3710.38	0.0	57.9		0.03
6		515.98	3710.38	0.0	57.9		0.03
7		511.28	3709.38	0.0	64.0		0.02
8		512.28	3709.38	0.0	61.0		0.02
9		513.28	3709.38	0.0	73.2		0.02
10		514.28	3709.38	0.0	64.0		0.03
11		515.28	3709.38	0.0	57.9		0.03
12		518.28	3709.38	0.0	61.0		0.04
13		511.28	3708.38	0.0	67.1		0.02
14		513.28	3708.38	0.0	76.2		0.02
15		514.28	3708.38	0.0	70.1		0.03
16		517.28	3708.38	0.0	64.0		0.03
17		513.28	3707.38	0.0	64.0		0.02
18		512.28	3707.38	0.0	67.1		0.02
19		515.28	3707.38	0.0	61.0		0.04
20		517.28	3707.38	0.0	67.1		0.03
21		511.28	3706.38	0.0	73.2		0.02
22		512.28	3706.38	0.0	73.2		0.02
23		513.28	3706.38	0.0	64.0		0.02
24		514.28	3706.38	0.0	64.0		0.03
25		515.28	3706.38	0.0	67.1		0.04
26		517.28	3714.18	0.0	70.1		0.04
27		512.28	3715.18	0.0	61.0		0.05
28		514.28	3716.18	0.0	61.0		0.05
29		515.28	3716.18	0.0	70.1	*	0.06
30		513.28	3717.18	0.0	61.0		0.05
31		514.28	3717.18	0.0	61.0		0.05
32		512.28	3711.18	0.0	64.0		0.02
33		511.28	3709.38	0.0	64.0		0.02

34	511.28	3709.38	0.0	61.0	0.02
35	513.28	3709.38	0.0	73.2	0.02
36	514.28	3709.38	0.0	64.0	0.03
37	515.28	3709.38	0.0	57.9	0.03
38	511.28	3708.38	0.0	67.1	0.02
39	513.28	3708.38	0.0	76.2	0.02
40	514.28	3708.38	0.0	70.1	0.03
41	517.28	3708.38	0.0	64.0	0.03
42	513.28	3707.38	0.0	64.0	0.02
43	512.28	3707.38	0.0	67.1	0.02
44	515.28	3707.38	0.0	61.0	0.04
45	517.28	3707.38	0.0	67.1	0.03
46	511.28	3706.38	0.0	73.2	0.02
47	512.28	3706.38	0.0	73.2	0.02
48	513.28	3706.38	0.0	64.0	0.02
49	514.28	3706.38	0.0	64.0	0.03
50	515.28	3706.38	0.0	67.1	0.04
51	517.28	3714.18	0.0	70.1	0.04
52	512.28	3715.18	0.0	61.0	0.05
53	511.28	3716.18	0.0	61.0	0.05
54	514.28	3716.18	0.0	61.0	0.05
55	515.28	3716.18	0.0	70.1	0.06
56	513.28	3717.18	0.0	61.0	0.05
57	514.28	3717.18	0.0	61.0	0.05
58	512.28	3711.18	0.0	64.0	0.02
59	516.50	3708.10	0.0	67.7	0.04
60	518.10	3709.35	0.0	79.3	0.04
61	514.50	3708.80	0.0	80.5	0.02
62	517.30	3714.40	0.0	76.2	0.04

FIVE HIGHEST 1-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1	2	3	4	5
1(515.98,3710.48)	5.11 (237,12) *	5.01 (105,12)	4.98 (223,16)	4.96 (123,14)	4.96 (213,14)
2(515.88,3710.48)	5.06 (237,12)	4.98 (223,16)	4.96 (105,12)	4.92 (123,14)	4.88 (187,12)
3(515.78,3710.38)	4.90 (223,16)	4.81 (187,12)	4.80 (237,12)	4.72 (105,12)	4.68 (180,12)
4(515.88,3710.38)	4.93 (223,16)	4.91 (213,14)	4.87 (237,12)	4.84 (187,12)	4.80 (129,14)
5(515.68,3710.38)	4.86 (223,16)	4.78 (237,13)	4.78 (187,12)	4.73 (180,11)	4.71 (237,12)
6(515.98,3710.38) *	5.12 (243,12)	4.95 (223,16)	4.93 (213,14)	4.92 (237,12)	4.84 (105,12)
7(511.28,3709.38)	1.79 (192,17)	1.72 (139,14)	1.54 (218,15)	1.54 (199, 8)	1.54 (192,16)
8(512.28,3709.38)	2.06 (192,17)	1.98 (218,15)	1.96 (192,16)	1.96 (159,15)	1.79 (233,12)
9(513.28,3709.38)	2.25 (238,15)	2.25 (251,15)	2.20 (192,17)	2.14 (326,12)	2.13 (56,12)
10(514.28,3709.38)	2.89 (244,10)	2.88 (238,15)	2.84 (242,10)	2.69 (311,12)	2.68 (223,11)
11(515.28,3709.38)	3.34 (214,13)	3.32 (223,11)	3.30 (242,10)	3.20 (144,10)	3.18 (299,12)
12(518.28,3709.38)	2.95 (213,15)	2.92 (166,16)	2.91 (232,17)	2.89 (232,14)	2.77 (305,12)
13(511.28,3708.38)	1.63 (192,17)	1.47 (215,15)	1.44 (159, 9)	1.38 (68,17)	1.38 (82,17)
14(513.28,3708.38)	1.87 (5,13)	1.85 (200,13)	1.85 (200,16)	1.85 (217,17)	1.83 (233,12)
15(514.28,3708.38)	2.24 (230,13)	2.23 (230,14)	2.16 (244,10)	2.15 (214,13)	2.14 (5,13)
16(517.28,3708.38)	2.52 (232,15)	2.44 (129,11)	2.44 (92,11)	2.30 (37,14)	2.27 (348,14)
17(513.28,3707.38)	1.62 (166,18)	1.59 (238,17)	1.59 (200,16)	1.59 (200,13)	1.54 (180, 9)
18(512.28,3707.38)	1.49 (238,17)	1.48 (215,15)	1.45 (159, 9)	1.40 (82,17)	1.40 (200,13)
19(515.28,3707.38)	2.13 (230,13)	2.12 (230,14)	2.05 (242,14)	1.79 (203,17)	1.75 (179, 8)
20(517.28,3707.38)	2.07 (213,17)	1.94 (92,11)	1.86 (181,17)	1.86 (348,14)	1.84 (180,18)
21(511.28,3706.38)	1.24 (238,17)	1.24 (215,15)	1.22 (159, 9)	1.16 (294,14)	1.16 (184,10)
22(512.28,3706.38)	1.36 (238,17)	1.32 (159, 9)	1.28 (166,18)	1.24 (82,17)	1.23 (326,15)
23(513.28,3706.38)	1.60 (230,13)	1.60 (230,14)	1.45 (238,17)	1.41 (166,18)	1.34 (326,14)
24(514.28,3706.38)	1.73 (230,13)	1.73 (230,14)	1.51 (166,18)	1.50 (203,17)	1.41 (308,10)
25(515.28,3706.38)	1.82 (230,14)	1.56 (203,17)	1.55 (242,14)	1.52 (202,18)	1.51 (140,12)
26(517.28,3714.18)	3.62 (212,13)	3.62 (168,16)	3.57 (184,16)	3.56 (226,10)	3.54 (229,16)
27(512.28,3715.18)	1.91 (238,11)	1.72 (230,17)	1.71 (220,18)	1.70 (231,17)	1.70 (184,11)
28(514.28,3716.18)	1.97 (233,17)	1.95 (253,15)	1.94 (232,13)	1.89 (309,13)	1.82 (167,17)
29(515.28,3716.18)	2.16 (233,14)	2.14 (226,12)	2.14 (253,15)	2.13 (135,15)	2.13 (226,16)
30(513.28,3717.18)	1.46 (200, 9)	1.44 (233,10)	1.44 (286,16)	1.44 (232,12)	1.43 (201, 9)
31(514.28,3717.18)	1.58 (167,17)	1.55 (233,10)	1.53 (200, 9)	1.52 (233,17)	1.52 (233,14)

32(512.28,3711.18)	2.37	(220,15)	2.32	(233,11)	2.22	(220,17)	2.13	(349,14)	2.10	(253,13)
33(511.28,3709.38)	1.79	(192,17)	1.72	(139,14)	1.54	(218,15)	1.54	(199, 8)	1.54	(192,16)
34(511.28,3709.38)	1.79	(192,17)	1.72	(139,14)	1.54	(218,15)	1.54	(199, 8)	1.54	(192,16)
35(513.28,3709.38)	2.25	(238,15)	2.25	(251,15)	2.20	(192,17)	2.14	(326,12)	2.13	(56,12)
36(514.28,3709.38)	2.89	(244,10)	2.88	(238,15)	2.84	(242,10)	2.69	(311,12)	2.68	(223,11)
37(515.28,3709.38)	3.34	(214,13)	3.32	(223,11)	3.30	(242,10)	3.20	(144,10)	3.18	(299,12)
38(511.28,3708.38)	1.63	(192,17)	1.47	(215,15)	1.44	(159, 9)	1.38	(68,17)	1.38	(82,17)
39(513.28,3708.38)	1.87	(5,13)	1.85	(200,13)	1.85	(200,16)	1.85	(217,17)	1.83	(233,12)
40(514.28,3708.38)	2.24	(230,13)	2.23	(230,14)	2.16	(244,10)	2.15	(214,13)	2.14	(5,13)
41(517.28,3708.38)	2.52	(232,15)	2.44	(129,11)	2.44	(92,11)	2.30	(37,14)	2.27	(348,14)
42(513.28,3707.38)	1.62	(166,18)	1.59	(238,17)	1.59	(200,16)	1.59	(200,13)	1.54	(180, 9)
43(512.28,3707.38)	1.49	(238,17)	1.48	(215,15)	1.45	(159, 9)	1.40	(82,17)	1.40	(200,13)
44(515.28,3707.38)	2.13	(230,13)	2.12	(230,14)	2.05	(242,14)	1.79	(203,17)	1.75	(179, 8)
45(517.28,3707.38)	2.07	(213,17)	1.94	(92,11)	1.86	(181,17)	1.86	(348,14)	1.84	(180,18)
46(511.28,3706.38)	1.24	(238,17)	1.24	(215,15)	1.22	(159, 9)	1.16	(294,14)	1.16	(184,10)
47(512.28,3706.38)	1.36	(238,17)	1.32	(159, 9)	1.28	(166,18)	1.24	(82,17)	1.23	(326,15)
48(513.28,3706.38)	1.60	(230,13)	1.60	(230,14)	1.45	(238,17)	1.41	(166,18)	1.34	(326,14)
49(514.28,3706.38)	1.73	(230,13)	1.73	(230,14)	1.51	(166,18)	1.50	(203,17)	1.41	(308,10)
50(515.28,3706.38)	1.82	(230,14)	1.56	(203,17)	1.55	(242,14)	1.52	(202,18)	1.51	(140,12)
51(517.28,3714.18)	3.62	(212,13)	3.62	(168,16)	3.57	(184,16)	3.56	(226,10)	3.54	(229,16)
52(512.28,3715.18)	1.91	(238,11)	1.72	(230,17)	1.71	(220,18)	1.70	(231,17)	1.70	(184,11)
53(511.28,3716.18)	1.47	(238,11)	1.36	(220, 9)	1.35	(230,17)	1.35	(209, 8)	1.35	(201, 9)
54(514.28,3716.18)	1.97	(233,17)	1.95	(253,15)	1.94	(232,13)	1.89	(309,13)	1.82	(167,17)
55(515.28,3716.18)	2.16	(233,14)	2.14	(226,12)	2.14	(253,15)	2.13	(135,15)	2.13	(226,16)
56(513.28,3717.18)	1.46	(200, 9)	1.44	(233,10)	1.44	(286,16)	1.44	(232,12)	1.43	(201, 9)
57(514.28,3717.18)	1.58	(167,17)	1.55	(233,10)	1.53	(200, 9)	1.52	(233,17)	1.52	(233,14)
58(512.28,3711.18)	2.37	(220,15)	2.32	(233,11)	2.22	(220,17)	2.13	(349,14)	2.10	(253,13)
59(516.50,3708.10)	2.59	(213,17)	2.57	(242,14)	2.38	(232,15)	2.36	(92,11)	2.35	(198,10)
60(518.10,3709.35)	3.00	(166,16)	2.99	(213,15)	2.94	(232,17)	2.92	(232,14)	2.83	(305,12)
61(514.50,3708.80)	2.57	(244,10)	2.55	(214,13)	2.53	(242,10)	2.48	(144,10)	2.42	(311,12)
62(517.30,3714.40)	3.35	(168,16)	3.35	(212,13)	3.34	(159,12)	3.30	(184,16)	3.26	(72,15)

FIVE HIGHEST 3-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	4.23	(230,12) *	3.28	(129,15)	3.13	(180,12)	2.55	(237,12)	2.37	(144,12)
2(515.88,3710.48)	4.19	(230,12)	3.14	(180,12)	3.09	(187,12)	2.55	(237,12)	2.33	(144,12)
3(515.78,3710.38)	3.11	(180,12)	3.10	(187,12)	3.03	(230,12)	2.55	(299,12)	2.54	(237,12)
4(515.88,3710.38)	4.04	(230,12)	3.12	(180,12)	3.11	(187,12)	2.55	(237,12)	2.21	(123,12)
5(515.68,3710.38) *	4.67	(180,12)	3.09	(187,12)	3.03	(230,12)	2.58	(299,12)	2.53	(237,12)
6(515.98,3710.38)	4.08	(230,12)	3.24	(243,12)	3.22	(129,15)	3.13	(180,12)	2.55	(237,12)
7(511.28,3709.38)	1.11	(192,18)	1.09	(241,12)	0.99	(139,15)	0.93	(199, 9)	0.93	(256,18)
8(512.28,3709.38)	1.41	(241,12)	1.34	(192,18)	1.11	(199,18)	1.09	(254,12)	1.07	(159,15)
9(513.28,3709.38)	1.91	(299,15)	1.89	(256,15)	1.30	(245, 9)	1.30	(214, 9)	1.28	(106,12)
10(514.28,3709.38)	2.28	(299,15)	1.60	(256,12)	1.59	(256,15)	1.54	(311,12)	1.49	(106,12)
11(515.28,3709.38)	2.79	(180,12)	2.08	(230,12)	2.06	(299,12)	2.00	(187,12)	1.82	(237,12)
12(518.28,3709.38)	1.82	(213,15)	1.71	(307,15)	1.63	(76,15)	1.62	(136,15)	1.61	(137, 9)
13(511.28,3708.38)	0.99	(192,18)	0.88	(256,18)	0.78	(199,18)	0.77	(254,12)	0.77	(214, 9)
14(513.28,3708.38)	1.58	(299,15)	1.17	(258,15)	1.13	(311,12)	1.07	(106,12)	0.98	(274,12)
15(514.28,3708.38)	1.49	(230,15)	1.30	(311,12)	1.23	(97,15)	1.15	(97,12)	1.12	(123, 9)
16(517.28,3708.38)	1.53	(179,15)	1.43	(143,18)	1.38	(181,18)	1.36	(137,15)	1.35	(278, 9)
17(513.28,3707.38)	0.93	(311,12)	0.88	(299,15)	0.85	(97,15)	0.79	(274,12)	0.77	(97,12)
18(512.28,3707.38)	1.09	(299,15)	0.86	(227,18)	0.85	(258,15)	0.81	(311,12)	0.76	(106,12)
19(515.28,3707.38)	1.48	(76,12)	1.42	(230,15)	1.27	(274,15)	1.12	(214,18)	1.11	(179, 9)
20(517.28,3707.38)	1.24	(143,18)	1.24	(181,18)	1.20	(179,15)	1.04	(339,15)	1.03	(339,12)
21(511.28,3706.38)	0.80	(227,18)	0.79	(299,15)	0.67	(289, 9)	0.63	(258,15)	0.59	(311,12)
22(512.28,3706.38)	0.70	(289,15)	0.69	(289, 9)	0.67	(311,12)	0.65	(274,18)	0.63	(299,15)
23(513.28,3706.38)	1.06	(230,15)	0.76	(311,12)	0.70	(289, 9)	0.69	(97,15)	0.64	(11,21)
24(514.28,3706.38)	1.15	(230,15)	0.89	(301,12)	0.88	(301, 6)	0.88	(301,24)	0.88	(303, 3)
25(515.28,3706.38)	1.13	(76,12)	1.04	(274,15)	0.96	(300,15)	0.91	(301,12)	0.91	(301, 9)
26(517.28,3714.18)	2.34	(226,12)	2.31	(212,15)	2.21	(235,15)	2.00	(229,18)	1.90	(176,15)
27(512.28,3715.18)	1.38	(138,12)	1.31	(26,12)	1.26	(39,12)	1.21	(188,18)	1.20	(238,12)
28(514.28,3716.18)	1.25	(148,12)	1.21	(167,18)	1.06	(341,12)	1.03	(363,15)	1.00	(107,12)
29(515.28,3716.18)	1.83	(167,18)	1.69	(247,15)	1.66	(168,15)	1.40	(226,18)	1.18	(226,15)

30(513.28,3717.18)	0.89	(112,21)	0.86	(281,12)	0.86	(363,15)	0.85	(116,15)	0.85	(343,15)
31(514.28,3717.18)	1.03	(167,18)	0.97	(110,12)	0.94	(148,12)	0.91	(111,12)	0.90	(133,12)
32(512.28,3711.18)	1.85	(362,15)	1.36	(199, 9)	1.36	(251,18)	1.33	(241,18)	1.20	(270,15)
33(511.28,3709.38)	1.11	(192,18)	1.09	(241,12)	0.99	(139,15)	0.93	(199, 9)	0.93	(256,18)
34(511.28,3709.38)	1.11	(192,18)	1.09	(241,12)	0.99	(139,15)	0.93	(199, 9)	0.93	(256,18)
35(513.28,3709.38)	1.91	(299,15)	1.89	(256,15)	1.30	(245, 9)	1.30	(214, 9)	1.28	(106,12)
36(514.28,3709.38)	2.28	(299,15)	1.60	(256,12)	1.59	(256,15)	1.54	(311,12)	1.49	(106,12)
37(515.28,3709.38)	2.79	(180,12)	2.08	(230,12)	2.06	(299,12)	2.00	(187,12)	1.82	(237,12)
38(511.28,3708.38)	0.99	(192,18)	0.88	(256,18)	0.78	(199,18)	0.77	(254,12)	0.77	(214, 9)
39(513.28,3708.38)	1.58	(299,15)	1.17	(258,15)	1.13	(311,12)	1.07	(106,12)	0.98	(274,12)
40(514.28,3708.38)	1.49	(230,15)	1.30	(311,12)	1.23	(97,15)	1.15	(97,12)	1.12	(123, 9)
41(517.28,3708.38)	1.53	(179,15)	1.43	(143,18)	1.38	(181,18)	1.36	(137,15)	1.35	(278, 9)
42(513.28,3707.38)	0.93	(311,12)	0.88	(299,15)	0.85	(97,15)	0.79	(274,12)	0.77	(97,12)
43(512.28,3707.38)	1.09	(299,15)	0.86	(227,18)	0.85	(258,15)	0.81	(311,12)	0.76	(106,12)
44(515.28,3707.38)	1.48	(76,12)	1.42	(230,15)	1.27	(274,15)	1.12	(214,18)	1.11	(179, 9)
45(517.28,3707.38)	1.24	(143,18)	1.24	(181,18)	1.20	(179,15)	1.04	(339,15)	1.03	(339,12)
46(511.28,3706.38)	0.80	(227,18)	0.79	(299,15)	0.67	(289, 9)	0.63	(258,15)	0.59	(311,12)
47(512.28,3706.38)	0.70	(289,15)	0.69	(289, 9)	0.67	(311,12)	0.65	(274,18)	0.63	(299,15)
48(513.28,3706.38)	1.06	(230,15)	0.76	(311,12)	0.70	(289, 9)	0.69	(97,15)	0.64	(11,21)
49(514.28,3706.38)	1.15	(230,15)	0.89	(301,12)	0.88	(301, 6)	0.88	(301,24)	0.88	(303, 3)
50(515.28,3706.38)	1.13	(76,12)	1.04	(274,15)	0.96	(300,15)	0.91	(301,12)	0.91	(301, 9)
51(517.28,3714.18)	2.34	(226,12)	2.31	(212,15)	2.21	(235,15)	2.00	(229,18)	1.90	(176,15)
52(512.28,3715.18)	1.38	(138,12)	1.31	(26,12)	1.26	(39,12)	1.21	(188,18)	1.20	(238,12)
53(511.28,3716.18)	0.99	(138,12)	0.92	(26,12)	0.88	(39,12)	0.88	(238,12)	0.77	(261, 9)
54(514.28,3716.18)	1.25	(148,12)	1.21	(167,18)	1.06	(341,12)	1.03	(363,15)	1.00	(107,12)
55(515.28,3716.18)	1.83	(167,18)	1.69	(247,15)	1.66	(168,15)	1.40	(226,18)	1.18	(226,15)
56(513.28,3717.18)	0.89	(112,21)	0.86	(281,12)	0.86	(363,15)	0.85	(116,15)	0.85	(343,15)
57(514.28,3717.18)	1.03	(167,18)	0.97	(110,12)	0.94	(148,12)	0.91	(111,12)	0.90	(133,12)
58(512.28,3711.18)	1.85	(362,15)	1.36	(199, 9)	1.36	(251,18)	1.33	(241,18)	1.20	(270,15)
59(516.50,3708.10)	1.92	(269,12)	1.71	(187,15)	1.65	(123,15)	1.36	(181,18)	1.34	(98,18)
60(518.10,3709.35)	2.36	(104,15)	1.87	(213,15)	1.72	(307,15)	1.67	(76,15)	1.67	(136,15)
61(514.50,3708.80)	1.49	(230,15)	1.45	(311,12)	1.39	(97,15)	1.38	(230,12)	1.37	(256,12)
62(517.30,3714.40)	2.10	(212,15)	1.97	(235,15)	1.89	(229,18)	1.77	(176,15)	1.76	(155,15)

FIVE HIGHEST 8-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1		2		3		4		5	
1(515.98,3710.48)	1.71	(230,16)	1.52	(180,16)	1.43	(123,16)	1.41	(129,16)	1.17	(275,16)
2(515.88,3710.48)	1.70	(230,16)	1.52	(180,16)	1.43	(123,16)	1.16	(187,16)	1.09	(223,16)
3(515.78,3710.38)	1.53	(180,16)	1.38	(123,16)	1.29	(230,16)	1.16	(187,16)	1.12	(275,16)
4(515.88,3710.38)	1.67	(230,16)	1.53	(180,16)	1.42	(123,16)	1.16	(187,16)	1.10	(275,16)
5(515.68,3710.38) *	2.12	(180,16) *	1.55	(237,16)	1.30	(230,16)	1.19	(187,16)	1.14	(275,16)
6(515.98,3710.38)	1.68	(230,16)	1.53	(180,16)	1.43	(123,16)	1.41	(129,16)	1.22	(243,16)
7(511.28,3709.38)	0.47	(362,16)	0.44	(199,16)	0.43	(256,24)	0.41	(241,16)	0.41	(245,16)
8(512.28,3709.38)	0.79	(106,16)	0.60	(159,16)	0.53	(241,16)	0.50	(245,16)	0.46	(199,16)
9(513.28,3709.38)	1.26	(256,16)	0.72	(299,16)	0.55	(199,16)	0.52	(64,16)	0.50	(56,16)
10(514.28,3709.38)	1.49	(256,16)	1.18	(299,16)	0.91	(64,16)	0.76	(180,16)	0.71	(289,16)
11(515.28,3709.38)	1.37	(180,16)	1.29	(97,16)	1.26	(275,16)	1.24	(230,16)	1.01	(237,16)
12(518.28,3709.38)	1.25	(307,16)	1.24	(158,16)	0.99	(166,16)	0.91	(104,16)	0.89	(21,16)
13(511.28,3708.38)	0.62	(106,16)	0.56	(256,16)	0.51	(227,16)	0.44	(159,16)	0.42	(74, 8)
14(513.28,3708.38)	0.90	(256,16)	0.64	(64,16)	0.62	(289,16)	0.59	(299,16)	0.51	(258,16)
15(514.28,3708.38)	0.98	(230,16)	0.89	(97,16)	0.79	(289,16)	0.74	(311,16)	0.65	(256,16)
16(517.28,3708.38)	0.95	(339,16)	0.82	(179,16)	0.77	(354,16)	0.76	(43,16)	0.76	(114,16)
17(513.28,3707.38)	0.61	(97,16)	0.59	(289,16)	0.54	(311,16)	0.53	(256,16)	0.47	(299,16)
18(512.28,3707.38)	0.58	(256,16)	0.52	(289,16)	0.47	(64,16)	0.41	(299,16)	0.37	(200,16)
19(515.28,3707.38)	0.97	(301,16)	0.94	(301,24)	0.89	(230,16)	0.84	(301, 8)	0.83	(275,16)
20(517.28,3707.38)	0.78	(339,16)	0.77	(358,16)	0.62	(354,16)	0.62	(278,16)	0.62	(179,16)
21(511.28,3706.38)	0.40	(256,16)	0.39	(289,16)	0.36	(274,24)	0.31	(73,16)	0.30	(227,24)
22(512.28,3706.38)	0.66	(289,16)	0.49	(274,24)	0.47	(256,16)	0.43	(97,16)	0.37	(73,16)
23(513.28,3706.38)	0.58	(230,16)	0.58	(97,16)	0.51	(289,16)	0.47	(46, 8)	0.45	(311,16)
24(514.28,3706.38)	0.66	(301, 8)	0.66	(301,16)	0.66	(301,24)	0.64	(230,16)	0.63	(97,16)
25(515.28,3706.38)	0.91	(301,16)	0.90	(301,24)	0.79	(301, 8)	0.79	(302,24)	0.76	(20,16)
26(517.28,3714.18)	1.13	(153,16)	1.10	(146,16)	1.07	(131,16)	1.03	(156,16)	1.02	(152,16)
27(512.28,3715.18)	0.87	(39,16)	0.78	(96,16)	0.70	(65,16)	0.70	(138,16)	0.66	(201,16)

28(514.28,3716.18)	0.73 (341,16)	0.72 (249,16)	0.66 (126,16)	0.64 (148,16)	0.64 (53,16)
29(515.28,3716.18)	0.98 (226,16)	0.74 (126,16)	0.71 (322,24)	0.68 (313,16)	0.66 (54, 8)
30(513.28,3717.18)	0.67 (343,16)	0.62 (281,16)	0.54 (246,24)	0.53 (344,16)	0.53 (312,16)
31(514.28,3717.18)	0.64 (281,16)	0.59 (313,24)	0.59 (148,16)	0.57 (53,16)	0.56 (111,16)
32(512.28,3711.18)	0.76 (362,16)	0.57 (71,16)	0.55 (38,16)	0.49 (241,16)	0.47 (199,16)
33(511.28,3709.38)	0.47 (362,16)	0.44 (199,16)	0.43 (256,24)	0.41 (241,16)	0.41 (245,16)
34(511.28,3709.38)	0.47 (362,16)	0.44 (199,16)	0.43 (256,24)	0.41 (241,16)	0.41 (245,16)
35(513.28,3709.38)	1.26 (256,16)	0.72 (299,16)	0.55 (199,16)	0.52 (64,16)	0.50 (56,16)
36(514.28,3709.38)	1.49 (256,16)	1.18 (299,16)	0.91 (64,16)	0.76 (180,16)	0.71 (289,16)
37(515.28,3709.38)	1.37 (180,16)	1.29 (97,16)	1.26 (275,16)	1.24 (230,16)	1.01 (237,16)
38(511.28,3708.38)	0.62 (106,16)	0.56 (256,16)	0.51 (227,16)	0.44 (159,16)	0.42 (74, 8)
39(513.28,3708.38)	0.90 (256,16)	0.64 (64,16)	0.62 (289,16)	0.59 (299,16)	0.51 (258,16)
40(514.28,3708.38)	0.98 (230,16)	0.89 (97,16)	0.79 (289,16)	0.74 (311,16)	0.65 (256,16)
41(517.28,3708.38)	0.95 (339,16)	0.82 (179,16)	0.77 (354,16)	0.76 (43,16)	0.76 (114,16)
42(513.28,3707.38)	0.61 (97,16)	0.59 (289,16)	0.54 (311,16)	0.53 (256,16)	0.47 (299,16)
43(512.28,3707.38)	0.58 (256,16)	0.52 (289,16)	0.47 (64,16)	0.41 (299,16)	0.37 (200,16)
44(515.28,3707.38)	0.97 (301,16)	0.94 (301,24)	0.89 (230,16)	0.84 (301, 8)	0.83 (275,16)
45(517.28,3707.38)	0.78 (339,16)	0.77 (358,16)	0.62 (354,16)	0.62 (278,16)	0.62 (179,16)
46(511.28,3706.38)	0.40 (256,16)	0.39 (289,16)	0.36 (274,24)	0.31 (73,16)	0.30 (227,24)
47(512.28,3706.38)	0.66 (289,16)	0.49 (274,24)	0.47 (256,16)	0.43 (97,16)	0.37 (73,16)
48(513.28,3706.38)	0.58 (230,16)	0.58 (97,16)	0.51 (289,16)	0.47 (46, 8)	0.45 (311,16)
49(514.28,3706.38)	0.66 (301, 8)	0.66 (301,16)	0.66 (301,24)	0.64 (230,16)	0.63 (97,16)
50(515.28,3706.38)	0.91 (301,16)	0.90 (301,24)	0.79 (301, 8)	0.79 (302,24)	0.76 (20,16)
51(517.28,3714.18)	1.13 (153,16)	1.10 (146,16)	1.07 (131,16)	1.03 (156,16)	1.02 (152,16)
52(512.28,3715.18)	0.87 (39,16)	0.78 (96,16)	0.70 (65,16)	0.70 (138,16)	0.66 (201,16)
53(511.28,3716.18)	0.64 (39,16)	0.56 (272, 8)	0.52 (116,24)	0.51 (318,16)	0.51 (51,16)
54(514.28,3716.18)	0.73 (341,16)	0.72 (249,16)	0.66 (126,16)	0.64 (148,16)	0.64 (53,16)
55(515.28,3716.18)	0.98 (226,16)	0.74 (126,16)	0.71 (322,24)	0.68 (313,16)	0.66 (54, 8)
56(513.28,3717.18)	0.67 (343,16)	0.62 (281,16)	0.54 (246,24)	0.53 (344,16)	0.53 (312,16)
57(514.28,3717.18)	0.64 (281,16)	0.59 (313,24)	0.59 (148,16)	0.57 (53,16)	0.56 (111,16)
58(512.28,3711.18)	0.76 (362,16)	0.57 (71,16)	0.55 (38,16)	0.49 (241,16)	0.47 (199,16)
59(516.50,3708.10)	1.45 (269,16)	0.92 (129,16)	0.83 (302,24)	0.74 (76,16)	0.74 (37,16)
60(518.10,3709.35)	1.26 (307,16)	1.23 (104,16)	1.02 (166,16)	0.93 (158,16)	0.84 (21,16)
61(514.50,3708.80)	1.07 (230,16)	1.02 (97,16)	0.88 (289,16)	0.81 (311,16)	0.78 (256,16)
62(517.30,3714.40)	1.09 (153,16)	1.02 (146,16)	0.99 (156,16)	0.97 (190,16)	0.96 (285,16)

FIVE HIGHEST 24-HOUR PART CONCENTRATIONS((ENDING ON JULIAN DAY, HOUR)
(MICROGRAMS/M**3)

RECEPTOR	1	2	3	4	5
1(515.98,3710.48)	0.57 (180,24)	0.57 (230,24)	0.48 (123,24)	0.47 (129,24)	0.40 (275,24)
2(515.88,3710.48)	0.58 (180,24)	0.57 (230,24)	0.48 (123,24)	0.39 (187,24)	0.36 (223,24)
3(515.78,3710.38)	0.59 (180,24)	0.54 (123,24)	0.43 (230,24)	0.39 (187,24)	0.38 (275,24)
4(515.88,3710.38)	0.59 (180,24)	0.56 (230,24)	0.48 (123,24)	0.39 (187,24)	0.37 (275,24)
5(515.68,3710.38)	0.79 (180,24)	0.52 (237,24)	0.43 (230,24)	0.40 (187,24)	0.39 (275,24)
6(515.98,3710.38)	0.59 (180,24)	0.56 (230,24)	0.48 (123,24)	0.47 (129,24)	0.41 (243,24)
7(511.28,3709.38)	0.31 (199,24)	0.31 (256,24)	0.18 (74,24)	0.17 (34,24)	0.16 (258,24)
8(512.28,3709.38)	0.33 (256,24)	0.32 (199,24)	0.30 (106,24)	0.26 (64,24)	0.24 (258,24)
9(513.28,3709.38)	0.56 (256,24)	0.29 (299,24)	0.28 (64,24)	0.28 (199,24)	0.21 (123,24)
10(514.28,3709.38)	0.54 (256,24)	0.44 (299,24)	0.35 (123,24)	0.31 (223,24)	0.31 (64,24)
11(515.28,3709.38)	0.56 (180,24)	0.51 (301,24)	0.45 (97,24)	0.44 (275,24)	0.41 (230,24)
12(518.28,3709.38)	0.58 (158,24)	0.49 (42,24)	0.43 (307,24)	0.37 (335,24)	0.34 (232,24)
13(511.28,3708.38)	0.36 (256,24)	0.27 (227,24)	0.25 (258,24)	0.25 (106,24)	0.20 (64,24)
14(513.28,3708.38)	0.33 (256,24)	0.29 (64,24)	0.29 (299,24)	0.27 (274,24)	0.26 (289,24)
15(514.28,3708.38)	0.33 (97,24)	0.33 (230,24)	0.32 (289,24)	0.28 (256,24)	0.27 (311,24)
16(517.28,3708.38)	0.43 (179,24)	0.35 (358,24)	0.34 (163,24)	0.34 (278,24)	0.33 (137,24)
17(513.28,3707.38)	0.31 (274,24)	0.28 (289,24)	0.27 (299,24)	0.26 (97,24)	0.25 (256,24)
18(512.28,3707.38)	0.26 (274,24)	0.26 (256,24)	0.26 (299,24)	0.24 (289,24)	0.21 (227,24)
19(515.28,3707.38) *	0.92 (301,24)	0.65 (302,24)	0.46 (300,24)	0.43 (2,24)	0.37 (20,24)
20(517.28,3707.38)	0.44 (179,24)	0.43 (303,24)	0.35 (336,24)	0.34 (31,24)	0.33 (358,24)
21(511.28,3706.38)	0.24 (299,24)	0.23 (274,24)	0.21 (289,24)	0.20 (256,24)	0.20 (227,24)
22(512.28,3706.38)	0.33 (274,24)	0.30 (289,24)	0.24 (256,24)	0.22 (299,24)	0.21 (73,24)
23(513.28,3706.38)	0.30 (274,24)	0.26 (289,24)	0.25 (301,24)	0.24 (97,24)	0.23 (32,24)
24(514.28,3706.38)	0.66 (301,24)	0.34 (11,24)	0.30 (32,24)	0.29 (274,24)	0.28 (302,24)
25(515.28,3706.38)	0.87 (301,24) *	0.66 (302,24)	0.49 (300,24)	0.45 (2,24)	0.38 (20,24)

SECTION H.21

SCREENING MODEL OUTPUT FOR NOx

11-05-91
22:46:34

*** SCREEN-1.1 MODEL RUN ***
*** VERSION DATED 88300 ***

INTERNATIONAL PAPER COMPANY - CAMDEN, ARKANSAS - NOX SCREEN

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	10.43
STACK HEIGHT (M)	=	22.86
STK INSIDE DIAM (M)	=	3.42
STK EXIT VELOCITY (M/S)	=	16.61
STK GAS EXIT TEMP (K)	=	427.59
AMBIENT AIR TEMP (K)	=	293.00
RECEPTOR HEIGHT (M)	=	.00
IOPT (1=URB,2=RUR)	=	2
BUILDING HEIGHT (M)	=	13.60
MIN HORIZ BLDG DIM (M)	=	49.02
MAX HORIZ BLDG DIM (M)	=	93.79

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF .00 M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	0	.0	.0	.0	.0	.0	.0	NA
100.	215.4	4	20.0	22.6	5000.0	25.7	8.5	13.7	HS
200.	129.1	4	20.0	22.6	5000.0	30.5	16.0	18.6	HS
300.	82.94	4	20.0	22.6	5000.0	34.4	23.1	21.7	HS
400.	60.48	4	20.0	22.6	5000.0	38.0	30.0	24.7	HS
500.	47.18	4	20.0	22.6	5000.0	41.3	36.8	27.6	HS
600.	38.38	4	20.0	22.6	5000.0	44.3	43.4	30.4	HS
700.	32.13	4	20.0	22.6	5000.0	47.2	49.9	33.1	HS
800.	25.69	4	20.0	22.6	5000.0	50.0	56.3	33.7	HS
900.	22.58	4	20.0	22.6	5000.0	52.2	62.7	35.8	HS
1000.	21.66	4	20.0	22.6	5000.0	52.2	68.8	37.7	HS
1100.	20.69	4	20.0	22.6	5000.0	52.2	75.0	39.5	HS
1200.	19.72	4	20.0	22.6	5000.0	52.2	81.0	41.3	HS
1300.	18.76	4	20.0	22.6	5000.0	52.2	87.1	43.1	HS
1400.	17.84	4	20.0	22.6	5000.0	52.2	93.1	44.8	HS
1500.	16.96	4	20.0	22.6	5000.0	52.2	99.0	46.5	HS
1600.	16.12	4	20.0	22.6	5000.0	52.2	105.0	48.1	HS
1700.	15.34	4	20.0	22.6	5000.0	52.2	110.8	49.7	HS
1800.	14.60	4	20.0	22.6	5000.0	52.2	116.7	51.3	HS
1900.	14.11	4	15.0	17.0	4800.0	65.4	122.8	53.6	HS
2000.	13.65	4	15.0	17.0	4800.0	65.4	128.6	55.1	HS
2100.	13.19	4	15.0	17.0	4800.0	65.4	134.4	56.6	HS
2200.	12.75	4	15.0	17.0	4800.0	65.4	140.1	58.1	HS
2300.	12.32	4	15.0	17.0	4800.0	65.4	145.8	59.6	HS
2400.	11.91	4	15.0	17.0	4800.0	65.4	151.5	61.0	HS
2500.	11.52	4	15.0	17.0	4800.0	65.4	157.1	62.5	HS
2600.	11.14	4	15.0	17.0	4800.0	65.4	162.8	63.9	HS
2700.	10.77	4	15.0	17.0	4800.0	65.4	168.4	65.3	HS
2800.	10.42	4	15.0	17.0	4800.0	65.4	174.0	66.0	HS
2900.	10.09	4	15.0	17.0	4800.0	65.4	179.6	67.3	HS
3000.	9.777	4	15.0	17.0	4800.0	65.4	185.1	68.6	HS
3500.	8.740	4	10.0	11.3	3200.0	91.8	213.1	76.2	HS
4000.	8.174	5	3.0	4.0	5000.0	122.3	181.3	57.3	NO
4500.	8.757	5	2.0	2.7	5000.0	136.7	201.7	62.0	NO

5000.	9.218	5	2.0	2.7	5000.0	136.7	221.3	64.5	NO
5500.	9.567	5	2.0	2.7	5000.0	136.7	240.6	66.9	NO
6000.	10.05	5	1.0	1.3	5000.0	166.3	261.0	73.6	NO
6500.	10.48	5	1.0	1.3	5000.0	166.3	280.0	75.7	NO
7000.	10.85	5	1.0	1.3	5000.0	166.3	298.8	77.7	NO
7500.	11.15	5	1.0	1.3	5000.0	166.3	317.4	79.7	NO
8000.	11.39	5	1.0	1.3	5000.0	166.3	336.0	81.7	NO
8500.	11.59	5	1.0	1.3	5000.0	166.3	354.4	83.6	NO
9000.	11.74	5	1.0	1.3	5000.0	166.3	372.7	85.4	NO
9500.	11.86	5	1.0	1.3	5000.0	166.3	390.9	87.3	NO
10000.	11.94	5	1.0	1.3	5000.0	166.3	409.0	89.1	NO
15000.	11.38	5	1.0	1.3	5000.0	166.3	584.8	104.0	NO
20000.	10.25	5	1.0	1.3	5000.0	166.3	753.4	116.7	NO
25000.	8.995	5	1.0	1.3	5000.0	166.3	916.6	125.7	NO
30000.	7.979	5	1.0	1.3	5000.0	166.3	1075.3	133.7	NO
40000.	6.993	6	1.0	1.6	5000.0	135.5	920.8	81.1	NO
50000.	6.276	6	1.0	1.6	5000.0	135.5	1117.9	85.5	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

41.	287.5	4	20.0	22.6	5000.0	22.2	3.9	9.7	HS

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SCREEN DISCRETE DISTANCES ***
****

*** TERRAIN HEIGHT OF .00 M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
60.	253.8	4	20.0	22.6	5000.0	23.4	5.4	11.0	HS

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*** CAVITY CALCULATION - 1 ***		*** CAVITY CALCULATION - 2 ***	
CONC (UG/M**3) =	.0000	CONC (UG/M**3) =	.0000
CRIT WS @10M (M/S) =	99.99	CRIT WS @10M (M/S) =	99.99
CRIT WS @ HS (M/S) =	99.99	CRIT WS @ HS (M/S) =	99.99
DILUTION WS (M/S) =	99.99	DILUTION WS (M/S) =	99.99
CAVITY HT (M) =	13.80	CAVITY HT (M) =	13.60
CAVITY LENGTH (M) =	60.25	CAVITY LENGTH (M) =	45.13
ALONGWIND DIM (M) =	49.02	ALONGWIND DIM (M) =	93.79

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S. CONC SET = 0.0

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	287.5	41.	0.

****

SECTION H.22

SCREENING MODEL OUTPUT FOR CO

11-05-91
22:50:03

*** SCREEN-1.1 MODEL RUN ***
*** VERSION DATED 88300 ***

INTERNATIONAL PAPER COMPANY - CAMDEN, ARKANSAS - CO SCREEN

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	6.507
STACK HEIGHT (M)	=	22.86
STK INSIDE DIAM (M)	=	3.42
STK EXIT VELOCITY (M/S)	=	16.61
STK GAS EXIT TEMP (K)	=	427.59
AMBIENT AIR TEMP (K)	=	293.00
RECEPTOR HEIGHT (M)	=	.00
IOPT (1=URB,2=RUR)	=	2
BUILDING HEIGHT (M)	=	13.60
MIN HORIZ BLDG DIM (M)	=	49.02
MAX HORIZ BLDG DIM (M)	=	93.79

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF .00 M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	0	.0	.0	.0	.0	.0	.0	NA
100.	134.3	4	20.0	22.6	5000.0	25.7	8.5	13.7	HS
200.	80.53	4	20.0	22.6	5000.0	30.5	16.0	18.6	HS
300.	51.73	4	20.0	22.6	5000.0	34.4	23.1	21.7	HS
400.	37.72	4	20.0	22.6	5000.0	38.0	30.0	24.7	HS
500.	29.42	4	20.0	22.6	5000.0	41.3	36.8	27.6	HS
600.	23.93	4	20.0	22.6	5000.0	44.3	43.4	30.4	HS
700.	20.04	4	20.0	22.6	5000.0	47.2	49.9	33.1	HS
800.	16.02	4	20.0	22.6	5000.0	50.0	56.3	33.7	HS
900.	14.08	4	20.0	22.6	5000.0	52.2	62.7	35.8	HS
1000.	13.51	4	20.0	22.6	5000.0	52.2	68.8	37.7	HS
1100.	12.91	4	20.0	22.6	5000.0	52.2	75.0	39.5	HS
1200.	12.30	4	20.0	22.6	5000.0	52.2	81.0	41.3	HS
1300.	11.70	4	20.0	22.6	5000.0	52.2	87.1	43.1	HS
1400.	11.13	4	20.0	22.6	5000.0	52.2	93.1	44.8	HS
1500.	10.58	4	20.0	22.6	5000.0	52.2	99.0	46.5	HS
1600.	10.06	4	20.0	22.6	5000.0	52.2	105.0	48.1	HS
1700.	9.566	4	20.0	22.6	5000.0	52.2	110.8	49.7	HS
1800.	9.105	4	20.0	22.6	5000.0	52.2	116.7	51.3	HS
1900.	8.800	4	15.0	17.0	4800.0	65.4	122.8	53.6	HS
2000.	8.511	4	15.0	17.0	4800.0	65.4	128.6	55.1	HS
2100.	8.228	4	15.0	17.0	4800.0	65.4	134.4	56.6	HS
2200.	7.952	4	15.0	17.0	4800.0	65.4	140.1	58.1	HS
2300.	7.686	4	15.0	17.0	4800.0	65.4	145.8	59.6	HS
2400.	7.429	4	15.0	17.0	4800.0	65.4	151.5	61.0	HS
2500.	7.182	4	15.0	17.0	4800.0	65.4	157.1	62.5	HS
2600.	6.945	4	15.0	17.0	4800.0	65.4	162.8	63.9	HS
2700.	6.717	4	15.0	17.0	4800.0	65.4	168.4	65.3	HS
2800.	6.501	4	15.0	17.0	4800.0	65.4	174.0	66.0	HS
2900.	6.294	4	15.0	17.0	4800.0	65.4	179.6	67.3	HS
3000.	6.097	4	15.0	17.0	4800.0	65.4	185.1	68.6	HS
3500.	5.451	4	10.0	11.3	3200.0	91.8	213.1	76.2	HS
4000.	5.098	5	3.0	4.0	5000.0	122.3	181.3	57.3	NO
4500.	5.461	5	2.0	2.7	5000.0	136.7	201.7	62.0	NO

5000.	5.749	5	2.0	2.7	5000.0	136.7	221.3	64.5	NO
5500.	5.967	5	2.0	2.7	5000.0	136.7	240.6	66.9	NO
6000.	6.268	5	1.0	1.3	5000.0	166.3	261.0	73.6	NO
6500.	6.537	5	1.0	1.3	5000.0	166.3	280.0	75.7	NO
7000.	6.764	5	1.0	1.3	5000.0	166.3	298.8	77.7	NO
7500.	6.952	5	1.0	1.3	5000.0	166.3	317.4	79.7	NO
8000.	7.105	5	1.0	1.3	5000.0	166.3	336.0	81.7	NO
8500.	7.228	5	1.0	1.3	5000.0	166.3	354.4	83.6	NO
9000.	7.323	5	1.0	1.3	5000.0	166.3	372.7	85.4	NO
9500.	7.395	5	1.0	1.3	5000.0	166.3	390.9	87.3	NO
10000.	7.445	5	1.0	1.3	5000.0	166.3	409.0	89.1	NO
15000.	7.095	5	1.0	1.3	5000.0	166.3	584.8	104.0	NO
20000.	6.390	5	1.0	1.3	5000.0	166.3	753.4	116.7	NO
25000.	5.610	5	1.0	1.3	5000.0	166.3	916.6	125.7	NO
30000.	4.976	5	1.0	1.3	5000.0	166.3	1075.3	133.7	NO
40000.	4.361	6	1.0	1.6	5000.0	135.5	920.8	81.1	NO
50000.	3.914	6	1.0	1.6	5000.0	135.5	1117.9	85.5	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

41.	179.3	4	20.0	22.6	5000.0	22.2	3.9	9.7	HS

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SCREEN DISCRETE DISTANCES ***
****

*** TERRAIN HEIGHT OF .00 M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
60.	158.3	4	20.0	22.6	5000.0	23.4	5.4	11.0	HS

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*** CAVITY CALCULATION - 1 ***		*** CAVITY CALCULATION - 2 ***	
CONC (UG/M**3) =	.0000	CONC (UG/M**3) =	.0000
CRIT WS @10M (M/S) =	99.99	CRIT WS @10M (M/S) =	99.99
CRIT WS @ HS (M/S) =	99.99	CRIT WS @ HS (M/S) =	99.99
DILUTION WS (M/S) =	99.99	DILUTION WS (M/S) =	99.99
CAVITY HT (M) =	13.80	CAVITY HT (M) =	13.60
CAVITY LENGTH (M) =	60.25	CAVITY LENGTH (M) =	45.13
ALONGWIND DIM (M) =	49.02	ALONGWIND DIM (M) =	93.79

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S. CONC SET = 0.0

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	179.3	41.	0.

****

Files Stuff

file: AR1900-0013

47

"PERMITS"

Comments on Summary Report Relative
to Permit Application for
International Paper Company
Camden, Arkansas

1. Air Quality Monitoring Data

Representativeness of the air quality in the region surrounding the Camden plant should be well established. The source must demonstrate that results of a monitoring program conducted for the proposed modification are adequate to measure maximum concentrations in the source impact area. Monitor location, number of monitors, quality and completeness of data are important considerations.

2. Dispersion Modeling

The applicant should use an approved dispersion model that is well-suited for the particular situation in question. Determining the options to be employed in the appropriate model is a critical factor in obtaining reliable ground-level pollutant concentrations. The applicant should specify the type of EPA model used, location and number of years of meteorological data and the options integrated into the model. EPA generally recommends five years of meteorological data for use in its models. A review of tall buildings and terrain features near the proposed emission points that considers all possible downwash effects must also be conducted. The Good Engineering Practice (GEP) stack height regulations and their accompanying technical support documents provide specific guidance on identifying potential downwash problems.

3. BACT Analysis

The BACT analysis is an important step in the PSD review process. A BACT analysis and the results it produces provides the majority of the input data for the air quality analysis and the additional impacts analysis. Before a BACT analysis can be undertaken, the energy and economic costs of emission controls should be considered reasonable and the direct and residual risks with, and impacts on, environmental factors must be considered. PSD applicants may use previous BACT determinations as a guide for their own facilities. A helpful source of this information is the BACT/LAER Clearinghouse reports published by the EPA. International Paper Company's use of an electrostatic precipitator for particulate control and their regulating sulfur bearing fuels to control SO_2 emissions appears to be a viable BACT determination.

4. Additional Impacts Analysis

A critical part of any PSD application is the additional impacts analysis of the effects of the modification upon the soils, vegetation and visibility in the areas surrounding the source. Distance to

FEB 7 1989

the nearest Class I area was stated as 150 kilometers, so no adverse impacts will likely affect this area. However, certain native vegetation near the source may be adversely affected by pollutant concentrations well below the NAAQS. The additional impacts analysis presented by the applicant should be sufficient to account for any potential significant effects on soils, vegetation and visibility resulting from air quality impacts.

AR 454 P1
#53

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209
PHONE: (501) 562-7444

July 10, 1989

Ms. Donna Ascenzi, Chief
Air Enforcement Branch
Arkansas/Oklahoma/Louisiana Section (6T-EA)
U.S. Environmental Protection Agency
Region VI
Allied Bank Tower, 12th Floor
1445 Ross Avenue
Dallas TX 75202-2733

Dear Ms. Ascenzi:

We have received a permit application from International Paper Company at Camden for the installation of a gas turbine cogeneration facility. The cogeneration facility by itself would result in a significant net increase in NOx and CO emissions that would subject the modification to PSD review. The applicant proposes to net out of PSD review by placing the two existing gas-fired power boilers on standby status, to be used when the cogeneration facility is down. The power boilers would not be run simultaneously with the cogeneration facility except when one or more of the recovery boilers is down. The emissions decreases from the power boilers were calculated from recent stack test results.

As described in the enclosed excerpts from the permit application, operating the power boilers simultaneously with the cogeneration facility for a maximum of 21 boiler-days per year would result in a net emissions increase of 38 tons per year of NOx and 73 tons per year of CO. These emissions figures are considered conservative for the following reasons:

1. Estimated emissions of NOx from the cogeneration facility are based on the turbine vendor's guarantee of 42 ppm. Predicted emissions are lower. These emissions estimates also assume that NOx emissions from the turbine and duct burner are additive.

2. The 21 boiler-days include startup and shutdown periods, during which NOx emissions would be less than emissions during normal operation.

3. The table does not take into account the decrease in NOx and CO emissions from the recovery boilers, one or more of which would be shut down whenever the power boilers and cogeneration facility are operated simultaneously.

We propose to write enforceable permit limitations on simultaneous operation of the cogeneration facility and power boilers:

1. Operation of the cogeneration facility shall be limited to 357 days per year.

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6T-EA

2. Simultaneous operation of the power boilers and the cogeneration facility shall be limited to 21 boiler-days per year, including startup and shutdown.

3. Operating logs shall be kept and annual reports filed to ensure compliance with these limits.

I am proceeding with review of the application, but we would like to have your comments on our approach as early in the review process as possible. If you have any questions, please call me.

Sincerely,

Stephen T Coldwell

Stephen T. Coldwell
Engineer, Air Division

STC/stc

Enclosure:
Permit application pp. 12-14, 16-20, 24-28

cc Howard Lienert, IP Dallas w/o

20th Anniversary
RADIAN CORPORATION

8501 Mo-Pac Blvd.
P.O. Box 201088
Austin, TX 78720-1088
(512)454-4797

APPLICATION FOR AN AIR POLLUTION CONTROL PERMIT TO CONSTRUCT A GAS TURBINE COGENERATION FACILITY

Submitted to:

Arkansas Department of Pollution
Control and Ecology

Submitted by:

International Paper Company
Camden Mill
Camden, Arkansas

Prepared by:

Radian Corporation
8501 Mo-Pac Blvd.
P. O. Box 201088
Austin, Texas 78720-1088

1 June 1989

Attachment No. 3

Description of Process

General

International Paper proposes to install a gas turbine cogeneration facility at the Camden Mill to supply steam and electricity to the paper making process. A description of the proposed process is contained in the this attachment. The equipment item numbers and process flow designations referred to in this discussion are taken from the process flow diagram in Attachment 4. The equipment numbers also correspond to those in the plot plan.

The process flow diagram shows both existing and proposed equipment and how each piece of equipment will be integrated into the Camden Mill's steam and electric generation system.

Fuel

Fuel will consist solely of natural gas from either ARKLA Resource Company (ARKLA) or Natural Gas Pipeline Company (NGP). There will be no alternate fuel fired in the proposed equipment. Typical characteristics of natural gas to be used are shown in the emission source table (Table 1) of Attachment 6.

The natural gas firing rate to the gas turbine (1) will be 338,000 SCFH. The proposed waste heat boiler (2) will be fired with 0 to 228,000 SCFH, depending on the amount of supplemental firing required.

The existing power boilers (3) will be converted to auxiliary (back-up) status and will not normally operate when the cogeneration system is operating. However, the existing power boilers may operate simultaneously with the cogeneration facility when the recovery boilers are down. When the cogeneration system is down, the existing boilers will provide steam to the paper making process and will fire up to 300,000 SCFH of natural gas. The existing recovery and bark boilers (5) will also continue to produce steam for use in the paper making process.

Electric Power

The output shaft of the gas turbine will drive an electric generator (5) to produce 27 megawatts of electric power. The waste heat boiler will provide steam to existing steam turbines (6) which drive two existing electric generators (7) which produce a combined 7 MW (average) of electric power. The amount of power that will actually be produced by the steam driven generators depends upon the steam requirements of the paper making process which in turn determines the level of supplemental firing.

The total electric power output of 34 megawatts will normally be consumed in the paper making process. A utility tie in with Arkansas Power and Light will be maintained and utilized during periods when power generation from the turbine is interrupted.

Steam

Steam production will be used for steam injection to the gas turbine (NO_x control), driving the steam turbine, and distribution to the paper making process.

The waste heat boiler (2) will produce between 128,000 and 300,000 lb/hr of steam depending on the amount of supplemental firing. Of this total, 25,000 to 45,000 lb/hr will be used for steam injection, with the remainder going to the steam turbines (6). After driving the turbines, the steam will be used in the paper making process.

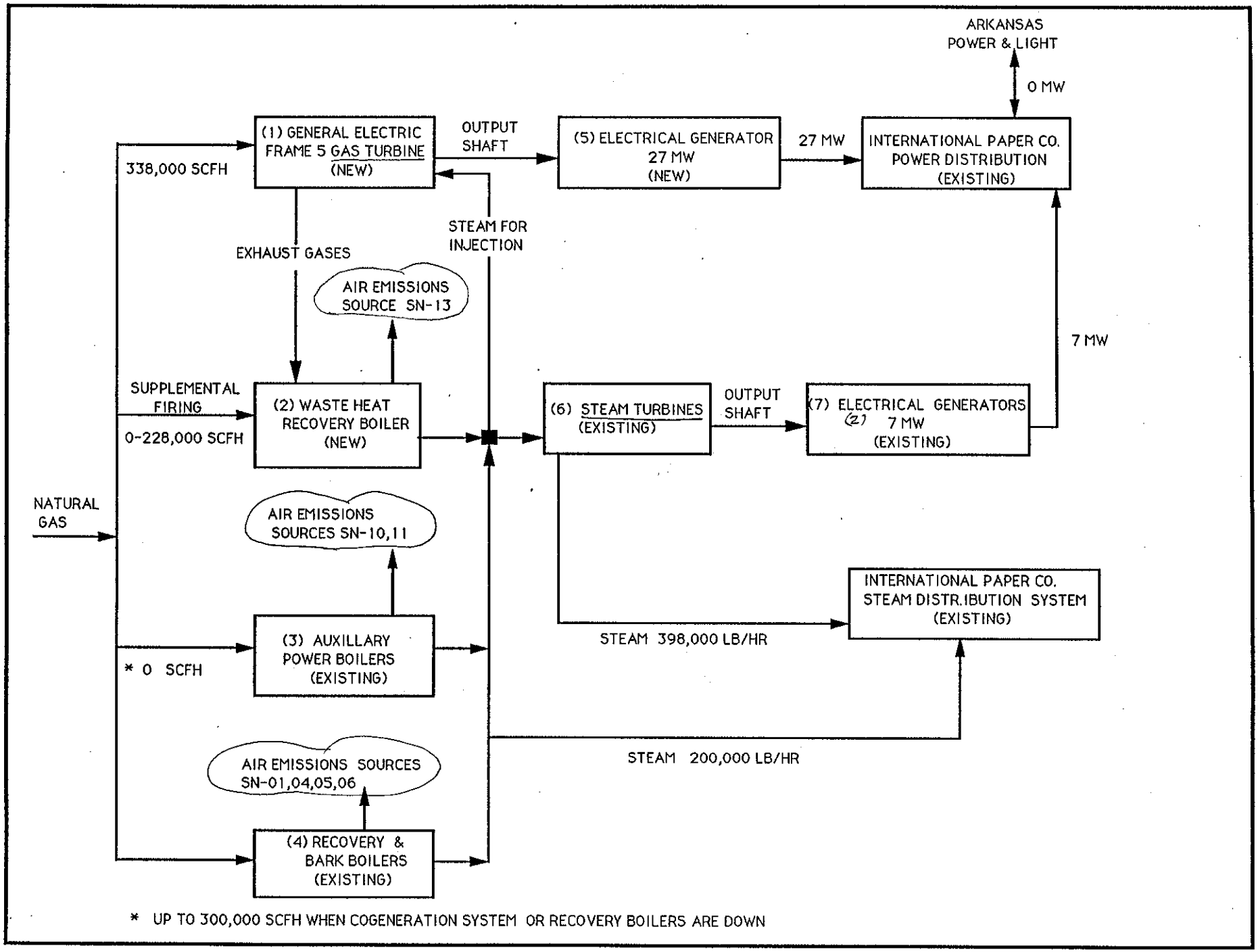
The existing power boilers (3) will not normally produce steam. However, when the cogeneration system is down, these boilers will produce steam for use in the paper making process.

The total steam piped to the paper making process will usually consist of 398,000 lb/hr from the steam turbines (6) plus 200,000 lb/hr from existing bark and recovery boilers (4), for a total of 598,000 lb/hr. When the

cogeneration system is down, the steam demand remains at 598,000 lb/hr and will be supplied by the existing auxiliary power boilers (3) and the recovery and bark boilers (4). The auxiliary power boilers (3) will also supply steam when the recovery boilers are down.

Emission Sources

One new air emission source, the exhaust stack from the waste heat boiler (SN-13) will be added at the mill. Emissions from this stack will consist of the gas turbine exhaust gas after having passed through the waste heat boiler, plus any additional combustion products from supplemental firing of the waste heat boiler. Emission points SN-01, 04, 05, 06, 10, and 11 are existing exhaust stacks for the power, recovery, and bark boilers.



Attachment 4. Cogeneration Facility Process Flow Diagram

ATTACHMENT 5

EMISSION RATE CALCULATIONS

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO.

SIGNATURE Robin A Langan DATE 5/26/89 CHECKED DATE

PROJECT IP Camden JOB NO.

SUBJECT Emission Calculations SHEET 1 OF SHEETS

SN-13 (Waste Heat Boiler Stack)

NOx

Gas Turbine - Manufacturers Guarantee = 42 ppm

or 53 lb/hr

357 days/yr operation

= 8568 hr/yr

$= \frac{53\ lb}{hr} \times \frac{8568\ hr}{yr} \times \frac{1\ ton}{2000\ lb}$

= 227 tpy

Duct Burner: NOx guarantee = 0.10 lb/10^6 BTU @ 238 MMBTU/HR

= 0.10 × 238 = 23.8 lb/hr

= 102 tpy

Total = 53.0 + 23.8 = 76.8 lb/hr

227 + 102 = 329 tpy

CO

Gas Turbine: Guarantee = 9 lb/hr

= 39 tpy

10-88-30702

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO.

SIGNATURE Stephen A. Langevin DATE 5/26/89 CHECKED DATE

PROJECT IP Camden JOB NO.

SUBJECT Emission Calcs SHEET 2 OF SHEETS

CO from duct burner:

from data in Zurn specification: 14.3 lb/hr
CO measured in exhaust

= 61.3 tpy

Total = 9.1 + 14.3 = 23.4 lb/hr

61.3 + 39.0 = 100.3 tpy

VOC Gas Turbine Guarantee = 4 lb/hr
= 17.1 tpy

Duct Burner data from Zurn specification 7.1 lb/hr of CH_4 measured in exhaust. No higher HC measured. Therefore use AP-42 NMHC factor for natural gas combustion Table 1.4-1:

$$= \frac{14 \text{ lb}}{10^6 \text{ SCF}} \times \frac{228\,000 \text{ SCF}}{\text{HR}} = 0.32 \text{ lb/hr}$$

= 1.4 tpy

Total VOC = 4.0 + 0.32 = 4.3 lb/hr
17.1 + 1.4 = 18.5 tpy

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RADIAN CORPORATION

CALCULATION SHEET

CALC. NO.

SIGNATURE Stephen A. Langevin DATE 5/26/89 CHECKED DATE

PROJECT IP Camden JOB NO.

SUBJECT Emission Calcs SHEET 3 OF SHEETS

PM Gas Turbine: Manufacturers' Guarantee = 2.5 lb/hr
= 10.7 tpy

Duct Burner: Use AP-42 Table 1.4-1

$= \frac{1.0 \text{ lb}}{10^6 \text{ scf}} \times \frac{228{,}000 \text{ scf}}{\text{HR}} = 0.23 \text{ lb/hr}$

= 0.99 tpy

Total = 2.5 + 0.23 = 2.7 lb/hr

10.7 + 0.99 = 11.7 tpy

SO2 Use AP-42 Table 1.4-1 for both Turbine and Duct Burner

$= \frac{0.6 \text{ lb}}{10^6 \text{ scf}} \times \frac{556{,}000 \text{ scf}}{\text{HR}}$

= 0.33 lb/hr

= 1.43 tpy

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Attachment 7

Contemporaneous Emission Changes

The existing No. 1 and No. 2 Power Boilers at the Camden Mill will be placed in standby service when the proposed cogeneration facility begins operation. The Power Boilers will be used to supply steam to the paper making process when the cogeneration facility or recovery boilers are out of service. Emission decreases associated with taking the power boilers out of service will offset the increase in emissions from the proposed cogeneration facility such that there will be no emission increase at the mill above the Prevention of Significant Deterioration (PSD) significant emission rate levels.

The contemporaneous emission changes at the Camden Mill are summarized in Table 7-1. As can be seen, the proposed cogeneration facility will have emission rates less than the PSD applicability thresholds for all pollutants except NO_x and CO, regardless of the shutdown of the existing power boilers. The CO emissions from the cogeneration facility are calculated to be 100 tpy which is the PSD applicability threshold. As such any decrease at all due to shutdown of the power boilers will result in PSD not applying for CO. A recent stack test, included as Attachment 10, demonstrates that a 300 tpy decrease in NO_x emissions will occur as a result of the shutdown of the power boilers. The power boilers may be operated simultaneously with the cogeneration plant when a recovery boiler is down. Table 7-1 shows the emissions increase that will occur due to operating the power boilers for 21 boiler-days per year. Although there would also be a decrease in emissions from the recovery boilers(s) when down, this decrease is not included in Table 7-1.

Supporting emission calculations are included in this attachment.

TABLE 7-1. NET EMISSION RATE CHANGES (tpy)

Pollutant	Increase From Cogeneration Facility	Decreases[a]	Increases[b]	Net Change	PSD Significant Emission Level
NO_x	329	300	9	38	40
SO_2	1.43	0.77	0.02	0.7	40
CO	100	27.6	0.8	73	100
PM_{10}	11.7	24.3	0.7	(11.9)	15
VOC	18.5	1.8	0.05	16.8	40

[a]Decreases in emissions due to shutdown of No. 1 and No. 2 Power Boilers to occur simultaneously with start-up of cogeneration facility.

[b]Increases in emissions due to simultaneous operation of Power Boilers with cogeneration facility for 21 boiler-days per year.

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO.

SIGNATURE Stephen O. Langeron DATE 5/26/89 CHECKED DATE

PROJECT IP Camden JOB NO.

SUBJECT Emission Reductions SHEET 1 OF SHEETS

Emission Decreases from power boiler shutdown

NOx From stack test = 69.96 lb/hr from two boilers

at 357 days/yr = $69.96 \frac{lb}{hr} \times \frac{24\ hr}{day} \times \frac{357\ day}{yr} \times \frac{1\ ton}{2000\ lb}$

= 300 tpy

PM from stack test = 5.68 lb/hr (2 boilers)

$= \frac{5.68\ lb}{hr} \times \frac{24\ hr}{day} \times \frac{357\ day}{yr} \times \frac{1\ ton}{2000\ lb} = 24.3\ tpy$

CO from stack test = 6.45 lb/hr (2 boilers)

$= \frac{6.45\ lb}{hr} \times \frac{24\ hr}{day} \times \frac{357\ day}{yr} \times \frac{1\ ton}{2000\ lb} = 27.6\ tpy$

SO_2 from AP-42 and fuel burning rate of $300{,}000 \frac{SCF}{HR}$ (2 boilers)
Table 1.4-1

$\frac{0.6\ lb}{10^6\ SCF} \times \frac{300{,}000\ SCF}{HR} \times \frac{24\ hr}{day} \times \frac{357\ day}{yr} \times \frac{1\ ton}{2000\ lb}$

= 0.77 tpy

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CALCULATION SHEET

CALC. NO.

Stephen A. Langman DATE 5/26/89 CHECKED DATE

IP Camden JOB NO.

Emission Reductions SHEET 2 OF SHEETS

VOC from AP-42 Table 1.4-1 and fuel burning rate of 300,000 SCF/HR

$$= \frac{1.4\ lb}{10^6\ SCF} \times \frac{300{,}000\ SCF}{HR} \times \frac{24\ hr}{day} \times \frac{357\ days}{yr} \times \frac{1\ ton}{2000\ lb}$$

$$= \underline{1.8\ tpy}$$

Boilers may be operated a few days each year simultaneously with cogeneration facility. Limiting pollutant with respect to PSD applicability is NO_x. Net increase with boilers shutdown completely is 29 tpy. PSD applicability threshold is 40 tpy. Therefore, boilers may emit up to 11 tpy of NO_x while the cogeneration facility is operational. When the cogen plant is down, there is no limitation on the operating hours of the boilers.

Calculate number of days boilers may operate simultaneously with cogen plant:

$$\frac{X\ days/yr}{11\ tpy} = \frac{357\ days/yr}{300\ tpy}$$

$$x = 13\ days \times (2\ boilers) = 26\ boiler\text{-}days/yr$$

go with 21 boiler days for margin of safety

$$NO_x = \frac{21\ boiler\text{-}days/yr}{(357\ days/yr\ /\ 2\ boilers)} \times 300\ tpy = \underline{9\ tpy}$$

10-88-30702

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO.

SIGNATURE Stephen A. Langevin DATE 5/26/89 CHECKED DATE

PROJECT IP Camden JOB NO.

SUBJECT Emission Reductions SHEET 3 OF SHEETS

PM

$$= \frac{5.68\ lb}{hr} \times \frac{}{2\ boilers} \times \frac{24\ hrs}{day} \times \frac{21\ days}{yr} \times \frac{1\ ton}{2000\ lb}$$

$$= \underline{0.72}\ tpy$$

CO

$$= \frac{6.45\ lb}{hr} \times \frac{}{2\ boilers} \times \frac{24\ hr}{day} \times \frac{21\ days}{yr} \times \frac{1\ ton}{2000\ lb}$$

$$= \underline{0.81}\ tpy$$

SO_2

$$= \frac{0.6\ lb}{10^6\ scf} \times \frac{150{,}000\ scf}{hr\text{-}boiler} \times \frac{24\ hr}{day} \times \frac{21\ day}{yr} \times \frac{1\ ton}{2000\ lb}$$

$$= \underline{0.02}\ tpy$$

VOC

$$= \frac{1.4\ lb}{10^6\ scf} \times \frac{150{,}000\ scf}{hr\text{-}boiler} \times \frac{24\ hr}{day} \times \frac{21\ day}{yr} \times \frac{1\ ton}{2000\ lb}$$

$$= \underline{0.05}\ tpy$$

10-88-30702

INTERNATIONAL PAPER
1944 ADAMS AVENUE • CAMDEN, ARKANSAS 71701

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AUG 20 1992
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6T-AN

August 12, 1992

Mr. Cecil Harrell
Engineer Supervisor, Permits
Arkansas Department of Pollution
Control and Ecology
P. O. Box 8913
Little Rock, Arkansas 72219-8913

Subject: Camden Mill, Cogeneration Unit PSD Permit Application Response to Environmental Protection Agency Comments

Dear Mr. Harrell:

As discussed in Section 1 of the PSD permit application, the existing Cogeneration Unit was permitted under Arkansas State Permit No. 990-A. This PSD application package was submitted at the request of the Arkansas Department of Pollution Control and Ecology (ADPC&E). International Paper believes that based on actual emissions, PSD applicability is not triggered for the Cogeneration Unit. The application and subsequent submittals must be reviewed with the understanding that the Cogeneration Unit is already constructed and operating at the Camden Mill.

The information contained in this letter addresses the comments outlined in the March 18, 1992, letter addressed to you from the EPA (Mr. Stanley Spruell for Mr. David Garcia) concerning the referenced PSD permit application. Attachment 1 contains the comments and responses to this letter.

If you have any questions regarding these items or would like any clarifications of these responses, please contact Mr. Russell Delezen at the Camden Mill (501) 231-4321, ext. 251, or Mr. Scott Wilby with Woodward-Clyde Consultants, at (713) 690-0700.

Sincerely,

Louis Walker
Facility Manager

RD:ad

cc: Mr. Courtney Garland, ADPC&E
Ms. Minette Landry, INTLPAPER
Mr. David Garcia, EPA-REG 6-DALLAS

Woodward-Clyde
Consultants

ATTACHMENT 1

RESPONSES TO EPA COMMENTS

APPLICABILITY

Item 1

Comment:

It is our understanding that this facility has been constructed and experienced difficulty in meeting its permitted hourly emissions rates for CO and NO_X. The public record should further demonstrate why these limitations could not be met.

Response:

The primary reason why the Cogeneration Unit SN-13 (i.e., the gas turbine and duct burner) hourly emission rate could not be consistently met is because the method used by the ADPCE to establish limits for NO_X and CO in permit 990-A did not allow for normal variability in process equipment. The limits were not based on expected maximum in-stack concentrations of NO_X and CO which would have taken into account process equipment variability. The ADPCE based these limits on expected averages, calculated by dividing the PSD trigger limits by the annual hours of operation. Therefore, any spikes in the pollutant concentrations (of NO_X and CO) recorded by the continuous emissions monitoring systems (CEMS) were considered by the ADPCE as exceedences of the permitted average hourly emission rates, even though annual emissions have never exceeded PSD limits.

If maximum hourly emission rates had been specified in Permit 990-A based upon normal process equipment variability, with the annual emission limits not to exceed the PSD trigger for each pollutant, the subject of PSD applicability for the Cogeneration Unit would not have been raised. International Paper maintains its position that the Cogeneration Unit is not now nor has it ever been subject to the provisions of PSD as demonstrated by actual annual emissions documented by data from the NO_X and CO CEMS.

Item 2

Comment:

The application and the public record should address the effect the proposed boiler will have on the normal operation of the other emission units at the source. Any increases from such emission units should be included in the net emission increase of each regulated pollutant and in the air quality modeling for each pollutant whose net emissions increase will be significant.

Response:

This application does not include the proposed construction of any new emission source associated with the Cogeneration Unit or at the Camden Mill. The operation of the existing Power Boilers (SN-10 and SN-11) will not affect the normal operation of any other emission unit at International Paper's Camden Mill.

Since the Cogeneration Unit is now considered a PSD source by the ADPCE, the restrictions imposed by Permit No. 990-A on the operational time of the power boilers (in lieu of a PSD Permit) are no longer applicable. This is the reason why the power boilers can return to their unrestricted operational status prior to the issuance of Permit NO. 990-A, and the emissions from these power boilers should not be considered as an increase.

Item 3

Comment:

The emissions increases associated with the existing emissions units should be addressed by comparing the actual emissions to the new proposed level of allowable emissions. If the proposed allowable emissions will be based upon other than full time operation of the emissions units at their maximum capacities while burning fuel oil, then the permit should contain federally enforceable limitations on the quantity of #6 fuel oil that can be used, and the overall production and hours of operation of the existing power boilers. Tables 1-1 through Table 1-5 give proposed allowable emissions based on natural gas. The new allowables and thus the net emissions increase should be based upon the actual fuel used or on a worst case basis.

Response:

International Paper has resolved this issue as described in the mill's pending Consolidated Air Permit No. 725-AR-1. The following conditions have been incorporated into this permit:

> **No fuel oil will be fired in the power boilers with the following two exceptions:**
>
> **1) A testing period not to exceed 48 hours be allowed annually to ensure proper operation of the fuel oil system in anticipation of natural gas curtailment.**

2) **Fuel oil is allowed to be fired only during periods of natural gas curtailment.**

Item 4

Comment:

This application presents the net emissions increase due to the project. We did not find where the creditable contemporaneous emission increases and decreases were presented. All other previously permitted emission points from all process modules within the facility should be evaluated with respect to creditable contemporaneous emissions that will be used in the prevention of significant deterioration (PSD) net emission increase calculation.

Response:

There are no other creditable contemporaneous increases or decreases at this facility other than the creditable decreases attributed to the curtailed operating schedules of the No. 1 and No. 2 Power Boilers. The revised Tables 1 through 5, contained in Attachment 2 of this letter, show which pollutants are subject to the "netting" calculations. Tables 6 through 8 (see Attachment 3) show the contemporaneous increases and decreases and which of the pollutant are subject to PSD Review.

Item 5

Comment:

CFR 52.21 (b)(3)(vi)(b) states that a decrease in actual emissions must be federally enforceable <u>at and after the time that actual construction on the particular change begins</u>. If the decreases of actual emissions from the existing power boiler were not federally enforceable at the time construction began, they are not creditable.

Response:

At the time the Cogeneration Unit was originally constructed (see Arkansas Air Permit No. 990-A), federally enforceable operating restrictions were placed upon Power Boilers No. 1 and 2 as a condition of Permit No. 990-A. These operating restrictions resulted in emissions decreases which are federally enforceable, and therefore creditable.

BACT ANALYSIS

Item 6

Comment:

CFR 52.21 (r)(12) states that:

"At such time that a particular source or modification becomes a major source or major modification solely by virtue of a relaxation in an enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such a restriction on hours of operation, then the requirements ... shall apply as though construction had not yet commenced on the source or modification." All best available control technology (BACT) should be evaluated with respect to technical feasibility and energy, environmental and economic impacts and should not include cost for retrofitting a unit requiring a relaxation of an enforceable limit.

Response:

The situation which caused the State of Arkansas to require International Paper to submit an application for a PSD permit did not involve the relaxation of any enforceable limitation in Permit No. 990-A. The situation that led to the PSD Review of the Cogeneration Unit is explained more fully in the response to Item 1 of this letter. Because of this, 40 CFR 52.21(r)(12) should not be used to prevent retrofit costs from being included in the BACT evaluations for the Cogeneration Unit.

Item 7

Comment:

The applicant has rejected selective catalytic reduction (SCR) as BACT for the Cogeneration Unit. SCR has been permitted as BACT in Region 6. The cost presented in the application appear to be excessive. Therefore the public record should contain a comparison of SCR for this project verses the cost of SCR that has been permitted in Region 6 (e.g. Enterprise Products PSD-TX-796).

Response:

After researching the public record at the Texas Air Control Board in Austin, Texas, no information could be found on a permitted SCR system (for Enterprise Products Company, PSD-TX-796). Information contained in that file describes why Enterprise Products Company rejected SCR on economic grounds.

As defined in 40 CFR 52.21, BACT is an issue that is evaluated on the basis of technical feasibility, energy, environmental and economic impacts on a case-by-case basis with consideration of site specific factors. A major difference between the SCR system proposed by Enterprise Products Company and the SCR system rejected by International Paper is that the Cogeneration Unit proposed by Enterprise Products was not yet built. The Cogeneration Unit at International Paper's Camden Mill is an existing unit. This difference will result in significantly higher installation (retrofitting) costs for an SCR system in the existing unit.

Item 8

Comment:

The applicant should consider and address for the public record Dry Low NO_X 2(DLN) burners as BACT for the turbine. We understand that G.E. is developing DLN burners down to 25 ppm and eventually will get to 9 ppm.

Response:

We understand that GE (General Electric) does intend to supply Dry Low NO_X technology to the Frame 5 turbine sometime in the future, however, this package is not currently commercially available. Presently, GE has developed and is marketing a program for retrofitting Frame 7 turbines with the Dry Low NO_X system and has a target date of late 1993 for retrofitting Frame 6 turbines.

Item 9

Comment:

The public record should address the possibility of using catalytic oxidation after the duct burner but before the recovery boiler. Based on the temperature ranges submitted in the application, this location would appear to be technically feasible.

Response:

This item is addressed in Section 4.3.2 of the PSD permit application. The temperature ranges prior to the duct burner(s) and after recuperator (see Figure 2-2 of the PSD permit application) are considered too low to make installation of a catalytic oxidation system to control CO emissions economically viable. This does not include the extensive amount of rework to

the foundation of the Cogeneration Unit and its ductwork, the relocation of upstream or downstream equipment and controls, or the relocation of water and utility connections. Based on these factors, International Paper believes that catalytic oxidation should be rejected as BACT for control of CO emissions from the Cogeneration Unit.

Additionally, this project does not involve a recovery boiler. Our understanding is that a recovery boiler is a boiler that recovers the heat available from the combustion of black liquor. The recuperator mentioned in the previous paragraph and in the PSD permit application is a waste heat recover boiler which recovers the heat energy from the exhaust gas of the Cogeneration Unit.

Item 10

Comment:

The modeling was performed using the meteorological data for the calendar years 1982 through 1987. The Guidelines on Air Quality Models requires that the modeling be performed using meteorological data available for the most recent consecutive five years. This should be addressed in the public record.

Response:

A letter from Woodward-Clyde Consultants dated August 28, 1991 was sent to the ADPCE describing the Modeling Protocol for this PSD permit application. A description of the meteorological data (proposing the years of meteorological data to include 1981 through 1985) is included in this letter. No response was received suggesting that the most current set of meteorological data be used instead. Therefore the meteorological data from the five proposed year was used. A copy of this letter is contained in Attachment 5.

Based on our experience, EPA Region VI has accepted five (5) consecutive years of meteorological data for any period during the 1980's. The modeled maximum concentrations for significance determination were 37.2 ug/m^3 and 11.69 ug/m^3 for CO for 1 and 8 hour averaging times and 0.54 ug/m^3 for NO_X for the annual averaging time. These maximum concentrations occurred over a five year period. Since the maximum ground level concentrations are significantly below the applicable standards or PSD trigger levels, there should be no reason to suspect that a different five year period would significantly alter the modeling results.

Item 11

No Response

ATTACHMENT 2

REVISED TABLES 1 THROUGH 5

TABLE 1

SUMMARY OF NO_X EMISSIONS [1]

Pollutant	Source	Current [2] Emissions (tpy)	Proposed [3] Emissions (tpy)	Change in Emissions (tpy)	PSD Significance Level (tpy)
NO_X	SN-10	158.56	159.94	+ 1.38	
	SN-11	168.06	40.01	- 128.05	
	SN-13	0.0	362.68	+ 362.68	
NO_X Total		326.62	562.63	+ 236.01 [4]	40.0

NOTES:

1 Power boiler emissions are based on the highest calculated NO_X emission rate of the three stack tests conducted May 4 and 5, 1989 (see Appendix D). SN-10: 36.20 pounds of NO_X per hour. SN-11: 38.37 pounds of NO_X per hour.

2 Current emissions are based on operating levels prior to the issuance of Permit 990-A. The requirement of International Paper to submit a PSD permit application for this facility invalidates the operational restrictions placed on the power boilers so that Permit No. 990-A could be issued.

3 Proposed emissions are based on continuous operation of the Cogeneration Unit and Power Boiler No. 1 and 84 days (2016 hours) of operation per year for Power Boiler No. 2. Both power boilers may each fire No. 6 fuel oil for 48 hours per year. The proposed emissions account for fuel oil firing.

4 PSD netting calculations are required since the emissions increase is greater than the PSD significance level for NO_X.

TABLE 2

SUMMARY OF CO EMISSIONS [1]

Pollutant	Source	Current [2] Emissions (tpy)	Proposed [3] Emissions (tpy)	Change in Emissions (tpy)	PSD Significance Level (tpy)
CO	SN-10	15.46	15.54	+ 0.08	
	SN-11	16.21	3.81	- 12.40	
	SN-13	0.0	226.18	+ 226.18	
CO Total		31.67	245.53	+ 213.86 [4]	100.0

NOTES:

1 Power boiler emissions are based on the highest calculated CO emission rate of the three stack tests conducted May 4 and 5, 1989 (see Appendix D). SN-10: 3.53 pounds CO per hour. SN-11: 3.70 pounds CO per hour.

2 Current emissions are based on operating levels prior to the issuance of Permit 990-A. The requirement of International Paper to submit a PSD permit application for this facility invalidates the operational restrictions placed on the power boilers so that Permit No. 990-A could be issued.

3 Proposed emissions are based on continuous operation of the Cogeneration Unit and Power Boiler No. 1 and 84 days (2016 hours) of operation per year for Power Boiler No. 2. Both power boilers may each fire No. 6 fuel oil for 48 hours per year. The proposed emissions account for fuel oil firing.

4 PSD netting calculations are required since the emissions increase is greater than the PSD significance level for CO.

TABLE 3

SUMMARY OF PM-10 EMISSIONS [1]

Pollutant	Source	Current [2] Emissions (tpy)	Proposed [3] Emissions (tpy)	Change in Emissions (tpy)	PSD Significance Level (tpy)
PM-10	SN-10	23.10	24.11	+ 1.01	
	SN-11	15.66	4.63	- 11.03	
	SN-13	0.0	24.65	+ 24.65	
PM-10 Total		38.76	53.39	+ 14.63 [4]	15.0

NOTES:

1 Power boiler emissions are based on the highest calculated PM-10 emission rate of the three stack tests conducted May 4 and 5, 1989 (see Appendix D). SN-10: 5.275 pounds of PM-10 per hour. SN-11: 3.576 pounds of PM-10 per hour.

2 Current emissions are based on operating levels prior to the issuance of Permit 990-A. The requirement of International Paper to submit a PSD permit application for this facility invalidates the operational restrictions placed on the power boilers so that Permit No. 990-A could be issued.

3 Proposed emissions are based on continuous operation of the Cogeneration Unit and Power Boiler No. 1 and 84 days (2016 hours) of operation per year for Power Boiler No. 2. Both power boilers may each fire No. 6 fuel oil for 48 hours per year. The proposed emissions account for fuel oil firing.

4 PSD netting calculations are not required since the emissions increase is less than the PSD significance level for PM-10.

TABLE 4

SUMMARY OF SO_2 EMISSIONS

Pollutant	Source	Current Emissions (tpy)	Proposed Emissions (tpy)	Change in Emissions (tpy)	PSD Significance Level (tpy)
SO_2	SN-10	0.06 [1]	16.37 [2]	+ 16.31	
	SN-11	0.06 [1]	15.95 [2]	+ 15.89	
	SN-13	0.0 [3]	1.55 [4]	+ 1.55	
SO_2 Total		0.12	33.87	+ 33.75 [5]	40.0

NOTES:

1 Current emissions are based on AP-42 emission factors for utility boilers (> 100 MMBtu per hour) firing natural gas at operating levels prior to the issuance of Permit 990-A. The requirement of International Paper to submit a PSD permit application for this facility invalidates the operational restrictions placed on the power boilers so that Permit No. 990-A could be issued.

2 Proposed power boiler emissions are based on AP-42 emission factors for natural gas and fuel oil firing of utility boilers (> 100 MMBtu/hr) with a continuous operating schedule for Power Boiler No. 1 and a 100 day (2400 hour) per year operating schedule for Power Boiler No. 2. Both power boilers may each fire No. 6 fuel oil for 48 hours per year. Also note that the Power Boilers No. 1 and No. 2 were "grandfathered" sources prior to the issuance of Permit No. 990-A. As such, they had no previous restrictions on the amount of fuel oil that could be fired.

3 No emissions prior to issuance of Permit No. 990-A.

4 Proposed emissions are based on emission factors for natural gas combustion in gas turbine engines (EPA document 450/4-90-003, AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Pollutants, page 34, source classification code 2-04-003-01.

5 PSD netting calculations are not required since the emissions increase is less than the PSD significance level for SO_2.

TABLE 5

SUMMARY OF VOC EMISSIONS

Pollutant	Source	Current Emissions (tpy)	Proposed Emissions (tpy)	Change in Emissions (tpy)	PSD Significance Level (tpy)
VOC	SN-10	1.29 [1]	1.31 [2]	+ 0.02	
	SN-11	1.29 [1]	0.31 [2]	- 0.98	
	SN-13	0.0 [3]	12.07 [4]	+ 12.07	
VOC Total		1.84	13.69	+ 11.11 [5]	40.0

NOTES:

1 Current power boiler emissions are based on AP-42 emission factors for utility boilers (> 100 MMBtu per hour) firing natural gas at an operating rate of 10 days (240 hours) per year per boiler.

2 Proposed power boiler emissions are based on AP-42 emission factors for naural gas and fuel oil firing of utility boilers (> 100 MMBtu/hr capacity) with a continuous operating schedule for Power Boiler No. 1 and a 84 day (2016 hour) per year operating schedule for Power Boiler No. 2. Both power boilers may each fire No. 6 fuel oil for 48 hours per year.

3 No emissions prior to Permit No. 990-A.

4 Emissions are based on continuous operation and emission factors for natural gas combustion in gas turbine engines (EPA document 450/4-90-003, AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Pollutants, page 34, source classification code 2-04-003-01.

5 PSD netting calculations are not required since the emissions increase is less than the PSD significance level for VOC.

ATTACHMENT 3

TABLES 6 THROUGH 8

TABLE 6

NET CHANGE IN NO_X EMISSIONS [1]

Pollutant	Source	Proposed Emissions Increase Over Permit 990-A (tpy)	Contemporaneous Change (tpy)	Net Change (tpy)
NO_X	Cogeneration Unit and Power Boilers	308.69 [2]		
	SN-10		- 154.22 [3]	
	SN-11		- 163.46 [4]	
	SN-13		+ 249.0 [5]	
Totals		308.69	- 68.68	= 240.01 [6]

NOTES:

1 Power Boilers emissions are based on the highest calculated emission rate of the three stack tests conducted May 4 and 5, 1989 (see Appendix D of PSD application).

2 Total proposed increase in emissions from continuous operation of the Cogeneration Unit and Power Boiler No. 1, and 84 days per year of operation for Power Boiler No 2.

3 Date of change: January 10, 1990. Curtailed operation of power boilers from unlimited non-limited operation to 10 days per year of operation simultaneously with the Cogeneration Unit.

After: 36.2 lbs/hr x 240 hrs/yr x ton/2000 lbs = 4.34 tons/yrs
Before: 36.2 lbs/hr x 8760 hrs/yr x ton/2000 lbs = 158.56 tons/yr

Contemporaneous Change = - 154.22 tons/yr

4 Date of change: January 10, 1990. Curtailed operation of power boilers from unlimited non-limited operation to 10 days per year of operation simultaneously with the Cogeneration Unit.

After: 38.37 lbs/hr x 240 hrs/yr x ton/2000 lbs = 4.60 tons/yr
Before: 38.37 lbs/hr x 8760 hrs/yr x ton/2000 lbs = 168.06 tons/yr

Contemporaneous Change = - 163.46 tons/yr

5 Date of change: January 10, 1990. Start up of Cogeneration Unit

6 PSD Review required for NO_X

TABLE 7

NET CHANGE IN CO EMISSIONS [1]

Pollutant	Source	Proposed Emissions Increase Over Permit 990-A (tpy)	Contemporaneous Change (tpy)	Net Change (tpy)
CO	Cogeneration Unit and Power Boilers	153.59 [2]		
	SN-10		- 15.04 [3]	
	SN-11		- 15.76 [4]	
	SN-13		+ 119.0 [5]	
Totals		153.59	+ 88.20	= 241.79 [6]

NOTES:

1 Power Boilers emissions are based on the highest calculated emission rate of the three stack tests conducted May 4 and 5, 1989 (see Appendix D of PSD application).

2 Total proposed increase in emissions from continuous operation of the Cogeneration Unit and Power Boiler No, 1, and 84 days per year of operation for Power Boiler No 2.

3 Date of change: January 10, 1990. Curtailed operation of power boilers from unlimited non-limited operation to 10 days per year of operation simultaneously with the Cogeneration Unit.

After: 3.53 lbs/hr x 240 hrs/yr x ton/2000 lbs = 0.42 tons/yr
Before: 3.53 lbs/hr x 8760 hrs/yr x ton/2000 lbs = 15.46 tons/yr

Contemporaneous Change = - 15.04 tons/yr

4 Date of change: January 10, 1990. Curtailed operation of power boilers from unlimited non-limited operation to 10 days per year of operation simultaneously with the Cogeneration Unit.

After: 3.70 lbs/hr x 240 hrs/yr x ton/2000 lbs = 0.44 tons/yr
Before: 3.70 lbs/hr x 8760 hrs/yr x ton/2000 lbs = 16.20 tons/yr

Contemporaneous Change = - 15.76 tons/yr

5 Date of change: January 10, 1990. Start up of Cogeneration Unit

6 PSD Review required for CO

TABLE 8

NET CHANGE IN PM-10 EMISSIONS [1]

Pollutant	Source	Proposed Emissions Increase Over Permit 990-A (tpy)	Contemporaneous Change (tpy)	Net Change (tpy)
PM-10	Cogeneration Unit and Power Boilers	40.76 [2]		
	SN-10		- 22.47 [3]	
	SN-11		- 15.23 [4]	
	SN-13		+ 11.83 [5]	
Totals		40.76	- 25.87	= 14.89 [6]

NOTES:

1 Power Boilers emissions are based on the highest calculated emission rate of the three stack tests conducted May 4 and 5, 1989 (see Appendix D of PSD application).

2 Total proposed increase in emissions from continuous operation of the Cogeneration Unit and Power Boiler No. 1, and 84 days per year of operation for Power Boiler No 2.

3 Date of change: January 10, 1990. Curtailed operation of power boilers from unlimited non-limited operation to 10 days per year of operation simultaneously with the Cogeneration Unit.

After: 5.275 lbs/hr x 240 hrs/yr x ton/2000 lbs = 0.63 tons/yr
Before: 5.275 lbs/hr x 8760 hrs/yr x ton/2000 lbs = 23.10 tons/yr

Contemporaneous Change = - 22.47 tons/yr

4 Date of change: January 10, 1990. Curtailed operation of power boilers from unlimited non-limited operation to 10 days per year of operation simultaneously with the Cogeneration Unit.

After: 3.576 lbs/hr x 240 hrs/yr x ton/2000 lbs = 0.43 tons/yr
Before: 3.576 lbs/hr x 8760 hrs/yr x ton/2000 lbs = 15.66 tons/yr

Contemporaneous Change = - 15.23 tons/yr

5 Date of change: January 10, 1990. Start up of Cogeneration Unit

6 PSD Review for PM/PM-10 not required

ATTACHMENT 4

REVISED ADPCE TABLE 1

SN-10, SN-11, SN-13

TABLE 1

 DATE: 7-30-92

EMISSION POINT NO.	PROCESS DESCRIPTION (descriptive name)	STACK HEIGHT above ground (FEET)	STACK DIAMETER or dimensions (FEET)	STACK GAS TEMPERATURE (°F)	STACK GAS VELOCITY (FT/SEC)	UTM COORDINATES of discharge point (if known)	
						HORIZ.(E)	VERT.(N)
SN-10	AUXILIARY POWER BOILER #1	102	6.5	420	55	516400	3711600

MAXIMUM OPERATING			PERCENT OF ANNUAL THROUGHPUT BY SEASON				BOILER CAPACITY (HEAT INPUT)	TYPE OF PROCESS (check one)	
HOURS PER DAY	DAYS PER WEEK	WEEKS PER YEAR	DECEMBER JANUARY FEBRUARY	MARCH APRIL MAY	JUNE JULY AUGUST	SEPTEMBER OCTOBER NOVEMBER	(MILLION BTU/HR)	CONT.	BATCH
24	7	52	0-100	0-100	0-100	0-100	210	X	

[1] FUEL OIL WILL ONLY BE USED DURING PERIODS OF NATURAL GAS CURTAILMENTS AND AT TIMES TO TEST THE FUEL OIL CAPABILITY OF THE POWER BOILER.

PROPOSED MAXIMUM OPERATING RATES			RAW MATERIAL, PRODUCT, FUEL, ETC.	FUEL PERCENT SULFUR	FUEL PERCENT ASH	FUEL HEAT VALUE MMBTU/UNIT	Department use only: SCC
ANNUAL	HOURLY	UNITS of operating rates					
1,752,000[1]	200	THOUSANDS OF SCF	NATURAL GAS	2 gr/1000 SCF	0	1000 Btu/SCF	
48,000[2]	1000	GALLONS	NO. 6 FUEL OIL	3 wt. %	< 0.5 %	6.3 MMBtu/bbl	

[1] SN-10 OPERATING 8760 HRS/YR [2] ALLOWABLE FIRING OF FUEL OIL 48 HRS/YEAR (> 48 HRS DURING NAT GAS CURTAILMENT)

POLLUTANT (particulate, SO2, NOX, CO, etc.)	PROPOSED MAXIMUM EMISSIONS			EMISSION CONTROL EQUIPMENT	CONTROL EFFICIENCY	Department use only:				
	POUNDS/HOUR[3]		TONS/YEAR[4,3]		PERCENT	EM TH	C.EQT. CODE	ALLOW #/hr INC	ALLOW T/Y INC	CM ST
	NAT GAS	F.O.								
TSP	5.28	46.20	24.11	NONE	0					
PM-10	5.28	46.20	24.11	(ANNUAL EMISSIONS ARE BASED ON STACK SAMPLING CONDDUCTED MAY 4, 1989 WHERE APPLICABLE	0					
SO2	0.13	659.40	16.37		0					
NOX	36.20	93.20	159.94		0					
CO	3.53	7.00	15.54		0					
VOC	0.29	1.06	1.31		0					
SO3	--	12.18	0.29		0					

[3] SEE ATTACHED EMISSION CALCULATION SPREADSHEET FOR POWER BOILER NO. 1 FOR EXPLAINATION.

[4] BASED ON THE HIGHER ANNUAL EMISSION RATE OF 8712 HRS GAS + 48 HRS FUEL OIL FIRING OR 8760 HRS OF GAS FIRING

Woodward-Clyde Consultants

INTERNATIONAL PAPER, CAMDEN MILL, EMISSIONS CALCULATIONS

EMISSIONS FROM POWER BOILER NO. 1

ENTER->	210000000	Btu/hr firing rate
ENTER->	6300000	Btu/bbl
ENTER->	7.9	lbs/gal
ENTER->	0.03	lb sulfur/lb oil
ENTER->	1000	Btu/scf
CALC	0.21	MMscf/hr natural gas usage
CALC	1400	gal/hr = fuel oil usage
ENTER->	48	hours = firing time for fuel oil
ENTER->	8760	hours = allowable firing time for natural gas
ENTER->	8712	hours = firing time for natural gas if fuel oil is fired for 48 hours

NATURAL GAS COMBUSTION

		Emission Factor (#/MMscf)	Emission Rates -max- (#/hr)	-8760 hrs- (tons/yr)	-8712 hrs- (tons/yr)
(1)	TSP	--	5.28	23.13	23.00
(3)	PM-10	--	5.28	23.13	23.00
(2)	SO2	0.6	0.13	0.55	0.55
	SO3	--	--	0.00	0.00
(1)	NOx	--	36.20	158.56	157.69
(1)	CO	--	3.53	15.46	15.38
(2)	VOC	1.4	0.29	1.29	1.28

FUEL OIL COMBUSTION

		Emission Factor (#/Mgal)	Emission Rates -max- (#/hr)	(tons/yr)
(4)	TSP	33	46.20	1.11
(4)	PM-10	33	46.20	1.11
(4,5,6)	SO2	471	659.40	15.83
(4,5,6)	SO3	8.7	12.18	0.29
(4)	NOx	67	93.80	2.25
(4)	CO	5	7.00	0.17
(4)	VOC	0.76	1.06	0.03

EMISSIONS FROM POWER BOILER NO. 1
(continued)

		Combined total maximum annual emission rate (tons/yr)
(7)	TSP	24.11
(7)	PM-10	24.11
(7)	SO2	16.37
(7)	SO3	0.29
(7)	NOx	159.94
(7)	CO	15.54
(7)	VOC	1.31

NOTES:

(1) Based on stack testing conducted on the boilers May 5 and 6, 1989
(2) Based on AP-42 emission factors for uncontrolled natural gas combustion in utility boilers (> 100 MMBtu/hr capacity)
(3) Assumes all TSP to be less than 10 microns in diameter
(4) Based on AP-42 emission factors for utility boilers firing residual oil
(5) Based on 3 weight percent sulfur in the fuel oil
(6) Based on 1% conversion of SO2 to SO3
(7) Total annual emissions based on 8712 hours of natural gas firing and 48 hours of fuel oil firing

TABLE 1

 DATE: 7-30-92

EMISSION POINT NO.	PROCESS DESCRIPTION (descriptive name)	STACK HEIGHT above ground (FEET)	STACK DIAMETER or dimensions (FEET)	STACK GAS TEMPERATURE (°F)	STACK GAS VELOCITY (FT/SEC)	UTM COORDINATES of discharge point (if known)	
						HORIZ.(E)	VERT.(N)
SN-11	AUXILIARY POWER BOILER #2	102	6.5	420	55	516400	3711600

MAXIMUM OPERATING			PERCENT OF ANNUAL THROUGHPUT BY SEASON				BOILER CAPACITY (HEAT INPUT)	TYPE OF PROCESS (check one)	
HOURS PER DAY	DAYS PER WEEK	WEEKS PER YEAR	DECEMBER JANUARY FEBRUARY	MARCH APRIL MAY	JUNE JULY AUGUST	SEPTEMBER OCTOBER NOVEMBER	(MILLION BTU/HR)	CONT.	BATCH
24	7	12	0-100	0-100	0-100	0-100	210	X	

[1] FUEL OIL WILL ONLY BE USED DURING PERIODS OF NATURAL GAS CURTAILMENTS AND AT TIMES TO TEST THE FUEL OIL CAPABILITY OF THE POWER BOILER.

PROPOSED MAXIMUM OPERATING RATES			RAW MATERIAL, PRODUCT, FUEL, ETC.	FUEL PERCENT SULFUR	FUEL PERCENT ASH	FUEL HEAT VALUE MMBTU/UNIT	Department use only: SCC
ANNUAL	HOURLY	UNITS of operating rates					
403,200[1]	200	THOUSANDS OF SCF	NATURAL GAS	2 gr/1000 SCF	0	1000 Btu/SCF	
48,000[2]	1000	GALLONS	NO. 6 FUEL OIL	3 wt. %	< 0.5 %	6.3 MMBtu/bbl	

[1] SN-11 OPERATING 2016 HRS/YR [2] ALLOWABLE FIRING OF FUEL OIL 48 HRS/YR (> 48 HRS DURING NAT GAS CURTAILMENT)

POLLUTANT (particulate, SO2,NOX,CO,etc.)	PROPOSED MAXIMUM EMISSIONS			EMISSION CONTROL EQUIPMENT	CONTROL EFFICIENCY	Department use only:				
	POUNDS/HOUR[3]		TONS/YEAR[4,3]		PERCENT	EM TH	C.EQT. CODE	ALLOW #/hr INC	ALLOW T/Y INC	CM ST
	NAT GAS	F.O.								
TSP	3.58	46.20	4.63	NONE	0					
PM-10	3.58	46.20	4.63	(ANNUAL EMISSIONS ARE BASED ON STACK SAMPLING CONDUCTED MAY 4, 1989 WHERE APPLICABLE)	0					
SO2	0.13	659.40	15.95		0					
NOX	38.37	93.80	40.01		0					
CO	3.70	7.00	3.81		0					
VOC	0.29	1.06	0.31		0					
SO3	--	12.18	0.29							

[3] SEE ATTACHED EMISSION CALCULATION SPREADSHEET FOR POWER BOILER NO. 2 FOR EXPLAINATION.

[4] BASED ON THE HIGHER ANNUAL EMISSION RATE OF 1968 HRS GAS + 48 HRS FUEL OIL FIRING OR 2016 HRS OF GAS FIRING

Woodward-Clyde Consultants

INTERNATIONAL PAPER, CAMDEN MILL, EMISSIONS CALCULATIONS

EMISSIONS FROM POWER BOILER NO. 2

ENTER->	210000000	Btu/hr firing rate
ENTER->	6300000	Btu/bbl
ENTER->	7.9	lbs/gal
ENTER->	0.03	lb sulfur/lb oil
ENTER->	1000	Btu/scf
CALC	0.21	MMscf/hr natural gas usage
CALC	1400	gal/hr = fuel oil usage
ENTER->	48	hours = firing time for fuel oil
ENTER->	2016	hours = allowable firing time for natural gas
CALC	1968	hours = firing time for natural gas if fuel oil is fired for 48 hours

NATURAL GAS COMBUSTION

		Emission Factor (#/MMscf)	Emission Rates -max- (#/hr)	-8760 hrs- (tons/yr)	-8712 hrs- (tons/yr)
(1)	TSP	--	3.58	3.61	3.52
(3)	PM-10	--	3.58	3.61	3.52
(2)	SO2	0.6	0.13	0.13	0.12
	SO3	--	--	0.00	0.00
(1)	NOx	--	38.37	38.68	37.76
(1)	CO	--	3.70	3.73	3.64
(2)	VOC	1.4	0.29	0.30	0.29

FUEL OIL COMBUSTION

		Emission Factor (#/Mgal)	Emission Rates -max- (#/hr)	(tons/yr)
(4)	TSP	33	46.20	1.11
(4)	PM-10	33	46.20	1.11
(4,5,6)	SO2	471	659.40	15.83
(4,5,6)	SO3	8.7	12.18	0.29
(4)	NOx	67	93.80	2.25
(4)	CO	5	7.00	0.17
(4)	VOC	0.76	1.06	0.03

EMISSIONS FROM POWER BOILER NO. 2
(continued)

		Combined total maximum annual emission rate (tons/yr)
(7)	TSP	4.63
(7)	PM-10	4.63
(7)	SO2	15.95
(7)	SO3	0.29
(7)	NOx	40.01
(7)	CO	3.81
(7)	VOC	0.31

NOTES:

(1) Based on stack testing conducted on the boilers May 4 and 5, 1989
(2) Based on AP-42 emission factors for uncontrolled natural gas combustion in utility boilers (> 100 MMBtu/hr capacity)
(3) Assumes all TSP to be less than 10 microns in diameter
(4) Based on AP-42 emission factors for utility boilers firing residual oil
(5) Based on 3 weight percent sulfur in the fuel oil
(6) Based on 1% conversion of SO2 to SO3
(7) Total annual emissions based on 1968 hours of natural gas firing and 48 hours of fuel oil firing

TABLE 1

 DATE: 7-30-92

EMISSION POINT NO.	PROCESS DESCRIPTION (descriptive name)	STACK HEIGHT above ground (FEET)	STACK DIAMETER or dimensions (FEET)	STACK GAS TEMPERATURE (°F)	STACK GAS VELOCITY (FT/SEC)	UTM COORDINATES of discharge point (if known)	
						HORIZ.(E)	VERT.(N)
SN-13	COGENERATION UNIT EXHAUST STACK	75	8.25 x 12.0	310	54.5	516331	3711889

MAXIMUM OPERATING			PERCENT OF ANNUAL THROUGHPUT BY SEASON				BOILER CAPACITY (HEAT INPUT)	TYPE OF PROCESS (check one)	
HOURS PER DAY	DAYS PER WEEK	WEEKS PER YEAR	DECEMBER JANUARY FEBRUARY	MARCH APRIL MAY	JUNE JULY AUGUST	SEPTEMBER OCTOBER NOVEMBER	(MILLION BTU/HR)	CONT.	BATCH
24	7	52	25	25	25	25	351 (GAS TURBINE) 238 (DUCT BURNER)	XX	

PROPOSED MAXIMUM OPERATING RATES			RAW MATERIAL, PRODUCT, FUEL, ETC.	FUEL PERCENT SULFUR	FUEL PERCENT ASH	FUEL HEAT VALUE MMBTU/UNIT	Department use only: SCC
ANNUAL	HOURLY	UNITS of operating rates					
5,150,000	589	THOUSANDS OF SCF	NATURAL GAS	2 gr. per 1000 SCF	0	1,000 BTU/SCF	

POLLUTANT (particulate, SO2,NOX,CO,etc.)	PROPOSED MAXIMUM EMISSIONS		EMISSION CONTROL EQUIPMENT	CONTROL EFFICIENCY PERCENT	Department use only:				
	POUNDS/HOUR	TONS/YEAR			EM TH	C.EQT. CODE	ALLOW #/hr INC	ALLOW T/Y INC	CM ST
TSP	5.628	24.65	STEAM INJECTION FOR THE GAS TURBINE AND REDUCED NOx BURNERS FOR THE DUCT BURNER	0					
PM-10	5.628	24.65		0					
SO2	0.354	1.55		0					
NOx	82.803	362.68		60-65%					
CO	51.640	226.18		0					
VOC	2.775	12.07		0					

ATTACHMENT 5

MODELING PROTOCOL LETTER

2822 O'Neal Lane
Post Office Box 66317
Baton Rouge, Louisiana 70896
(504) 751-1873
FAX (504) 753-3616

Woodward-Clyde Consultants

August 28, 1991

Mr. David Morrow
Permit Engineer
Arkansas Department of Pollution Control
and Ecology
8001 National Drive
Post Office Box 9583
Little Rock, Arkansas 72209

Re: Modeling Protocol
International Paper Company, PSD Application
Camden, Quachita County, Arkansas
File 91B531C-3

Dear Mr. Morrow:

Woodward-Clyde Consultants (WCC) is pleased to submit the attached air dispersion modeling protocol for International Paper Company's Prevention of Significant Deterioration (PSD) permit application, Camden, Arkansas mill. The pollutants to be addressed for this application are carbon monoxide (CO) and oxides of nitrogen (NOx).

Please feel free to contact us at (504) 751-1873 with any questions and to advise us of any changes you may desire in the attached protocol.

Very truly yours,

Doug Walters

Doug Walters
Project Scientist

Bharat Contractor

Bharat Contractor, P. E.
Project Manager

DW:wv
Enclosure

cc: Mr. Russel Delezan, IPC
531-ADMP.LTR IP1

PROPOSED MODELING FOR IMPACTS OF MODIFICATION ANALYSIS (SCREENING) INTERNATIONAL PAPER COMPANY CAMDEN, ARKANSAS MILL

(ONE WEEK COMPLETION SCHEDULE)

I. MODELS TO BE USED FOR FLAT OR GENTLY ROLLING TERRAIN RECEPTORS (BELOW STACK HEIGHT)

A. Oxides of Nitrogen (NOx):

The ISCLT Model will be run in the rural and regulatory modes for annual concentrations.

B. Carbon Monoxide (CO):

The ISCST Model will be run in the rural and regulatory modes for 1-hour and 8-hour concentrations.

Note that the Auer Method will be used to document justification of use of the rural mode and this documentation will be provided with the application.

II. MODEL TO BE USED FOR COMPLEX TERRAIN (RECEPTORS ABOVE STACK HEIGHT)

The COMPLEX I Model will be used for both pollutants in the rural and regulatory modes.

III. DOWNWASH, BUILDING WAKE EFFECTS, AND CAVITY ANALYSES

Both the Huber-Snyder and the Schulman-Scire downwash algorithms will be employed in the ISCST and ISCLT Models. The SCREEN Model will be used to evaluate any cavity effects on ambient air.

IV. RECEPTOR GRIDS

A cartesian coordinate system will be used in all analyses. Receptors will be located at 100-meter intervals along the public access restriction to the mill. Additional receptors will be placed from the public access restriction at 100 meter spacing to a distance of 1 kilometer (km). Other receptors will be placed at distances of 2, 3, 4, etc. km from the public access restriction until ambient significance is no longer impeached for the pollutant in question.

For the COMPLEX I Modeling, a subset of the above receptors will be used which will include all receptors above stack height. The worst case concentration will be used to determine significant impact among the use of the two ISC Models and the COMPLEX I Model.

V. METEOROLOGICAL DATA

The ISCST and COMPLEX I Models will utilize five consecutive years of binary data constructed from Shreveport, Louisiana, National Weather Service (NWS) Station surface observations and Longview, Texas NWS Station upper air radiosonde observations. The years of meteorological data proposed for modeling are 1981 through 1985.

The ISCLT Model will use five consecutive separate years of joint frequency distribution stability array (STAR) data for the same years (1981 through 1985) as the binary data.

Note: If any preconstruction monitoring is indicated due to the above analyses, a minimum of 4 months of ambient data for the pollutant in question may be required by the ADPCE before any refined modeling analysis may be completed.

RETRIEVAL OF MAJOR/MINOR, AREA, AND MOBILE SOURCES INVENTORY FROM THE ADPCE

(ONE WEEK COMPLETION SCHEDULE)

Once any impact areas for CO are identified from the previous screening analysis, a retrieval of other major and minor sources will be required from the ADPCE. This retrieval will include the maximum radius of impact plus 50 km which defines the radius of the circle within which other sources of CO are to be considered. These sources will be used in any refined modeling which may be required for National Ambient Air Quality Standards (NAAQS) analysis.

If any impact areas for NOx are identified from the screening modeling, a retrieval of the inventory of other major, minor area and mobile sources will be required from the ADPCE. This retrieval will be similar to the CO retrieval except that other sources of NOx (annual allowable emissions) are to be considered. These sources will be used in any refined modeling which may be required for NAAQS analysis. In addition, if any complete PSD application for NOx has been submitted to the ADPCE which has a significant NOx impact on Quachita County or a complete PSD application for NOx for a source located in Quachita County has been submitted to the ADPCE since February 8, 1988 a baseline retrieval of the inventory of actual emissions of major, minor, area and mobile sources for the minor source baseline date will be required from the ADPCE as well as current actual emissions from the same sources.

The 20D criteria will be used to determine if sources outside of the impact area need be included. For long term analyses, if D is the distance (km) from the area of impact boundary, the absolute value of emissions from sources less than 20D tons per year need not be included in refined modeling. For short term analyses, D is the distance (km) from the applicant's source.

MEETING WITH THE ADPCE TO DISCUSS REFINED COMPLEX I MODELING PROTOCOL

(SCHEDULE CONTINGENT ON ADPCE)

In the event that ambient significance is indicated at any receptor for any pollutant at any receptor above stack height, a meeting will be required with the ADPCE (contingent of ADPCE availability for such a meeting) to discuss the protocol for modeling multiple stacks in complex terrain.

REFINED MODELING ANALYSIS

(THREE WEEKS COMPLETION SCHEDULE FROM AGREEMENT ON COMPLEX MODELING PROTOCOL)

A. Refined NAAQS analysis will be performed, if necessary, for CO using the ISCST and COMPLEX I Models with appropriate receptor spacing and all other inputs as previously discussed.

B. Refined NAAQS and Class II increment analyses will be performed, if necessary, for NOx using the ISCST and COMPLEX I Models with appropriate receptor spacing and all other inputs as previously discussed. If the NAAQS or allowable increments are exceeded, the ozone limiting method may be applied, if appropriate.

STATUS AS OF July 20, 1992 | PSD PERMIT NUMBER PSD-ARK-???? 1
DPAGE | STATE PERMIT NUMBER
DUNN & BRADSTREET #

SOURCE: INTERNATIONAL PAPER, CAMDEN MILL / COGENERATION FACILITY

ADDRESS:
COUNTY: Ouachita County
LOCATION: Camden, Arkansas
SUBMITTED BY:
CONTACT:
TELEPHONE #

PREPARED BY: Woodward-Clyde Consultants
ADDRESS: 2822 O'Neal Lane, Baton Rouge, LA 70896
LOCATION:
CONTACT:
TELEPHONE #

EPA PERMIT ENGINEER: R. Daron Page
STATE PERMIT ENGINEER: David Marrow

Current Status/Size of Source: Existing Major Source
PSD-__-____ ST.Number 990-A

Type of Application: Major Mod.

PROJECT DESCRIPTION: I.P. installed a GE frame 5 NG fired turbine which is the prime mover for a 27 MW electric generator. Waste heat is recovered in a downstream waste heat boiler, a duct burner is used to provide supplemental firing to ensure that a stable supply of steam is provided by the waste heat boiler. Steam injection is used to lower the combustion flame temp and therefore the NOx emissions.

Existing Power boilers (C) will be used as back-up when the Co-gen is down due to maintenance or repairs, they will be kept in a cold down state when not in use. Power boilers will provide steam to the mill and fire up to 300,000 scf/hr of N.G. and will use No. 6 fuel oil as an emergency fuel during shortages of N.G. I.P. would like the authority to periodically use No. 6 fuel oil in these boilers to assure their capability to operate under such emergency conditions. The bark and recovery boilers (D) also produce steam for the mill electrical and steam distribution systems (G) and (I). I.P. would like the authority to operate the power boilers simultaneously with the Co-gen Unit for a total of 80 boiler days, start up will be counted against the 80 boiler days. A total of 600,000 lb/ hr of steam is needed by the I.P. steam distribution system. The power boilers will be used to maintain this demand when one or more of the Co-gen unit,the bark boiler, or the Recovery boiler is down.

APPLICABILITY	PM_{10}	SO_2	NO_x	CO	NMHC
Project Emissions, tpy	24.65	1.55	362.68	226.18	12.07
Contemporaneous Emissions,tpy	-34.51	-.694	-265.19	-28.25	-3.27
Net Emissions Increase, tpy	-9.86	.856	98.49	197.93	8.78
Number of Project Stacks	3	3	3	3	3
BACT/LAER Required, Yes/No	no	no	yes	yes	no
	24.65	1.55	362.68	226.18	12.07
	-10.02	32.2	-126.67	-12.32	-0.96
	14.63	33.75	236.01	213.86	11.11

AIR QUALITY

		NO_x isclt	NO_x complex	CO isclt	CO complex
Ambient Significance, ug/m^3	1 hr			37.20	6.38
	8 hr			11.69	2.38
	annual	0.54	0.12		

Radius of Sign. Impact, Km
Refined Modeling Required
PSD Increment Used, 3-hour
PSD Increment Used, 24-hour
PSD Increment Used, Annual
NAAQS Conc Modeled, 3-hour
NAAQS Conc Modeled, 24-hour
NAAQS Conc Modeled, Annual
NAAQS Conc Background

BACT ANALYSIS EMISSION POINT	Proposed	CONTROLS & NSPS & CEM	EMISSIONS
Turbine	3 to 1 steam fuel ratio	N.G.fired w/ steam injection	42 ppm
Duct burner		Low NOx Burners w/N.G only	
PM_{10}		(lb/MMBTU)	.003
SO_2		(lb/MMBTU)	.0006
NO_x		(lb/MMBTU)	.1

MOST STRINGENT CONTROL RANKING

		CONTROL	EMISSIONS
NOx			
Turbine	$8323/ton/yr	wet injection w/SCR	90%
		wet injection w/SCR	???
CO			
		Thermal Oxidation _____	95 - 98 %_
		Catalytic Oxidation_____	90%

COMMENT LETTERS

DATE	FROM	TO	SUBJECT
__/__/__	_____	_____	_____
__/__/__	_____	_____	_____

TELEPHONE CALLS / TELECONFERENCES

DATE	FROM	TO	SUBJECT / ATTENDEES
__/__/__	_____	_____	_____
__/__/__	_____	_____	_____
__/__/__	_____	_____	_____

MEETINGS

DATE	LOCATION	SUBJECT / ATTENDEES
__/__/__	_____	_____
__/__/__	_____	_____

SOURCE: INTERNATIONAL PAPER, CAMDEN MILL / COGENERATION FACILITY

CHRONOLOGY:

DATE OF PRE-APPLICATION MEETING:	__/__/__
DATE APPLICATION RECEIVED BY STATE: .	01/23/92
DATE APPLICATION RECEIVED BY EPA: ...	01/29/92
DATE of anticipated construction: ...	__/__/__
DATE of anticipated startup:	__/__/__
DATE STATE COMPLETENESS:	__/__/__
DATE EPA COMPLETENESS COMMENTS:	__/__/__
DATE STATE PUBLIC NOTICE:	__/__/__
DATE DRAFT PSD PERMIT AT EPA:	__/__/__
DATE EPA DRAFT COMMENTS TO STATE: ...	__/__/__
DATE PSD PERMIT ISSUED:	__/__/__

STATUS AS OF 02/18/92
DPAGE

PSD PERMIT NUMBER PSD-ARK-???? 1
STATE PERMIT NUMBER
DUNN & BRADSTREET #

SOURCE: INTERNATIONAL PAPER, CAMDEN MILL / Cogeneration ~~Unit~~ facility

ADDRESS:
COUNTY: Ouachita County
LOCATION: Camden, Arkansas
SUBMITTED BY:
CONTACT:
TELEPHONE #

Was modeling done based upon max. rate when Power boilers are burning fuel oil and operating simultaneously with the Cogen Unit

PREPARED BY: Woodward-Clyde Consultants
ADDRESS: 2822 O'Neal Lane, Baton Rouge,
LOCATION:
CONTACT:
TELEPHONE #

EPA PERMIT ENGINEER: R. Daron Page
STATE PERMIT ENGINEER: David Marrow

Current Status/Size of Source: Existing Major Source
PSD-__-____ ST.Number 990-A
Type of Application: Major Mod.

PROJECT DESCRIPTION: I.P. installed a GE frame 5 NG fired turbine which is the prime mover for a 27 MW eletcric generator. Wast heat is recovered in a downstream waste heat boiler, a duct burner is used to provide supplementalfiring to ensure ~~that ble~~ a stable supply of steam is provided by the waste heate boiler. Steam injection is used to lower the combuster flame temp and therefore the NOx emissions.
existing Power boilers (C) will be used as back-up when the Co-gen is down due to maintaince or repairs, they will be kept in a cold down state when not in use. Power boilers will provide steam to the mill and fire up to 300,000 scf/hr of N.G. and will use No. 6 fuel oil as an emergency fuel during shortagesof N.G. I.P. would like the authority to periodically use No. 6 fuel oil in these boilers to assure their capability to operate under such emergency conditions. The bark and recovery boilers (D) also produce steam for the mill electrical and steam distribution systems (G) and (I). I.P. would like the authority to operate the power boilers simultaineously with the Co-gen Unit for a total of 80 boiler days, start up will be counted against the 80 boiler days. A total of 600,000 lb/ hr of steam is needed by the I.P. steam distrbustion syatem. The power boilers will be used to maintain this demand when one or more of the Co-gen unit,the bark boiler, or the Recovery boiler is down.

APPLICABILITY	PM_{10}	SO_2	NO_x	CO	NMHC
Project Emissions, tpy	24.65	1.55	362.68	226.18	12.07
Contemporaneous Emissions,tpy	-34.51	-.694	-265.19	-28.25	-3.27
Net Emissions Increase, tpy	-9.86	.856	98.49	197.93	8.78
Number of Project Stacks	3	3	3	3	3
BACT/LAER Required, Yes/No	no	no	yes	yes	no

	CO		NOx	
	CO ISCST	Complex I	ISCLT	Complex I
Ambient Significance, ug/m³	1hr 37.20	6.38		
Radius of Sign. Impact, Km	8hr 11.69	2.38	.54	.12
Refined Modeling Required				
PSD Increment Used, 3-hour				
PSD Increment Used, 24-hour				
PSD Increment Used, Annual				
NAAQS Conc Modeled, 3-hour				
NAAQS Conc Modeled, 24-hour				
NAAQS Conc Modeled, Annual				
NAAQS Conc Background				

BACT ANALYSIS

Proposed

EMISSION POINT	CONTROLS & NSPS & CEM	EMISSIONS
Turbine	3 to 1 ratio steam/fuel ratio N.G.fired w/ steam injection	????? 42 ppm vd
Duct burner	Low NOx Burners w/N.G only	
PM_{10}	(lb/MMBTU)	.003
SO_2	(lb/MMBTU)	.0006
NO_x	(lb/MMBTU)	.1

MOST STRINGENT CONTROL RANKING

			CONTROL	EMISSIONS
Turbine	NOx	$8323/ton/yr	wrong temp range wet injection w/SCR	90%
			wrong temp range wet injection w/SCR SNCR	???
	CO		Thermal Oxidation	95-98%
			Catalytic Oxidation	90%

COMMENT LETTERS

DATE	FROM	TO	SUBJECT
__/__/__			
__/__/__			

TELEPHONE CALLS / TELECONFERENCES

DATE	FROM	TO	SUBJECT / ATTENDEES
__/__/__			
__/__/__			
__/__/__			

MEETINGS

DATE	LOCATION	SUBJECT / ATTENDEES
__/__/__		
__/__/__		

CHRONOLOGY:

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DATE APPLICATION RECEIVED BY EPA: ...	__/__/__
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DATE of anticipated startup:	__/__/__
DATE STATE COMPLETENESS:	__/__/__
DATE EPA COMPLETENESS COMMENTS:	__/__/__
DATE STATE PUBLIC NOTICE:	__/__/__
DATE DRAFT PSD PERMIT AT EPA:	__/__/__
DATE EPA DRAFT COMMENTS TO STATE: ...	__/__/__
DATE PSD PERMIT ISSUED:	__/__/__

STATUS AS OF March 11, 1992 | PSD PERMIT NUMBER PSD-ARK-???? 1
DPAGE | STATE PERMIT NUMBER
DUNN & BRADSTREET #

SOURCE: INTERNATIONAL PAPER, CAMDEN MILL / COGENERATION FACILITY

ADDRESS:
COUNTY: Ouachita County
LOCATION: Camden, Arkansas
SUBMITTED BY:
CONTACT:
TELEPHONE #

PREPARED BY: Woodward-Clyde Consultants
ADDRESS: 2822 O'Neal Lane, Baton Rouge, LA 70896
LOCATION:
CONTACT:
TELEPHONE #

EPA PERMIT ENGINEER: R. Daron Page
STATE PERMIT ENGINEER: David Marrow

Current Status/Size of Source: Existing Major Source
PSD-__-____ ST.Number 990-A
Type of Application: Major Mod.

PROJECT DESCRIPTION: I.P. installed a GE frame 5 NG fired turbine which is the prime mover for a 27 MW electric generator. Waste heat is recovered in a downstream waste heat boiler, a duct burner is used to provide supplemental firing to ensure that a stable supply of steam is provided by the waste heat boiler. Steam injection is used to lower the combustion flame temp and therefore the NOx emissions.

Existing Power boilers (C) will be used as back-up when the Co-gen is down due to maintenance or repairs, they will be kept in a cold down state when not in use. Power boilers will provide steam to the mill and fire up to 300,000 scf/hr of N.G. and will use No. 6 fuel oil as an emergency fuel during shortages of N.G. I.P. would like the authority to periodically use No. 6 fuel oil in these boilers to assure their capability to operate under such emergency conditions. The bark and recovery boilers (D) also produce steam for the mill electrical and steam distribution systems (G) and (I). I.P. would like the authority to operate the power boilers simultaneously with the Co-gen Unit for a total of 80 boiler days, start up will be counted against the 80 boiler days. A total of 600,000 lb/ hr of steam is needed by the I.P. steam distribution system. The power boilers will be used to maintain this demand when one or more of the Co-gen unit,the bark boiler, or the Recovery boiler is down.

APPLICABILITY	PM_{10}	SO_2	NO_x	CO	NMHC
Project Emissions, tpy	24.65	1.55	362.68	226.18	12.07
Contemporaneous Emissions,tpy	-34.51	-.694	-265.19	-28.25	-3.27
Net Emissions Increase, tpy	-9.86	.856	98.49	197.93	8.78
Number of Project Stacks	3	3	3	3	3
BACT/LAER Required, Yes/No	no	no	yes	yes	no

AIR QUALITY		NO_x isclt	NO_x complex	CO isclt	CO complex
Ambient Significance, ug/m^3	1 hr			37.20	6.38
	8 hr			11.69	2.38
	annual	0.54	0.12		

Radius of Sign. Impact, Km
Refined Modeling Required
PSD Increment Used, 3-hour
PSD Increment Used, 24-hour
PSD Increment Used, Annual
NAAQS Conc Modeled, 3-hour
NAAQS Conc Modeled, 24-hour
NAAQS Conc Modeled, Annual
NAAQS Conc Background

BACT ANALYSIS EMISSION POINT	Proposed	CONTROLS & NSPS & CEM	EMISSIONS
Turbine	3 to 1 steam fuel ratio	N.G.fired w/ steam injection	42 ppm
Duct burner		Low NOx Burners w/N.G only	
PM_{10}		(lb/MMBTU)	.003
SO_2		(lb/MMBTU)	.0006
NO_x		(lb/MMBTU)	.1

MOST STRINGENT CONTROL RANKING		CONTROL	EMISSIONS
NOx			
Turbine	$8323/ton/yr	wet injection w/SCR	90%
		wet injection w/SCR	???
CO			
		Thermal Oxidation _____	95 - 98 %_
		Catalytic Oxidation_____	90%

COMMENT LETTERS

DATE	FROM	TO	SUBJECT
__/__/__	_____	_____	_____
__/__/__	_____	_____	_____

TELEPHONE CALLS / TELECONFERENCES

DATE	FROM	TO	SUBJECT / ATTENDEES
__/__/__	_____	_____	_____
__/__/__	_____	_____	_____
__/__/__	_____	_____	_____

MEETINGS

DATE	LOCATION	SUBJECT / ATTENDEES
__/__/__	_____	_____
__/__/__	_____	_____

SOURCE: INTERNATIONAL PAPER, CAMDEN MILL / COGENERATION FACILITY

CHRONOLOGY:

DATE OF PRE-APPLICATION MEETING:	__/__/__
DATE APPLICATION RECEIVED BY STATE: .	01/23/92
DATE APPLICATION RECEIVED BY EPA: ...	01/29/92
DATE of anticipated construction: ...	__/__/__
DATE of anticipated startup:	__/__/__
DATE STATE COMPLETENESS:	__/__/__
DATE EPA COMPLETENESS COMMENTS:	__/__/__
DATE STATE PUBLIC NOTICE:	__/__/__
DATE DRAFT PSD PERMIT AT EPA:	__/__/__
DATE EPA DRAFT COMMENTS TO STATE: ...	__/__/__
DATE PSD PERMIT ISSUED:	__/__/__

6T-AN
AIR QUALITY SUMMARY

Reviewer [illegible]
Date: __/__/__

COMPANY: I. P. Camden Mill
SOURCE: Camden Mill
LOCATION: Camden Arkansas
PSD PERMIT NUMBER: _____

✓ Net Emission Increase / Potential to Emit
___ PSD Increment Analysis
___ National Ambient Air Quality Standard (NAAQS)
Pollutant NOx
Grid Size: 1 Kilometer ____ 100 Meters ____ Other ____
Urban ____ Rural ____ Building Downwash ____
Upper Air Station ____ Surface Station ____
Model Used ISC LT

	___ HOUR Highest	___ HOUR 2nd High	___ HOUR Highest	___ HOUR 2nd high	Annual
1. YEAR 81					.508077
Day/Hour					
Receptor UTM E					516277
Receptor UTM N					3714176
Elevation					
2. YEAR 82					.540537
Day/Hour					
Receptor UTM E					516277
Receptor UTM N					3714176
Elevation					
3. YEAR 83					.400022
Day/Hour					
Receptor UTM E					516277
Receptor UTM N					3714170
Elevation					
4. YEAR 84					.510712
Day/Hour					
Receptor UTM E					516277
Receptor UTM N					3714176
Elevation					
5. YEAR 85					.456880
Day/Hour					
Receptor UTM E					516277
Receptor UTM N					3714176
Elevation					
BACKGROUND CONCENTRATION					
TOTAL CONCENTRATION					
RADIUS OF IMPACT KILOMETERS					2.286 km

STATUS AS OF March 11, 1992 PSD PERMIT NUMBER PSD-ARK-???? 1
DPAGE STATE PERMIT NUMBER
DUNN & BRADSTREET #

SOURCE: INTERNATIONAL PAPER, CAMDEN MILL / COGENERATION FACILITY

ADDRESS:
COUNTY: Ouachita County
LOCATION: Camden, Arkansas
SUBMITTED BY:
CONTACT:
TELEPHONE #

PREPARED BY: Woodward-Clyde Consultants
ADDRESS: 2822 O'Neal Lane, Baton Rouge, LA 70896
LOCATION:
CONTACT:
TELEPHONE #

EPA PERMIT ENGINEER: R. Daron Page
STATE PERMIT ENGINEER: David Marrow

Current Status/Size of Source: Existing Major Source
PSD-__-____ ST.Number 990-A
Type of Application: Major Mod.

PROJECT DESCRIPTION: I.P. installed a GE frame 5 NG fired turbine which is the prime mover for a 27 MW electric generator. Waste heat is recovered in a downstream waste heat boiler, a duct burner is used to provide supplemental firing to ensure that a stable supply of steam is provided by the waste heat boiler. Steam injection is used to lower the combustion flame temp and therefore the NOx emissions.

Existing Power boilers (C) will be used as back-up when the Co-gen is down due to maintenance or repairs, they will be kept in a cold down state when not in use. Power boilers will provide steam to the mill and fire up to 300,000 scf/hr of N.G. and will use No. 6 fuel oil as an emergency fuel during shortages of N.G. I.P. would like the authority to periodically use No. 6 fuel oil in these boilers to assure their capability to operate under such emergency conditions. The bark and recovery boilers (D) also produce steam for the mill electrical and steam distribution systems (G) and (I). I.P. would like the authority to operate the power boilers simultaneously with the Co-gen Unit for a total of 80 boiler days, start up will be counted against the 80 boiler days. A total of 600,000 lb/ hr of steam is needed by the I.P. steam distribution system. The power boilers will be used to maintain this demand when one or more of the Co-gen unit,the bark boiler, or the Recovery boiler is down.

APPLICABILITY	PM_{10}	SO_2	NO_x	CO	NMHC
Project Emissions, tpy	24.65	1.55	362.68	226.18	12.07
Contemporaneous Emissions,tpy	-34.51	-.694	-265.19	-28.25	-3.27
Net Emissions Increase, tpy	-9.86	.856	98.49	197.93	8.78
Number of Project Stacks	3	3	3	3	3
BACT/LAER Required, Yes/No	no	no	yes	yes	no

AIR QUALITY

		NO_x isclt	NO_x complex	CO isclt	CO complex
Ambient Significance, ug/m^3	1 hr			37.20	6.38
	8 hr			11.69	2.38
	annual	0.54	0.12		

Radius of Sign. Impact, Km
Refined Modeling Required
PSD Increment Used, 3-hour
PSD Increment Used, 24-hour
PSD Increment Used, Annual
NAAQS Conc Modeled, 3-hour
NAAQS Conc Modeled, 24-hour
NAAQS Conc Modeled, Annual
NAAQS Conc Background

BACT ANALYSIS EMISSION POINT	Proposed	CONTROLS & NSPS & CEM	EMISSIONS
Turbine	3 to 1 steam fuel ratio	N.G.fired w/ steam injection	42 ppm
Duct burner		Low NOx Burners w/N.G only	
PM_{10}		(lb/MMBTU)	.003
SO_2		(lb/MMBTU)	.0006
NO_x		(lb/MMBTU)	.1

MOST STRINGENT CONTROL

RANKING		CONTROL	EMISSIONS
NOx			
Turbine	$8323/ton/yr	wet injection w/SCR	90%
		wet injection w/SCR	???
CO			
		Thermal Oxidation _____	95 - 98 %_
		Catalytic Oxidation_____	90%

COMMENT LETTERS

DATE	FROM	TO	SUBJECT
__/__/__	_____	_____	_____
__/__/__	_____	_____	_____

TELEPHONE CALLS / TELECONFERENCES

DATE	FROM	TO	SUBJECT / ATTENDEES
__/__/__	_____	_____	_____
__/__/__	_____	_____	_____
__/__/__	_____	_____	_____

MEETINGS

DATE	LOCATION	SUBJECT / ATTENDEES
__/__/__	_____	_____
__/__/__	_____	_____

SOURCE: INTERNATIONAL PAPER, CAMDEN MILL / COGENERATION FACILITY

CHRONOLOGY:

DATE OF PRE-APPLICATION MEETING:	__/__/__
DATE APPLICATION RECEIVED BY STATE: .	01/23/92
DATE APPLICATION RECEIVED BY EPA: ...	01/29/92
DATE of anticipated construction: ...	__/__/__
DATE of anticipated startup:	__/__/__
DATE STATE COMPLETENESS:	__/__/__
DATE EPA COMPLETENESS COMMENTS:	__/__/__
DATE STATE PUBLIC NOTICE:	__/__/__
DATE DRAFT PSD PERMIT AT EPA:	__/__/__
DATE EPA DRAFT COMMENTS TO STATE: ...	__/__/__
DATE PSD PERMIT ISSUED:	__/__/__

STATUS AS OF 02/12/92
DPAGE

PSD PERMIT NUMBER PSD-ARK-???? 1
STATE PERMIT NUMBER 990-A
DUNN & BRADSTREET #

SOURCE: INTERNATIONAL PAPER, CAMDEN MILL

Cogen - turbine
GE Fram 5 gas turbine
NG Fired continuous operation
27 MW electric generator
duct burner/waste heat boiler
Subpart GG
Db

ADDRESS:
COUNTY: Ouachita County, Arkansas
LOCATION: Camden
SUBMITTED BY:
CONTACT:
TELEPHONE #

PREPARED BY: Woodward-Clyde Consultants
ADDRESS: 2822 O'Neal Lane, Baton Rouge, LA 70896
LOCATION:
CONTACT:
TELEPHONE #

EPA PERMIT ENGINEER: R. Daron Page
STATE PERMIT ENGINEER: David Marrow

990-A issued 1-10-90

Current Status/Size of Source: Existing Major Source/~~Minor Source~~
PSD- - ST.Number-

Type of Application: Major Mod./Minor Mod./New Source

PROJECT DESCRIPTION: I.P. installed a GE Frame 5 NG Fired turbine which is the prime mover for a 27MW electric generator. Waste heat is recovered in a downstream waste heat boiler, a duct burner is used to provide supplemental firing to ensure a stable supply of steam is provided by the waste heat boiler. Steam injection is used to lower the combustor flame temp. and therefore the NO_x emissions.

APPLICABILITY	TSP	PM_{10}	SO_2	NO_x	CO	~~NMHC~~ VOC
Project Emissions, tpy		24.65	1.55	362.68	226.18	12.07
Number of Project Stacks		3	3	3	3	
Contemporaneous Emissions, tpy		-34.51	-.694	-265.19	-28.25	-3.276
Net Emissions Increase, tpy		-9.86	.856	98.49	197.93	8.784
BACT/LAER Required, Yes/No						
Ambient Significance, ug/m³						
Radius of Sign. Impact, Km						
Refined Modeling Required						
PSD Increment Used, 3-hour						
PSD Increment Used, 24-hour						
PSD Increment Used, Annual						
NAAQS Conc Modeled, 3-hour						
NAAQS Conc Modeled, 24-hour						
NAAQS Conc Modeled, Annual						
NAAQS Conc Background						

BACT ANALYSIS EMISSION POINT	Proposed CONTROLS & NSPS & CEM	EMISSIONS
Turbine	N.G. fired W/ steam injection	
Duct Burner	Low NO_x Burners	

MOST STRINGENT CONTROL RANKING

$8,323 per ton per year

	CONTROL	EMISSIONS
	Wet Injection w/SCR	90%
	Wet injection w/NSCR	

COMMENT LETTERS

DATE	FROM	TO	SUBJECT
__/__/__			
__/__/__			

TELEPHONE CALLS / TELECONFERENCES

DATE	FROM	TO	SUBJECT / ATTENDEES
__/__/__			
__/__/__			
__/__/__			
__/__/__			

MEETINGS

DATE	LOCATION	SUBJECT / ATTENDEES
__/__/__		
__/__/__		
__/__/__		

CHRONOLOGY:

DATE OF PRE-APPLICATION MEETING:	__/__/__
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DATE of anticipated construction: ...	__/__/__
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DATE STATE COMPLETENESS:	__/__/__
DATE EPA COMPLETENESS COMMENTS:	__/__/__
DATE STATE PUBLIC NOTICE:	__/__/__
DATE DRAFT PSD PERMIT AT EPA:	__/__/__
DATE EPA DRAFT COMMENTS TO STATE: ...	__/__/__
DATE PSD PERMIT ISSUED:	__/__/__

#214

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 8913
LITTLE ROCK, ARKANSAS 72219-8913
PHONE: (501) 562-7444
FAX: (501) 562-4632

January 27, 1992

RECEIVED
JAN 29 1992
6T-AN

Mr. Merritt Nicewander (6T-AN)
U.S. Environmental Protection Agency
Region VI
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

RE: Grant Output Objective 92-AR-01

Dear Mr. Nicewander:

This letter is submitted in compliance with Grant Output Objective 92-AR-01.

In accordance with 92-AR-01, the State must submit within 20 days of receipt, a copy of a complete application for a major modification subject to PSD or Nonattainment Review as defined in 40 CFR Parts 51 and 52.

The attached PSD applications and supplemental information were submitted by Dames and Moore for Nucor-Yamato Steel and Woodward-Clyde Consultants for International Paper (Camden Mill) on December 31, 1991, and January 23, 1992, respectively.

If I may be of any other assistance to you, please do not hesitate to contact me at (501)570-2118.

Sincerely,

Cathalene Z. Purvis

Cathalene Z. Purvis
Administrative Assistant II
Division of Air Pollution Control

Enclosures

cc, w/o enclosures:
Karen Alvarez, 105 Project Officer, EPA, Region VI

State: ARKANSAS
(92-AR-01)

Region 6
FY 92 105 GRANT OUTPUT DESCRIPTION

Output Objective: PSD, NONATTAINMENT and MINOR SOURCE PERMITTING PROGRAMS NSPS and NESHAP APPLICABILITY DETERMINATIONS IN PERMITTING

Grant Allocation: $ State Workyears:

Goal: To implement the PSD, Nonattainment and Minor Source permitting programs. To provide effective management of new source growth while attaining and maintaining the ambient air quality standards. To determine NSPS and NESHAP applicability/nonapplicability during permit review.

Date: Milestones

I. General Program Operation

1. State will implement the PSD, Nonattainment and Minor Source permitting programs as described in the delegation agreements, applicable statutes, and regulations.

2. State will determine NSPS and NESHAP applicability/nonapplicability as described in the delegation agreements during the permit review process.

3. State will operate the permitting programs in accordance with the Federal Clean Air Act, EPA regulations, EPA requirements and guidance (specified in "Guidelines and Criteria for Accomplishment"), the Federally-approved SIP, the State Clean Air Act, and State regulations.

4. State will review written guidance provided by EPA and discuss with EPA the most responsible way and timeframes in which such guidance can be implemented.

5. State will conduct a monthly phone call with EPA to discuss both the status of PSD or Nonattainment permit applications and permitting issues.

Region 6
FY 92 105 GRANT OUTPUT DESCRIPTION

Output Objective: PSD/NSR/NSPS/NESHAP Permitting Programs (Con't)

Date: Milestones

II. Enforcement Permits

State will write and issue enforceable permits for construction. When issuing new source permits, State will:

1. Specify applicable NSPS and NESHAP subparts in permits.

2. Specify maximum allowable emission rates for all pollutants emitted on both a short-term and a long-term basis (i.e., lb/hr and ton/yr) in permits.

3. Specify, in permits, which Federal and State regulations apply, when regulations are used to limit emissions, including the effective date of the regulation(s) referenced.

4. Specify, in permits, the method to determine initial and continual compliance and the date by which initial compliance will be demonstrated at all major and minor sources, and specific initial and continual compliance demonstration methods, as appropriate.

5. Specify, in permits, recordkeeping/reporting requirements as appropriate to document initial and continual compliance.

III. Major Source Permit Applications

The State will:

1. within 20 days of receipt, provide EPA with a copy of any complete application for a new major source or major modification subject to PSD or Nonattainment Review as defined in 40 CFR Parts 51 and 52.

2. to the extent practicable, prior to permit issuance, provide EPA with opportunity to review potential minor permit actions which exempt an otherwise major source or modification from a major review (e.g., "synthetic" minor sources, major sources netting out of review, and 99.9 or 249.9 tons per year sources).

Output Objective: PSD/NSR/NSPS/NESHAP Permitting Programs (Con't)

Date: Milestones

3. provide EPA copies of all notifications to applicants of the receipt date, incompleteness or completeness determinations of applications for new major sources or major modifications subject PSD or Nonattainment Review when such notifications are made.

4. Provide EPA copies of letters sent to Federal Land Managers when a Class I area is within 100 kilometers of a proposed project.

5. Provide EPA, at least 30 days prior to the close of the public comment period, a public notice package for each application for a new major source or major modification under PSD or Nonattainment review. The public notice package shall contain the proposed public notice language, the draft PSD or Nonattainment permit and a Preliminary Determination Summary. The Preliminary Determination Summary shall include a technical analysis demonstrating how the proposed projects comply with the technical review requirements of the regulations (e.g., BACT, LAER, offsets), a description of air quality models used, the results of project, increment and NAAQS modeling analyses, monitoring and quality assurance plans, an assessment of air toxics secondary impacts, additional impacts (e.g., visibility soils, and vegetation, growth) and impacts on Class I areas, as applicable.

6. provide EPA with a timely submittal of a copy of the public notice as published by the applicant for PSD or Nonattainment applications.

7. submit to EPA copies of notices of public hearing schedules for consideration of PSD or Nonattainment applications/draft permits at the time formal notification is made.

8. provide EPA with the final preconstruction permit and the final nonattainment permit including response to any public comment upon issuance for major sources or major modifications/subject to PSD or Nonattainment review.

Output Objective: PSD/NSR/NSPS/NESHAP Permitting Programs (Con't)-

Date: Milestones

9. provide EPA with a copy of the operating permit upon issuance for major sources and major modifications subject to PSD or nonattainment review.

IV. MODELING, MONITORING, QUALITY ASSURANCE

1. Copies of Modeling protocols, monitoring and quality assurance project plans, received from sources for PSD or Nonattainment review applications must be submitted to EPA within 30 days of receipt.

2. Copies of all letters approving modeling protocols, monitoring plans, or quality assurance project plans for PSD or Nonattainment review applications will be submitted to EPA at the time of approval.

3. Documentation of all procedural agreements mae with applicants involving modeling, monitoring or quality assurance will be submitted to EPA within 30 days of when such agreements are made.

4. State will maintain and submit an annual list of all approved or ongoing monitoring activities occurring within the State. This list will include the location of the monitoring sites, the contractor conducting the monitoring, the length of monitoring, and the pollutants being monitored.

V. BACT/LAER DETERMINATIONS

1. Send BACT/LAER determinations completed by the State to the BACT/LAER Clearinghouse (MD-15, RTP, N.C. 27111) and EPA Region 6 within 90 days of determination

VI. MINOR SOURCE PERMITTING

1. EPA will conduct audits as necessary to assess the State's minor source permitting activity. EPA will notify the State prior to the audit of the date of the audit and provide a plan for the audit. State will cooperate with EPA by providing assistance and being available to the audit team.

Region 6
FY 92 105 GRANT OUTPUT DESCRIPTION

Output Objective: PSD/NSR/NSPS/NESHAP Permitting Programs (Con't)

Date: Milestones

2. The State will submit a quarterly report of all permits issued during the quarter. This report shall contain, at a minimum, the following information: Permit Number, Source Name, Source Location, Source Type, New Source or Modification, Maximum Allowable Emission Rates per Pollutant, Date Issued, Applicable NSPS/NESHAP Subparts.

Guidelines or criteria for accomplishment:

CAA Sections 110,111, 112, 172
PSD SIP 40 CFR 51.166
NSPS and NESHAP Delegation Agreements 40 CFR 60 & 61
Existing EPA modeling guidelines (revised) 1986
EPA-450/2-78-027R July 1986, updated July 1987
Criteria entitled "General Minimum Criteria for Determining Enforceability of New Source Permits" issued by letter 6/18/82;
40 CFR Part 51, Subpart I, 1980;
Draft New Source Review Workshop Manual, October 1990
Letter of 1/4/88 transmitting J. C. Potter memo of 12/1/87 re: "Improving New Source Review (NSR) Implementation."
Gerald A. Emison memo of 9/30/87 re: "Implementation of North County Resource Recovery PSD Remand."
EPA's Emissions Trading Policy Statement, 51 FR 43814, 12/4/86.
Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD).
Guidance on Limiting Potential to Emit in New Source Permitting, dated 6/13/89.
NSR Bulletin Board
SCRAM Bulletin Board
1988 New Source Review PSD and Nonattainment Area Guidance Notebook, Volumes 1 & 2.

MAR 18 1992

Mr. Cecil Harrell
Engineer Supervisor, Permits
Arkansas Department of Pollution
Control and Ecology
P.O. Box 8913
Little Rock, Arkansas 72219-8913

Re: International Paper, Camden Mill, Cogeneration Facility

Dear Mr. Harrell:

We have reviewed the application dated December 30, 1991, from International Paper, requesting a permit to construct a cogeneration unit with a duct burner and waste heat recovery boiler. On the basis of our evaluation we have items of concern which should be addressed in the public record. Our comments and items of concern follow.

APPLICABILITY

Item 1) It is our understanding that this facility has been constructed and experienced difficulty in meeting it's permitted hourly emissions rates for CO and NO_x. The public record should further demonstrate why these limitations could not be met.

Item 2) The application and the public record should address the effect that the proposed boiler will have on the normal operation of other emission units at the source. Any increases in emissions from such emission units should be included in the net emission increase of each regulated pollutant and in the air quality modeling for each pollutant whose net emissions increase will be significant.

Item 3) The emissions increases associated with the existing emissions units should be addressed by comparing the old level of <u>actual</u> emissions to the new proposed level of allowable emissions. If the proposed allowable emissions will be based upon other than full time operation of the emissions units at their maximum capacities while burning

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jk:03/17/92

YELLOW

fuel oil, then the permit should contain federally enforceable limitations on the quantity of #6 fuel oil that can be used, and the overall production and hours of operation of the existing power boilers. Tables 1-1 through Table 1-5 give proposed allowable emissions based on natural gas. The new allowable and thus the net emissions increase should be based on the actual fuel used or on a worst case basis.

Item 4) The application presents the net emission increase due to the project. We did not find where the creditable contemporaneous emission increases and decreases were presented. All other previously permitted emission points from all process modules within the facility should be evaluated with respect to creditable contemporaneous emissions that will be used in the prevention of significant deterioration (PSD) net emission increase calculation. *

Item 5) CFR 52.21 (b)(3)(vi)(b) states that a decrease in actual emissions must be federally enforceable <u>at and after the time that actual construction on the particular change begins.</u> If the decreases of actual emissions from the existing power boiler were not federally enforceable at the time construction began they are not creditable. P Aux

BACT ANALYSIS

Item 6) CFR 52.21 (r)(4) states that:

"At such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements ... shall apply as though construction had not yet commenced on the source or modification."

All best available control technology (BACT) should be evaluated with respect to technical feasibility and energy, environmental and economic impacts and should not include cost for retrofitting a unit requiring a relaxation of an enforceable limit.

Item 7) The applicant has rejected selective catalytic reduction (SCR) as BACT for the Cogeneration Unit. SCR has been permitted as BACT in Region 6. The cost presented in the application appear to be excessive. Therefore the public record should contain a comparison of SCR for this project verses the cost of SCR that has been permitted in Region 6 (e.g. Enterprise Products PSD-TX-796). *

Item 8) The applicant should consider and address for the public record Dry Low NO_x (DLN) burners as BACT for the turbine. We understand that G.E. is developing DLN burners down to 25 ppm and eventually will get to 9 ppm.

15

Item 9) The public record should address the possibility of using catalytic oxidation after the duct burner but before the recovery boiler. Based on the temperature ranges submitted in the application this location would appear to be technically feasible.

AIR QUALITY ANALYSIS

Item 10) The modeling was performed using the meteorological data for the calendar years 1982 through 1987. The Guidelines on Air Quality Models requires that the modeling be performed using meteorological data available for the most recent five consecutive years. This should be addressed for the public record.

Item 11) It was unclear in the application whether the modeling was done with the boiler firing fuel oil or natural gas as a worst case. This should be addressed in the public record.

This concludes our review of the permit application as received. If our concerns are adequately addressed, we have no objections to the state drafting a PSD permit.

If you have any questions, please call Mr. Reverdie Daron Page of my staff at (214) 655-2181.

Sincerely yours,

S S / for

David F. Garcia
Acting Chief
New Source Review Section (6T-AN)

cc: International Paper

bcc: 6T-AN Staff
Kelley (6T-EC)
Mikus (6T-AG)

Comment Letter

I.P. Camden

✓ demonstrate wheather or not they can meet current permit? why not? see SS. Quantin Chemical

Net emission increase

✓ old actuals to New allowable - check on

decreases in existing boilers -
hr of operation - over all operation
hr of use of #6 fuel Oil
should be reflected in New allowable
public Board address how are these enforceable

✓ ~~Cause of other units~~ - will ~~be~~ other units be affected
Normal operation

✓ Other contemporaneous Emissions should be addressed

decreases may not be creadable if deacreases were not federally inforceable (see S.S. memo)
at time Unit began construction.

Modeling

✓ Most recent 5 years of modeling of Met data etc

fuel Oil in Power boilers as worst case

BACT

SCR ~ Transamerica

Since unit was ~~built~~ built
52.21 (R)(4) - check on SIP - must be treated as ~~the~~ project
had not yet began all BACT cost should be reevaluated

STATUS AS OF March 11, 1992 PSD PERMIT NUMBER PSD-ARK-???? 1
DPAGE STATE PERMIT NUMBER
DUNN & BRADSTREET #

SOURCE: INTERNATIONAL PAPER, CAMDEN MILL / COGENERATION FACILITY

ADDRESS:
COUNTY: Ouachita County
LOCATION: Camden, Arkansas
SUBMITTED BY:
CONTACT:
TELEPHONE #

PREPARED BY: Woodward-Clyde Consultants
ADDRESS: 2822 O'Neal Lane, Baton Rouge, LA 70896
LOCATION: Baton Rouge LA
CONTACT:
TELEPHONE # (504) 751-1873 FAX (504) 753-3616

EPA PERMIT ENGINEER: R. Daron Page
STATE PERMIT ENGINEER: David Marrow

Current Status/Size of Source: Existing Major Source
PSD-__-____ ST.Number 990-A
Type of Application: Major Mod.

PROJECT DESCRIPTION: I.P. installed a GE frame 5 NG fired turbine which is the prime mover for a 27 MW electric generator. Waste heat is recovered in a downstream waste heat boiler, a duct burner is used to provide supplemental firing to ensure that a stable supply of steam is provided by the waste heat boiler. Steam injection is used to lower the combustion flame temp and therefore the NOx emissions.

Existing Power boilers (C) will be used as back-up when the Co-gen is down due to maintenance or repairs, they will be kept in a cold down state when not in use. Power boilers will provide steam to the mill and fire up to 300,000 scf/hr of N.G. and will use No. 6 fuel oil as an emergency fuel during shortages of N.G. I.P. would like the authority to periodically use No. 6 fuel oil in these boilers to assure their capability to operate under such emergency conditions. The bark and recovery boilers (D) also produce steam for the mill electrical and steam distribution systems (G) and (I). I.P. would like the authority to operate the power boilers simultaneously with the Co-gen Unit for a total of 80 boiler days, start up will be counted against the 80 boiler days. A total of 600,000 lb/ hr of steam is needed by the I.P. steam distribution system. The power boilers will be used to maintain this demand when one or more of the Co-gen unit,the bark boiler, or the Recovery boiler is down.

APPLICABILITY	PM_{10}	SO_2	NO_x	CO	NMHC
Project Emissions, tpy	24.65	1.55	362.68	226.18	12.07
Contemporaneous Emissions,tpy	-34.51	-.694	-265.19	-28.25	-3.27
Net Emissions Increase, tpy	-9.86	.856	98.49	197.93	8.78
Number of Project Stacks	3	3	3	3	3
BACT/LAER Required, Yes/No	no	no	yes	yes	no

AIR QUALITY

		NO_x isclt	NO_x complex	CO isclt	CO complex
Ambient Significance, ug/m^3	1 hr			37.20	6.38
	8 hr			11.69	2.38
	annual	0.54	0.12		

Radius of Sign. Impact, Km
Refined Modeling Required
PSD Increment Used, 3-hour
PSD Increment Used, 24-hour
PSD Increment Used, Annual
NAAQS Conc Modeled, 3-hour
NAAQS Conc Modeled, 24-hour
NAAQS Conc Modeled, Annual
NAAQS Conc Background

BACT ANALYSIS EMISSION POINT	Proposed	CONTROLS & NSPS & CEM	EMISSIONS
Turbine	3 to 1 steam fuel ratio	N.G.fired w/ steam injection	42 ppm
Duct burner		Low NOx Burners w/N.G only	
PM_{10}		(lb/MMBTU)	.003
SO_2		(lb/MMBTU)	.0006
NO_x		(lb/MMBTU)	.1

MOST STRINGENT CONTROL RANKING		CONTROL	EMISSIONS
NOx			
Turbine	$8323/ton/yr	wet injection w/SCR	90%
		wet injection w/SCR	???
CO			
		Thermal Oxidation _____	95 - 98 %_
		Catalytic Oxidation_____	90%

COMMENT LETTERS

DATE	FROM	TO	SUBJECT
__/__/__	_____	_____	_____
__/__/__	_____	_____	_____

TELEPHONE CALLS / TELECONFERENCES

DATE	FROM	TO	SUBJECT / ATTENDEES
__/__/__	_____	_____	_____
__/__/__	_____	_____	_____
__/__/__	_____	_____	_____

MEETINGS

DATE	LOCATION	SUBJECT / ATTENDEES
__/__/__	_____	_____
__/__/__	_____	_____

SOURCE: INTERNATIONAL PAPER, CAMDEN MILL / COGENERATION FACILITY

CHRONOLOGY:

DATE OF PRE-APPLICATION MEETING:	__/__/__
DATE APPLICATION RECEIVED BY STATE: .	01/23/92
DATE APPLICATION RECEIVED BY EPA: ...	01/29/92
DATE of anticipated construction: ...	__/__/__
DATE of anticipated startup:	__/__/__
DATE STATE COMPLETENESS:	__/__/__
DATE EPA COMPLETENESS COMMENTS:	__/__/__
DATE STATE PUBLIC NOTICE:	__/__/__
DATE DRAFT PSD PERMIT AT EPA:	__/__/__
DATE EPA DRAFT COMMENTS TO STATE: ...	__/__/__
DATE PSD PERMIT ISSUED:	__/__/__

6T-AN
AIR QUALITY SUMMARY

Reviewer DS
Date: __/__/__

COMPANY: I. P. Camden Mill
SOURCE: Camden Mill
LOCATION: Camden Arkansas
PSD PERMIT NUMBER: _____

✓ Net Emission Increase / Potential to Emit
___ PSD Increment Analysis
___ National Ambient Air Quality Standard (NAAQS)
Pollutant NOx
Grid Size: 1 Kilometer ____ 100 Meters ____ Other ____
Urban ____ Rural ____ Building Downwash ____
Upper Air Station ____ Surface Station ____
Model Used ISCLT

	HOUR Highest	HOUR 2nd High	HOUR Highest	HOUR 2nd high	Annual
1. YEAR 81					.508077
Day/Hour					516277
Receptor UTM E					3714176
Receptor UTM N					
Elevation					
2. YEAR 82					.540537
Day/Hour					516277
Receptor UTM E					3714176
Receptor UTM N					
Elevation					
3. YEAR 83					.400022
Day/Hour					516277
Receptor UTM E					3714170
Receptor UTM N					
Elevation					
4. YEAR 84					.510712
Day/Hour					516277
Receptor UTM E					3714176
Receptor UTM N					
Elevation					
5. YEAR 85					.456880
Day/Hour					516277
Receptor UTM E					3714176
Receptor UTM N					
Elevation					
BACKGROUND CONCENTRATION					
TOTAL CONCENTRATION					
RADIUS OF IMPACT KILOMETERS					2.286 km

DF6
3/16/92

Mr. Cecil Harrell
Engineer Supervisor, Permits
Arkansas Department of Pollution
Control and Ecology
P.O. Box 8913
Little Rock, Arkansas 72219-8913

Re: International Paper, Camden Mill, Cogeneration Facility

Dear Mr. Harrell:

We have reviewed the application dated December 30, 1991, from International Paper, requesting a permit to construct a cogeneration unit with a duct burner and waste heat recovery boiler. On the basis of our evaluation we have items of concern which should be addressed in the public record. Our comments and items of concern follow.

APPLICABILITY

Sub script

Item 1) It is our understanding that this facility has been constructed and experienced difficulty in meeting it's permitted hourly emissions rates for CO and NOx. The public record should further demonstrate why these limitations could not be met. see B.12 ?

Item 2) The application and the public record should address the effect that the proposed boiler will have on the normal operation of other emission units at the source. Any increases in emissions from such emission units should be included in the net emission increase of each regulated pollutant and in the air quality modeling for each pollutant whose net emissions increase will be significant. A.15 ?

Item 3) The emissions increases associated with the existing emissions units should be addressed by comparing the old level of actual emissions to the new proposed level of allowable emissions. If the proposed allowable emissions will be based upon other than full time operation of the emissions units at their maximum capacities while burning fuel oil, then the permit should contain federally enforceable limitations on the quantity of #6 fuel oil that can be used, and the overall production and hours of operation of the existing power boilers. Tables 1-1 through Table 1-5 give proposed allowable emissions based on natural gas. The new allowable and thus the net emissions increase should be based on the actual fuel used or on a worst case basis.

Item 4) The application presents the net emission increase due to the project. We did not find where the creditable

contemporaneous emission increases and decreases were presented. All other previously permitted emission points from all process modules within the facility should be evaluated with respect to creditable contemporaneous emissions that will be used in the PSD net emission increase calculation.

Item 5) CFR 52.21 (b)(b)(3)(vi)(b) states that a decrease in actual emissions must be federally enforceable <u>at and after the time that actual construction on the particular change begins.</u> If the decreases of actual emissions from the existing power boiler were not federally enforceable at the time construction began they are not creditable.

BACT ANALYSIS

Item 6) CFR 52.21 (r)(4) states that:

"At such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements ... shall apply as though construction had not yet commenced on the source or modification."

All BACT should be evaluated with respect to technical feasibility and energy, environmental and economic impacts, and should not include cost for retrofitting a unit ~~constructed~~ requiring a relaxation.

Item 7) The applicant has rejected SCR as BACT for the Cogeneration Unit. SCR has been permitted as BACT in Region 6. The cost presented in the application appear to be excessive. Therefore, the public record should contain a comparison of SCR for this project verses the cost of SCR that has been permitted in Region 6 (e.g. Enterprise Products PSD-TX-796).

Item 8) The applicant should consider and address for the public record Dry Low NOx (DLN) burners as BACT for the turbine. We understand that G.E. is developing DLN burners down to 25 ppm and eventually will get to 9 ppm.

Item 9) The public record should address the ~~appropriateness~~ possibility of using catalytic oxidation after the duct burner but before the recovery boiler. Based on the temperature ranges submitted in the application this location would ~~be~~ appear to be technically feasible.

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AIR QUALITY ANALYSIS

Item 10) The modeling was performed using the meteorological data for the calendar years 1982 through 1987. The Guidelines on Air Quality Models requires that the modeling be performed using meteorological data available for the most recent five consecutive years. This should be addressed for the public record.

Item 11) It was unclear in the application whether the modeling was done with the boiler firing fuel oil or natural gas as a worst case. This should be addressed in the public record.

This concludes our review of the permit application as received. If our concerns are adequately addressed, we have no objections to the state drafting a PSD permit. If you have any questions, please call Mr. Reverdie Daron Page of my staff at (214) 655-2181.

Sincerely yours,

David F. Garcia
Acting Chief
New Source Review Section (6T-AN)

cc: not known

bcc: 6T-AN Staff
Kelley (6T-EC)
Mikus (6T-AG)

6T-AN:PAGE:X2181:jk:03/12/92 f:\user\dpage\letters\ipcamden.let

6PD-R CORRESPONDENCE ROUTING

NAME: DATE: International Paper Co.

TITLE: Camden Mill

TYPE OF MATERIAL CIRCLE:
(LETTER) (PERMIT) (APPLICATION)

AR, LA, TX, OK, NM ******* (CREATE)

VERSATILE: #

DUNS & BRADSTREET : #

FACILITY: # ARD047338494

A. MAI:	(REVIEWED)	(TO REMAIN) or (DELAY)	(DISCARD)**
B. ROBERT:	(REVIEWED)	(TO REMAIN) or (DELAY)	(DISCARD)**
C. BILLYE :	(REVIEWED)	(TO REMAIN) or (DELAY)	(DISCARD)**
D. (PSD)	(NSR)	(TITLE 5)	(FILE ROOM)
E.			

F. LETTER FROM: Michaels

G. TO: Delayen

H. ADDRESS:

I. LETTER STATING: Enclosed permit

1. ADMINISTRATIVELY COMPLETE:

2. ADDITIONAL INFORMATION IF NECESSARY:

MS - 4/20/00
FNE

ARD 454

ADEQ

ARKANSAS
Department of Environmental Quality

RECEIVED
APR 10 2000
NSR SECTION
6T-AN

April 4, 2000

Russell Delezen, Superintendent of Environmental Services
International Paper Company Camden Mill
1944 Adams Avenue
Camden, Arkansas 71701

Dear Mr. Delezen:

The enclosed Permit No. 725-AOP-R1 is issued pursuant to the Arkansas Operating Permit Program, Regulation # 26.

After considering the facts and requirements of A.C.A. §8-4-101 et seq., and implementing regulations, I have determined that Permit No. 725-AOP-R1 for the construction, operation and maintenance of an air pollution control system for International Paper Company Camden Mill be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under §2.1.14 of Regulation No. 8, Arkansas Department of Pollution Control & Ecology Commission's Administrative Procedures, within thirty (30) days after service of this decision.

All persons submitting written comments during this thirty (30) day period, and all other persons entitled to do so, may request an adjudicatory hearing and Commission review on whether the decision of the Director should be reversed or modified. Such a request shall be in the form and manner required by §2.1.14 of Regulation No. 8.

This permit is subject to the conditions specified therein and the conditions, if any, which are specified in the enclosed summary report.

Sincerely,

Keith A. Michaels
Chief, Air Division

Enclosure

AIR DIVISION
8001 NATIONAL DRIVE / POST OFFICE BOX 8913 / LITTLE ROCK, ARKANSAS 72219-8913 / TELEPHONE 501-682-0739 / FAX 501-682-0753
www.adeq.state.ar.us

RESPONSE TO COMMENTS
International Paper Company
Permit #725-AOP-R1 CSN: 52-0013

On or about December 29, 1999, the Director of the Arkansas Department of Environmental Quality gave notice of a draft permitting decision for the above referenced facility. During the comment period one person submitted written comments, data, views or arguments on the draft permitting decision. The Department's response to these issues is as follows.

ISSUE 1

Comment: A minor modification for the Woodyard Source Group was approved during the comment period. This should be incorporated into the permit by including "roundwood slashing" in the first sentence of the Source Description on page 22. No change in the emission tables is required.

Response: A public notice period is required for all permits, including minor modifications. Therefore, the Department cannot include the new equipment allowed under the minor modification without a second public comment period on the draft permit. Also, the permit application for the roundwood slasher requested a slight increase in the annual emission rate for PM. Because the permittee has Interim Authority at this time to construct equipment which will allow them to comply with the Cluster Rule, the Department is issuing the permit without including the roundwood slasher.

ISSUE 2

Comment: To streamline the permit, Specific Conditions 8, 9, 12, 13, 30, 31, 129, and 210 should be deleted from the permit. In each case, the actionable requirements are contained in the conditions that follow these conditions requested for deletion. Also, Plantwide Condition 14 makes this applicability clear.

Response: Specific Conditions 8, 12, 30, 129, and 210 will be deleted from the permit. The source descriptions for sources SN-12, SN-14, SN-20, SN-21, and SN-27 will be modified to state that these sources are subject to the Cluster Rule. The source description for source SN-16 already states that the ASB is subject to the Cluster Rule.

Specific Conditions 9, 13, and 31 will also be deleted from the permit. However, since the language in these specific conditions is contained in the Cluster Rule, the Department is required to include it in the permit. The language will be placed with the more specific requirements in the LVHC Source Group.

ISSUE 3

Comment: Specific Condition 11 lists emission rates for the Turpentine Recovery Source Group. These emissions should be eliminated when 40 CFR Part 63, Subpart S provisions are implemented in 2001.

Response: The Department cannot remove these conditions at this time because the emissions still exist at this time. A note will be added to the source description stating that upon implementation of the Cluster Rule requirements, the Turpentine Recovery Source Group will no longer be considered an emission point. At that time, International Paper may submit a request for an administrative amendment to remove the emission rates from the permit.

ISSUE 4

Comment: Add "as provided in Specific Condition 127" to the last sentence of the second paragraph on page 25.

Response: The change will be made as requested.

ISSUE 5

Comment: Delete Specific Conditions 39, 81, 82, 92, 93, and 114 as these conditions require one time testing that was completed in August 1999.

Response: As the testing requirements have been completed, the specific conditions will be removed as requested.

ISSUE 6

Comment: Begin Specific Conditions 108 and 109 with the phrase "If the lime kiln is used as a HAP control device..."

Response: As Specific Conditions 108 and 109 will apply only if the lime kiln is used as a control device, the change will be made as requested.

ISSUE 7

Comment: Add "...by a person trained (but not necessarily certified) in EPA Reference Method 9 during any week in which SN-14 is operated" to the end of the first sentence of Specific Condition 124. Also, delete the reference to Specific Condition 135. (See Issue 8)

Response: Specific Condition 124 will be modified to state that the observations shall be made by a person trained but not necessarily certified in EPA Reference Method 9 in order to make it consistent with similar requirements elsewhere in the permit. The reference to Specific Condition 135 will also be deleted from the permit. (See Issue 8 for further explanation.)

ISSUE 8

Comment: Specific Conditions 135 through 137 should be deleted. Since the application was submitted, International Paper has reviewed the design and operation of the flare in comparison to regulatory language in parts 60 and 63. The NCG flare is an enclosed design rather than an open design and has an adjustable supply of combustion air. The flare is an enclosed combuster as defined in 40 CFR §60.751 and should not be subject to the provisions of 40 CFR §63.11 for an open flame type flare.

Response: The Department has reviewed this request and will remove the specific conditions as requested. An opacity limit for the flare is needed to replace the opacity requirement formerly contained in Specific Condition 135. The opacity limit will be set at 20% and will require daily observations when the flare is in use. The source description will be modified to state that the flare meets the definition of an enclosed combuster in 40 CFR §60.751 and therefore is not subject to the provisions of 40 CFR §63.11 for an open flame type flare.

ISSUE 9

Comment: The phrase "by October 15, 2001," should be added to the first sentence of Specific Condition 141 between "test" and "on." Initial performance tests must be conducted within 180 days of the compliance date of the standard.

Response: As the equipment required to be tested is existing and is not being modified, the Department will make the change as requested.

ISSUE 10

Comment: Specific Condition 134 should include a provision for startup, shutdown, and malfunction. Specific Condition 134 states that SN-14 shall be operating at all times when emissions are vented to it.

Response: The Department has reviewed this request and will make the change as requested.

ISSUE 11

Comment: Specific Condition 140 should include the language from Specific Condition 132.

Response: Because of the different regulatory citations for Specific Conditions 132 and 140, the Department will modify Specific Condition 140 to refer back to Specific Condition 132 for when excess emissions will be considered a violation of the permit.

ISSUE 12

Comment: Add a space between the words "operated" and "to" in Specific Condition 138 and delete the phrase "as required by the subpart" for clarity.

Response: The changes will be made as requested.

ISSUE 13

Comment: Include "wetlands" in the first sentence of the Source Description for source SN-16. This minor modification to the waste water treatment system was recently approved by ADEQ - NPDES division and will not change the emission rates.

Response: The Department has reviewed this request and will make the change.

ISSUE 14

Comment: The phrase "after the initial performance test" needs to be added to the first sentence of Specific Condition 218 between the phrases "the Department" and "the methodology" to further clarify the timing of this submittal. The same change should also be made to Specific Condition 272.

Response: The change will be made as requested to Specific Condition 218. Specific Condition 272 already states that the analysis identifying acceptable parameter ranges for the parameters required to be monitored shall be submitted along with the results of the initial performance test upon completion of the tests. Therefore, no change to Specific Condition 272 is necessary.

ISSUE 15

Comment: Specific Conditions 255, 256, 259, and 267 make reference to inspections "every 30 days." International Paper requests that these requirements be changed to "once each month" to simplify scheduling and record keeping.

Response: The language "every 30 days" is taken directly from the Cluster Rule. The Department is unable to change this requirement.

ISSUE 16

Comment: Specific Condition 258 should contain a fourth option for negative pressure testing inadvertently left out of the application. Please include "any other industrial ventilation test method demonstrated to the Department's satisfaction."

Response: The Department has reviewed this request and will make the change as requested.

ISSUE 17

Comment: Plantwide Condition 14 should incorporate 40 CFR Part 63, Subpart S by reference rather than attaching the regulation to the permit. Requirements of this subpart are the subject of ongoing negotiations between EPA and industry representatives and are continuing to evolve. As an example, the testing requirements for soluble BOD and volatile suspended solids has been deleted and the method for determining mixing zones has changed according to information posted on an EPA web site but not yet published in the federal register. This permit should make it clear that the flexibility and options being written into the regulation will be allowed and incorporated into the permit. The permit should also make it clear that none of the requirements of Part 63 will become effective until the time frame specified in the regulation - April 15, 2001, or later. This same principal should be following in Specific Conditions 8 - 10, 12 - 14, 30 - 32, 108 - 109, 129 - 142, 210 - 223, and 249 - 273.

Response: The Department is aware that on January 10, 2000, EPA proposed some changes to 40 CFR Part 63, Subpart S. These changes are only proposed at this time and it is not known when or if these changes will become final. The permit cannot be modified to include changes to the Cluster Rule that are not yet final. The Department is required to list all of the applicable requirements of a subpart in the permit and cannot incorporate a subpart into the permit by reference only. Therefore, all of the listed requirements in the permit will remain unchanged. International Paper Company may apply for a minor modification to the permit should they choose a monitoring requirement which is not contained in the Cluster Rule at the time of permit issuance. Any changes that a facility would want to make in monitoring requirements due to changes in the Cluster Rule would most likely not be considered signficant changes to the permit.

The permit will be modified to state that the Cluster Rule requirements for the LVHC system, the ASB, and the pulping process condensates listed in the permit do not become effective until April 15, 2001. For simplicity in the permit, the following will be added to the Plantwide Conditions of the permit:

"Pursuant to §19.304 of Regulation 19 and 40 CFR §63.441(d), the permittee shall be in compliance with the requirements of 40 CFR Part 63, Subpart S listed in this permit no later than April 16, 2001, except as outline in paragraphs (d)(1) through (d)(3) of this section. The permittee is not required to be in compliance with 40 CFR Part 63, Subpart S upon issuance of this permit. (Paragraphs (d)(1) through (d)(3) may be found in the copy of Subpart S in Appendix F of this permit.)"

ISSUE 18

Comment: Delete "and submitted to the Department upon completion" from the second sentence of Plantwide Condition 15 as this is not a requirement of Part 63, Subpart S.

Response: 40 CFR §63.6(e)(3)(v) states that the SSM plan shall be made available to the Administrator for inspection upon request. The Department is making this request through a permit requirement. Therefore, the change will not be made as requested.

ISSUE 19

Comment: Replace the "0" values in the tpy columns in Specific Conditions 43, 44, 60, 61, and 160 with "*" to indicate that emissions are bubbled in the Plantwide Conditions. This will make the references consistent with Specific Conditions 48, 65, and 164.

Response: The "0" values were accidentally placed in the permit instead of "*." The changes will be made as requested.

ISSUE 20

Comment: The VOC emissions from the Lime Kiln listed in the Emission Summary and in Specific Condition 97 should be changed to 9.6 pounds per hour and 22.3 tpy. The hourly emission rate is equivalent to the rate listed in permit #725-AOP-R0 less the total reduced sulfur compounds. The annual emission rate is based on pulp production, lime production, and the amount of fuel oil fired in the kiln. During discussions with the Department following submittal of the comments concerning the draft permit, International Paper decided that the emission limit of 5.1 pounds per hour would be sufficient.

Response: Based on discussions with the permittee, the hourly emission rate will remain unchanged. The annual emission rate will be changed to 22.3 to correspond with the hourly rate.

ISSUE 21

The Department is required to include a compliance plan and schedule in all Title V permits. Therefore, the following has been added to the permit:

"International Paper Company is in compliance with the applicable regulations cited in the permit application. International Paper Company will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis."

ISSUE 22

The Department has corrected typographical errors in the permit. These include, but are not necessarily limited to, changing a regulatory citation in Specific Condition 74 from §19.8 to §19.804 in accordance with the effective regulations, and including a specific condition number reference omitted from Specific Condition 250.

OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation #26:

Permit #: 725-AOP-R1

IS ISSUED TO:

International Paper Company
1944 Adams Avenue
Camden, AR 71701
Ouachita County
CSN:52-0013

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

June 1, 1999 and May 31, 2004

AND IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Keith A. Michaels

4/4/00
Date Modified

SECTION I: FACILITY INFORMATION

PERMITTEE:	International Paper Company
CSN:	52-0013
PERMIT NUMBER:	725-AOP-R1
FACILITY MAILING ADDRESS:	1944 Adams Avenue Camden, AR 71701
PHYSICAL LOCATION:	1944 Adams Avenue Camden, AR 71701
COUNTY:	Ouachita
CONTACT POSITION:	Russell Delezen / Jay Wilson
TELEPHONE NUMBER:	870-231-2251 / 870-231-2250
REVIEWING ENGINEER:	Loretta Reiber
UTM North-South (X):	3711.5
UTM East-West (Y):	516.5

SECTION II: INTRODUCTION

International Paper Company owns and operates a facility in Camden which produces a variety of unbleached papers and linerboard. The primary Standard Industrial Classification Code (SIC) for this facility is 2611 and 2621. This permit will continue to classify this facility as a major source of criteria pollutant emissions (with the exception of lead) with respect to Title V and 40 CFR 52.21.

Wood is accepted in either chip or log form. Other chips are stored in piles. Logs are debarked, chipped, and screened prior to storage in the chip silos. Chips are conveyed to the pulp mill, cooked in a continuous digester, washed, stored, and transferred to the paper mill where they are refined. Recycled fiber is also produced from a post consumer recycle plant. Recycled fiber, virgin fiber, chemicals, and dyes form the feedstock for the three paper machines. The final paper product is trimmed, wound onto rolls, and prepared for shipment off site.

Weak black liquor from the pulp mill is concentrated in an evaporation system prior to combustion in one of the three recovery boilers. These boilers recover the spent cooking chemicals as green liquor. Energy from liquor combustion is captured to generate steam for mill use.

The green liquor is reacted with lime in the caustic and lime recovery area and clarified to produce white liquor. The lime mud from the clarifier is recovered, calcined in a lime kiln, and reused. Ancillary systems include the bark boiler and the two power boilers which provide supplemental plant-wide steam, two steam turbines, a gas turbine generator equipped with a heat recovery steam generator (HRSG), a wastewater treatment system, an electrical distribution system, maintenance areas, and laboratories.

Permit #725-AOP-R1 is the second operating permit issued to International Paper Company under Regulation 26. Under this permit, several changes are being made in order to comply with the applicable requirements of 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry*. These changes include, but are not limited to, collecting Low Volume High Concentration (LVHC) gases from various sources and feeding them to the LVHC system for destruction in either the incinerator or the lime kiln. The permittee will be collecting the pulping condensate from several sources in a hard piping system for routing to treatment in the Aeration Stabilization Basin. The permittee will also be replacing the scrubber located at the NCG Incinerator. Increases in permitted and/or actual emissions will not be increasing above the PSD Significant Increase Levels. The permittee is also combining the #6 fuel oil usage limits for sources SN-01, SN-04/05, and SN-06 for flexibility purposes. The permitted emission rate for the lime handling system is increasing to allow for a safety factor. A custom schedule for monitoring the sulfur content of the fuel used at the cogeneration unit is being granted in this permit.

All of the hourly emission rates for this facility were based upon the maximum capacity of the equipment. CEMs as required by §19.804 of Regulation 19 will show compliance with the permitted emission rates for total reduced sulfur from several pieces of equipment. There are no additional requirements for demonstrating compliance with the short term emission rates in this permit. Compliance with the annual emission rates will be demonstrated through several record keeping requirements. These specific conditions are specified for each set of emission rates in this permit. All of the records are to be kept on a twelve month rolling total so that compliance may be demonstrated for any twelve month period.

REGULATIONS

International Paper Company - Camden Mill is subject to the applicable provisions of the following regulations.

Regulation	Description
18	Arkansas Air Pollution Control Code
19	Regulations of the Arkansas Plan of Implementation for Air Pollution Control
26	Regulations of the Arkansas Operating Air Permit Program
40 CFR 52.21	Prevention of Significant Deterioration
40 CFR Part 60, Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
40 CFR Part 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
40 CFR Part 60, Subpart BB	Standards of Performance for Kraft Pulp Mills
40 CFR Part 60, Subpart GG	Standards of Performance for Stationary Gas Turbines
40 CFR Part 63, Subpart S	National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry

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Following are a table of the facility wide emissions of federally regulated pollutants and a table of the facility wide non-criteria pollutant emissions. Specific unit information may be located using the indicated cross reference pages in the first table. The annual emission totals for sources SN-01, SN-04/05, and SN-06 include emissions generated by the firing of #6 fuel oil. The permitted annual emission rates for these sources while firing #6 fuel oil may be found in the plantwide conditions as the amount of #6 fuel which the permittee is allowed to fire at each of these sources has been combined.

EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
Total Allowable Emissions		PM	547.8	2070.1	N/A
		PM_{10}	285.1	1076.3	
		SO_2	4132.1	2481.7	
		VOC	1063.3	4417.8	
		CO	1834.4	7011.3	
		NO_x	1035.2	2406.2	
		Pb	1.21	4.60	
		TRS	170.2	650.5	
01	Bark Boiler	PM	76.7	329.2	96
		PM_{10}	62.5	274.3	
		SO_2	706.5	22.3	
		VOC	28.0	122.7	
		CO	619.0	2711.1	
		NO_x	110.0	482.8	
		Pb	0.05	0.01	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
02	Slaker Vent Scrubber	PM	5.0	21.9	81
		PM_{10}	5.0	21.9	
		VOC	3.3	14.2	
		TRS	0.1	0.2	
03	Lime Kiln	PM	70.0	306.6	74
		PM_{10}	34.9	152.9	
		SO_2	17.4	76.3	
		VOC	5.1	22.3	
		CO	35.0	153.3	
		NO_x	44.8	196.0	
		Pb	1.10	4.50	
		TRS	7.4	19.1	
04/05	Recovery Boiler #1	PM	200.0	876.3	48
		PM_{10}	77.6	340.2	
		SO_2	1318.8	1160.6	
		VOC	66.60	294.0	
		CO	412.6	1810.0	
		NO_x	192.0	401.9	
		Pb	0.02	0.04	
		TRS	31.8	140.6	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
06	Recovery Boiler #2 and #3	PM	75.0	307.0	55
		PM_{10}	29.1	58.2	
		SO_2	1507.2	1066.1	
		VOC	162.3	711.4	
		CO	454.0	1991.6	
		NO_x	242.0	701.9	
		Pb	0.01	0.02	
		TRS	37.2	163.9	
07	Smelt Dissolving Tank #1	PM	25.0	110.0	62
		PM_{10}	25.0	110.0	
		SO_2	7.5	32.9	
		VOC	28.0	122.3	
		NO_x	12.9	56.7	
		Pb	0.01	0.01	
		TRS	1.5	6.6	
08	Smelt Dissolving Tank #2	PM	8.4	76.3*	66
		PM_{10}	8.4	76.3*	
		SO_2	3.6	29.5*	
		VOC	13.6	115.5*	
		NO_x	6.1	51.0*	
		Pb	0.01	0.02*	
		TRS	0.7	5.8*	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
09	Smelt Dissolving Tank #3	PM	9.0	76.3*	66
		PM_{10}	9.0	76.3*	
		SO_2	3.2	29.5*	
		VOC	12.2	115.5*	
		NO_x	5.5	51.0*	
		Pb	0.01	0.02*	
		TRS	0.6	5.8*	
10	Auxiliary Power Boiler #1	This source is no longer in service.			
11	Auxiliary Power Boiler #2	This source is no longer in service.			
12	NCG Incinerator	PM	0.2	0.9	84
		PM_{10}	0.2	0.9	
		SO_2	10.9	15.2	
		VOC	4.0	17.3	
		CO	9.4	41.1	
		NO_x	7.3	32.1	
		TRS	1.8	4.3	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
13	Cogeneration Unit	PM	5.6	24.6	92
		PM_{10}	5.6	24.6	
		SO_2	0.4	1.5	
		VOC	2.8	12.1	
		CO	51.6	226.2	
		NO_x	93.3	408.8	
14	NCG Back-Up Flare	PM	0.2	0.2	84
		PM_{10}	0.2	0.2	
		SO_2	544.8	74.3	
		VOC	3.0	3.1	
		CO	9.4	5.7	
		NO_x	7.3	4.4	
		TRS	7.6	2.3	
15	Brown Stock Washers	VOC	221.1	968.4	31
		TRS	45.7	200.3	
16	Aeration Stabilization Basin and Process Sewers	VOC	9.1	39.9	115
		TRS	1.2	4.1	
17	The printing presses are no longer in service.				
18	Black Liquor Oxidation Tank Vent	VOC	121.5	531.1	46
		TRS	25.0	62.2	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
19	Woodyard Source Group	PM	0.7	3.0	22
		PM_{10}	0.6	2.7	
		VOC	36.9	161.5	
20	Digester and Blow Tanks Source Group	PM	0.1	0.1	25
		PM_{10}	0.1	0.1	
		VOC	1.7	6.8	
		TRS	0.9	3.8	
21	Turpentine Recovery Source Group	VOC	0.2	0.9	28
22	Knotter System Source Group	VOC	18.7	81.3	29
		TRS	1.7	7.5	
23	High Density Storage Source Group	VOC	47.9	209.6	34
		TRS	2.9	12.8	
24	Pine Stock Chest	VOC	47.9	209.6	36
		TRS	2.9	12.8	
25	Weak Black Liquor Storage Source Group	VOC	6.3	26.5	39
		TRS	0.6	2.5	
26	Strong Black Liquor Storage Source Group	VOC	0.3	0.7	43
		TRS	0.2	0.6	
27	Multiple Effect Evaporators	Emissions from this source are routed to sources SN-12 and/or SN-14.			41

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
28, 29, 30, 32, 33, & 34	Causticizing Area Sources	VOC	7.4	31.2	71
		TRS	0.3	0.8	
31	Lime Handling Source Group	PM	1.0	4.4	79
		PM_{10}	1.0	4.4	
35	Paper Mill Source Group	VOC	161.6	707.6	111
36	Active East Landfill	VOC	0.8	3.3	122
		CO	0.1	0.3	
		TRS	0.1	0.3	
37	Gasoline Storage Tank	VOC	22.8	0.5	126
38	Maintenance Parts Cleaners	This is an insignificant activity under Group B.			
39 - 46	These sources were all part of the bag plant which has been removed from service.				
47	Package Boiler	PM	5.5	6.6	102
		PM_{10}	5.5	6.6	
		SO_2	0.2	0.2	
		VOC	0.4	0.4	
		CO	50.0	60.0	
		NO_x	25.0	30.0	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
48	Air Compressors	PM	2.0	2.5	128
		PM_{10}	2.0	2.5	
		SO_2	1.8	2.3	
		VOC	2.3	2.9	
		CO	5.9	7.4	
		NO_x	27.2	34.3	
49	Shutdown Equipment	PM	18.4	0.5	131
		PM_{10}	18.4	0.5	
		SO_2	17.2	0.5	
		VOC	27.5	0.7	
		CO	187.4	4.6	
		NO_x	261.8	6.3	

*These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

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EMISSION SUMMARY FOR NON-CRITERIA POLLUTANTS		
Pollutant	lb/hr	tpy
Acetaldehyde	13.57	58.95
Acetone**	4.35	12.22
Acetophenone	0.03	0.11
Acrolein	0.39	1.40
Acrylonitrile	0.01	0.02
Aldehydes	0.06	0.01
Ammonia**	167.67	734.31
Antimony Compounds	0.200	0.115
Arsenic Compounds	0.070	0.146
Benzene	0.50	1.29
Beryllium Compounds	0.010	0.007
Cadmium Compounds	0.04	0.123
Carbon Disulfide	0.76	3.20
Carbon Tetrachloride	0.03	0.08
Carbonyl Sulfide	0.02	0.05
Chlorobenzene	0.09	0.27
Chloroform	0.10	0.31
Chromium Compounds	0.85	3.60
Cobalt Compounds	0.160	0.154
Cresols & Hexachloroethane	0.06	0.27
Cumene	0.05	0.15
Dibenzofurans	0.01	0.01
Dimethyl Disulfide*	5.95	25.87

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EMISSION SUMMARY FOR NON-CRITERIA POLLUTANTS		
Pollutant	lb/hr	tpy
Dimethyl Sulfide*	50.81	222.65
Ethyl Benzene	0.01	0.02
Ethylene Glycol	0.44	1.92
Formaldehyde	3.89	12.72
Hydrogen Chloride**	32.52	105.92
Hydrogen Fluoride**	0.46	0.15
H_2S	13.6	58.0
Lead Compounds	0.09	0.269
Manganese Compounds	2.41	10.132
Mercury Compounds	0.01	0.015
Methanol	396.42	1732.79
Methyl Ethyl Ketone	4.40	18.66
Methyl Isobutyl Ketone	0.38	1.25
Methylene Chloride**	0.51	2.21
Methyl Mercaptan*	12.79	55.78
n-Hexane	0.22	0.80
Napthalene	0.21	0.89
Nickel Compounds	1.000	0.785
Phenols	3.32	14.49
POM & PAH	0.11	0.36
Propionaldehyde	0.11	0.45
Selenium Compounds	0.020	0.021
Styrene	0.69	2.39

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EMISSION SUMMARY FOR NON-CRITERIA POLLUTANTS		
Pollutant	lb/hr	tpy
1,1,2,2-Tetrachloroethane	0.01	0.01
Tetrachloroethylene**	0.41	1.72
Toluene	0.36	1.01
1,2,4-Trichlorobenzene	0.80	3.31
1,1,1-Trichloroethane**	0.13	0.44
1,1,2-Trichloroethane	0.12	0.49
Trichloroethylene	0.07	0.19
Vinyl Chloride	0.01	0.02
Xylene	0.32	0.76
Zinc	25.67	112.49

*Components of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

SECTION III: PERMIT HISTORY

Operations at the facility now known as International Paper Company - Camden Mill began in early 1928. With the exception of the frames of the paper machines, all of the original equipment has been replaced.

Permit #725-A was issued to International Paper Company on March 23, 1984. This permit allowed for the rebuilding of the electrostatic precipitator controlling emissions from the #2 and #3 recovery boilers.

Permit #990-A was issued to International Paper Company on January 10, 1990. This permit allowed for the installation of the cogeneration unit at this facility. At this time, the facility took severe restrictions on the two auxiliary power boilers to net out of a PSD review.

Permit #1239-A was issued to International Paper Company on December 13, 1991. This permit allowed for the installation of a new multiple effect evaporator. Limits were taken on the amount of black liquor solids that could be burned in the recovery boilers in order to avoid a PSD review.

Permit #725-AR-1 was issued to International Paper Company on May 15, 1992. This permit consolidated permits #725-A, #990-A, and 1239-A. Annual emissions were quantified for the first time in this permit.

Permit #1458-A was issued to International Paper Company on June 2, 1993. At this time, the Department and International Paper were working on a PSD permit for the cogeneration facility. The facility wished to install a scrubber on source SN-01, the bark boiler, prior to the issuance of the draft permit. Therefore, the Department issued this temporary permit to allow for the installation of the scrubber.

Permit #725-AR-2 was issued to International Paper Company on November 1, 1996. This permit consolidated permits #725-AR-1 and #1458-A. Restrictions on the operation of the auxiliary power boilers (which have since been taken out of service) were changed which resulted in the need for a retroactive PSD review of the emissions from the cogeneration unit. Although the increase in particulate matter emissions from the cogeneration unit were above the PSD significant increase level, the permittee was able to net out of PSD review for particulate matter. Emissions of sulfur dioxide and volatile organic compounds were below significant increase levels without any corresponding offsets. A PSD review for the emissions of oxides of nitrogen and carbon monoxide from the cogeneration unit was conducted due to net emissions increases of 241.79 tpy of carbon monoxide and 240.01 tpy of oxides of nitrogen. As such, a Best Available Control Technology (BACT) analysis for oxides of nitrogen and carbon monoxide is required.

BACT is defined as an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation which the environmental authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts, determined is achievable. The BACT assessment identifies alternative control methods, considers the technical feasibility of each method, ranks the technically feasible alternatives in terms of control effectiveness, evaluates the economic, energy, and environmental aspects of technically feasible alternatives, and identifies the control method considered BACT for each pollutant and source combination.

NO_X Control Technologies

NO_X formation is a function of three main variables: fuel bound nitrogen in the fuel burned in the combustion chamber, combustion chamber flame temperature, and combustion chamber residence time. Conceptually, several types of NO_X control technologies exist to control the formation of NO_X at its source of formation. This can involve limiting the fuel bound nitrogen, lowering the flame temperature of the combustion chamber through wet injection, chamber design, and/or fuel to air ratios (combustion control), and decreasing the residence time of the fuel in the combustion chamber, usually through the design of the combustion device.

The other type of control technology involves reducing the NO_X content of the combustion exhaust gases (post-combustion control). This can involve selective catalytic reduction, nonselective catalytic reduction, and selective noncatalytic reduction. These control technologies can also be used in combination with the technologies that control NO_X at its source formation.

The permittee's cogeneration unit currently controls the amount of NO_X formed from fuel bound nitrogen by limit the fuel for this unit to only natural gas. The flame temperature of the gas turbine combustion chamber is lowered by steam injection, thereby reducing the amount of NO_X formed. Water injection is not used in the cogeneration unit. Also, the flame temperature of the downstream duct burner is controlled through the use of low NO_X burners. The control options of wet injection for NO_X reduction in the gas turbine, and the combustion control technologies built into the designs of the gas turbine and duct burner, represent the best control technology for this unit. Since these controls already exist for the cogeneration unit, no additional controls are proposed.

CO Control Technologies

Carbon monoxide emissions in gas turbines arise from inefficient or incomplete combustion of fuel. Three major factors which influence carbon monoxide formation in gas turbines are firing temperature, combustion chamber residence time, and combustion mixing characteristics. By increasing the combustion chamber temperature and residence time, the rate of CO conversion to CO_2 increases, thereby reducing CO emissions. However, increasing the combustion chamber temperature and residence time, NO_X emissions increase. Therefore, a dichotomy exists between

CO and NO_X at their source of formation. By reducing the rate of formation of one, the rate of formation of the other increases. Since NO_X is of greater concern from the point of ambient air quality and ozone formation, it is not considered environmentally acceptable to lower the CO emissions at the expense of additional NO_X emissions.

The control of CO emissions from the cogeneration unit involves oxidizing the CO to CO_2. The options currently available to reduce the CO emissions are thermal oxidation and catalytic oxidation. International Paper considers the duct burner to act as a thermal oxidizer to control or minimize CO emissions. The temperature of the exhaust gas is raised to 1560°F, which is near the range of thermal oxidation of CO and CO_2. No additional CO controls are proposed.

Ambient Air Quality Analysis

As required by the PSD Regulations, the increases in emissions were modeled to determine their impact. The results of this modeling may be found in the following table. As the ambient impacts caused by the increases in emissions were below the Modeling Significance Levels, the full impact analysis, which includes NAAQS modeling and an increment analysis, nor any ambient monitoring was required.

Pollutant	Averaging Period	Impact	Modeling Significance Level
CO	1-hour	37.20	2000
	8-hour	11.69	500
NO_X	Annual	0.54	1.0

Additional impact analyses indicated that there will be no construction and growth impacts associated with the scope of the proposed modification. Nor are any adverse impacts on soil or vegetation anticipated due to the cogeneration unit. It is unlikely that there would be any measurable impact on the nearest Class I area which is well over 250 km from this facility.

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Permit #725-AOP-R0 was issued to International Paper Company - Camden Mill on June 1, 1999. Several sources were deleted in this permit due to the removal of the bag plant. Several sources which have been in operation at this facility for some time were permitted for the first time. Two new sources were also added. The two new sources were a package boiler which will be brought on site whenever another boiler will be down for an extended period of time and a baghouse to control the particulate matter emissions from the lime handling operations. In addition to several additional sources being permitted, non-criteria pollutants were also quantified. Permitted emissions from several sources were increased. This was due to a change in the method of calculation and not a change in the method of operation.

SECTION IV: EMISSION UNIT INFORMATION

WOODYARD

SN-19
Woodyard Source Group

Source Description

The woodyard source group includes emissions from roundwood chipping and screening, purchased chips unloading and storage, chip silo loading, debarking drums, roundwood chips rechipping, sawdust storage, purchased chips rechipping, chip conveying, and other associated equipment.

Due to the nature of the emissions from this source, an opacity limit would not be practical because of the difficulty in determining compliance with it. Instead, Plantwide Conditions 19 and 20 will require that the facility be operated in a manner that will not cause unnecessary visible emissions.

Specific Conditions

1. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at source SN-19. Compliance with these emission rates will be shown through compliance with the limit of wood chips that may be processed at this source.

Pollutant	lb/hr	tpy
PM_{10}	0.6	2.7
VOC	36.9	161.5

2. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-19. Compliance with these emission rates will be shown through compliance with the limit of wood chips that may be processed at this source.

Pollutant	lb/hr	tpy
PM	0.7	3.0

3. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not process more than 4.1 million tons of chips at source SN-19 in any consecutive twelve month period.

4. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of chips processed at source SN-19 in order to demonstrate compliance with Specific Condition 3 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

PULP MILL

SN-20
Digester and Blow Tank Source Group

Source Description

Source SN-20, which was installed or last modified in 1963, covers the emissions from the digester, vented either from the loading of chips or from the blow tanks following the digester. The digester are used to pressure cook the wood chips. The blow tanks are used to blow the pulp from the digester to atmospheric pressure. The particulate matter emissions result from loading the chips into the different digester. No control equipment for particulate matter emissions is associated with SN-20.

The emissions which occur at the digesters while the chips are being cooked are routed to the turpentine recovery source group (SN-21). The emissions from source SN-21 are then routed to the NCG Incinerator (SN-12) as required by §19.804 of Regulation 19. Under this permit, the emissions from the blow tank, two low pressure feeders, and after blow tank condenser will also be collected and routed to either SN-12 or the lime kiln (SN-03). The facility may route these emissions to the back-up flare (SN-14) for a limited amount of time as provided in Specific Condition 114.

No opacity limit has been assigned for this source group. The particulate matter emissions are intermittent and occur when loading chips into the digester chipper hoppers. Instead Plantwide Conditions 19 and 20 will require that this source group be operated in a manner that will not cause unnecessary visible emissions.

Source SN-20 is subject to the applicable provisions of 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry.*

Specific Conditions

5. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-20. Compliance with these emission rates will be determined through compliance with the limit of air dried tons of pulp (ADTP) that may be processed at this facility and proper incineration of the gases which result from cooking the chips.

Pollutant	lb/hr	tpy
PM_{10}	0.1	0.1

Pollutant	lb/hr	tpy
VOC	1.7	6.8
TRS	0.9	3.8

6. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-20. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit of ADTP and proper incineration of the gases which result from cooking the chips.

Pollutant	lb/hr	tpy
PM	0.1	0.1
Acetaldehyde	0.02	0.09
Cresols & Hexachloroethane	0.06	0.27
Dimethyl Disulfide*	0.06	0.22
Dimethyl Sulfide*	0.71	3.11
H_2S*	0.1	0.4
Methanol	0.36	1.56
Methyl Ethyl Ketone	0.01	0.03

*Component of TRS.

7. Pursuant to §19.804 of Regulation 19, the exhaust gases from the digesters shall be incinerated at 1200°F for a minimum of 0.5 seconds. (Currently, the facility is routing the gases through the turpentine recovery source group prior to incineration at source SN-12 which meets this requirement.)

8. Pursuant to 40 CFR §63.443(c), §19.304 and §19.705 of Regulation 19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the non-condensible gases from the digesters, the #1 and the #2 low pressure feeders, the blow tank, and the after blow tank condenser shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (d) of this section. The enclosures and closed-vent system shall meet the requirements specified in §63.450. The lime kiln (SN-03), the NCG Incinerator (SN-12), and the NCG Back-Up Flare (SN-14) are control devices that may be used at this facility.

SN-21
Turpentine Recovery Source Group

Source Description

Source SN-21, which was installed or last modified in 1978, consists of several turpentine condensers, a decanter, a storage tank, and other associated equipment. Turpentine is recovered from the digester (see source SN-20), and flash tanks, decanted, and stored prior to being shipped off site. Emissions are routed to the NCG Incinerator (SN-12), the Back-Up Flare (SN-14), or the Lime Kiln (SN-03).

Source SN-21 is subject to the applicable provisions of 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry*. Upon full implementation of the LVHC standards contained in this subpart, source SN-21 will no longer be considered an emission point at this facility.

Specific Conditions

9. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-21. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	0.2	0.9

10. Pursuant to 40 CFR §63.443(c), §19.304 and §19.705 of Regulation 19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the non-condensible gases from the turpentine condensers, turpentine decanter, and turpentine decanter foul condensate collection tank shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (d) of this section. The enclosures and closed-vent system shall meet the requirements specified in §63.450. The lime kiln (SN-03), the NCG Incinerator (SN-12), and the NCG Back-Up Flare (SN-14) are control devices that may be used at this facility.

SN-22
Knotter System Source Group

Source Description

This source, which was not previously permitted, was installed or last modified in 1982. This source group consists of the screens, the reject refiners, the reject chests, and other equipment associated with the deknotting system. The knotter system removes the knots and other undissolved material from the wood pulp before it is sent to the brown stock washers. No control equipment is associated with this source group.

Specific Conditions

11. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-22. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	18.70	81.3
TRS	1.7	7.5

12. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-22. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.16	0.67
Benzene	0.01	0.01
Dimethyl Disulfide*	0.19	0.83
Dimethyl Sulfide*	1.50	6.55
Formaldehyde	0.01	0.01
Methanol	17.2	75.2
Methyl Ethyl Ketone	0.05	0.21
Methyl Isobutyl Ketone	0.01	0.01
Methyl Mercaptan*	0.02	0.08
Styrene	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

SN-15
Brown Stock Washers Source Group

Source Description

Source SN-15, which was installed or last modified in 1968, consists of six brown stock washers (3 stages, 2 lines), their associated equipment, and the foam tank. In the brown stock washers, the pulp is washed with clean water and is separated from the digester chemicals. No control equipment is associated with this source group.

All emissions from this source are based upon NCASI factors. Previously, the VOC emissions were calculated using an emission factor from AP-42. The large increase in emissions from this source is due to the difference in the emission factors. This source was installed or last modified in 1968 and no physical modification or change in the method of operation is occurring at this source with the issuance of this permit. Therefore, this source was not required to undergo PSD review for the increase in VOC and TRS emissions.

Specific Conditions

13. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-15. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility as well as the testing requirements for this source.

Pollutant	lb/hr	tpy
VOC	221.1	968.4
TRS	45.7	200.3

14. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-15. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.47	2.02
Acrolein	0.01	0.05
Benzene	0.01	0.02
Carbon Disulfide	0.01	0.01
Carbon Tetrachloride	0.02	0.06
Chlorobenzene	0.01	0.01
Chloroform	0.07	0.28
Dimethyl Disulfide*	2.61	11.42
Dimethyl Sulfide*	41.8	183.00
Formaldehyde	0.17	0.75
H_2S*	0.8	3.3
Methanol	23.0	101.00
Methyl Ethyl Ketone	0.34	1.45
Methyl Isobutyl Ketone	0.02	0.09
Methylene Chloride**	0.05	0.22
Methyl Mercaptan*	0.59	2.56
n-Hexane	0.01	0.05
Styrene	0.12	0.49

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Pollutant	lb/hr	tpy
Tetrachloroethylene**	0.01	0.02
Toluene	0.02	0.07
1,2,4-Trichlorobenzene	0.01	0.01
1,1,1-Trichloroethane**	0.01	0.01
1,1,2-Trichloroethane	0.01	0.03
Trichloroethylene	0.01	0.02
Xylene	0.01	0.05

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

SN-23
High Density Storage Source Group

Source Description

Source SN-23, which was installed or last modified in 1947, consists of three parallel pulp storage tanks and associated equipment. Stock which has been washed and screened to remove the knots is stored in these tanks. No control equipment is associated with the high density storage source group.

Specific Conditions

15. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-23. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	47.9	209.6
TRS	2.9	12.8

16. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-23. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	1.07	4.67
Acrolein	0.01	0.01
Benzene	0.01	0.01
Dimethyl Disulfide*	1.16	5.06
Dimethyl Sulfide*	1.60	7.01
H_2S*	0.1	0.3
Methanol	33.10	145.00
Methyl Ethyl Ketone	0.07	0.30
Methyl Isobutyl Ketone	0.01	0.03
Methyl Mercaptan*	0.09	0.36
n-Hexane	0.01	0.03
Styrene	0.01	0.05
Toluene	0.01	0.01
1,2,4-Trichlorobenzene	0.10	0.42
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

SN-24
Pine Stock Chest

Source Description

The pine stock chest, which was installed or last modified in 1963, provides intermediate storage for pulp stock before being pumped to the paper mill. No control equipment is associated with the pine stock chest.

Specific Conditions

17. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-24. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	47.9	209.6
TRS	2.9	12.8

18. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-24. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	1.07	4.67
Acrolein	0.01	0.01
Benzene	0.01	0.01
Dimethyl Disulfide*	1.16	5.06
Dimethyl Sulfide*	1.60	7.01
H_2S*	0.1	0.3
Methanol	33.08	145.00
Methyl Ethyl Ketone	0.07	0.30
Methyl Isobutyl Ketone	0.01	0.03
Methyl Mercaptan*	0.09	0.36
n-Hexane	0.01	0.03
Styrene	0.01	0.05
Toluene	0.01	0.01
1,2,4-Trichlorobenzene	0.10	0.42
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

BLACK LIQUOR RECOVERY AREA

SN-25
Weak Black Liquor Storage Source Groups

Source Description

Source SN-47, which was installed or last modified in 1997, consists of several weak liquor storage tanks and associated equipment that store liquor either continuously or intermittently. This source also consists of the combination tank and the blow heat recovery tank, which store both weak and strong black liquor periodically. This source stores the weak black liquor from the pulp mill prior to sending it through a multiple effect evaporator which will concentrate the liquor. No control equipment is associated with this source group.

Specific Conditions

19. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-25. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	6.3	26.5
TRS	0.6	2.5

20. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-25. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.01	0.05
Acrolein	0.01	0.01

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Pollutant	lb/hr	tpy
Benzene	0.01	0.01
Carbon Tetrachloride	0.01	0.02
Dimethyl Disulfide*	0.13	0.56
Dimethyl Sulfide*	0.44	1.91
Formaldehyde	0.01	0.02
Methanol	2.30	10.10
Methyl Ethyl Ketone	0.04	0.17
Methyl Isobutyl Ketone	0.01	0.01
Methyl Mercaptan*	0.01	0.03
n-Hexane	0.01	0.01
Phenols	0.31	1.33
Styrene	0.01	0.01
Tetrachloroethylene**	0.08	0.34
Toluene	0.01	0.02
1,1,1-Trichloroethane**	0.01	0.01
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

SN-27
Multiple Effect Evaporator

Source Description

The multiple effect evaporator (MEE) is used to concentrate the weak black liquor. The concentrated black liquor is sent through a soap removal system. The desaponified black liquor is then returned to the evaporator before being transferred to the strong black liquor storage group.

The non condensible gases from the evaporator are incinerated at source SN-12. No emissions are vented at the evaporator.

Source SN-27 is subject to the applicable provisions of 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry.*

Specific Conditions

21. Source SN-27 is subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart BB, *Standards of Performance for Kraft Pulp Mills*, due to an installation date after September 24, 1976. A copy of Subpart BB has been placed in Appendix E of this permit. The important requirements of this subpart are outlined in Specific Conditions 20 through 25.

22. Pursuant to 40 CFR §60.283(a)(1)(iii) and §19.304 and §19.804 of Regulation 19, the permittee shall combust all gases from source SN-27 at source SN-12 or as allowed at source SN-14 at a minimum temperature of 1200°F for a minimum of 0.5 seconds.

23. Pursuant to 40 CFR §60.284(b)(1) and §19.304 and §19.804 of Regulation 19, the permittee shall install, calibrate, maintain, and operate a monitoring device which measures and records the combustion temperature of the gases at SN-12 or SN-14. The monitoring device is to be certified by the manufacturer to be accurate within ± 1% of the temperature being measured.

24. Pursuant to 40 CFR §60.284d(3)(ii) and §19.304 and §19.804 of Regulation 19, for the purposes of reports required under §60.7(c), the permittee shall report semiannually periods of excess emissions from source SN-27. Excess emissions are defined as all periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 1200°F.

25. Pursuant to 40 CFR §60.284(e) and §19.304 and §19.804 of Regulation 19, the Administrator will not consider periods of excess emissions reported under paragraph (d) of this section to be indicative of a violation of §60.11(d) provided that the Administrator determines that the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions.

26. Pursuant to 40 CFR §63.443(c), §19.304 and §19.705 of Regulation 19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the non-condensible gases from the multiple effect evaporators (evaporator hotwell) shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (d) of this section. The enclosures and closed-vent system shall meet the requirements specified in §63.450. The lime kiln (SN-03), the NCG Incinerator (SN-12), and the NCG Back-Up Flare (SN-14) are control devices that may be used at this facility.

SN-26
Strong Black Liquor Storage Source Group

Source Description

Source SN-26, which was installed or last modified in 1996, consists of three black liquor storage tanks and associated equipment which store liquor either continuously or intermittently. It also consists of the combination tank and blow heat recovery tank and associated equipment which store both weak and strong black liquor periodically. The maximum throughput of the unit is limited by the firing rate of the recovery boilers of 390 gal/min of black liquor at the burner nozzles. The strong black liquor storage group stores the liquor from the MEE prior to sending it through the black liquor oxidation source group. No control equipment is associated with this source group.

Specific Conditions

27. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-26. Compliance with these emission rates will be determined through compliance with Specific Condition 29.

Pollutant	lb/hr	tpy
VOC	0.3	0.7
TRS	0.2	0.6

28. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with Specific Condition 29.

Pollutant	lb/hr	tpy
Acetaldehyde	0.02	0.06
Benzene	0.01	0.01
Chloroform	0.01	0.01
Dimethyl Disulfide*	0.02	0.05
Dimethyl Sulfide*	0.08	0.23
Formaldehyde	0.01	0.01
H_2S*	0.1	0.3
Methanol	0.12	0.34
Methyl Ethyl Ketone	0.03	0.06
Methyl Isobutyl Ketone	0.01	0.01
Methyl Mercaptan*	0.01	0.01
n-Hexane	0.01	0.01
Styrene	0.01	0.01
Toluene	0.01	0.01
1,2,4-Trichlorobenzene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

29. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not process in excess of 496,382 tons of black liquor solids at source SN-26 in any consecutive twelve month period. Compliance with this specific condition will be verified through the record keeping requirements on the total amount of BLS fired at sources SN-04, SN-05, and SN-06.

30. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of black liquor solids processed at source SN-26 in order to demonstrate compliance with Specific Condition 29 and which may be used by the Department for enforcement purposes. The records of the amount of BLS fired in the recovery boilers may be used to fulfill the requirement of this specific condition. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

SN-18
Black Liquor Oxidation Source Group

Source Description

Source SN-18, which was installed or last modified in 1974, consists of a black liquor oxidation tank with its associated cyclone separator. The primary purpose of the black liquor oxidation system is to convert the sulfides in the black liquor to sulfates to minimize the TRS emissions from the recovery boilers. No control equipment in operation is associated with this source group.

Specific Conditions

31. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-18. Compliance with these emission rates will be determined through compliance with Specific Condition 29 and the testing requirements for this source.

Pollutant	lb/hr	tpy
VOC	121.5	531.1
TRS	25.0	62.2

32. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-18. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with Specific Condition 29 and the testing requirements for this source.

Pollutant	lb/hr	tpy
Acetone**	1.00	3.00
Acetophenone	0.03	0.11
Acrolein	0.01	0.01
Carbon Disulfide	0.55	2.41
Dimethyl Disulfide*	0.26	1.13
Dimethyl Sulfide*	0.82	3.57
Formaldehyde	0.07	0.31
H_2S*	10.3	44.9
Methanol	80.00	350.31
Methyl Ethyl Ketone	2.19	9.57
Methyl Isobutyl Ketone	0.02	0.09
Methyl Mercaptan	2.89	12.65
n-Hexane	0.01	0.01
Propionaldehyde	0.11	0.45
Styrene	0.02	0.09

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

SN-04/SN-05
Recovery Boiler #1

Source Description

Source SN-04/SN-05 is a 480 MMBTU/hr recovery boiler which was installed or last modified in 1967. This recovery boiler has not been modified since and is therefore not subject to any NSPS subpart. Recovery Boiler #1 vents through 2 separate stacks. Because of the difficulty involved in determining exactly what is being emitted through each stack, emissions for the two stacks have been "bubbled." The main purpose of this recovery boiler is to recover inorganic chemicals from black liquor. Natural gas may be fired at any time. The facility is permitted to fire a limited amount of #6 fuel oil in the event of natural gas curtailment and to test the oil burning capabilities of the equipment. Particulate matter emissions from this source are controlled with an electrostatic precipitator.

This source has a CEM to monitor the emissions of TRS. Annual testing is required for the emissions of carbon monoxide, particulate matter, and sulfur dioxide.

Specific Conditions

33. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table when burning BLS. Compliance with these rates will be determined through compliance with Specific Condition 42, proper operation of the control equipment, and the required testing for this recovery boiler.

Pollutant	lb/hr	tpy
PM_{10}	77.6	339.9
SO_2	262.6	1150.0
VOC	66.6	293.6
CO	412.6	1806.8
NO_x	192.0	400.0
Pb	0.02	0.02

34. Pursuant to §19.501 et seq and §19.804 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table when burning BLS. Compliance with these rates will be determined thru compliance with Specific Condition 42, proper operation of the control equipment and the CEMS required for this recovery boiler (Specific Condition 44). This TRS emission rate is based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	31.8	139.8

35. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 8% oxygen by volume at source SN-04/SN-05. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 44.

36. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-04/05 when burning #6 fuel oil. Compliance with these emission rates will be determined through proper operation of the control equipment.

Pollutant	lb/hr	tpy
PM_{10}	25.5	*
SO_2	1318.8	*
VOC	66.6	*
CO	412.6	*
NO_x	192.0	*
Pb	0.02	*

*Annual emissions have been bubbled with sources SN-01 and SN-06 and may be found in the plantwide conditions.

37. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-04/05 when burning #6 fuel oil. Compliance with these emission rates will be determined through proper operation of the control equipment and the required CEMS for this recovery boiler. These emission rates are based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	31.8	*

*Annual emissions have been included in the emissions when firing BLS.

38. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 40% opacity from source SN-04/SN-05 as measured by EPA Reference Method 9 except that emissions greater than 40% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 39.

39. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-04/05 shall be conducted by a person trained, but not necessarily certified, in EPA Reference Method 9. If emissions which appear to be in excess of 30% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, the permittee shall conduct another observation of the opacity from source SN-04/05. If the opacity observed does not appear to be in excess of 30%, then no further action is needed and the permittee will be considered in compliance with the permitted opacity limit. If visible emissions which appear to be in excess of 30% are still observed, a 6-minute visible emissions reading shall be conducted by a person certified in EPA Reference Method 9 to determine if the opacity is less than 40%. If the opacity observed is not in excess of 40%, then no further action is needed and the permittee will be considered in compliance with the permitted opacity limit. If no Method 9 reading is conducted despite emissions appearing to be in excess of 30% after corrective action has been taken, the permittee shall be considered out of compliance with the permitted opacity limit for that day.

40. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-04/SN-05 when burning black liquor solids. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with Specific Condition 42 and proper operation of the control equipment for this recovery boiler.

Pollutant	lb/hr	tpy
PM	200.0	876.0
Acetaldehyde	3.19	13.97
Antimony Compounds	0.013	0.053
Arsenic Compounds	0.013	0.056
Benzene	0.03	0.11
Cadmium Compounds	0.011	0.048
Chromium Compounds	0.419	1.834
Cobalt Compounds	0.010	0.040
Formaldehyde	0.43	1.88
Hydrogen Chloride**	12.27	53.75
Lead Compounds	0.011	0.047
Manganese Compounds	0.629	2.76
Methanol	34.05	149.20
Methyl Ethyl Ketone	0.38	1.63
Methyl Mercaptan*	6.06	26.60
Nickel Compounds	0.075	0.329
Phenols	1.56	6.84

Pollutant	lb/hr	tpy
Selenium Compounds	0.001	0.001
Styrene	0.13	0.53

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

41. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at SN-04 when burning #6 fuel oil. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through proper operation of the control equipment associated with this recovery boiler.

Pollutant	lb/hr	tpy
PM	35.8	**
Antimony Compounds	0.065	**
Arsenic Compounds	0.012	**
Beryllium Compounds	0.001	**
Cadmium Compounds	0.002	**
Chromium Compounds	0.007	**
Cobalt Compounds	0.045	**
Formaldehyde	0.18	**
Hydrogen Chloride*	3.12	**
Hydrogen Fluoride*	0.16	**
Lead Compounds	0.010	**
Manganese Compounds	0.036	**
Mercury Compounds	0.001	**

Pollutant	lb/hr	tpy
Nickel Compounds	0.31	**
POM	0.01	**
Selenium Compounds	0.004	**

*Non-VOC, non-PM non-criteria pollutant.
**Annual emissions have been bubbled with sources SN-01 and SN-06 and may be found in the plantwide conditions.

42. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not process in excess of 392,886 tons of black liquor solids at source SN-04/SN-05 in any consecutive twelve month period.

43. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of black liquor solids processed at source SN-04/SN-05 in order to demonstrate compliance with Specific Condition 42 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

44. Pursuant to §19.703 and §19.804 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a CEMS at source SN-04/SN-05 for TRS. The CEMS requirements which the permittee must comply with may be found in Appendix A.

45. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-04/SN-05 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place less than 9 months and no more than 15 months apart.

46. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-04/SN-05 for sulfur dioxide using EPA Reference Method 6C. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

47. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-04/SN-05 for carbon monoxide using EPA Reference Method 10. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

48. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not bypass the ESP at this source during required maintenance. In the event that a boiler is not shut down during ESP maintenance, one side of the ESP shall be isolated. During such times, the operation of source SN-04/SN-05 shall be limited to 50% of the full service load rating. (NOTE: If the maintenance does not affect operation of the ESP at this source, the permittee is not restricted by the Department on the service load rating.)

49. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall notify the Department within 24 hours of any maintenance which requires one side of the ESP being removed from service.

SN-06
Recovery Boilers #2 and #3

Source Description

Source SN-06 consists of two recovery boilers which were installed or last modified in 1947. These recovery boilers have a combined heat input capacity of 632 MMBTU/hr. The main purpose of these recovery boilers is to recover inorganic chemicals from black liquor. Natural gas may be fired in these recovery boilers at any time. The facility is permitted to fire a limited amount of #6 fuel oil in the event of natural gas curtailment and to test the oil burning capabilities of the equipment. Particulate matter emissions from this source are controlled with an electrostatic precipitator.

This source has a CEM to monitor the emissions of TRS. Annual testing is required for the emissions of carbon monoxide, particulate matter, and sulfur dioxide.

Specific Conditions

50. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning black liquor solids. Compliance with these emission rates will be determined through compliance with Specific Condition 59, proper operation of the control equipment, and the required testing for these recovery boilers.

Pollutant	lb/hr	tpy
PM_{10}	13.2	57.9
SO_2	240.6	1054.0
VOC	162.3	710.6
CO	454.0	1988.0
NO_x	242.0	700.0
Pb	0.01	0.01

51. Pursuant to §19.501 et seq and §19.804 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning black liquor solids. Compliance with these emission rates will be determined through compliance with Specific Condition 59, proper operation of the control equipment, and the CEMS for these recovery boilers. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	37.2	163.0

52. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 8% oxygen by volume at source SN-06. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 61.

53. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning #6 fuel oil. Compliance with these emission rates will be determined through proper operation of the control equipment.

Pollutant	lb/hr	tpy
PM_{10}	29.1	*
SO_2	1507.2	*
VOC	2.4	*
CO	16.0	*
NO_x	214.0	*
Pb	0.01	*

*Annual emissions have been bubbled with sources SN-01 and SN-04/05 and may be found in the plantwide conditions.

54. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning #6 fuel oil. Compliance with these emission rates will be determined through proper operation of the control equipment and the CEMS required for these recovery boilers. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	37.2	*

*Annual emissions are included in the emission rates when firing BLS.

55. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-06 as measured by EPA Reference Method 9 except that emissions greater than 20% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 56.

56. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-03 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

57. Pursuant to §18.801 of Regulation 18 and A.C.A. §8.4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-06 when burning black liquor solids. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with Specific Condition 59 and proper operation of the control equipment for these recovery boilers.

Pollutant	lb/hr	tpy
PM	75.0	306.6
Acetaldehyde	3.03	13.27
Antimony Compounds	0.012	0.048
Arsenic Compounds	0.012	0.051
Benzene	0.03	0.10
Cadmium Compounds	0.010	0.044
Chromium Compounds	0.390	1.690
Cobalt Compounds	0.009	0.037
Formaldehyde	0.41	1.79
Hydrogen Chloride**	11.25	49.27
Lead Compounds	0.010	0.043
Manganese Compounds	0.580	2.530
Methanol	32.34	141.65
Methyl Ethyl Ketone	0.36	1.55
Methyl Mercaptan*	5.56	24.4
Nickel Compounds	0.069	0.310
Phenols	1.43	6.27
Selenium Compounds	0.001	0.001

Pollutant	lb/hr	tpy
Styrene	0.12	0.51
Toluene	0.08	0.34

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

58. Pursuant to §18.801 of Regulation 18 and A.C.A. §8.4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning #6 fuel oil. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through proper operation of the control equipment associated with these recovery boilers.

Pollutant	lb/hr	tpy
PM	40.9	**
Antimony Compounds	0.074	**
Arsenic Compounds	0.014	**
Beryllium Compounds	0.001	**
Cadmium Compounds	0.002	**
Chromium Compounds	0.008	**
Cobalt Compounds	0.051	**
Formaldehyde	0.20	**
Hydrogen Chloride*	3.57	**
Hydrogen Fluoride*	0.18	**
Lead Compounds	0.011	**
Manganese Compounds	0.041	**
Mercury Compounds	0.001	**

Pollutant	lb/hr	tpy
Nickel Compounds	0.35	**
POM	0.01	**
Selenium Compounds	0.004	**

*Non-VOC, non-PM non-criteria pollutant.
*Annual emissions have been bubbled with sources SN-01 and SN-04/05 and may be found in the plantwide conditions.

59. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not process in excess of 361,757 tons of black liquor solids at source SN-06 in any consecutive twelve month period.

60. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of black liquor solids processed at source SN-06 in order to demonstrate compliance with Specific Condition 59 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

61. Pursuant to §19.703 and §19.804 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a CEMS at source SN-06 for TRS. The CEMS requirements which the permittee must comply with may be found in Appendix A.

62. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-06 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

63. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-06 for sulfur dioxide using EPA Reference Method 6C. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

64. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-06 for carbon monoxide using EPA Reference Method 10. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

65. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, when an ESP is shut down for maintenance, the permittee shall not operate the boiler associated with that ESP. The service load rating is not affected if any maintenance is being performed which does not affect either of the ESPs located at SN-06. (NOTE: SN-06 is actually two boilers which both have an ESP.)

SN-07
Smelt Tank #1

Source Description

This source was installed or last modified in 1967. A wet scrubber is used to control the particulate matter and TRS emissions. The scrubbing liquids used for this piece of control equipment are weak wash, alkaline solution, or water.

Annual testing for particulate matter and TRS emissions was required in permit #725-AR-2 and is being carried forth in this permit. Additional testing is being required for VOC and methanol emissions.

Specific Conditions

66. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-07. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-04/05, proper operation of the control equipment, and the required testing for this smelt dissolving tank.

Pollutant	lb/hr	tpy
PM_{10}	25.0	110.0
SO_2	7.5	32.9
VOC	28.0	122.3
NO_x	12.9	56.7
Pb	0.01	0.01

67. Pursuant to §19.501 et seq and §19.804 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-07. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-04/05, proper operation of the control equipment, and the required testing for this smelt dissolving tank. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	1.5	6.6

68. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 0.0168 grams of H_2S per kilogram of black liquor solids on a 12 hour average from source SN-07. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 73.

69. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-07. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-04/05, proper operation of the control equipment, and the required testing for this smelt dissolving tank.

Pollutant	lb/hr	tpy
PM	25.0	110.0
Ammonia*	16.80	73.60
Antimony Compounds	0.002	0.005
Arsenic Compounds	0.001	0.002
Benzene	0.02	0.09
Beryllium Compounds	0.001	0.001
Cadmium Compounds	0.001	0.001

Pollutant	lb/hr	tpy
Chlorobenzene	0.01	0.04
Chromium Compounds	0.002	0.009
Lead Compounds	0.001	0.004
Manganese Compounds	0.008	0.032
Mercury Compounds	0.001	0.001
Methanol	26.15	115.00
Methyl Ethyl Ketone	0.11	0.45
Methyl Isobutyl Ketone	0.06	0.25
Nickel Compounds	0.001	0.002
Selenium Compounds	0.001	0.001
Styrene	0.01	0.03
Toluene	0.04	0.15
Trichloroethylene	0.02	0.08
Xylene	0.03	0.11

*Non-HAP, non-VOC, non-criteria pollutant.

70. Pursuant to §19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-07 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 71.

71. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-07 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the excess visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if excess visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

72. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-07 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

73. Pursuant to §19.702 and §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-07 for TRS using EPA Reference Method 16. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

74. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain the following at source SN-07:

    a. A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within a gage pressure of $\pm$500 Pascals (ca. $\pm$ 2 inches water gage pressure).

    b. A monitoring device for the continuous measurement of the scrubbing liquid flow rate to the control equipment. The monitoring device is to be certified by the manufacturer to accurate within $\pm$ 15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point.

SN-08 and SN-09
Smelt Tanks #2 and #3

Source Description

Sources SN-08 and SN-09 were installed or last modified in 1947. Wet scrubbers are used to control the particulate matter and TRS emissions. The scrubbing liquids used are weak wash, alkaline solution, or water.

Annual testing for particulate matter and TRS emissions was required in permit #725-AR-2 and is being carried forth in this permit. Additional testing is being required for VOC and methanol emissions.

Specific Conditions

75. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-06, proper operation of the control equipment, and the required testing for these two smelt dissolving tanks.

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy*
PM_{10}	8.4	9.0	76.3
SO_2	3.6	3.2	29.5
VOC	13.6	12.2	115.5
NO_x	6.1	5.5	51.0
Pb	0.01	0.01	0.02

*These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

76. Pursuant to §19.501 et seq and §19.804 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-06, proper operation of the control equipment, and the required testing for these two smelt dissolving tanks. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy*
TRS	0.7	0.6	5.8

*These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

77. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 0.0168 grams of H_2S per kilogram of black liquor solids on a 12 hour average from sources SN-08 and SN-09. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 82.

78. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-06, proper operation of the control equipment, and the required testing for these two smelt dissolving tanks.

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy**
PM	8.4	9.0	76.3
Ammonia*	7.96	7.17	66.23
Antimony Compounds	0.001	0.001	0.005
Arsenic Compounds	0.001	0.001	0.002
Benzene	0.01	0.01	0.08
Beryllium Compounds	0.001	0.001	0.001
Cadmium Compounds	0.001	0.001	0.001

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy**
Chlorobenzene	0.01	0.01	0.04
Chromium Compounds	0.001	0.001	0.008
Lead Compounds	0.001	0.001	0.004
Manganese Compounds	0.004	0.004	0.030
Mercury Compounds	0.001	0.001	0.001
Methanol	12.70	11.41	105.50
Methyl Ethyl Ketone	0.05	0.05	0.42
Methyl Isobutyl Ketone	0.03	0.03	0.23
Nickel Compounds	0.001	0.001	0.002
Selenium Compounds	0.001	0.001	0.001
Styrene	0.01	0.01	0.03
Toluene	0.02	0.02	0.13
Trichloroethylene	0.01	0.01	0.07
Xylene	0.02	0.01	0.10

*Non-HAP, non-VOC, non-criteria pollutant.
**These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

79. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from sources SN-08 and SN-09 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 80.

80. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from sources SN-08 and SN-09 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the excess visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if excess visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

81. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at sources SN-08 and SN-09 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

82. Pursuant to §19.702 and §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at sources SN-08 and SN-09 for TRS using EPA Reference Method 16. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

83. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain the following at sources SN-08 and SN-09:

    a. A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within a gage pressure of $\pm$500 Pascals (ca. $\pm$ 2 inches water gage pressure).

    b. A monitoring device for the continuous measurement of the scrubbing liquid flow rate to the control equipment. The monitoring device is to be certified by the manufacturer to accurate within $\pm$ 15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point.

CAUSTICIZING AREA

SN-28, SN-29, SN-30, SN-32, SN-33, and SN-34
Causticizing Area Sources

Source Description

Source SN-28 is used to store the green liquor prior to it being reacted with calcium oxide (lime) to form white liquor. This source group, which was installed or last modified in 1975, consists of two green liquor storage tanks and associated equipment.

Source SN-29, which was installed or last modified in 1947, consists of the green liquor clarifier and associated equipment. The clarifier removes contaminants from the green liquid prior to it being sent to the slaker.

Source SN-30 is the dregs washer. The contaminants removed at sources SN-28 and SN-29 are washed at the dregs washer prior to being discarded.

Source SN-32, which was installed or last modified in 1981, consists of five causticizers and their associated equipment. White liquor from the slaker passes through the causticizer prior to being sent to storage.

Source SN-33, which was installed or last modified in 1947, consists of four white liquor storage tanks and their associated equipment. After the white liquor is clarified, it may be stored prior to usage in the mill.

Source SN-34, which was installed or last modified in 1983, consists of two white liquor clarifiers and associated equipment. The lime mud which was formed in the slaker and the causticizer is removed from the white liquor in one of the two clarifiers. The lime mud is sent to storage and washing (considered to be a source of de minimis emissions). The white liquor is then sent to storage.

No control equipment is associated with any of these sources.

Specific Conditions

84. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. Compliance with these emission rates will be determined through compliance with the limit on the amount of lime that may be processed at this facility.

SN	Pollutant	lb/hr	tpy
28, 29, 30, 32, 33, & 34	VOC	7.4	31.2
	TRS	0.3	0.8

85. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of lime that may be processed at this facility.

SN	Pollutant	lb/hr	tpy
28, 29, 30, 32, 33, & 34	Acetaldehyde	0.34	1.34
	Acrolein	0.03	0.03
	Ammonia**	67.87	297.24
	Benzene	0.05	0.05
	Dimethyl Disulfide*	0.11	0.46
	Dimethyl Sulfide*	0.02	0.06
	Methanol	5.98	26.11
	Methyl Ethyl Ketone	0.07	0.14
	Methyl Isobutyl Ketone	0.05	0.05
	Methyl Mercaptan*	0.04	0.10
	Styrene	0.06	0.06
	Toluene	0.06	0.06
	Xylene	0.06	0.06

*Component of TRS.
**Non-criteria, non-VOC pollutant.

SN-03
Lime Kiln

Source Description

The lime kiln was installed or last modified in 1967. The lime kiln is used to regenerate the calcium oxide used in the slaker from the lime mud which is separated from the white liquor.

A wet scrubber is used to control the emissions of sulfur dioxide and particulate matter from the lime kiln. A CEM is used to track the emissions of TRS from the lime kiln. Annual testing for particulate matter is also required for the lime kiln.

The facility is permitted to fire #6 fuel oil at any time at this source. The facility is also allowed to use natural gas to fire the lime kiln at any time.

Specific Conditions

86. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-03. Compliance with these emission rates will be demonstrated through compliance with fuel usage limits, the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this lime kiln, and the required testing.

Pollutant	lb/hr	tpy
PM_{10}	34.9	152.9
SO_2	17.4	76.3
VOC	5.1	22.3
CO	35.0	153.3
NO_x	44.8	196.0
Pb	1.1	4.5

87. Pursuant to §19.501 et seq and §19.804 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-03. Compliance with these emission rates will be demonstrated through compliance with fuel usage limits, the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this lime kiln, and the required CEMS. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	7.4	19.1

88. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions from source SN-03 shall not exceed 40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 10% oxygen by volume.

89. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-03 as measured by EPA Reference Method 9 except that emissions greater than 20% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 90.

90. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-03 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

91. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-03. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with fuel usage limits, the limit on the amount of lime that may be processed at this facility, and proper operation of the control equipment associated with this lime kiln.

Pollutant	lb/hr	tpy
PM	70.0	306.6
Acetaldehyde	0.39	1.71
Acetone	0.51	2.23
Acrolein	0.02	0.08
Antimony Compounds	0.001	0.001
Arsenic Compounds	0.001	0.002
Benzene	0.03	0.12
Beryllium Compounds	0.001	0.002
Cadmium Compounds	0.006	0.023
Carbon Disulfide	0.05	0.19
Chromium Compounds	0.020	0.050
Cobalt Compounds	0.003	0.014
Dimethyl Disulfide*	0.15	0.65
Dimethyl Sulfide*	1.45	6.34
Formaldehyde	0.04	0.14
Hydrogen Chloride**	0.56	2.45
Hydrogen Fluoride**	0.03	0.12
H_2S*	1.9	8.3

Pollutant	lb/hr	tpy
Lead Compounds	0.019	0.082
Manganese Compounds	0.164	0.72
Mercury Compounds	0.002	0.008
Methanol	3.46	15.13
Methyl Ethyl Ketone	0.04	0.14
Methyl Isobutyl Ketone	0.01	0.04
Nickel Compounds	0.013	0.055
POM	0.01	0.01
Selenium Compounds	0.001	0.001
Styrene	0.02	0.06
Toluene	0.09	0.39
Xylene	0.07	0.29

*Component of TRS.
**Non-VOC, non-HAP, non-criteria pollutant.

92. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall only burn #6 fuel oil and pipeline quality natural gas at source SN-03.

93. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not burn in excess of 4.38 million gallons of #6 fuel oil in any consecutive twelve month period at source SN-03.

94. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of fuel oil fired at SN-03 in order to demonstrate compliance with Specific Condition 93 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

95. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing for particulate matter emissions from source SN-03 using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and take place no less than 9 months and no more than 15 months apart.

96. Pursuant to §19.703 and §19.804 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a Continuous Emissions Monitoring System (CEMS) at source SN-03 for TRS. The CEM standards which the permittee is required to comply with may be found in Appendix A.

97. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.443(d)(4), if the lime kiln is used as a HAP control device, the permittee shall introduce the HAP emission stream from the from the closed vent system into the flame zone of the lime kiln or with the primary fuel.

98. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.443(e)(1), if the lime kiln is used as a HAP control device, periods of excess emissions reported under §63.455 shall not be a violation of §63.443(d)(4) provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed one percent for the lime kiln.

SN-31
Lime Handling Source Group

Source Description

The lime handling source group consists of a hot lime chain, a lime bucket elevator, a lime crusher, reburn lime silo, and associated equipment. A baghouse was installed in late 1997 or early 1998 to control the emissions from the lime handling operations.

Specific Conditions

99. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-31. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this source, and the testing requirements for this source.

Pollutant	lb/hr	tpy
PM_{10}	1.0	4.4

100. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-31. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this source, and the testing requirements for this source.

Pollutant	lb/hr	tpy
PM	1.0	4.4

101. Pursuant to §18.503 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed 5% opacity from source SN-31 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 102.

102. Pursuant to§18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall conduct weekly observations of the opacity from source SN-31 and keep a record of these observations. If visible emissions are detected, the permittee shall take immediate action to identify and to correct the cause of the visible emissions. After any necessary corrective action has taken place, the permittee shall conduct another observation of the opacity from source SN-31 to confirm that no visible emissions are present. If corrective action was needed, the permittee shall record the cause of the visible emissions, the corrective action taken, and if visible emissions were observed afterwards. These records shall be kept on site and made available to Department personnel upon request.

SN-02
Slaker

Source Description

The slaker was installed or last modified in 1980. Clarified green liquor, fresh lime, and reburned lime are reacted in the slaker to form sodium hydroxide and calcium carbonate. A wet scrubber is used to control the emissions from the slaker.

Specific Conditions

103. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-02. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this source, and the testing requirements.

Pollutant	lb/hr	tpy
PM_{10}	5.0	21.9
VOC	3.3	14.2
TRS	0.1	0.2

104. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-02 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 105.

105. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-02 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

106. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-02. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be shown through compliance with the limit on the amount of lime that may be processed at this facility as well as proper operation of the control equipment associated with this source.

Pollutant	lb/hr	tpy
PM	5.0	21.9
Acetaldehyde	0.26	1.11
Ammonia**	67.87	297.24
Dimethyl Disulfide*	0.05	0.20
Methanol	2.90	12.71
Methyl Ethyl Ketone	0.02	0.09
Styrene	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS.
**Non-VOC, non-HAP, non-criteria pollutant.

NCG SYSTEM

SN-12 and SN-14
NCG Incinerator and Back-Up Flare

Source Description

The NCG Incinerator was installed or last modified in 1988. This natural gas fired source incinerates the non-condensible gases from the multiple effect evaporator and the turpentine recovery system. (NOTE: The NCGs from the digesters are routed through the turpentine recovery system.) Source SN-14 was installed or last modified in 1992. The back-up flare is maintained in the event of primary incinerator failure.

There are two special requirements for this source because source SN-27 is subject to 40 CFR Part 60, Subpart BB. These requirements are outlined in Specific Conditions 137 and 138. The increase in VOC emissions from this source is due to the method of calculation. Due to discrepancy in testing methods, the total of HAPs which are also VOCs is often higher than the VOC tested rate.

Source SN-14 meets the definition of an enclosed combuster contained in 40 CFR §60.751 and therefore is not subject to the provisions for an open flame type flare contained in 40 CFR §63.11.

Sources SN-12 and SN-14 are subject to the applicable requirements of 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry.*

Specific Conditions

107. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the combined emission rates set forth in the following table at SN-12 and SN-14 when firing natural gas. Compliance with these emission rates will be determined through compliance with fuel usage limits as well as maintaining the temperature and the residence time required by 40 CFR Part 60, Subpart BB.

International Paper Company
CSN: 52-0013 Permit #:725-AOP-R1

SN	Pollutant	lb/hr	tpy
12	PM_{10}	0.2	0.9
	SO_2	10.9	15.2
	VOC	4.0	17.3
	CO	9.4	41.1
	NO_x	7.3	32.1
	TRS	1.8	4.3

SN	Pollutant	lb/hr	tpy
14	PM_{10}	0.2	0.2
	SO_2	544.8	74.3
	VOC	3.0	3.1
	CO	9.4	5.7
	NO_x	7.3	4.4
	TRS	7.6	2.3

108. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from sources SN-12 and SN-14 as measured by EPA Reference Method 9 except that emissions greater than 20% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 111.

109. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at sources SN-12 and SN-14 when firing natural gas. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be shown through compliance with fuel usage limits and maintaining the temperature and the residence time required by 40 CFR Part 60, Subpart BB.

SN	Pollutant	lb/hr	tpy
12	PM	0.2	0.9
	Acetone	1.42	6.22
	Benzene	0.08	0.19
	Cumene	0.04	0.14
	Formaldehyde	0.80	2.04
	Methanol	1.96	8.58
	Methyl Ethyl Ketone	0.01	0.02
	Styrene	0.01	0.02
	Xylene	0.01	0.01
14	PM	0.2	0.2
	Acetone	1.42	0.85
	Benzene	0.08	0.03
	Cumene	0.04	0.01
	Formaldehyde	0.80	0.24
	Methanol	1.96	1.89
	Methyl Ethyl Ketone	0.01	0.01
	Styrene	0.01	0.01
	Xylene	0.01	0.01

110. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, pipeline quality natural gas shall be the only fuel fired at source SN-12.

111. Pursuant to §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, daily observations of the opacity from sources SN-12 and SN-14 (when operating) shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the excess visible emissions. After corrective action has been taken, another observation of the opacity from source SN-12 shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emissions observations, the cause of any excess visible emissions, the corrective action taken, and if excess visible emissions were present after corrective action was taken. These records shall be kept on site and made available to Department personnel upon request.

112. Pursuant to 40 CFR §60.283(a)(1)(iii) and §19.304 and §19.804 of Regulation 19, the permittee shall combust all gases from source SN-27 at source SN-12 or as allowed at source SN-14 at a minimum temperature of 1200°F for a minimum of 0.5 seconds.

113. Pursuant to 40 CFR §60.284(b)(1) and §19.304 and §19.804 of Regulation 19, the permittee shall install, calibrate, maintain, and operate a monitoring device which measures and records the combustion temperature of the gases at SN-12 or SN-14. The monitoring device is to be certified by the manufacturer to be accurate within ± 1% of the temperature being measured.

114. Pursuant to §19.705 of Regulation 19, 40 CFR 70.6, and/or A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and §18.1004 of Regulation 18, the NCG Back-Up Flare shall not be operated in excess of 1200 hours in any consecutive twelve month period.

115. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, or §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain records of the hours of operation of source SN-14 in order to demonstrate compliance with Specific Condition 114 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request.

116. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.443(d), the NCG Incinerator (SN-12) shall meet one of the following requirements in order to achieve the overall HAP emission reductions.

    1. Reduce total HAP emissions by 98% or more by weight;
    2. Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 ppm or less by volume, corrected to 10% oxygen on a dry basis; or
    3. Reduce total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 1600°F and a minimum residence time of 0.75 seconds.

117. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.443(d)(3), the NCG Back-Up Flare (SN-14) shall meet a minimum temperature requirement of 1600°F and a minimum residence time of 0.75 seconds in order to achieve the overall HAP emissions reductions.

118. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.443(e)(1), periods of excess emissions shall not be a violation provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed one percent.

119. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.11(b)(1), the permittee shall monitor the NCG Back-Up Flare (SN-14) to assure that the flare is operated and maintained in conformance with its design.

120. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.11(b)(3), the NCG Back-Up Flare shall be operated at all times when emissions are vented to it except for periods of startup, shutdown, and malfunction.

121. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(b), the permittee shall install, calibrate, certify, and maintain (according to manufacturer's specifications) a continuous monitoring system (CMS) on the NCG Incinerator and the NCG Back-Up Flare. The CMS shall be operated to measure the temperature in the firebox in order to ensure the efficient incineration of the non-condensible gases.

122. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(n), during the performance test on the NCG Incinerator, the permittee shall establish a minimum temperature value or range in order to demonstrate continuous compliance with the destruction requirement or outlet HAP (as methanol) concentration requirement.

123. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(o), the permittee shall operate the NCG Incinerator and the NCG Back-Up Flare consistent with the minimum operating temperatures as established. Operation of either control device below the minimum temperature value (caused by events other than those in the facility's startup, shutdown, and malfunction plan) shall constitute a violation of the applicable emission standard and be reported as a period of excess emissions except as provided for in Specific Condition 118.

124. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457(a), the permittee shall perform an initial performance test by October 15, 2001, on the NCG Incinerator (SN-12) to ensure that the control device meets one of the requirements listed in Specific Condition 117. If compliance with the minimum temperature and residence time standard cannot be demonstrated through calculations, an initial performance test shall be conducted in order to demonstrate compliance with either the 98% reduction requirement or the 20 ppmv corrected to 10% O_2 outlet HAP (as methanol) concentration requirement.

125. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457, the permittee shall comply with the following requirements if the NCG Incinerator (SN-12) can not meet the minimum temperature and residence time requirements as specified in Specific Condition 117.

A. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457(f), the permittee shall measure methanol concentration at the outlet of the NCG Incinerator (SN-12) in order to demonstrate compliance with the total HAP emission reduction or outlet concentration requirements during the initial performance test.

B. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457(i), the permittee shall sample the vent gas stream out of the NCG Incinerator (SN-12) during the initial performance test using Reference Method 308 as identified in 40 CFR Part 63, Subpart S in order to demonstrate compliance with the percent reduction requirement.

C. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457(k), the permittee shall correct the methanol concentration measured at the outlet of the NCG Incinerator (SN-12) to 10% O_2 using the following equation in order to demonstrate compliance with the 20 ppmv concentration requirement.

$$\text{Methanol ppm (10\% } O_2) = \frac{\text{Methanol ppm (dry basis, actual measured } O_2\%) * 10.9\%}{(20.9\% - \text{Actual measured } O_2\%\text{, dry basis})}$$

POWER BOILERS

SN-13
Cogeneration Unit

Source Description

The cogeneration unit was installed or last modified in 1990. The cogeneration unit consists of a natural gas fired turbine and a natural gas fired duct burner. The cogeneration unit is used to produce power for use throughout the facility.

This source underwent PSD review for emissions of NO_x and CO in permit #725-AR-2. Steam injection and low NO_x burners are used to reduce the NO_x emissions from this unit.

The cogeneration unit is subject to the provisions of 40 CFR Part 60, Subpart GG. The initial testing required by this NSPS subpart has been performed.

Specific Conditions

126. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-13 when firing natural gas. Compliance with these emission rates will be shown through compliance with the fuel usage limitations.

Pollutant	lb/hr	tpy
PM_{10}	5.6	24.6
SO_2	0.4	1.5
VOC	2.8	12.1

127. Pursuant to §19.501 et seq and §19.901 et seq of Regulation 19, and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at source SN-11. Compliance with these emission rates will be shown through compliance with fuel usage limitations and the use of steam injection at this source.

Pollutant	lb/hr	tpy
CO	51.6	226.2
NO_x	93.3	408.8

128. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-13. Compliance with these emission rates will be shown through compliance with the fuel usage limitations.

Pollutant	lb/hr	tpy
PM	5.6	24.6

129. Pursuant to §18.503 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed 5% opacity from source SN-13 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 130.

130. Pursuant to §19.705 and §19.901 et seq of Regulation 19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, pipeline quality natural gas shall be the only fuel used to fire this source.

131. Pursuant to §19.705 and §19.901 et seq of Regulation 19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, natural gas usage at the gas turbine shall not exceed 351 Mscf/hr.

132. Pursuant to §19.705 and §19.901 et seq of Regulation 19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, natural gas usage at the duct burner shall not exceed 238 Mscf/hr.

133. Pursuant to §19.705 and §19.901 et seq of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall continue to maintain a separate strip chart recorder to measure the gas used by the gas turbine and the duct burner. The recorders shall be inspected and adjusted once every twelve hours. The strip chart shall also measure the date and the time in addition to the gas flow. The strip charts shall be maintained on site for at least two years and shall be made available to Department personnel upon request.

134. Pursuant to §19.703 and §19.901 et seq of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a continuous emissions monitoring systems for CO and NO_x at source SN-13. The standards for the CEMS may be found in Appendix A.

135. Source SN-13 is subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart GG, *Standards of Performance for Stationary Gas Turbines* due to an installation date of 1990 and a heat input at peak load greater than 10.7 gigajoules per hour. A copy of Subpart GG has been placed in Appendix B of this permit. The important requirements of this subpart are outlined in Specific Conditions 136 through 141.

136. Pursuant to 40 CFR 60.332(a)(2) and §19.304 of Regulation 19, the permittee shall not cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of 150 ppm (at 15% oxygen and on a dry basis).

137. Pursuant to 40 CFR 60.332(f) and §19.304 of Regulation 19, the limit set forth in Specific Condition 136 may be exceeded when ice fog is deemed to be a traffic hazard by the owner or operator of the gas turbine.

138. Pursuant to 40 CFR 60.333(a) and §19.304 of Regulation 19, the permittee shall not cause from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015% by volume at 15% oxygen and on a dry basis. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 139.

139. Pursuant to 40 CFR 60.333(b) and §19.304 of Regulation 19, the permittee shall not burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8% by weight.

140. Pursuant to 40 CFR 60.334(b) and §19.304 of Regulation 19, the owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine as outlined in the following custom schedule:

    A. Monitoring of fuel nitrogen content shall not be required while natural gas is the only fuel fired in the gas turbine.
    B. Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The approved reference methods are: ASTM D1072-80, ASTM D3031-81, ASTM D3246-81, and ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2). The Gas Processors Association (GPA) test method entitled "Test for Hydrogen Sulfide and Carbon Dioxide in Natural Gas Using Length of Stain Tubes" (GPA Standard 2377-86) is an approved alternative method.
    C. The fuel supply shall be initially sampled daily for a period of two weeks to establish that the pipeline quality natural gas fuel supply is low in sulfur content. This requirement has already been fulfilled by the permittee.

D. After the monitoring required in Item C above, sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted once per quarter for six quarters. This requirement will be fulfilled in January 2000.

E. If after the monitoring required in Item D above, or herein, the sulfur content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.

F. Should any sulfur analysis as required in Items D or E above indicated noncompliance with 40 CFR 60.333, IP Camden shall notify the ADEQ of such excess emissions and the custom schedule shall be re-examined. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.

G If there is a change in fuel supply (supplier), the fuel shall be sampled daily for a period of two weeks to re-establish for the record that the fuel supply is low in sulfur content. If the fuel supply's low sulfur content is re-established, then the custom fuel monitoring schedule can be resumed.

H. Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for a period of three years, and be available for inspection by EPA or ADEQ personnel.

141. Pursuant to 40 CFR 60.334(c)(2) and §19.304 of Regulation 19, for the purpose of reports required under §60.7(c), periods of excess emissions are defined as follows for sulfur dioxide: any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8%.

SN-01
Bark/Gas Boiler

Source Description

Source SN-01 is a 225 MMBTU/hr boiler which was installed in 1947. The main fuels for this boiler are natural gas, tire derived fuel (TDF), bark, and wood waste (sawdust, billet ends, and hardwood pallets). The facility is permitted to burn a limited amount of #6 fuel oil in the event of natural gas curtailment or to test the fuel burning capability of the equipment. The permittee is also allowed to fire sawdust containing small amounts of fuel oil from cleanups, small amounts of waste paper, and small amounts of lubricating oil incidentally burned from contact with the conveyor systems. Emissions from this source are controlled with a wet scrubber. While the source is burning natural gas and/or mill wood waste, water is used as a scrubbing liquor. When #6 fuel oil is being fired, a caustic scrubbing liquid is used.

Annual testing is required for carbon monoxide and particulate matter emissions.

Specific Conditions

142. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-01 when firing natural gas, wood waste, box plant clippings, shredded corrugated cardboard containers, and/or TDF. Compliance with these emission rates will be determined through compliance with the fuel usage and steam production limits, proper operation of the control equipment associated with this boiler, and the testing requirements for this boiler.

Pollutant	lb/hr	tpy
PM_{10}	62.5	273.8
SO_2	3.8	16.6
VOC	28.0	122.6
CO	619.0	2711.0
NO_x	110.0	482.0

143. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-01 when firing #6 fuel oil. Compliance with these emission rates will be determined through proper operation of the control equipment associated with this boiler and the testing requirements for this boiler.

Pollutant	lb/hr	tpy
PM_{10}	54.5	*
SO_2	706.5	*
VOC	1.2	*
CO	7.5	*
NO_x	100.5	*
Pb	0.05	*

*Annual emissions have been bubbled with sources SN-04/05 and SN-06 and may be found in the plantwide conditions.

144. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-01 as measured by EPA Reference Method 9 except that emissions greater than 40% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 145.

145. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-01 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the excess visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if excess visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

146. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-01 when firing natural gas, wood waste, box plant clippings, shredded corrugated cardboard containers, and/or TDF. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the fuel usage and steam production limits and proper operation of the control equipment associated with this boiler.

Pollutant	lb/hr	tpy
PM	75.0	328.5
Acetaldehyde	0.08	0.34
Acrolein	0.01	0.01
Arsenic Compounds	0.007	0.030
Benzene	0.09	0.40
Cadmium Compounds	0.001	0.003
Carbon Disulfide	0.03	0.13
Chloroform	0.01	0.01
Chromium Compounds	0.002	0.006
Cobalt Compounds	0.014	0.060
Cumene	0.01	0.01
Dibenzofurans	0.01	0.01
Formaldehyde	0.17	0.73
Hydrogen Chloride	0.08	0.34
Lead Compounds	0.020	0.086
Manganese Compounds	0.927	4.06
Mercury Compounds	0.001	0.002
Methanol	0.32	1.38

Pollutant	lb/hr	tpy
Methyl Ethyl Ketone	0.01	0.01
Methyl Isobutyl Ketone	0.05	0.21
Methylene Chloride*	0.21	0.92
Napthalene	0.06	0.26
Nickel Compounds	0.018	0.079
n-Hexane	0.13	0.55
Phenols	0.01	0.05
POM	0.07	0.31
Selenium Compounds	0.001	0.004
Styrene	0.01	0.02
Toluene	0.01	0.01
1,1,1-Trichloroethane	0.01	0.01
Trichloroethylene	0.01	0.01
Xylene	0.01	0.01
Zinc	25.67	112.49

*Non-VOC HAP.

147. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at SN-01 when firing #6 fuel oil. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through proper operation of the control equipment associated with this source.

Pollutant	lb/hr	tpy
PM	76.7	**
Antimony Compounds	0.035	**
Arsenic Compounds	0.007	**
Beryllium Compounds	0.001	**
Cadmium Compounds	0.001	**
Chromium Compounds	0.004	**
Cobalt Compounds	0.024	**
Formaldehyde	0.10	**
Hydrogen Chloride*	1.67	**
Hydrogen Fluoride*	0.09	**
Lead Compounds	0.006	**
Manganese Compounds	0.019	**
Mercury Compounds	0.001	**
Nickel Compounds	0.161	**
POM	0.01	**
Selenium Compounds	0.002	**

*Non-VOC, non-criteria pollutant
**Annual emissions have been bubbled with sources SN-04/05 and SN-06 and may be found in the plantwide conditions.

148. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall only fire pipeline quality natural gas, bark, wood waste (sawdust, billet ends, and hardwood pallets), TDF, sawdust containing small amounts of fuel oil from cleanups, small amounts of waste paper, small amounts of lubricating oil incidentally burned from contact with the conveyor systems, box plant clippings, shredded corrugated cardboard containers, and#6 fuel oil at source SN-01. The permittee may also use diesel fuel for starting bark fires.

149. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, steam production shall not exceed 1,314,000,000 pounds in any consecutive twelve month period.

150. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the steam production at source SN-01 in order to demonstrate compliance with Specific Condition 149 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual total shall be submitted to the Department in accordance with General Provision 7.

151. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-31,1 and 40 CFR 70.6, the permittee shall not fire in excess of 210 tons of TDF at source SN-01 per week.

152. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of TDF fired at source SN-01 in order to demonstrate compliance with Specific Condition 151 and which may be used by the Department for enforcement purposes. These records shall be updated weekly, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual total shall be submitted to the Department in accordance with General Provision 7.

153. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing for carbon monoxide emissions from source SN-01 using EPA Reference Method 10. These tests shall be conducted in accordance with Plantwide Condition #3 and take place no less than 9 months and no more than 15 months apart.

154. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing for particulate matter emissions from source SN-01 using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and take place no less than 9 months and no more than 15 months apart.

SN-47
Package Boiler

Source Description

Source SN-47 is a package boiler which will be used to provide supplemental steam to various parts of the plant whenever another boiler is out of service for maintenance, etc. This source will only be on site whenever it is needed. The permittee will be required to comply with any applicable NSPS subpart (This will be dependent upon the size of the boiler being used.).

Natural gas will be the only fuel that this source will be permitted to fire. As this source will only be used when another boiler is out of service, there will be no net increase in emissions. Also, restrictions on the amount of fuel that may be fired in this boiler are being taken in order to stay below the PSD significant increase levels.

Specific Conditions

155. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-47. Compliance with these emission rates will be determined through compliance with Specific Condition 159.

Pollutant	lb/hr	tpy
PM_{10}	5.5	6.6
SO_2	0.2	0.2
VOC	0.4	0.4
CO	50.0	60.0
NO_x	25.0	30.0

156. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-47. Compliance with these emission rates will be determined through compliance with Specific Condition 159.

Pollutant	lb/hr	tpy
PM	5.5	6.6

157. Pursuant to §18.503 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed 5% opacity from source SN-47 as measured by EPA Reference Method 9. Compliance with this opacity limit will be demonstrated by compliance with Specific Condition 158.

158. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, pipeline quality natural gas shall be the only fuel used to fire the package boiler.

159. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, natural gas usage shall not exceed 575 MMSCF at source SN-47 in any consecutive twelve month period.

160. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of natural gas fired at source SN-47 in order to demonstrate compliance with Specific Condition 159 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

161. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the heat input capacity of source SN-47 shall not exceed 250 MMBTU/hr.

162. Source SN-47 is potentially subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart Dc - *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*. Source SN-47 will only be subject to this subpart if the facility chooses to install a boiler which has a heat input capacity between 10 MMBTU/hr and 100 MMBTU/hr. The important requirements of this subpart are outlined in Specific Conditions 163 and 164. A copy of Subpart Dc has been included in Appendix C.

163. Pursuant to 40 CFR 60.48c(g) and §19.304 of Regulation 19, the permittee shall record and maintain records of the amount of natural gas combusted during each day.

164. Pursuant to 40 CFR 60.48c(i) and §19.304 of Regulation 19, the permittee shall maintain the records required by Specific Condition 163 for a period of two years following the date of such record.

165. Source SN-47 is potentially subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart Db, *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units*. This source will be subject to this subpart if the facility chooses to install a boiler which has a heat input capacity greater than 100 MMBTU/hr. The important requirements of this subpart are outlined in Specific Conditions 166 through 183. A copy of subpart Db has been included in Appendix D.

166. Pursuant to 40 CFR 60.44b(a) and §19.304 of Regulation 19, the permittee shall not cause to be discharged to the atmosphere any gases that contain oxides of nitrogen in excess of 0.10 lb/MMBTU (expressed as NO_2).

167. Pursuant to 40 CFR 60.44b(a) and §19.304 of Regulation 19, the heat release rate shall not exceed 70,000 BTU/hr ft^3.

168. Pursuant to 40 CFR 60.46b(h) and §19.304 of Regulation 19, the oxides of nitrogen standards set forth in Specific Condition 166 shall apply at all times including periods of startup, shutdown, or malfunction.

169. Pursuant to 40 CFR 60.46b(e) and §19.304 of Regulation 19, to determine compliance with the emission limits for nitrogen oxides required under §60.44b, the owner or operator of an affected facility shall conduct the performance test as required under §60.8 using the continuous system for monitoring nitrogen oxides under §60.48b (Specific Condition 172).

170. Pursuant to 40 CFR 60.46b(e)(1), §19.304 and §19.702 of Regulation 19, and 40 CFR Part 52, Subpart E, for the initial compliance test, nitrogen oxides from the steam generating unit are monitored for 30 successive steam generating operating days and the 30-day average emission rate is used to determine compliance with the nitrogen oxides emission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

171. Pursuant to 40 CFR 60.46b(e)(4), following the date on which the initial performance test is completed or required to be completed under §60.8 of this subpart, whichever date comes first, the owner or operator of an affected facility which has a heat input capacity of 73 MW (250 million BTU/hr) or less and which combusts natural gas shall upon request determine compliance with the nitrogen oxide standards under §60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, nitrogen oxides emission data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports but will not be used to determine compliance with the nitrogen oxides emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

172. Pursuant to 40 CFR 60.48b(b), §19.304 and §19.703 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall install, calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system.

173. Pursuant to 40 CFR 60.48b(c) and §19.304 of Regulation 19, the continuous monitoring system required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

174. Pursuant to 40 CFR 60.48b(c) and §19.304 of Regulation 19, the 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor required by paragraph (b) of this section shall be expressed in ng/J or lb/million BTU heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(b). At least 2 data points must be used to calculate each 1-hour average.

175. Pursuant to 40 CFR 60.48b(e) and §19.304 of Regulation 19, the procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring system.

176. Pursuant to 40 CFR 60.48b(e)(2) and §19.304 of Regulation 19, the span value for the nitrogen oxides emission monitor shall be 500 ppm.

177. Pursuant to 40 CFR 60.49b(a) and §19.304 of Regulation 19, the permittee shall submit notification of initial startup as provided by §60.7. This notification shall include the following:

    a. The heat design input capacity of the affected facility and identification of the fuels to be combusted in the affected facility.

    b. If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§60.44b.

    c. The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired.

178. Pursuant to 40 CFR 60.49b(d) and §19.304 of Regulation 19, the owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for each calendar quarter. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

179. Pursuant to 40 CFR 60.49b(g) and §19.304 of Regulation 19, except as provided for under paragraph (p) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under §60.44b shall maintain records of the following information for each steam generating unit operating day.

    a. Calendar date

    b. The average hourly nitrogen oxides emission rates (expressed as NO_2) (ng/J or lb/million BTU heat input) measured or predicted

    c. The 30-day average nitrogen oxides emission rates (ng/J or lb/million BTU heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.

    d. Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken.

e. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective action taken.

f. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

g. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

h. Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

i. Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.

j. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

180. Pursuant to 40 CFR 60.49b(h)(2) and §19.304 of Regulation 19, the owner or operator of any affected facility that is subject to the nitrogen oxides standards of §60.44b, combusts natural gas, has a heat input capacity less than 73 MW (250 million BTU/hr), and is required to monitor nitrogen oxides emissions on a continuous basis under §60.48b(g)(1) or steam generating unit operating conditions under §60.48b(g)(2), shall submit excess emission reports for any calendar quarter during which there are excess emissions from the affected facility. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period.

181. Pursuant to 40 CFR 60.49b(h)(4) and §19.304 of Regulation 19, for purposes of §60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average nitrogen oxides emission rate, as determined under §60.46b(e), which exceeds the applicable emission limits in §60.44b.

182. Pursuant to 40 CFR 60.49b(i) and §19.304 of Regulation 19, the owner or operator of any affected facility subject to the continuous monitoring requirements for nitrogen oxides under §60.48b shall submit a quarterly report containing the information recorded under paragraph (g) of this section. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

183. Pursuant to 40 CFR 60.49b(o) and §19.304 of Regulation 19, all records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

184. Pursuant to§19.705 of Regulation 19, and 40 CFR 70.6, the permittee shall maintain records of the dates which the package boiler was brought on site, when operation of the boiler began, when operation of the boiler ceased, and when the boiler was removed from this facility. The permittee shall also maintain records of the heat input capacity of the boiler and compliance date with any applicable NSPS requirements. These records shall be updated within one week of the boiler being brought in or taken out, kept on site for a minimum of two years following the date of such record, and shall be made available to Department personnel upon request.

185. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall only operate source SN-47 when another boiler is out of operation. However, if a boiler is subject to 40 CFR Part 60, Subpart Dc or is not subject to any NSPS subpart, the permittee may startup SN-47 a maximum of 72 hours prior to the boiler it is temporarily replacing is off line and the permittee may also operate SN-47 for a maximum of 48 hours after the permanent boiler is brought back on line. The permittee may maintain a warming fire in the boiler whenever it is on site in the event that the ambient temperature falls below freezing.

186. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which will demonstrate compliance with Specific Condition 185 and which may be used by the Department for enforcement purposes. These records shall be kept on site and made available to Department personnel upon request.

PAPER MILL

SN-35
Paper Mill Source Group

Source Description

The paper mill source group consists of the pulp and whitewater storage tanks and chests in the stock preparation area and all sections of the paper machine from the headbox to the reel for all three paper machines. It is in the paper mill source group where the pulp is converted to paper on one of the three machines. No control equipment is associated with the paper mill source group.

Specific Conditions

187. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-35. Compliance with these emission rates will be determined through compliance with the limit on the amount of paper that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	161.6	707.6

188. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-35. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the amount of paper that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	2.05	8.98
Acrolein	0.27	1.18
Benzene	0.02	0.09
Chlorobenzene	0.04	0.17
Ethylene Glycol	0.44	1.92
Formaldehyde	1.23	5.37
Methanol	75.12	329.00
Methyl Ethyl Ketone	0.46	1.99
Methyl Isobutyl Ketone	0.04	0.16
Methylene Chloride*	0.24	1.03
Napthalene	0.14	0.62
n-Hexane	0.02	0.09
Styrene	0.10	0.42
Tetrachloroethylene*	0.31	1.34
Toluene	0.02	0.09
1,2,4-Trichlorobenzene	0.56	2.41
1,1,1-Trichloroethane	0.09	0.40
1,1,2-Trichloroethane	0.11	0.46
Xylenes	0.07	0.28

*Non-VOC non-criteria pollutant

189. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not produce more than 438,000 tons of paper at the paper mill in any consecutive twelve month period.

190. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of paper produced at source SN-35 in order to demonstrate compliance with Specific Condition 189 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

WASTEWATER COLLECTION & TREATMENT AERATION STABILIZATION BASIN
PROCESS SEWER NON-POINT SOURCES

SN-16
Aeration Stabilization Basin & Process Sewer Non-Point Sources

Source Description

The waste water treatment process at the Camden mill consists of a wetlands area, collection, screening, clarification, neutralization, aeration, settling, sludge dewatering, and disposal.

All process water is collected from the various process area sumps and pumped through the process sewer mains. The sewer mains also receive landfill leachate and surface drainage from culverts in various areas of the site.

The emissions from source SN-16 are related to the amount of pulp that is produced. Therefore, compliance with the emission rates will be demonstrated through compliance with the limit on the amount of ADTP that can be produced.

Source SN-16 is subject to the provisions of 40 CFR Part 63, Subpart S. The pulping condensate streams from some but not necessarily all of the following equipment will be collected in a hard piping system and routed to SN-16 for biological treatment.

A. Evaporator Hot Well
B. Evaporator Surface Condenser
C. Turpentine Decanter Underflow
D. Turpentine Storage Underflow
E. Blow Tank Condenser Condensate
F. NCG Drains

Specific Conditions

191. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-16. Compliance with these emission rates will be demonstrated through compliance with the amount of ADTP that may be produced.

Pollutant	lb/hr	tpy
VOC	9.1	39.9
TRS	1.2	4.1

192. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-16. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with the amount of ADTP that may be produced.

Pollutant	lb/hr	tpy
Acetaldehyde	1.36	5.96
Carbon Disulfide	0.11	0.45
Dimethyl Disulfide*	0.06	0.23
Dimethyl Sulfide*	0.85	3.70
H_2S*	0.1	0.1
Methanol	0.68	2.96
Methyl Ethyl Ketone	0.03	0.11
Methyl Isobutyl Ketone	0.01	0.03
Methyl Mercaptan*	0.02	0.05

*Component of TRS.

193. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.446(b), the permittee shall collect the pulping condensate streams from some but not necessarily all of the following equipment in a hard piping system and deliver the condensate streams to the ASB for biological treatment.

A. Evaporator Hot Well
B. Evaporator Surface Condenser
C. Turpentine Decanter Underflow
D. Turpentine Storage Underflow
E. Blow Tank Condenser Condensate
F. NCG Drains

194. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.446(e)(2), the permittee shall discharge the collected pulping process condensate streams below the liquid surface of the Aerated Stabilization Basin (SN-16).

195. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.446(e)(3), the permittee shall demonstrate one of the following removal efficiencies in order to demonstrate compliance with the total HAP treatment requirement. Compliance shall be met by removing at least 6.6 lb/ODTP of HAPs as measured as methanol, methyl ethyl ketone, acetaldehyde, and propionaldehyde.

A. 92% destruction of total HAPs (with methanol as a surrogate)
B. (6.6 + 7.2R) lb/ODTP of total HAPs destroyed
where: $R = \frac{\text{(sum of non methanol HAPs, concentration)}}{\text{(sum of total HAPs, concentration)}}$

Note: EPA has verbally agreed in meetings with industry representatives to allow a lb/ODTP removal standard as an alternative to the 92% destruction requirement. For non-bleach mills, this alternative removal requirement is (6.6 + 7.2R) lb/ODTP, where R = (sum of non-methanol HAPs, concentration)/(sum of total HAPs, concentration)

196. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(j)(1) and (m), the permittee shall monitor the following parameters on a daily basis from source SN-16, ASB. The permittee may install and operated a CMS to monitor other appropriate operating parameters that demonstrate continuous compliance with the control requirements.

A. Composite daily sample of outlet soluble BOD_5 concentration to monitor for maximum daily and maximum monthly average;
B. Mixed liquor volatile suspended solids;
C. Horsepower of aerator unit(s);
D. Inlet liquid flow; and
E. Liquid temperature.

Note: The industry and EPA are working to finalize a procedure which would permit the use of the lb/ODTP option for demonstrating compliance with the HAP removal requirement for open biological treatment systems, allow flexibility in defining alternate operating parameters to monitor, such as COD, to demonstrate continuous compliance, and provide guidance on acceptable averaging periods. In accordance with the ongoing discussions with EPA, the mill will perform a baseline characterization of the waste treatment system to establish thoroughly mixed zones and other appropriate emissions modeling system parameters. Mill-specific procedures for initial performance and

continuous compliance demonstrations will be submitted to the department after the industries discussions with EPA are complete. A rule change is expected.

197. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(j)(2), the permittee shall obtain daily inlet and outlet grab samples from the ASB (SN-16) in order to have the HAP data available to perform the quarterly percent reduction tests and the compliance percent reduction tests. The following procedures shall be followed with the liquid samples.

A. Store the samples for 5 days. The 5 day storage is required since the soluble BOD_5 test requires 5 days to obtain results. If the results of the soluble BOD_5 test are outside of the range established during the initial performance test, then archive sample shall be used to perform the percent reduction test.

B. Perform the percent reduction test procedures within 45 days after the beginning of each quarter as follows.

i. The percent reduction test performed in the first quarter (annually) shall be performed for HAPs and methanol and the percent reduction obtained from the test shall be at least as great as the total HAP reduction specified in Specific Condition 195.

ii. The remaining quarterly percent reduction tests shall be performed for methanol and the percent reduction obtained shall be at least as great as the methanol reduction determined in the previous first quarter test.

iii. The parameter values used to calculate the percent reductions shall be parameter values measured per Specific Condition 196.

Note: The industry and EPA are working to finalize a procedure which would permit the use of the lb/ODTP option for demonstrating compliance with the HAP removal requirement for open biological treatment systems, allow flexibility in defining alternate operating parameters to monitor, such as COD, to demonstrate continuous compliance, and provide guidance on acceptable averaging periods. In accordance with the ongoing discussions with EPA, the mill will perform a baseline characterization of the waste treatment system to establish thoroughly mixed zones and other appropriate emissions modeling system parameters. Mill-specific procedures for initial performance and continuous compliance demonstrations will be submitted to the department after the industries discussions with EPA are complete. A rule change is expected.

198. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(n), the permittee shall submit the following information to the Department prior to the initial compliance testing in order to demonstrate compliance with the condensate treatment requirements.

A. The methodology to be used,
B. The parameters to be monitored, and
C. The rationale for using those parameters.

199. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(n), the permittee shall submit the results of the initial performance tests, along with an analysis identifying acceptable parameter ranges for the parameters required to be monitored to the Department upon completion of the required performance tests.

200. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(o), the permittee shall submit to the Department after the initial performance test the methodology to be used to assess periods of excess emissions from the condensate treatment system if the monitored parameters are out-of-range. Instances where emissions are in excess of the appropriate standard, but are caused by events identified in the mill's startup, shutdown, and malfunction plan (required by 40 CFR §63.6) will not be considered in the calculation of periods of excess emissions.

201. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(p), the permittee shall perform all the following requirements when the monitoring parameters specified in Specific Condition 196 are below or above the minimum and maximum operating values as established.

A. Determine the compliance removal efficiency using the percent reduction test procedures specified in 40 CFR §63.457(l) and the monitoring data specified in 40 CFR §63.457(j)(1) that coincide with the time period of the parameter excursion;
B. Steps shall be taken to repair or adjust the operation of the process to end the parameter excursion period; and
C. Steps shall be taken to minimize total HAP emissions to the atmosphere during the parameter excursion period.

202. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457(c)(1), liquid samples shall be collected using the sampling procedures specified in Method 305 of Part 60, appendix A, including the following:

A. Where feasible, samples shall be taken from an enclosed pipe prior to the liquid stream being exposed to the atmosphere; and
B. When sampling from an enclosed pipe is not feasible, samples shall be collected in a manner to minimize exposure of the sample to the atmosphere and loss of HAP compounds prior to sampling.

203. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457 (c)(2), the volumetric flow rate of the entering and exiting liquid streams shall be determined using inlet and outlet flow meters or other methods demonstrated to the Administrator's satisfaction. The volumetric flow rate measurements to determine actual mass removal shall be taken at the same time as the concentration measurements.

204. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457(c)(3), when gathering liquid samples for HAP analysis purposes, the permittee shall conduct a minimum of three test runs that are representative of normal conditions and average the resulting pollutant concentrations. The minimum sampling time for each test run shall be 1 hour and the grab or composite samples shall be taken at approximately equally spaced intervals over the 1 hour test run period. The owner or operator shall use one of the following procedures to determine total HAP or methanol concentration:

    A. Method 305 in Appendix A of this part, adjusted using equation contained in 40 CFR 457(c)(3)(i); or
    B. NCASI Method DI/MEOH-94.02, Methanol in Process Liquids by GC/FID, August 1998, Methods Manual, NCASI, Research Triangle Park, NC, for determining methanol concentrations.

205. Pursuant to §19.304 of Regulation 19 and 40 CFR 457(c)(4), the permittee shall use Method 405.1 of Part 136 to determine soluble BOD_5 in the effluent stream from a biological treatment unit with the modifications contained in §63.457(c)(i) and (ii).

ACTIVE LANDFILLS

SN-36
East Landfill

Source Description

The east landfill is the only active landfill located at this facility. At this time, there are two other landfills which have been closed and no longer accept any plant refuse.

The emissions from this source are limited by the amount of plant refuse that can be accepted by this landfill.

Specific Conditions

206. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-36. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of mill waste that may be placed in the landfill.

Pollutant	lb/hr	tpy
VOC	0.8	3.3
CO	0.1	0.3
TRS	0.1	0.3

207. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of mill waste that may be placed in the landfill.

Pollutant	lb/hr	tpy
Acrylonitrile	0.01	0.02
Benzene	0.01	0.01

Pollutant	lb/hr	tpy
Carbon Disulfide	0.01	0.01
Carbonyl Sulfide	0.02	0.05
Chlorobenzene	0.01	0.01
Chloroform	0.01	0.01
Dimethyl Sulfide*	0.04	0.16
Ethyl Benzene	0.01	0.02
H_2S*	0.1	0.1
Methyl Ethyl Ketone	0.01	0.02
Methyl Isobutyl Ketone	0.01	0.01
Methylene Chloride**	0.01	0.04
Methyl Carpatan*	0.01	0.02
n-Hexane	0.01	0.02
1,1,2,2-Tetrachloroethane	0.01	0.01
Tetrachlorethylene	0.01	0.02
Toluene	0.01	0.03
1,1,1-Trichloroethane**	0.01	0.01
Trichloroethylene	0.01	0.01
Vinyl Chloride	0.01	0.02
Xylene	0.01	0.05

*Includes TRS components which are also considered to be VOCs.
**Component of TRS. Included in the TRS total.

208. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall use source SN-36 for plant refuse only.

209. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, source SN-36 shall not accept in excess of 113,200 cubic yards of plant refuse in any consecutive twelve month period. For the purposes of this permit, 1 uncompacted cubic yard shall equal 300 pounds.

210. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of plant refuse accepted at source SN-36 in order to demonstrate compliance with Specific Condition 209 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

FUEL STORAGE

SN-37
Gasoline Storage Tank

Source Description

Source SN-37 is a horizontal fixed roof tank with a capacity of approximately 1763 gallons. The facility is permitted to store only gasoline at this source. This tank is used to store fuel for the vehicles used around the facility.

Specific Conditions

211. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-37. Compliance with these emission rates will be determined by compliance with Specific Conditions 212 and 213.

Pollutant	lb/hr	tpy
VOC	22.8	0.5

212. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall store only gasoline at source SN-37.

213. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, throughput of gasoline at source SN-37 shall not exceed 39,900 gallons of gasoline in any consecutive twelve month period.

214. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the gasoline throughput at source SN-37 in order to demonstrate compliance with Specific Condition 213 and which may be used by the Department for enforcement purposes. The records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

MILL SHUTDOWN EQUIPMENT

SN-48
Air Compressors

Source Description

The air compressors will be used when one or more of the electrical air compressors is out of service. These air compressors do not include the smaller units which may be found in Group B of the Insignificant Activities List.

Specific Conditions

215. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-48. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 217 and 218.

Pollutant	lb/hr	tpy
PM_{10}	2.0	2.5
SO_2	1.8	2.3
VOC	2.3	2.9
CO	5.9	7.4
NO_X	27.2	34.3

216. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-48. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 217 and 218.

Pollutant	lb/hr	tpy
PM	2.0	2.5
Acetaldehyde	0.05	0.01

Pollutant	lb/hr	tpy
Acrolein	0.01	0.01
Aldehydes	0.06	0.01
Benzene	0.06	0.01
Formaldehyde	0.07	0.01
Napthalene	0.01	0.01
PAH	0.01	0.01
Toluene	0.01	0.01
Xylenes	0.02	0.01

217. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, diesel fuel with a sulfur content not to exceed 3% by weight shall be the only fuel used to fire the air compressors.

218. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not use in excess of 113,400 gallons of diesel fuel at the air compressors in any consecutive twelve month period.

219. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the diesel fuel usage at source SN-48 and the sulfur content of the fuel in order to demonstrate compliance with Specific Conditions 217 and 218 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

220. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall only operate source SN-48 when the electrical air compressors are out of service.

221. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which will demonstrate compliance with Specific Condition 220 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

SN-49
Shutdown Equipment

Source Description

The shutdown equipment will consist mainly of generators which will supply some power to the facility when the mill is in a shutdown mode.

Specific Conditions

222. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-49. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 224, 225, and 227.

Pollutant	lb/hr	tpy
PM_{10}	18.4	0.5
SO_2	17.2	0.5
VOC	27.5	0.7
CO	187.4	4.6
NO_X	261.8	6.3

223. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-49. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 224, 225, and 227.

Pollutant	lb/hr	tpy
PM	18.4	0.5

224. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, diesel fuel with a sulfur content not to exceed 3% by weight and gasoline shall be the only fuels used to fire source SN-49.

225. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not use in excess of 20,520 gallons of diesel fuel at source SN-49 in any consecutive twelve month period.

226. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the diesel fuel usage at source SN-49 and the sulfur content in order to demonstrate compliance with Specific Conditions 224 and 225 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

227. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not use in excess of 805 gallons of gasoline at the source SN-49 in any consecutive twelve month period.

228. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the gasoline usage at source SN-49 in order to demonstrate compliance with Specific Condition 227 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

229. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall only operate source SN-49 during full or partial mill shutdowns. The permittee is allowed to operate this source for up to 48 hours prior to mill shut down and up to 48 after mill operations begin.

230. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which will demonstrate compliance with Specific Condition 229 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

40 CFR Part 63, Subpart S Requirements for the LVHC Source Group and the Condensate Collection System Source Group

LVHC Source Group

Source Description

Non-condensible gases from the following sources are routed through the closed vent system and sent to efficient incineration in either the Lime Kiln (SN-03), the NCG Incinerator (SN-12), or the NCG Back-Up Flare (SN-13). #1 through #7 are associated with other source groups at this facility. Most of the applicable requirements of 40 CFR Part 63, Subpart S, for sources SN-20, SN-21, and SN-27 are under this source group for clarity.

1. Evaporator Hotwell (SN-27)
2. Turpentine Condensers (SN-21)
3. Turpentine Decanter (SN-21)
4. #1 and #2 Low Pressure Feeders (SN-20)
5. Blow Tank (SN-20)
6. After Blow Tank Condenser (SN-20)
7. Turpentine Decanter Foul Condensate Tank (SN-21)
8. Foul Condensate Collection Tank
9. NCG Drain Points

Specific Conditions

231. Pursuant to §19.705 of Regulation 19, 40 CFR 70.6, and/or A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and §18.1004 of Regulation 18, the NCG Pre-Scrubber shall be operated at all times when LVHC gases are being collected and treated in sources SN-03, SN-12, or SN-14. The permittee may bypass this scrubber for 400 hours in any consecutive twelve month period. Fifty hours of this down time may occur when emissions are being vented to source SN-14.

232. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, or §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain records of the hours in which the NCG Pre-Scrubber is bypassed and whether those hours occur when emissions are being vented to source SN-14 in order to demonstrate compliance with Specific Condition 231 and which may be used by the Department for enforcement purposes. These records shall be updated by the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

233. Pursuant to 40 CFR §63.443(a)(1)(i), §19.304 and §19.705 of Regulation 19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the owner or operator of each pulping system using the kraft process subject to the requirements of this subpart shall control the total HAP emissions from each LVHC system.

234. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.450(b), the permittee shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures specified in §63.457(e). (Specific Condition 238) Each enclosure or hood opening closed during the initial performance test specified in §63.457(a) (Specific Condition 241) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs.

235. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.450(c), the permittee shall maintain the portion of the closed vent system that is operated at positive pressure and located prior to a control device with no detectable leaks as indicated by an instrument reading of less than 500 ppmv above background as measured by the procedures in §63.457(d). This portion includes the LVHC system segments downstream of the ejectors and the NCG Scrubber.

236. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.450(d)(1), the permittee shall install, calibrate, maintain, and operate (according to manufacturer's specifications) a computer controlled valve position flow indicator on each of the following bypass lines that provides a record of the presence of a gas stream flow in the line at least once every 15 minutes.

Turpentine Decanter Bypass Line
#1 and #2 Low Pressure Feeders Bypass Line
Blow Tank Bypass Line
After Blow Tank Condenser Bypass Line
Foul Condensate Collection Tank Bypass Line
NCG Drain Points Bypass Line

237. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.450(d)(2), the permittee shall maintain the valves on the following bypass lines in the closed position and equipped with a seal.

Evaporator Hotwell Bypass Line
Turpentine Condensers Bypass Line

238. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(k)(1), the permittee shall perform a visual inspection of each enclosure opening at least every 30 days to ensure the opening is maintained in the same closed and sealed position as during the performance test except when necessary to use the opening for sampling, inspection, maintenance, or repairs.

239. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(k)(2), the permittee shall conduct a visual inspection of each closed vent system at least every 30 days. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.

240. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(k)(3), the permittee shall perform initial and subsequent annual tests to demonstrate that no detectable leaks are present in each component of the closed-vent system operated at positive pressure. This includes the LVHC system segments downstream of the ejectors and the NCG Scrubber. The tests shall be conducted using the procedure outlined in 40 CFR Part 63.457(d) and:

Method 21, of 40 CFR Part 60, Appendix A; and
The instrument specified in Method 21 shall be calibrated before use according to the procedures specified in Method 21 on each day that leak checks are performed. The following calibration gases shall be used:
Zero air (less than 10 parts per million by volume of hydrocarbon in air); and
A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 parts per million by volume methane or n-hexane.

241. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(k)(4), the permittee shall perform initial and subsequent annual tests to demonstrate that each enclosure opening of the closed-vent system is maintained at negative pressure. The tests shall be conducted using one of the following procedures.

An anemometer to demonstrate flow in the enclosure opening.
Measure the static pressure across the opening.
Smoke tubes to demonstrate flow into the enclosure opening.
Any other industrial ventilation test method demonstrated to the Department's satisfaction.

242. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(k)(5), the permittee shall inspect the valve and seal on the following bypass lines at least once every 30 days to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line.

Evaporator Hotwell Bypass Line
Turpentine Condensers Bypass Line

243. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(k)(6), the permittee shall undertake the following corrective actions as soon as practicable if an inspection required by paragraphs (k)(1) through (k)(5) of this section(Specific Conditions 238 thru 242) identifies any visible defects in the ductwork, piping, enclosures, or connections to covers, or if an instrument reading of 500 ppm by volume or greater above background is measured, or if any enclosure openings are not maintained at negative pressure.

    A. A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.
    B. The repair or corrective action shall be completed no later than 15 days after the problem is identified. Delay of repair or corrective action is allowed if the repair or corrective action is technically infeasible without a process unit shutdown or if the permittee determines that the emissions resulting from immediate repair would be greater than the emissions likely to result from the delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

244. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.454(b), the permittee shall prepare and maintain a site-specific inspection plan for each applicable enclosure opening and closed-vent system including drawings or schematics of the components of the affected equipment. The following information shall be recorded for each inspection.

    A. Date of inspection;
    B. The equipment type and identification;
    C. Results of the negative pressure tests for enclosures;
    D. Results of leak detection tests;
    E. The nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);
    F. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;
    G. Repair methods applied in each attempt to repair the defect or leak;

H. The reason for the delay if the defect or leak is not repaired within 15 days after discovery;
I. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;
J. The date of successful repair of the defect or leak;
K. The position and duration of opening of bypass line valves and the condition of any valve seals; and
L. The duration of the use of bypass valves on computer controlled valves.

Condensate Collection System Source Group

Source Description

The pulping condensates from some, but not necessarily all, of the following equipment will be collected in hard piping system and routed to the Aerated Stabilization Basin (ASB, source SN-16) for biological treatment.

1. Evaporator Hot Well
2. Evaporator Surface Condenser
3. Turpentine Decanter Underflow
4. Turpentine Storage Underflow
5. Blow Tank Condenser Condensate
6. NCG Drains

Specific Conditions

245. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.446(b) and (c)(3), the permittee shall collect some, but not necessarily all, of the pulping condensate streams from the following equipment in a hard piping system in order to achieve a total HAP (as methanol) mass collected of 7.2 lb/ODTP. Compliance with the total HAP mass collected requirement shall be demonstrated on a 15-day rolling average basis.

    A. Evaporator Hot Well
    B. Evaporator Surface Condenser
    C. Turpentine Decanter Underflow
    D. Turpentine Storage Underflow
    E. Blow Tank Condenser Condensate
    F. NCG Drains

246. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.446(d)(1), the collected pulping process condensates shall be conveyed in a closed collection system that is designed and operated to meet the individual drain system requirements specified in 40 CFR 63.960, 63.961, and 63.962 of subpart RR of this part, except closed vent systems and control devices shall be designed and operated in accordance with 40 CFR 63.443(d) and 63.450, instead of in accordance with 40 CFR §63.962(a)(3)(ii), (b)(3)(ii)(A), and (b)(3)(ii)(B)(5)(iii). The closed collection system will meet the specified requirements by being a hard-piped individual drain system per 40 CFR §63.962(a)(2). The Main Foul Condensate Collection Tank and Turpentine Decanter Underflow Collection Tank will be equipped with a water seal per 40 CFR §63.962(b)(2)(i)(A).

247. Pursuant to §19.304 of Regulation 19 and 40 CFR Part §63.446(d)(2), the permittee shall design and operate the Main Foul Condensate Collection Tank and the Turpentine Foul Condensate Collection Tank per the following requirements.

    A. The fixed roof and all openings shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 ppm above background, vented into the LVHC Collection System, and routed to either the Lime Kiln (SN-03), the NCG Incinerator (SN-12), or the NCG Back-Up Flare (SN-14) for incineration.
    B. Each opening shall be maintained in a closed, sealed position at all times when the tank contains pulping process condensates or any HAP removed from a pulping process condensate stream except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.

248. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(a) and (i), the permittee shall install, calibrate, certify, operate, and maintain (according to manufacturer's specifications) a continuous monitoring system (CMS) on the Main Foul Condensate Collection Tank to measure the appropriate parameters that shall be submitted to the Department prior to the initial performance test.

249. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(k)(3), the permittee shall perform initial and subsequent annual tests to demonstrate that no detectable leaks are present in each condensate tank of the closed collection system. The tests shall be conducted using the procedure outlined in 40 CFR Part 63.457(d).

250. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(l)(1), the permittee shall conduct a visual inspection of each condensate closed collection system at least every 30 days. The visual inspections shall verify that appropriate liquid levels in the water seals in the Main Foul Condensate Collection Tank and Turpentine Foul Condensate Collection Tank are being maintained and identify any other defects that could reduce water seal control effectiveness. In addition, the permittee shall visually inspect the unburied portion of the collection system piping to verify that no defects are present.

251. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(l)(2), the Main Foul Condensate Collection Tank and the Turpentine Foul Condensate Collection Tank collection system shall be operated with no detectable leaks as specified in §63.446 (d)(2)(i) (see Specific Condition 246) measured initially and annually by the procedures specified in §63.457(d).

252. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(l)(3), if an inspection required by 40 CFR §63.453(l)(1) (see Specific Condition 250) identifies visible defects in the closed collection system, or if an instrument reading of 500 parts per million or greater above background is measured, the first efforts at repair of the defect will be no later than 5 calendar days after detection and repair will be completed as soon as possible but no later than 15 calendar days after detection unless the repair of the defect requires emptying or temporary removal from service of the collection system. The defect will be repaired the next time the process generating the wastewater stops operation. The repair of the defect will be completed before the process resumes operation.

253. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(n), the permittee shall submit the following information to the Department prior to the initial compliance testing in order to demonstrate compliance with the condensate collection requirements.

    A. The methodology to be used,
    B. The parameters to be monitored, and
    C. The rationale for using those parameters.

254. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(n), the permittee shall submit the results of the initial performance tests, along with an analysis identifying acceptable parameter ranges for the parameters required to be monitored to the Department upon completion of the required performance tests.

255. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(o), the permittee shall submit to the Department the methodology to be used to assess periods of excess emissions from the condensate collection system if the monitored parameters are out-of-range. Instances where emissions are in excess of the appropriate standard, but are caused by events identified in the mill's startup, shutdown, and malfunction plan (required by 40 CFR Part 63.6) will not be considered in the calculation of periods of excess emissions.

256. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.454, the permittee shall prepare and maintain a site-specific inspection plan for each applicable closed collection system including drawings or schematics of the components of the affected equipment. The following information shall be recorded for each inspection.

    A. Date of inspection;
    B. The equipment type and identification;
    C. Results of the negative pressure tests for enclosures;
    D. Results of leak detection tests;
    E. The nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);

F. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;
G. Repair methods applied in each attempt to repair the defect or leak;
H The reason for the delay if the defect or leak is not repaired within 15 days after discovery;
I. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;
J. The date of successful repair of the defect or leak;
K. The position and duration of opening of bypass line valves and the condition of any valve seals; and
L. The duration of the use of bypass valves on computer controlled valves.

SECTION V: COMPLIANCE PLAN AND SCHEDULE

International Paper Company is in compliance with the applicable regulations cited in the permit application. International Paper Company will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: INSIGNIFICANT ACTIVITIES

Pursuant to §26.3(d) of Regulation 26, the following sources are insignificant activities. Insignificant and trivial activities will be allowable after approval and federal register notice publication of a final list as part of the operating air permit program. Any activity for which a state or federal applicable requirement applies is not insignificant even if this activity meets the criteria of §3(d) of Regulation 26 or is listed below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated August 23, 1996.

Mill Area	Description	Reason
Woodyard	Mobile Hydraulic Tank	Group A, #3
Woodyard	Lube Oil Storage Tank	Group A, #3
Pulp Mill	2 Oil Storage Tanks	Group A, #3
Pulp Mill	2 Hydrogen Chloride Tanks	Group A, #13
Paper Mill	Caustic Soda Tank	Group A, #4
Paper Mill	Paper Mill Bulk Lube Oil Storage Tank	Group A, #3
Paper Mill	3 Paper Machine Lube Oil Tanks	Group A, #3
Black Liquor Recovery Area	2 Diesel Fuel Tanks	Group A, #3
Black Liquor Recovery Area	Used Oil Tank	Group A, #3
Power Generation	3 Caustic Tanks	Group A, #4
Power Generation	Bark Boiler Reservoir	Group A, #3
Power Generation	Lube Oil Reservoir	Group A, #3
Causticizing Area	Caustic Storage Tank	Group A, #4
Causticizing Area	Caustic Soda Day Tank	Group A, #4
Causticizing Area	Quaker "3540" Flocculant Tank	Group A, #3
Causticizing Area	Caustic Plant Laboratory Plant	Group A, #5
Causticizing Area	OTE-25 Oil Tank	Group A, #3
Causticizing Area	600-W Oil Tank	Group A, #3

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Mill Area	Description	Reason
Causticizing Area	630 Oil Tank	Group A, #3
Water Supply System	Caustic Soda Tank	Group A, #4
Mill Ancillary Services	4 Diesel Fuel Storage Tanks in the Clarifiers Area	Group A, #2
Mill Ancillary Services	2 Fuel Oil Storage Tanks	Group A, #2
Mill Ancillary Services	Diesel Fuel Storage Tank in the Causticizing Area	Group A, #2
Mill Ancillary Services	Lubrication Oil Storage Tank	Group A, #2
Mill Ancillary Services	Lubricating Oil and Hydraulic Fluid Storage	Group A, #2

Pursuant to §26.3(d) of Regulation 26, the following emission units, operations, or activities have been determined by the Department to be insignificant activities. Activities included in this list are allowable under this permit and need not be specifically identified.

1. Combustion emissions from propulsion of mobile sources and emissions from refueling these sources unless regulated by Title II and required to obtain a permit under Title V of the federal Clean Air Act, as amended. This does not include emissions from any transportable units, such as temporary compressors or boilers. This does not include emissions from loading racks or fueling operations covered under any applicable federal requirements.

2. Air conditioning and heating units used for comfort that do not have applicable requirements under Title VI of the Act.

3. Ventilating units used for human comfort that do not exhaust air pollutants into the ambient air from any manufacturing/industrial or commercial process.

4. Non-commercial food preparation or food preparation at restaurants, cafeterias, or caterers, etc.

5. Consumer use of office equipment and products, not including commercial printers or business primarily involved in photographic reproduction.

6. Janitorial services and consumer use of janitorial products.

7. Internal combustion engines used for landscaping purposes.

8. Laundry activities, except for dry-cleaning and steam boilers.

9. Bathroom/toilet emissions.

10. Emergency (backup) electrical generators at residential locations.

11. Tobacco smoking rooms and areas.

12. Blacksmith forges.

13. Maintenance of grounds or buildings, including: lawn care, weed control, pest control, and water washing activities.

14. Repair, up-keep, maintenance, or construction activities not related to the sources' primary business activity, and not otherwise triggering a permit modification. This may include, but is not limited to such activities as general repairs, cleaning, painting, welding, woodworking, plumbing, re-tarring roofs, installing insulation, paved/paving parking lots, miscellaneous solvent use, application of refractory, or insulation, brazing, soldering, the use of adhesives, grinding, and cutting.[1]

15. Surface-coating equipment during miscellaneous maintenance and construction activities. This activity specifically does not include any facility whose primary business activity is surface-coating or includes surface-coating or products.

16. Portable electrical generators that can be "moved by hand" from one location to another.[2]

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[1] Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must get a permit.

[2] "Moved by hand" means that it can be moved by one person without assistance of any motorized or non-motorized vehicle, conveyance, or device.

17. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning, or machining wood, metal, or plastic.

18. Brazing or soldering equipment related to manufacturing activities that do not result in emission of HAPs.[3]

19. Air compressors and pneumatically operated equipment, including hand tools.

20. Batteries and battery charging stations, except at battery manufacturing plants.

21. Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOCs or HAPs.[4]

22. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and no volatile aqueous salt solutions, provided appropriate lids and covers are used and appropriate odor control is achieved.

23. Equipment used to mix and package soaps, vegetable oil, grease, animal fat, and non-volatile aqueous salt solutions, provided appropriate lids and covers are used and appropriate odor control is achieved.

24. Drop hammers or presses for forging or metalworking.

25. Equipment used exclusively to slaughter animals, but not including other equipment at slaughter-houses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.

26. Vents from continuous emissions monitors and other analyzers.

27. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.

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[3] Brazing, soldering, and welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals are more appropriate for treatment as insignificant activities based on size or production thresholds. Brazing, soldering, and welding equipment, and cutting torches related directly to plant maintenance and upkeep and repair or maintenance shop activities that emit HAP metals are treated as trivial and listed separately in this appendix.

[4] Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids are based on size and limits including storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.

28. Hand-held applicator equipment for hot melt adhesives with no VOCs in the adhesive.

29. Lasers used only on metals and other materials which do not emit HAPs in the process.

30. Consumer use of paper trimmers/binders.

31. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.

32. Salt baths using non-volatile salts that do not result in emissions of any air pollutant covered by this regulation.

33. Laser trimmers using dust collection to prevent fugitive emissions.

34. Bench-scale laboratory equipment used for physical or chemical analysis not including lab fume hoods or vents.

35. Routine calibration and maintenance of laboratory equipment or other analytical instruments.

36. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.

37. Hydraulic and hydrostatic testing equipment.

38. Environmental chambers not using hazardous air pollutant gases.

39. Shock chambers, humidity chambers, and solar simulators.

40. Fugitive emissions related to movement of passenger vehicles, provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.

41. Process water filtration systems and demineralizers.

42. Demineralized water tanks and demineralizer vents.

43. Boiler water treatment operations, not including cooling towers.

44. Emissions from storage or use of water treatment chemicals, except for hazardous air pollutants or pollutants listed under regulations promulgated pursuant to Section 112(r) of the Act, for use in cooling towers, drinking water systems, and boiler water/feed systems.

45. Oxygen scavenging (de-aeration) of water.

46. Ozone generators.

47. Fire suppression systems.

48. Emergency road flares.

49. Steam vents and safety relief valves.

50. Steam leaks.

51. Steam cleaning operations.

52. Steam and microwave sterilizers.

53. Site assessment work to characterize waste disposal or remediation sites.

54. Miscellaneous additions or upgrades of instrumentation.

55. Emissions from combustion controllers or combustion shutoff devices but not combustion units itself.

56. Use of products for the purpose of maintaining motor vehicles operated by the facility, not including air cleaning units of such vehicles (i.e. antifreeze, fuel additives).

57. Stacks or vents to prevent escape of sanitary sewer gases through the plumbing traps.

58. Emissions from equipment lubricating systems (i.e. oil mist), not including storage tanks, unless otherwise exempt.

59. Residential wood heaters, cookstoves, or fireplaces.

60. Barbecue equipment or outdoor fireplaces used in connection with any residence or recreation.

61. Log wetting areas and log flumes.

62. Periodic use of pressurized air for cleanup.

63. Solid waste dumpsters.

64. Emissions of wet lime from lime mud tanks, lime mud washers, lime mud piles, lime mud filter and filtrate tanks, and lime mud slurry tanks.

65. Natural gas odoring activities unless the Department determines that emissions constitute air pollution.

66. Emissions from engine crankcase vents.

67. Storage tanks used for the temporary containment of materials resulting from an emergency reporting to an unanticipated release.

68. Equipment used exclusively to mill or grind coatings in roll grinding rebuilding, and molding compounds where all materials charged are in paste form.

69. Mixers, blenders, roll mills, or calendars for rubber or plastic for which no materials in powder form are added and in which no organic solvents, diluents, or thinners are used.

70. The storage , handling, and handling equipment for bark and wood residues not subject to fugitive dispersion offsite (this applies to the equipment only).

71. Maintenance dredging of pulp and paper mill surface impoundments and ditches containing cellulosic and cellulosic derived biosolids and inorganic materials such as lime, ash, or sand.

72. Tall oil soap storage, skimming, and loading.

73. Water heaters used strictly for domestic (non-process) purposes.

74. Facility roads and parking areas, unless necessary to control offsite fugitive emissions.

75. Agricultural operations, including onsite grain storage, not including IC engines or grain elevators.

76. The following natural gas and oil exploration production site equipment: separators, dehydration units, natural gas fired compressors, and pumping units. This does not include compressors located on natural gas transmission pipelines.

SECTION VII: PLANTWIDE CONDITIONS

1. Pursuant to §19.704 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the Director shall be notified in writing within thirty (30) days after construction has commenced, construction is complete, the equipment and/or facility is first placed in operation, and the equipment and/or facility first reaches the target production rate.

2. Pursuant to §19.410(B) of Regulation 19, and 40 CFR Part 52, Subpart E, the Director may cancel all or part of this permit if the construction or modification authorized herein is not begun within 18 months from the date of the permit issuance or if the work involved in the construction or modification is suspended for a total of 18 months or more.

3. Pursuant to §19.702(E) of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, each emission point for which an emission test method is specified in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. Compliance test results shall be submitted to the Department within thirty (30) days after the completed testing. The permittee shall provide:

   (1) Sampling ports adequate for applicable test methods
   (2) Safe sampling platforms
   (3) Safe access to sampling platforms
   (4) Utilities for sampling and testing equipment

4. Pursuant to Regulation 19.303 of Regulation 19 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the equipment, control apparatus and emission monitoring equipment shall be operated within their design limitations and maintained in good condition at all times.

5. Pursuant to Regulation 26 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit subsumes and incorporates all previously issued air permits for this facility.

6. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the sulfur content of the #6 fuel oil shall not exceed 3.0% by weight.

7. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall either obtain a manufacturer's certification of the sulfur content of the fuel oil or test each shipment of fuel oil received for the sulfur content. The manufacturer's certification or the test results shall be kept on site and shall be made available to Department personnel upon request.

8. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, natural gas usage at this facility shall not exceed 9.857 billion standard cubic feet of natural gas in any consecutive twelve month period. This includes the amount of natural gas that may be fired at the package boiler, source SN-47.

9. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records in order to demonstrate compliance with Plantwide Condition 8 and which may be used by the Department for enforcement purposes. These records shall include the amount of natural gas used at each natural gas burning source, shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

10. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not produce in excess of 324,850 air dried tons of pulp in any consecutive twelve month period.

11. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of air dried pulp produced in order to demonstrate compliance with Plantwide Condition 10 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

12. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not process more than 73,000 tons of lime in any consecutive twelve month period.

13. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of lime processed in order to demonstrate compliance with Plantwide Condition 12 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

14. International Paper Company is subject to the provisions of 40 CFR Part 63, Subpart A - *General Provisions* and 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry*. A copy of this subpart has been included in Appendix F of this permit. International Paper Company is required to comply with all applicable provisions of this subpart within the time frames specified. This includes notifications to the Department of applicability and options which have been chosen to demonstrate compliance with this regulation. General requirements for the entire facility are listed, but not limited to the items found, in Plantwide Conditions 15 through 18.

15. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 63.6, the permittee shall develop a startup, shutdown, and malfunction (SSM) plan containing operation and maintenance requirements. This plan shall be maintained on site, provided to Department personnel upon request, and submitted to the Department upon completion.

16. Pursuant to 40 CFR 63.9, the permittee shall comply with all notification requirements including initial notifications, notification of performance tests, continuous monitoring system performance evaluations, and source compliance status.

17. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 63.10, the permittee shall maintain the following records in order to demonstrate compliance with the applicable provisions of 40 CFR Part 63, Subpart S. These records shall be maintained on site and provided to Department personnel upon request.

    A. Startup, Shutdown, Malfunction, and Maintenance Records
    B. Continuous Monitoring System Records

18. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 63.10, the permittee shall submit the following reports on a semi-annual basis to the Department in order to demonstrate compliance with the applicable provisions of 40 CFR Part 63, Subpart S.

    A. Excess Emission Reports
    B. Monitoring System Performance Reports
    C. Startup, Shutdown, and Malfunction Reports

19. Pursuant to §18.801 of Regulation 18, the permittee shall not cause or permit the emission of air contaminants, including odors or water vapor and including an air contaminant whose emission is not otherwise prohibited by Regulation #18, if the emission of the air contaminant constitutes air pollution within the meaning of A.C.A. §8-4-303.

20. Pursuant to §18.901 of Regulation 18, the permittee shall not conduct operations in such a manner as to unnecessarily cause air contaminants and other pollutants from becoming airborne.

21. Pursuant to §19.601 of Regulation 19, the Department may forego enforcement action for exceedances of federally regulated air pollutant emissions given that the person responsible for the source of the excess emissions does the following. The reporting of upset conditions is outlined in General Provision 8.

    A. Demonstrates to the Department that the emissions resulted from:

        1. Equipment malfunction or upset and are not the result of negligence or improper maintenance; or

        2. Physical constraints on the ability of a source to comply with the emission standard, limitation, or rate during startup or shutdown; and

        3. That all reasonable measures have been taken to immediately minimize or eliminate the excess emissions.

22. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, or §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the criteria pollutant and the PM emission rates listed in this permit were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. This condition does not apply to pollutants for which test data is already available, pollutants with an NSPS or NESHAP standard, or limits which have been set through a PSD permitting action (those pollutants which have undergone a BACT analysis or which "netted out" of a PSD review).

23. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee may maintain hand written records for those sources which do not have electronic data keeping systems. The permittee may maintain hand written records for those sources which have electronic record keeping systems with a data storage of one year for a period to not exceed one year from the date of permit issuance. The data storage shall be increased to five years for those sources during that period. Any records shall be made available to Department personnel upon request.

24. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the following combined emission rates at sources SN-01, SN-04/05, and SN-06 when burning #6 fuel oil. Compliance with these emission rates will be demonstrated through the fuel oil usage limit and proper operation of control equipment.

Pollutant	tpy
PM_{10}	1.1
SO_2	28.4
VOC	1.3
CO	6.9
NO_X	4.6
Pb	0.04

25. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permitteee shall not exceed the following combined emission rates at sources SN-01, SN-04/05, and SN-06 when firing #6 fuel oil. Compliance with these emission rates will be demonstrated through the fuel oil usage limits and proper operation of the control equipment.

Pollutant	tpy
PM	1.4
Antimony Compounds	0.003
Arsenic Compounds	0.003
Beryllium Compounds	0.003
Cadmium Compounds	0.003
Chromium Compounds	0.003
Cobalt Compounds	0.003
Formaldehyde	0.03
Hydrogen Chloride*	0.08
Hydrogen Fluoride*	0.03
Lead Compounds	0.003
Manganese Compounds	0.003
Mercury Compounds	0.003
Nickel Compounds	0.008
POM	0.03
Selenium Compounds	0.003

*Non-VOC, non-PM non-criteria pollutant.

26. Pursuant to §19.705 of Regulation 19, 40 CFR 70.6, and/or A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and §18.1004 of Regulation 18, the permittee shall not fire in excess of a total of 120,000 gallons of #6 fuel oil in any consecutive twelve month period at sources SN-01, SN-04/05, and SN-06.

27. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, or §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain records of the amount of #6 fuel oil fired at sources SN-01, SN-04/05, and SN-06 in order to demonstrate compliance with Plantwide Condition 27 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

28. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.441(d), the permittee shall be in compliance with the requirements of 40 CFR Part 63, Subpart S listed in this permit no later than April 16, 2001, except as outlined in paragraphs (d)(1) through (d)(3) of this section. The permittee is not required to be in compliance with 40 CFR Part 63, Subpart S upon issuance of this permit. (Paragraphs (d)(1) through (d)(3) may be found in the copy of Subpart S in Appendix F of this permit.)

Permit Shield.

29. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in item A of this condition:

    A. The following have been specifically identified as applicable requirements based upon information submitted by the permittee in an application dated August 23, 1996.

Source No.	Regulation	Description
Facility	19	SIP
Facility	26	Arkansas Title V regulations
13	40 CFR Part 60, Subpart GG	Standards of Performance for Stationary Gas Turbines
12, 14, and 27	40 CFR Part 60, Subpart BB	Standards of Performance for Kraft Pulp Mills

    B. The following requirements have been specifically identified as not applicable, based upon information submitted by the permittee in an application dated August 23, 1996.

Description of Regulation	Regulatory Citation	Affected Source	Basis for Determination
NESHAP Subpart for Halogenated Solvent Cleaning	40 CFR Part 63, Subpart T	Facility	This facility does not use halogenated solvents in the parts cleaning operations.
Relaxed Compliance Orders	40 CFR Part 65	Facility	This part includes specific EPA orders allowing designated sources to delay compliance with an otherwise applicable SIP requirement until a specific date. This facility is not included among the Arkansas sources listed in this part.
Assessment and Collection of Noncompliance Penalties by EPA	40 CFR Part 66	Facility	This part imposes requirements only on sources of air pollution which have received notices of noncompliance. This facility has received no such notices.
EPA Approval of State Noncompliance Penalty Programs	40 CFR Part 67	Facility	This part does not impose requirements of sources.
Acid Rain Program	40 CFR Parts 72 -78	Facility	This facility is not currently subject to any acid rain requirements.

C. Nothing shall alter or affect the following:

Provisions of Section 303 of the Clean Air Act;

The liability of an owner or operator for any violation of applicable requirements prior to or at the time of permit issuance;

The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; or

The ability of the EPA to obtain information under Section 114 of the Clean Air Act.

Title VI Provisions

30. The permittee shall comply with the standards for labeling of products using ozone depleting substances pursuant to 40 CFR Part 82, Subpart E:

A. All containers containing a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.

B. The placement of the required warning statement must comply with the requirements pursuant to §82.108.

C. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.

D. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

31. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:

A. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.

B. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.

C. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.

D. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like appliance" as defined at §82.152.)

E. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.

F. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

32. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.

33. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

    The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or systems used on passenger busses using HCFC-22 refrigerant.

34. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, Significant New Alternatives Policy Program.

SECTION VII: GENERAL PROVISIONS

1. Pursuant to 40 C.F.R. 70.6(b)(2), any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute.

2. Pursuant to 40 C.F.R. 70.6(a)(2) and §26.7 of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26), this permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later.

3. Pursuant to §26.4 of Regulation #26, it is the duty of the permittee to submit a complete application for permit renewal at least six (6) months prior to the date of permit expiration. Permit expiration terminates the permittee's right to operate unless a complete renewal application was submitted at least six (6) months prior to permit expiration, in which case the existing permit shall remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due.

4. Pursuant to 40 C.F.R. 70.6(a)(1)(ii) and §26.7 of Regulation #26, where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq* (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions are incorporated into the permit and shall be enforceable by the Director or Administrator.

5. Pursuant to 40 C.F.R. 70.6(a)(3)(ii)(A) and §26.7 of Regulation #26, records of monitoring information required by this permit shall include the following:

   a. The date, place as defined in this permit, and time of sampling or measurements;
   b. The date(s) analyses were performed;
   c. The company or entity that performed the analyses;
   d. The analytical techniques or methods used;
   e. The results of such analyses; and
   f. The operating conditions existing at the time of sampling or measurement.

6. Pursuant to 40 C.F.R. 70.6(a)(3)(ii)(B) and §26.7 of Regulation #26, records of all required monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

7. Pursuant to 40 C.F.R. 70.6(a)(3)(iii)(A) and §26.7 of Regulation #26, the permittee shall submit reports of all required monitoring every 6 months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official as defined in §26.2 of Regulation #26 and must be sent to the address below.

   Arkansas Department of Environmental Quality
   Air Division
   ATTN: Compliance Inspector Supervisor
   Post Office Box 8913
   Little Rock, AR 72219-8913

8. Pursuant to 40 C.F.R. 70.6(a)(3)(iii)(B), §26.7 of Regulation #26, and §19.601 and §19.602 of Regulation #19, all deviations from permit requirements, including those attributable to upset conditions as defined in the permit shall be reported to the Department. An initial report shall be made to the Department by the next business day after discovery of the occurrence. The initial report may be made by telephone and shall include:

   a. The facility name and location,
   b. The process unit or emission source which is deviating from the permit limit,
   c. The permit limit, including the identification of pollutants, from which deviation occurs,
   d. The date and time the deviation started,
   e. The duration of the deviation,
   f. The average emissions during the deviation,
   g. The probable cause of such deviations,
   h. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and
   i. The name of the person submitting the report.

   A full report shall be made in writing to the Department within five (5) business days of discovery of the occurrence and shall include in addition to the information required by the initial report a schedule of actions to be taken to eliminate future occurrences and/or

to minimize the amount by which the permit's limits are exceeded and to reduce the length of time for which said limits are exceeded. If the permittee wishes, they may submit a full report in writing (by facsimile, overnight courier, or other means) the next business day after discovery of the occurrence and such report will serve as both the initial report and full report.

9. Pursuant to 40 C.F.R. 70.6(a)(5), §26.7 of Regulation #26, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, if any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable.

10. Pursuant to 40 C.F.R. 70.6(a)(6)(i) and §26.7 of Regulation #26, the permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation #26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.* and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Any permit noncompliance with a state requirement constitutes a violation of the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) and is also grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

11. Pursuant to 40 C.F.R. 70.6(a)(6)(ii) and §26.7 of Regulation #26, it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

12. Pursuant to 40 C.F.R. 70.6(a)(6)(iii) and §26.7 of Regulation #26, this permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

13. Pursuant to 40 C.F.R. 70.6(a)(6)(iv) and §26.7 of Regulation #26, this permit does not convey any property rights of any sort, or any exclusive privilege.

14. Pursuant to 40 C.F.R. 70.6(a)(6)(v) and §26.7 of Regulation #26, the permittee shall furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the

permit. Upon request, the permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the permittee may be required to furnish such records directly to the Administrator along with a claim of confidentiality.

15. Pursuant to 40 C.F.R. 70.6(a)(7) and §26.7 of Regulation #26, the permittee shall pay all permit fees in accordance with the procedures established in Regulation #9.

16. Pursuant to 40 C.F.R. 70.6(a)(8) and §26.7 of Regulation #26, no permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for elsewhere in this permit.

17. Pursuant to 40 C.F.R. 70.6(a)(9)(i) and §26.7 of Regulation #26, if the permittee is allowed to operate under different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the scenario under which the facility or source is operating.

18. Pursuant to 40 C.F.R. 70.6(b) and §26.7 of Regulation #26, all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Act unless the Department has specifically designated as not being federally enforceable under the Act any terms and conditions included in the permit that are not required under the Act or under any of its applicable requirements.

19. Pursuant to 40 C.F.R. 70.6(c)(1) and §26.7 of Regulation #26, any document (including reports) required by this permit shall contain a certification by a responsible official as defined in §26.2 of Regulation #26.

20. Pursuant to 40 C.F.R. 70.6(c)(2) and §26.7 of Regulation #26, the permittee shall allow an authorized representative of the Department, upon presentation of credentials, to perform the following:

    a. Enter upon the permittee's premises where the permitted source is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements.

21. Pursuant to 40 C.F.R. 70.6(c)(5) and §26.7 of Regulation #26, the permittee shall submit a compliance certification with terms and conditions contained in the permit, including emission limitations, standards, or work practices. This compliance certification shall be submitted annually and shall be submitted to the Administrator as well as to the Department. The first report shall be due 30 days following the one-year anniversary of the issuance of this permit. All compliance certifications required by this permit shall include the following:

a. The identification of each term or condition of the permit that is the basis of the certification;
b. The compliance status;
c. Whether compliance was continuous or intermittent;
d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
e. Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and 504(b) of the Act.

22. Pursuant to §26.7 of Regulation #26, nothing in this permit shall alter or affect the following:

a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
b. The liability the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act; or
d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.

23. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit authorizes only those pollutant emitting activities addressed herein.

APPENDIX A

Arkansas Department of Pollution Control & Ecology

CONTINUOUS EMISSION MONITORING SYSTEMS CONDITIONS

Revised October 1996

SECTION I

DEFINITIONS

Continuous Emission Monitoring System (CEMS) - The total equipment required for the determination of a gas concentration and/or emission rate so as to include sampling, analysis and recording of emission data. [1]

Calibration Drift (CD) - The difference in the CEMS output reading from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustments took place. [2]

Primary CEMS - The main reporting CEMS with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate.

Back-up CEM (Secondary CEM) - A CEM with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate. This CEM is to serve as a back-up to the primary CEMS to minimize monitor downtime.

Out-of-Control Period - Begins with the hour corresponding to the completion of a daily calibration error, linearity check, or quality assurance audit that indicates that the instrument is not measuring and recording within the applicable performance specifications. Out-of-Control Period ends with the hour corresponding to the completion of an additional calibration error, linearity check, or quality assurance audit following corrective action that demonstrates that the instrument is measuring and recording within the applicable performance specifications. [3]

Monitor Downtime - Any period during which the CEMS is unable to sample, analyze and record a minimum of four evenly spaced data points over an hour, except during one daily zero-span check during which two data points per hour are sufficient.

Excess Emissions - Any period in which the emissions exceed the permit limits.

SECTION II

MONITORING REQUIREMENTS

A. For new sources, the installation date for the CEMS shall be no later than thirty (30) days from the date of start-up of the source. [4]

B. For existing sources, the installation date for the CEMS shall be no later than sixty (60) days from the issuance of the permit unless a specific date is required by the permit. [4]

C. Within sixty (60) days of installation of a CEMS, a performance specification test (PST) must be completed. PST's are defined in 40 CFR, Part 60, Appendix B, PS 1-9. The Department may accept alternate PSTs for pollutants not covered by Appendix B on a case-by-case basis. Alternate PST's shall be approved, in writing, by the Compliance Inspector Supervisor prior to testing. [5]

D. Each CEMS shall have, as a minimum, a daily zero-span check. The zero-span shall be adjusted whenever the 24-hour zero or 24-hour span drift exceeds two times the limits in the applicable performance specification in 40 CFR, Part 60, Appendix B. Before any adjustments are made to either the zero or span drifts measured at the 24-hour interval the excess zero and span drifts measured must be quantified and recorded. [6]

E. All CEMS shall be in continuous operation and shall meet minimum frequency of operation requirements of 95% up-time for each quarter for each pollutant measured. Failure to maintain operation time shall constitute a violation of the CEMS conditions. [18]

F. All sources with a CEMS shall meet 95% compliance per quarter for each pollutant. Failure to maintain compliance shall constitute a violation of the CEMS conditions. [18]

G. All CEMS measuring emissions shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive fifteen minute period unless more cycles are required by the permit. For each CEMS, one-hour averages shall be computed from four or more data points equally spaced over each one hour period unless more data points are required by the permit. [7]

H. When the pollutant from a single affected facility is released through more than one point, a CEMS shall be installed on each point unless installation of fewer systems is approved, in writing, by the Compliance Inspector Supervisor. When more than one CEMS is used to monitor emissions from one affected facility (e.g. multiple breaching or multiple exhaust) the owner or operator shall report the results as required from each CEMS. [8]

SECTION III

NOTIFICATION AND RECORD KEEPING

A. When requested to do so by an owner or operator, the Compliance Inspector Supervisor will review plans for installation or modification for the purpose of providing technical advice to the owner or operator. [9]

B. Each facility which operates a CEMS shall notify the Compliance Inspector Supervisor of the date for which the demonstration of the CEMS performance will commence (ie. PST, RATA, RAA, CGA). Notification shall be received in writing no less than 15 days prior to testing. [10]

C. Each facility which operates a CEMS shall maintain records of the occurrence and duration of start up/shut down, cleaning/soot blowing, process problems, fuel problems, or other malfunction in the operation of the affected facility which causes excess emissions. This includes any malfunction of the air pollution control equipment or any period during which a continuous monitoring device/system is inoperative. [11]

D. Each facility required to install a CEMS shall submit an excess emission and monitoring system performance report to the Department (Attention: Air Division, Compliance Inspector Supervisor) at least quarterly, unless more frequent submittals are warranted to assess the compliance status of the facility. Quarterly reports shall be postmarked no later than the 30th day of the month following the end of each calendar quarter. [12]

E. All excess emissions shall be reported in terms of the applicable standard. Each report shall be submitted on ADPC&E Quarterly Excess Emission Report Forms. These forms may be obtained from the Air Division of the Little Rock office of ADPC&E. Alternate forms may be used with the prior written approval from the Department. [13]

F. Each facility which operates a CEMS must maintain on site a file of CEMS data including all raw data, corrected and adjusted, repair logs, calibration checks, adjustments, and test audits. This file must be retained for two years, and is required to be maintained in such a condition that it can easily be audited by an inspector. [14]

G. Quarterly reports shall be used by the Department to determine compliance with the permit. Violations of the CEMS Conditions may result in penalties and/or other enforcement action. [18]

SECTION IV

QUALITY ASSURANCE/QUALITY CONTROL

A. For each CEMS a Quality Assurance/Quality Control (QA/QC) plan shall be submitted to the Department (Attn.: Air Division, Compliance Inspector Supervisor). Quality assurance procedures are defined in 40 CFR, Part 60, Appendix F. This plan shall be submitted within 180 days of the CEMS installation. A QA/QC plan shall consist of procedure and practices which assures acceptable level of monitor data accuracy, precision, representativeness, and availability.

B. The submitted QA/QC plan for each CEMS shall not be considered as accepted until the facility receives a written notification of acceptance from the Department.

C. Facilities responsible for one, or more, CEMS used for compliance monitoring shall meet these minimum requirements and are encouraged to develop and implement a more extensive QA/QC program, or to continue such programs where they already exist. Each QA/QC program must include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities: [15]

1. Calibration of CEMS
   a. Daily calibrations (including the approximate time(s) that the daily zero and span drifts will be checked and the time required to perform these checks and return to stable operation)
2. Calibration drift determination and adjustment of CEMS
   a. Out-of-control period determination
   b. Steps of corrective action
3. Preventive maintenance of CEMS
   a. CEMS information
      1) Manufacture
      2) Model number
      3) Serial number
   b. Scheduled activities (check list)
   c. Spare part inventory
4. Data recording, calculations, and reporting
5. Accuracy audit procedures including sampling and analysis methods
6. Program of corrective action for malfunctioning CEMS

D. As part of the QA/QC plan for each CEMS, a Relative Accuracy Test Audit (RATA), shall be conducted at least once every four calendar quarters. A Relative Accuracy Audit (RAA), or a Cylinder Gas Audit (CGA), may be conducted in the other three quarters but in no more than three quarters in succession. The RATA, RAA, and CGA test procedures shall be included in the QA/QC plan submitted for approval. Additionally, the justification and methodology for any alternate tests shall be submitted with the QA/QC plan. [16]

E. If either the zero or span drift results exceed two times the applicable drift specification in 40 CFR, Part 60, Appendix B for five consecutive, daily periods, the CEMS is out-of-control. If either the zero or span drift results exceed four times the applicable drift specification in Appendix B during a calibration drift check, the CEMS is out-of-control. [17]

1. Out-of-control begins with the hour corresponding to the completion of a daily calibration error, linearity check, or quality assurance audit that indicates that the instrument is not measuring and recording within the applicable performance specifications.

2. Out-of-control ends with the hour corresponding to the completion of an additional calibration error, linearity check, or quality assurance audit following corrective action that demonstrates that the instrument is measuring and recording within the applicable performance specifications.

3. If a CEMS is out-of-control, the data from that out-of-control period is not counted towards meeting the minimum data availability as required and described in the applicable subpart.

F. A back-up monitor may be placed on an emission source to minimize monitor downtime. This back-up CEM is subject to the same QA/QC procedure and practices as the primary CEMS. The back-up CEM shall be certified by a PST. Daily zero-span checks must be performed and recorded in accordance with standard practices. When the primary CEMS goes down, the back-up CEMS may then be engaged to sample, analyze and record the emission source pollutant until repairs are made and the primary unit is placed back in service. Records must be maintained on site when the back-up CEMS is placed in service, these records shall include at a minium the reason the primary CEMS is out of service, the date and time the primary CEMS was out of service and the date and time the primary CEMS was placed back in service.

1 40 CFR, Part 60, Appendix F 2.1
2 40 CFR, Part 60, Appendix F 2.5
3 40 CFR, Part 60, Appendix F 4.3.1 & 5.2.1
4 40 CFR 60.13(b)
5 40 CFR 60.3(j)
6 40 CFR 60.13(d)(1), Part 60, Appendix F 4
7 40 CFR 60.13(e)(2)
8 40 CFR 60.13(g)
9 40 CFR 60.6(a)
10 40 CFR 60.7(5)
11 40 CFR 60.7(c)(2)
12 40 CFR 60.7(c)
13 40 CFR 60.7(d)
14 40 CFR 60.7(e)
15 40 CFR, Part 60, Appendix F 3
16 40 CFR, Part 60, Appendix F 5
17 40 CFR, Part 60, Appendix F 4.3
18 USEPA Guidance on the "Timely and Appropriate Enforcement Response to Significant Air Pollution Violators" (2/7/92)

APPENDIX B

Subpart GG—Standards of Performance for Stationary Gas Turbines

§ 60.330 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour, based on the lower heating value of the fuel fired.

(b) Any facility under paragraph (a) of this section which commences construction, modification, or reconstruction after October 3, 1977, is subject to the requirements of this part except as provided in paragraphs (e) and (j) of § 60.332.

[44 FR 52798, Sept. 10, 1979, as amended at 52 FR 42434, Nov. 5, 1987]

§ 60.331 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Stationary gas turbine* means any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self propelled. It may, however, be mounted on a vehicle for portability.

(b) *Simple cycle gas turbine* means any stationary gas turbine which does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or which does not recover heat from the gas turbine exhaust gases to heat water or generate steam.

(c) *Regenerative cycle gas turbine* means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine.

(d) *Combined cycle gas turbine* means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to heat water or generate steam.

(e) *Emergency gas turbine* means any stationary gas turbine which operates as a mechanical or electrical power source only when the primary power source for a facility has been rendered inoperable by an emergency situation.

(f) *Ice fog* means an atmospheric suspension of highly reflective ice crystals.

(g) *ISO standard day conditions* means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

(h) *Efficiency* means the gas turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output based on the lower heating value of the fuel.

(i) *Peak load* means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.

(j) *Base load* means the load level at which a gas turbine is normally operated.

(k) *Fire-fighting turbine* means any stationary gas turbine that is used solely to pump water for extinguishing fires.

(l) *Turbines employed in oil/gas production or oil/gas transportation* means any stationary gas turbine used to provide power to extract crude oil/natural gas from the earth or to move crude oil/natural gas, or products refined from these substances through pipelines.

(m) A *Metropolitan Statistical Area* or *MSA* as defined by the Department of Commerce.

(n) *Offshore platform gas turbines* means any stationary gas turbine located on a platform in an ocean.

(o) *Garrison facility* means any permanent military installation.

(p) *Gas turbine model* means a group of gas turbines having the same nominal air flow, combuster inlet pressure, combuster inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

(q) *Electric utility stationary gas turbine* means any stationary gas turbine constructed for the purpose of supplying more than one-third of its potential electric output capacity to any utility power distribution system for sale.

(r) *Emergency fuel* is a fuel fired by a gas turbine only during circumstances, such as natural gas supply curtailment or breakdown of delivery system, that make it impossible to fire natural gas in the gas turbine.

(s) *Regenerative cycle gas turbine* means any stationary gas turbine that recovers thermal energy from the exhaust gases and utilizes the thermal energy to preheat air prior to entering the combustor.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982]

§ 60.332 Standard for nitrogen oxides.

(a) On and after the date of the performance test required by § 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (b), (c), and (d) of this section shall comply with one of the following, except as provided in paragraphs (e), (f), (g), (h), (i), (j), (k), and (l) of this section.

(1) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0075 \frac{(14.4)}{Y} + F$$

where:

STD=allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y=manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F=NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

(2) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0150 \frac{(14.4)}{Y} + F$$

where:

STD=allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y=manufacturer's rated heat rate at manufacturer's rated peak load (kilojoules per watt hour), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F=NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

(3) F shall be defined according to the nitrogen content of the fuel as follows:

Fuel-bound nitrogen (percent by weight)	F (NO_x percent by volume)
$N \leq 0.015$	0
$0.015 < N \leq 0.1$	0.04(N)
$0.1 < N \leq 0.25$	0.004+0.0067(N−0.1)
$N > 0.25$	0.005

where:

N=the nitrogen content of the fuel (percent by weight).

or:

Manufacturers may develop custom fuel-bound nitrogen allowances for each gas turbine model they manufacture. These fuel-bound nitrogen allowances shall be substantiated with data and must be approved for use by the Administrator before the initial performance test required by § 60.8. Notices of approval of custom fuel-bound nitrogen allowances will be published in the FEDERAL REGISTER.

(b) Electric utility stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.

(c) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired, shall comply with the provisions of paragraph (a)(2) of this section.

(d) Stationary gas turbines with a manufacturer's rated base load at ISO conditions of 30 megawatts or less except as provided in § 60.332(b) shall comply with paragraph (a)(2) of this section.

(e) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired and that have commenced construction prior to October 3, 1982 are exempt from paragraph (a) of this section.

(f) Stationary gas turbines using water or steam injection for control of NO_x emissions are exempt from paragraph (a) when ice fog is deemed a traffic hazard by the owner or operator of the gas turbine.

(g) Emergency gas turbines, military gas turbines for use in other than a garrison facility, military gas turbines installed for use as military training facilities, and fire fighting gas turbines are exempt from paragraph (a) of this section.

(h) Stationary gas turbines engaged by manufacturers in research and development of equipment for both gas turbine emission control techniques and gas turbine efficiency improvements are exempt from paragraph (a) on a case-by-case basis as determined by the Administrator.

(i) Exemptions from the requirements of paragraph (a) of this section will be granted on a case-by-case basis as determined by the Administrator in specific geographical areas where mandatory water restrictions are required by governmental agencies because of drought conditions. These exemptions will be allowed only while the mandatory water restrictions are in effect.

(j) Stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour that commenced construction, modification, or reconstruction between the dates of October 3, 1977, and January 27, 1982, and were required in the September 10, 1979, FEDERAL REGISTER (44 FR 52792) to comply with paragraph (a)(1) of this section, except electric utility stationary gas turbines, are exempt from paragraph (a) of this section.

(k) Stationary gas turbines with a heat input greater than or equal to 10.7 gigajoules per hour (10 million Btu/hour) when fired with natural gas are exempt from paragraph (a)(2) of this section when being fired with an emergency fuel.

(l) Regenerative cycle gas turbines with a heat input less than or equal to 107.2 gigajoules per

hour (100 million Btu/hour) are exempt from paragraph (a) of this section.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982]

§ 60.333 Standard for sulfur dioxide.

On and after the date on which the performance test required to be conducted by § 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with one or the other of the following conditions:

(a) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

[44 FR 52798, Sept. 10, 1979]

§ 60.334 Monitoring of operations.

(a) The owner or operator of any stationary gas turbine subject to the provisions of this subpart and using water injection to control NO_x emissions shall install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within ±5.0 percent and shall be approved by the Administrator.

(b) The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

(1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.

(2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.

(c) For the purpose of reports required under § 60.7(c), periods of excess emissions that shall be reported are defined as follows:

(1) *Nitrogen oxides.* Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with § 60.332 by the performance test required in § 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in § 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under § 60.335(a).

(2) *Sulfur dioxide.* Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.

(3) *Ice fog.* Each period during which an exemption provided in § 60.332(g) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

(4) *Emergency fuel.* Each period during which an exemption provided in § 60.332(k) is in effect shall be included in the report required in § 60.7(c). For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982]

§ 60.335 Test methods and procedures.

(a) To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.

(b) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided for in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.

(c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in §§ 60.332 and 60.333(a) as follows:

(1) The nitrogen oxides emission rate (NO_x) shall be computed for each run using the following equation:

$$NO_x = (NO_{xo})\,(P_r/P_o)^{0.5}\, e^{19(H_o - 0.00633)}\,(288°K/T_a)^{1.53}$$

where:

NO_x=emission rate of NO_x at 15 percent O_2 and ISO standard ambient conditions, volume percent.
NO_{xo}=observed NO_x concentration, ppm by volume.
P_r=reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.
P_o=observed combustor inlet absolute pressure at test, mm Hg.
H_o=observed humidity of ambient air, g H_2O/g air.
e=transcendental constant, 2.718.
T_a=ambient temperature, °K.

(2) The monitoring device of § 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with § 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.

(3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NO_x emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.

(d) The owner or operator shall determine compliance with the sulfur content standard in § 60.333(b) as follows: ASTM D 2880–71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072–80, D 3031–81, D 4084–82, or D 3246–81 shall be used for the sulfur content of gaseous fuels (incorporated by reference—see § 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.

(e) To meet the requirements of § 60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

(f) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) Instead of using the equation in paragraph (b)(1) of this section, manufacturers may develop ambient condition correction factors to adjust the nitrogen oxides emission level measured by the performance test as provided in § 60.8 to ISO standard day conditions. These factors are developed for each gas turbine model they manufacture in terms of combustion inlet pressure, ambient air pressure, ambient air humidity, and ambient air temperature. They shall be substantiated with data and must be approved for use by the Administrator before the initial performance test required by § 60.8. Notices of approval of custom ambient condition correction factors will be published in the FEDERAL REGISTER.

[54 FR 6675, Feb. 14, 1989, as amended at 54 FR 27016, June 27, 1989]

APPENDIX C

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

SOURCE: 55 FR 37683, Sept. 12, 1990, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/hr).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, § 60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units which meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§ 60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in § 60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under § 60.14.

[55 FR 37683, Sept. 12, 1990, as amended at 61 FR 20736, May 8, 1996]

§ 60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society for Testing and Materials in ASTM D388–77, "Standard Specification for Classification of Coals by Rank" (incorporated by reference—see § 60.17); coal refuse; and petroleum coke. Synthetic fuels derived from coal for the purpose of creating useful heat, including but not limited to solvent-refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Cogeneration steam generating unit means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (i.e., the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396–78, "Standard Specification for Fuel Oils" (incorporated by reference—see § 60.17).

Dry flue gas desulfurization technology means a sulfur dioxide (SO_2) control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2 control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under § 60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR Parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means (1) a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane, or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835–86, "Standard Specification for Liquefied Petroleum Gases" (incorporated by reference—see § 60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO_2 emissions (nanograms per joule [ng/J], or pounds per million Btu [lb/million Btu] heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396–78, "Standard Specification for Fuel Oils" (incorporated by reference—see § 60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Wet flue gas desulfurization technology means an SO_2 control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of particulate matter (PM) or SO_2.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[55 FR 37683, Sept. 12, 1990, as amended at 61 FR 20736, May 8, 1996]

§ 60.42c Standard for sulfur dioxide.

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, the owner the operator of an affected facility that combusts only coal shall neither: (1) cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction); nor (2) cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/million Btu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 90 percent SO_2 reduction requirement specified in this paragraph and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 20 percent (0.20) of the potential SO_2 emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/million Btu) heat input. If coal is fired with coal refuse, the affected facility is subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 90 percent SO_2 reduction requirement specified in paragraph (a) of this section and the emission limit determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO_2 emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 50 percent (0.50) of the potential SO_2 emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 260 ng/J (0.60 lb/million Btu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO_2 reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under this paragraph.

(1) Affected facilities that have a heat input capacity of 22 MW (75 million Btu/hr) or less.

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a Federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area.

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam gen erating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 215 ng/J (0.50 lb/million Btu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the following:

(1) The percent of potential SO_2 emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel,

(ii) Has a heat input capacity greater than 22 MW (75 million Btu/hr), and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s=(K_aH_a+K_bH_b+K_cH_c)/H_a+H_b+H_c)$$

where:

E_s is the SO_2 emission limit, expressed in ng/J or lb/million Btu heat input,

K_a is 520 ng/J (1.2 lb/million Btu),

K_b is 260 ng/J (0.60 lb/million Btu),

K_c is 215 ng/J (0.50 lb/million Btu),

H_a is the heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [million Btu]

H_b is the heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (million Btu)

H_c is the heat input from the combustion of oil, in J (million Btu).

(f) Reduction in the potential SO_2 emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO_2 emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO_2 control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), or (3) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under § 60.48c(f)(1), (2), or (3), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 million Btu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 million Btu/hr).

(3) Coal-fired facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 million Btu/hr).

(i) The SO_2 emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

§ 60.43c Standard for particulate matter.

(a) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.05 lb/million Btu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/million Btu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/million Btu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/million Btu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever

date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and in § 60.8(b), performance tests required under § 60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in § 60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under § 60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO_2 emission limits under § 60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) and § 60.8, compliance with the percent reduction requirements and SO_2 emission limits under § 60.42c is based on the average percent reduction and the average SO_2 emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO_2 emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 are used to determine the hourly SO_2 emission rate (E_{ho}) and the 30-day average SO_2 emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the continuous emission monitoring system (CEMS). Method 19 shall be used to calculate E_{ao} when using daily fuel sampling or Method 6B.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E_{ho} ($E_{ho}°$) is used in Equation 19–19 of Method 19 to compute the adjusted E_{ao} ($E_{ao}°$). The $E_{ho}°$ is computed using the following formula:

$$E_{ho}°=[E_{ho} \cdot E_w(1 \cdot X_k)]/X_k$$

where:

$E_{ho}°$ is the adjusted E_{ho}, ng/J (lb/million Btu)

E_{ho} is the hourly SO_2 emission rate, ng/J (lb/million Btu)

E_w is the SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9, ng/J (lb/million Btu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume E_w=0.

X_k is the fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19.

(2) The owner or operator of an affected facility that qualifies under the provisions of § 60.42c(c) or (d) [where percent reduction is not required] does not have to measure the parameters E_w or X_k if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19.

(f) Affected facilities subject to the percent reduction requirements under § 60.42c(a) or (b) shall determine compliance with the SO_2 emission limits under § 60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO_2 emission rate is computed using the following formula:

$$\%P_s=100(1 \cdot \%R_g/100)(1 \cdot \%R_f/100)$$

where

$\%P_s$ is the percent of potential SO_2 emission rate, in percent

$\%R_g$ is the SO_2 removal efficiency of the control device as determined by Method 19, in percent

$\%R_f$ is the SO_2 removal efficiency of fuel pretreatment as determined by Method 19, in percent

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g$ ($\%R_g°$) is computed from $E_{ao}°$ from paragraph (e)(1) of this section and an adjusted average SO_2 inlet rate ($E_{ai}°$) using the following formula:

$$\%R_g°=100\ [1.0 \cdot E_{ao}°/E_{ai}°)]$$

where:

$\%R_g^o$ is the adjusted $\%R_g$, in percent

E_{ao}^o is the adjusted E_{ao}, ng/J (lb/million Btu)

E_{ai}^o is the adjusted average SO_2 inlet rate, ng/J (lb/million Btu)

(ii) To compute E_{ai}^o, an adjusted hourly SO_2 inlet rate (E_{hi}^o) is used. The E_{hi}^o is computed using the following formula:

$$E_{hi}^o=[E_{hi} \cdot E_w (1 \cdot X_k)]/X_k$$

where:

E_{hi}^o is the adjusted E_{hi}, ng/J (lb/million Btu)

E_{hi} is the hourly SO_2 inlet rate, ng/J (lb/million Btu)

E_w is the SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19, ng/J (lb/million Btu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume $E_w = O$.

X_k is the fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under § 60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under § 60.46c(d)(2).

(h) For affected facilities subject to § 60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under § 60.48c(f)(1), (2), or (3), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2 standards under § 60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour averaged firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under § 60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or E_{ho} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under § 60.43c shall conduct an initial performance test as required under § 60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods.

(1) Method 1 shall be used to select the sampling site and the number of traverse sampling points. The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry square cubic meters (dscm) [60 dry square cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(2) Method 3 shall be used for gas analysis when applying Method 5, Method 5B, of Method 17.

(3) Method 5, Method 5B, or Method 17 shall be used to measure the concentration of PM as follows:

(i) Method 5 may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 2.1 and 2.3 of Method 5B may be used in Method 17 only if Method 17 is used in conjuction with a wet scrubber system. Method 17 shall not be used in conjuction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B may be used in conjunction with a wet scrubber system.

(4) For Method 5 or Method 5B, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 °C (320 °F).

(5) For determination of PM emissions, an oxygen or carbon dioxide measurement shall be obtained simultaneously with each run of Method 5,

Method 5B, or Method 17 by traversing the duct at the same sampling location.

(6) For each run using Method 5, Method 5B, or Method 17, the emission rates expressed in ng/J (lb/million Btu) heat input shall be determined using:

(i) The oxygen or carbon dioxide measurements and PM measurements obtained under this section,

(ii) The dry basis F-factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 (appendix A).

(7) Method 9 (6-minute average of 24 observations) shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under § 60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

§ 60.46c Emission monitoring for sulfur dioxide

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO_2 emission limits under § 60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO_2 concentrations and either oxygen or carbon dioxide concentrations at the outlet of the SO_2 control device (or the outlet of the steam generating unit if no SO_2 control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under § 60.42c shall measure SO_2 concentrations and either oxygen or carbon dioxide concentrations at both the inlet and outlet of the SO_2 control device.

(b) The 1-hour average SO_2 emission rates measured by a CEM shall be expressed in ng/J or lb/million Btu heat input and shall be used to calculate the average emission rates under § 60.42c. Each 1-hour average SO_2 emission rate must be based on at least 30 minutes of operation and include at least 2 data points representing two 15-minute periods. Hourly SO_2 emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 (appendix B).

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 (appendix F).

(3) For affected facilities subject to the percent reduction requirements under § 60.42c, the span value of the SO_2 CEMS at the inlet to the SO_2 control device shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted, and the span value of the SO_2 CEMS at the outlet from the SO_2 control device shall be 50 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of § 60.42c, the span value of the SO_2 CEMS at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEM at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by using Method 6B. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19. Method 19 provides procedures for converting these measurements into the format to be used in calculating the average SO_2 input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fule tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur con-

tent of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B may be used in lieu of CEMS to measure SO_2 at the inlet or outlet of the SO_2 control system. An initial stratification test is required to verify the adequacy of the Method 6B sampling location. The stratification test shall consist of three paired runs of a suitable SO_2 and carbon dioxide measurement train operated at the candidate location and a second similar train operated according to the procedures in § 3.2 and the applicable procedures in section 7 of Performance Specification 2 (appendix B). Method 6B, Method 6A, or a combination of Methods 6 and 3 or Methods 6C and 3A are suitable measurement techniques. If Method 6B is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to § 60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, as described under § 60.48c(f) (1), (2), or (3), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§ 60.47c Emission monitoring for particulate matter.

(a) The owner or operator of an affected facility combusting coal, residual oil, or wood that is subject to the opacity standards under § 60.43c shall install, calibrate, maintain, and operate a CEMS for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system.

(b) All CEMS for measuring opacity shall be operated in accordance with the applicable procedures under Performance Specification 1 (appendix B). The span value of the opacity CEMS shall be between 60 and 80 percent.

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by § 60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under § 60.42c, or § 60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO_2 emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of § 60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2 emission limits of § 60.42c, or the PM or opacity limits of § 60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS using the applicable performance specifications in appendix B.

(c) The owner or operator of each coal-fired, residual oil-fired, or wood-fired affected facility subject to the opacity limits under § 60.43c(c) shall submit excess emission reports for any calendar

quarter for which there are excess emissions from the affected facility. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report semiannually stating that no excess emissioins occurred during the semiannual reporting period. The initial quarterly report shall be postmarked by the 30th day of the third month following the completion of the initial performance test, unless no excess emissions occur during that quarter. The initial semiannual report shall be postmarked by the 30th day of the sixth month following the completion of the initial performance test, or following the date of the previous quarterly report, as applicable. Each subsequent quarterly or semiannual report shall be postmarked by the 30th day following the end of the reporting period.

(d) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall submit quarterly reports to the Administrator. The initial quarterly report shall be postmarked by the 30th day of the third month following the completion of the initial performance test. Each subsequenty quarterly report shall be postmarked by the 30th day following the end of the reporting period.

(e) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.43c shall keep records and submit quarterly reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO_2 emission rate (ng/J or lb/million Btu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period in the quarter; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO_2 emission rate calculated during the reporting period, ending with the last 30-day period in the quarter; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO_2 or diluent (oxygen or carbon dioxide) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 (appendix B).

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), or (3) of this section, as applicable. In addition to records of fuel supplier certifications, the quarterly report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the quarter.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier; and

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in § 60.41c.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another lo-

cation. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(g) The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day.

(h) The owner or operator of each affected facility subject to a Federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under § 60.42c or § 60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

APPENDIX D

Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

SOURCE: 52 FR 47842, Dec. 16, 1987, unless otherwise noted.

§ 60.40b Applicability and delegation of authority.

(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu/hour).

(b) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1984, but on or before June 19, 1986, is subject to the following standards:

(1) Coal-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 million Btu/hour), inclusive, are subject to the particulate matter and nitrogen oxides standards under this subpart.

(2) Coal-fired affected facilities having a heat input capacity greater than 73 MW (250 million Btu/hour) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; § 60.40) are subject to the particulate matter and nitrogen oxides standards under this subpart and to the sulfur dioxide standards under subpart D (§ 60.43).

(3) Oil-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 million Btu/hour), inclusive, are subject to the nitrogen oxides standards under this subpart.

(4) Oil-fired affected facilities having a heat input capacity greater than 73 MW (250 million Btu/hour) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; § 60.40) are also subject to the nitrogen oxides standards under this subpart and the particulate matter and sulfur dioxide standards under subpart D (§ 60.42 and § 60.43).

(c) Affected facilities which also meet the applicability requirements under subpart J (Standards of performance for petroleum refineries; § 60.104) are subject to the particulate matter and nitrogen oxides standards under this subpart and the sulfur dioxide standards under subpart J (§ 60.104).

(d) Affected facilities which also meet the applicability requirements under subpart E (Standards of performance for incinerators; § 60.50) are subject to the nitrogen oxides and particulate matter standards under this subpart.

(e) Steam generating units meeting the applicability requirements under subpart Da (Standards of performance for electric utility steam generating units; § 60.40a) are not subject to this subpart.

(f) Any change to an existing steam generating unit for the sole purpose of combusting gases containing TRS as defined under § 60.281 is not considered a modification under § 60.14 and the steam generating unit is not subject to this subpart.

(g) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the following authorities shall be retained by the Administrator and not transferred to a State.

(1) Section 60.44b(f).

(2) Section 60.44b(g).

(3) Section 60.49b(a)(4).

§ 60.41b Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from the fuels listed in § 60.42b(a), § 60.43b(a), or § 60.44b(a), as applicable, during a calendar year and the potential heat input to the steam generating unit had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility in a calendar year.

Byproduct/waste means any liquid or gaseous substance produced at chemical manufacturing plants or petroleum refineries (except natural gas, distillate oil, or residual oil) and combusted in a steam generating unit for heat recovery or for disposal. Gaseous substances with carbon dioxide levels greater than 50 percent or carbon monoxide levels greater than 10 percent are not byproduct/waste for the purposes of this subpart.

Chemical manufacturing plants means industrial plants which are classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 28.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388–77, Standard Specification for Classification of Coals by Rank (IBR—see § 60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any byproduct of coal mining or coal cleaning operations with an ash content greater than 50 percent, by weight, and a heating value less than 13,900 kJ/kg (6,000 Btu/lb) on a dry basis.

Combined cycle system means a system in which a separate source, such as a gas turbine, internal combustion engine, kiln, etc., provides exhaust gas to a heat recovery steam generating unit.

Conventional technology means wet flue gas desulfurization (FGD) technology, dry FGD technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396–78, Standard Specifications for Fuel Oils (incorporated by reference—see § 60.17).

Dry flue gas desulfurization technology means a sulfur dioxide control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline slurries or solutions used in dry flue gas desulfurization technology include but are not limited to lime and sodium.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary gas turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.

Emerging technology means any sulfur dioxide control system that is not defined as a conventional technology under this section, and for which the owner or operator of the facility has applied to the Administrator and received approval to operate as an emerging technology under § 60.49b(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State Implementation Plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed combustion technology means combustion of fuel in a bed or series of beds (including but not limited to bubbling bed units and circulating bed units) of limestone aggregate (or other sorbent materials) in which these materials are forced upward by the flow of combustion air and the gaseous products of combustion.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Full capacity means operation of the steam generating unit at 90 percent or more of the maximum steady-state design heat input capacity.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat input from preheated combustion air, recirculated flue gases, or exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

Heat release rate means the steam generating unit design heat input capacity (in MW or Btu/hour) divided by the furnace volume (in cubic meters or cubic feet); the furnace volume is that volume bounded by the front furnace wall where the burner is located, the furnace side waterwall, and extending to the level just below or in front of the first row of convection pass tubes.

Heat transfer medium means any material that is used to transfer heat from one point to another point.

High heat release rate means a heat release rate greater than 730,000 J/sec-m^3 (70,000 Btu/hour-ft^3).

Lignite means a type of coal classified as lignite A or lignite B by the American Society of Testing and Materials in ASTM D388–77, Standard Specification for Classification of Coals by Rank (IBR—see § 60.17).

Low heat release rate means a heat release rate of 730,000 J/sec-m^3 (70,000 Btu/hour-ft^3) or less.

Mass-feed stoker steam generating unit means a steam generating unit where solid fuel is introduced directly into a retort or is fed directly onto a grate where it is combusted.

Maximum heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel on a steady state basis, as determined by the physical design and characteristics of the steam generating unit.

Municipal-type solid waste means refuse, more than 50 percent of which is waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible materials such as glass and rock.

Natural gas means (1) a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or (2) liquid petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835–82, "Standard Specification for Liquid Petroleum Gases" (IBR—see § 60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil.

Petroleum refinery means industrial plants as classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 29.

Potential sulfur dioxide emission rate means the theoretical sulfur dioxide emissions (ng/J, lb/million Btu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Pulverized coal-fired steam generating unit means a steam generating unit in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the steam generating unit where it is fired in suspension. This includes both conventional pulverized coal-fired and micropulverized coal-fired steam generating units.

Residual oil means crude oil, fuel oil numbers 1 and 2 that have a nitrogen content greater than 0.05 weight percent, and all fuel oil numbers 4, 5 and 6, as defined by the American Society of Testing and Materials in ASTM D396–78, Standard Specifications for Fuel Oils (IBR—see § 60.17).

Spreader stoker steam generating unit means a steam generating unit in which solid fuel is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

Steam generating unit means a device that combusts any fuel or byproduct/waste to produce steam or to heat water or any other heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters as they are defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Very low sulfur oil means an oil that contains no more than 0.5 weight percent sulfur or that, when combusted without sulfur dioxide emission control, has a sulfur dioxide emission rate equal to or less than 215 ng/J (0.5 lb/million Btu) heat input.

Wet flue gas desulfurization technology means a sulfur dioxide control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gas with an alkaline slurry or solution and forming a liquid material. This definition applies to devices where the aqueous liquid material product of this contact is subsequently converted to other forms. Alkaline reagents used in wet flue gas desulfurization technology include, but are not limited to, lime, limestone, and sodium.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of particulate matter or sulfur dioxide.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including, but not limited to, sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51819, Dec. 18, 1989]

§ 60.42b Standard for sulfur dioxide.

(a) Except as provided in paragraphs (b), (c), (d), or (j) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal or oil shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 10 percent (0.10) of the potential sulfur dioxide emission rate (90 percent reduction) and that contain sulfur dioxide in excess of the emission limit determined according to the following formula:

$$E_s=(K_aH_a+K_bH_b)/(H_a+H_b)$$

where:

E_s is the sulfur dioxide emission limit, in ng/J or lb/million Btu heat input,

K_a is 520 ng/J (or 1.2 lb/million Btu),

K_b is 340 ng/J (or 0.80 lb/million Btu),

H_a is the heat input from the combustion of coal, in J (million Btu),

H_b is the heat input from the combustion of oil, in J (million Btu).

Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat input to the affected facility from exhaust gases from another source,

such as gas turbines, internal combustion engines, kilns, etc.

(b) On and after the date on which the performance test is completed or required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility that combusts coal refuse alone in a fluidized bed combustion steam generating unit shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 20 percent of the potential sulfur dioxide emission rate (80 percent reduction) and that contain sulfur dioxide in excess of 520 ng/J (1.2 lb/million Btu) heat input. If coal or oil is fired with coal refuse, the affected facility is subject to paragraph (a) or (d) of this section, as applicable.

(c) On and after the date on which the performance test is completed or is required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility that combusts coal or oil, either alone or in combination with any other fuel, and that uses an emerging technology for the control of sulfur dioxide emissions, shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 50 percent of the potential sulfur dioxide emission rate (50 percent reduction) and that contain sulfur dioxide in excess of the emission limit determined according to the following formula:

$$E_s=(K_cH_c+K_dH_d)/H_c+H_d)$$

where:

E_s is the sulfur dioxide emission limit, expressed in ng/J (lb/million Btu) heat input,

K_c is 260 ng/J (0.60 lb/million Btu),

K_d is 170 ng/J (0.40 lb/million Btu),

H_c is the heat input from the combustion of coal, J (million Btu),

H_d is the heat input from the combustion of oil, J (million Btu).

Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels, or from the heat input to the affected facility from exhaust gases from another source, such as gas turbines, internal combustion engines, kilns, etc.

(d) On and after the date on which the performance test is completed or required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility listed in paragraphs (d) (1), (2), or (3) of this section shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 520 ng/J (1.2 lb/million Btu) heat input if the affected facility combusts coal, or 215 ng/J (0.5 lb/million Btu) heat input if the affected facility combusts oil other than very low sulfur oil. Percent reduction requirements are not applicable to affected facilities under this paragraph.

(1) Affected facilities that have an annual capacity factor for coal and oil of 30 percent (0.30) or less and are subject to a Federally enforceable permit limiting the operation of the affected facility to an annual capacity factor for coal and oil of 30 percent (0.30) or less;

(2) Affected facilities located in a noncontinental area; or

(3) Affected facilities combusting coal or oil, alone or in combination with any other fuel, in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat input to the steam generating unit is from combustion of coal and oil in the duct burner and 70 percent (0.70) or more of the heat input to the steam generating unit is from the exhaust gases entering the duct burner.

(e) Except as provided in paragraph (f) of this section, compliance with the emission limits, fuel oil sulfur limits, and/or percent reduction requirements under this section are determined on a 30-day rolling average basis.

(f) Except as provided in paragraph (j)(2) of this section, compliance with the emission limits or fuel oil sulfur limits under this section is determined on a 24-hour average basis for affected facilities that (1) have a Federally enforceable permit limiting the annual capacity factor for oil to 10 percent or less, (2) combust only very low sulfur oil, and (3) do not combust any other fuel.

(g) Except as provided in paragraph (i) of this section, the sulfur dioxide emission limits and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(h) Reductions in the potential sulfur dioxide emission rate through fuel pretreatment are not credited toward the percent reduction requirement under paragraph (c) of this section unless:

(1) Fuel pretreatment results in a 50 percent or greater reduction in potential sulfur dioxide emissions and

(2) Emissions from the pretreated fuel (without combustion or post combustion sulfur dioxide control) are equal to or less than the emission limits specified in paragraph (c) of this section.

(i) An affected facility subject to paragraph (a), (b), or (c) of this section may combust very low sulfur oil or natural gas when the sulfur dioxide control system is not being operated because of malfunction or maintenance of the sulfur dioxide control system.

(j) Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall

demonstrate that the oil meets the definition of very low sulfur oil by: (1) Following the performance testing procedures as described in § 60.45b(c) or § 60.45b(d), and following the monitoring procedures as described in § 60.47b(a) or § 60.47b(b) to determine sulfur dioxide emission rate or fuel oil sulfur content; or (2) maintaining fuel receipts as described in § 60.49b(r).

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51819, Dec. 18, 1989]

§ 60.43b Standard for particulate matter.

(a) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility which combusts coal or combusts mixtures of coal with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of the following emission limits:

(1) 22 ng/J (0.05 lb/million Btu) heat input,

(i) If the affected facility combusts only coal, or

(ii) If the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/million Btu) heat input if the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels greater than 10 percent (0.10) and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(3) 86 ng/J (0.20 lb/million Btu) heat input if the affected facility combusts coal or coal and other fuels and

(i) Has an annual capacity factor for coal or coal and other fuels of 30 percent (0.30) or less,

(ii) Has a maximum heat input capacity of 73 MW (250 million Btu/hour) or less,

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for coal or coal and other solid fuels, and

(iv) Construction of the affected facility commenced after June 19, 1984, and before November 25, 1986.

(b) On and after the date on which the performance test is completed or required to be completed under 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts oil (or mixtures of oil with other fuels) and uses a conventional or emerging technology to reduce sulfur dioxide emissions shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of 43 ng/J (0.10 lb/million Btu) heat input.

(c) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts wood, or wood with other fuels, except coal, shall cause to be discharged from that affected facility any gases that contain particulate matter in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/million Btu) heat input if the affected facility has an annual capacity factor greater than 30 percent (0.30) for wood.

(2) 86 ng/J (0.20 lb/million Btu) heat input if

(i) The affected facility has an annual capacity factor of 30 percent (0.30) or less for wood,

(ii) Is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for wood, and

(iii) Has a maximum heat input capacity of 73 MW (250 million Btu/hour) or less.

(d) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts municipal-type solid waste or mixtures of municipal-type solid waste with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/million Btu) heat input,

(i) If the affected facility combusts only municipal-type solid waste, or

(ii) If the affected facility combusts municipal-type solid waste and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 86 ng/J (0.20 lb/million Btu) heat input if the affected facility combusts municipal-type solid waste or municipal-type solid waste and other fuels; and

(i) Has an annual capacity factor for municipal-type solid waste and other fuels of 30 percent (0.30) or less,

(ii) Has a maximum heat input capacity of 73 MW (250 million Btu/hour) or less,

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) for municipal-type solid waste, or municipal-type solid waste and other fuels, and

(iv) Construction of the affected facility commenced after June 19, 1984, but before November 25, 1986.

(e) For the purposes of this section, the annual capacity factor is determined by dividing the actual heat input to the steam generating unit during the calendar year from the combustion of coal,

wood, or municipal-type solid waste, and other fuels, as applicable, by the potential heat input to the steam generating unit if the steam generating unit had been operated for 8,760 hours at the maximum design heat input capacity.

(f) On and after the date on which the initial performance test is completed or is required to be completed under 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(g) The particulate matter and opacity standards apply at all times, except during periods of startup, shutdown or malfunction.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51819, Dec. 18, 1989]

§ 60.44b Standard for nitrogen oxides.

(a) Except as provided under paragraph (k) of this section, on and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides (expressed as NO_2) in excess of the following emission limits:

Fuel/Steam generating unit type	Nitrogen oxide emission limits ng/J (lb/million Btu) (expressed as NO_2) heat input
(1) Natural gas and distillate oil, except (4):	
(i) Low heat release rate	43 (0.10)
(ii) High heat release rate	86 (0.20)
(2) Residual oil:	
(i) Low heat release rate	130 (0.30)
(ii) High heat release rate	170 (0.40)
(3) Coal:	
(i) Mass-feed stoker	210 (0.50)
(ii) Spreader stoker and fluidized bed combustion	260 (0.60)
(iii) Pulverized coal	300 (0.70)
(iv) Lignite, except (v)	260 (0.60)
(v) Lignite mined in North Dakota, South Dakota, or Montana and combusted in a slag tap furnace	340 (0.80)
(vi) Coal-derived synthetic fuels	210 (0.50)
(4) Duct burner used in a combined cycle system:	
(i) Natural gas and distillate oil	86 (0.20)
(ii) Residual oil	170 (0.40)

(b) Except as provided under paragraph (k) of this section, on and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts mixtures of coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of a limit determined by use of the following formula:

$$E_n=[(EL_{go}\ H_{go})+(EL_{ro}\ H_{ro})+(EL_c\ H_c)]/(H_{go}+H_{ro}+H_c)$$

where:

E_n is the nitrogen oxides emission limit (expressed as NO_2), ng/J (lb/million Btu)

EL_{go} is the appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/million Btu)

H_{go} is the heat input from combustion of natural gas or distillate oil,

EL_{ro} is the appropriate emission limit from paragraph (a)(2) for combustion of residual oil,

H_{ro} is the heat input from combustion of residual oil,

EL_c is the appropriate emission limit from paragraph (a)(3) for combustion of coal, and

H_c is the heat input from combustion of coal.

(c) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility that simultaneously combusts coal or oil, or a mixture of these fuels with natural gas, and wood, municipal-type solid waste, or any other fuel shall cause to be discharged into the atmosphere any gases that contain nitrogen oxides in excess of the emission limit for the coal or oil, or mixture of these fuels with natural gas combusted in the affected facility, as determined pursuant to paragraph (a) or (b) of this section, unless the affected facility has an annual capacity factor for coal or oil, or mixture of these fuels with natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, or a mixture of these fuels with natural gas.

(d) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts natural gas with wood, municipal-type solid waste, or other solid fuel, except coal, shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of 130 ng/J (0.30 lb/million Btu) heat input unless the affected facility has an annual capacity factor for natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for natural gas.

(e) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal, oil, or natural gas with byproduct/waste shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of an emission limit determined by the following formula unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement which limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less:

$$E_n=[(EL_{go}\ H_{go})+(EL_{ro}\ H_{ro})+(EL_c\ H_c)]/(H_{go}+H_{ro}+H_c)$$

where:

E_n is the nitrogen oxides emission limit (expressed as NO_2), ng/J (lb/million Btu)

EL_{go} is the appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/million Btu).

H_{go} is the heat input from combustion of natural gas, distillate oil and gaseous byproduct/waste, ng/J (lb/million Btu).

EL_{ro} is the appropriate emission limit from paragraph (a)(2) for combustion of residual oil, ng/J (lb/million Btu)

H_{ro} is the heat input from combustion of residual oil and/or liquid byproduct/waste.

EL_c is the appropriate emission limit from paragraph (a)(3) for combustion of coal, and

H_c is the heat input from combustion of coal.

(f) Any owner or operator of an affected facility that combusts byproduct/waste with either natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility to establish a nitrogen oxides emission limit which shall apply specifically to that affected facility when the byproduct/waste is combusted. The petition shall include sufficient and appropriate data, as determined by the Administrator, such as nitrogen oxides emissions from the affected facility, waste composition (including nitrogen content), and combustion conditions to allow the Administrator to confirm that the affected facility is unable to comply with the emission limits in paragraph (e) of this section and to determine the appropriate emission limit for the affected facility.

(1) Any owner or operator of an affected facility petitioning for a facility-specific nitrogen oxides emission limit under this section shall:

(i) Demonstrate compliance with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, by conducting a 30-day performance test as provided in § 60.46b(e). During the performance test only natural gas, distillate oil, or residual oil shall be combusted in the affected facility; and

(ii) Demonstrate that the affected facility is unable to comply with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, when gaseous or liquid byproduct/waste is combusted in the affected facility under the same conditions and using the same technological system of emission reduction applied when demonstrating compliance under paragraph (f)(1)(i) of this section.

(2) The nitrogen oxides emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, shall be applicable to the affected facility until and unless the petition is approved by the Administrator. If the petition is approved by the Administrator, a facility-specific nitrogen oxides emission limit will be established at the nitrogen oxides emission level achievable when the affected facility is combusting oil or natural gas and byproduct/waste in a manner that the Administrator determines to be consistent with minimizing nitrogen oxides emissions.

(g) Any owner or operator of an affected facility that combusts hazardous waste (as defined by 40 CFR part 261 or 40 CFR part 761) with natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility for a waiver from compliance with the nitrogen oxides emission limit which applies specifically to that affected facility. The petition must include sufficient and appropriate data, as determined by the Administrator, on nitrogen oxides emissions from the affected facility, waste destruction efficiencies, waste composition (including nitrogen content), the quantity of specific wastes to be combusted and combustion conditions to allow the Administrator to determine if the affected facility is able to comply with the nitrogen oxides emission limits required by this section. The owner or operator of the affected facility shall demonstrate that when hazardous waste is combusted in the affected facility, thermal destruction efficiency requirements for hazardous waste specified in an applicable federally enforceable requirement preclude compliance with the nitrogen oxides emission limits of this section. The nitrogen oxides emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, are applicable to the affected facility until and unless the petition is approved by the Administrator. (See 40 CFR 761.70 for regulations applicable to the incineration of materials containing polychlorinated biphenyls (PCB's).)

(h) For purposes of paragraph (i) of this section, the nitrogen oxide standards under this section

apply at all times including periods of startup, shutdown, or malfunction.

(i) Except as provided under paragraph (j) of this section, compliance with the emission limits under this section is determined on a 30-day rolling average basis.

(j) Compliance with the emission limits under this section is determined on a 24-hour average basis for the initial performance test and on a 3-hour average basis for subsequent performance tests for any affected facilities that:

(1) Combust, alone or in combination, only natural gas, distillate oil, or residual oil with a nitrogen content of 0.30 weight percent or less;

(2) Have a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less; and

(3) Are subject to a Federally enforceable requirement limiting operation of the affected facility to the firing of natural gas, distillate oil, and/or residual oil with a nitrogen content of 0.30 weight percent or less and limiting operation of the affected facility to a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil and a nitrogen content of 0.30 weight percent or less.

(k) Affected facilities that meet the criteria described in paragraphs (j) (1), (2), and (3) of this section, and that have a heat input capacity of 73 MW (250 million Btu/hour) or less, are not subject to the nitrogen oxides emission limits under this section.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51825, Dec. 18, 1989]

§ 60.45b Compliance and performance test methods and procedures for sulfur dioxide.

(a) The sulfur dioxide emission standards under § 60.42b apply at all times.

(b) In conducting the performance tests required under § 60.8, the owner or operator shall use the methods and procedures in appendix A of this part or the methods and procedures as specified in this section, except as provided in § 60.8(b). Section 60.8(f) does not apply to this section. The 30-day notice required in § 60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(c) The owner or operator of an affected facility shall conduct performance tests to determine compliance with the percent of potential sulfur dioxide emission rate (% P_s) and the sulfur dioxide emission rate (E_s) pursuant to § 60.42b following the procedures listed below, except as provided under paragraph (d) of this section.

(1) The initial performance test shall be conducted over the first 30 consecutive operating days of the steam generating unit. Compliance with the sulfur dioxide standards shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility.

(2) If only coal or only oil is combusted, the following procedures are used:

(i) The procedures in Method 19 are used to determine the hourly sulfur dioxide emission rate (E_{ho}) and the 30-day average emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the continuous emission monitoring system of § 60.47b (a) or (b).

(ii) The percent of potential sulfur dioxide emission rate (% P_s) emitted to the atmosphere is computed using the following formula:

$$\% P_s = 100\,(1 - \% R_g/100)(1 - \% R_f/100)$$

where:

% R_g is the sulfur dioxide removal efficiency of the control device as determined by Method 19, in percent.

% R_f is the sulfur dioxide removal efficiency of fuel pretreatment as determined by Method 19, in percent.

(3) If coal or oil is combusted with other fuels, the same procedures required in paragraph (c)(2) of this section are used, except as provided in the following:

(i) An adjusted hourly sulfur dioxide emission rate ($E_{ho}°$) is used in Equation 19–19 of Method 19 to compute an adjusted 30-day average emission rate ($E_{ao}°$). The E_{ho} is computed using the following formula:

$$E_{ho}° = [E_{ho} - E_w(1 - X_k)]/X_k$$

where:

$E_{ho}°$ is the adjusted hourly sulfur dioxide emission rate, ng/J (lb/million Btu).

E_{ho} is the hourly sulfur dioxide emission rate, ng/J (lb/million Btu).

E_w is the sulfur dioxide concentration in fuels other than coal and oil combusted in the affected facility, as determined by the fuel sampling and analysis procedures in Method 19, ng/J (lb/million Btu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted.

X_k is the fraction of total heat input from fuel combustion derived from coal, oil, or coal and oil, as determined by applicable procedures in Method 19.

(ii) To compute the percent of potential sulfur dioxide emission rate (% P_s), an adjusted % R_g (% $R_g°$) is computed from the adjusted $E_{ao}°$ from paragraph (b)(3)(i) of this section and an adjusted average sulfur dioxide inlet rate ($E_{ai}°$) using the following formula:

$$\% R_g° = 100\,(1.0 - E_{ao}°/E_{ai}°)$$

To compute E_{af}^{o}, an adjusted hourly sulfur dioxide inlet rate (E_{hi}^{o}) is used. The E_{hi}^{o} is computed using the following formula:

$$E_{hi}^{o}=[E_{hi} - E_w(1 - X_k)]/X_k$$

where:

E_{hi}^{o} is the adjusted hourly sulfur dioxide inlet rate, ng/J (lb/million Btu).

E_{hi} is the hourly sulfur dioxide inlet rate, ng/J (lb/million Btu).

(4) The owner or operator of an affected facility subject to paragraph (b)(3) of this section does not have to measure parameters E_w or X_k if the owner or operator elects to assume that X_k=1.0. Owners or operators of affected facilities who assume X_k=1.0 shall

(i) Determine % P_s following the procedures in paragraph (c)(2) of this section, and

(ii) Sulfur dioxide emissions (E_s) are considered to be in compliance with sulfur dioxide emission limits under § 60.42b.

(5) The owner or operator of an affected facility that qualifies under the provisions of § 60.42b(d) does not have to measure parameters E_w or X_k under paragraph (b)(3) of this section if the owner or operator of the affected facility elects to measure sulfur dioxide emission rates of the coal or oil following the fuel sampling and analysis procedures under Method 19.

(d) Except as provided in paragraph (j), the owner or operator of an affected facility that combusts only very low sulfur oil, has an annual capacity factor for oil of 10 percent (0.10) or less, and is subject to a Federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for oil of 10 percent (0.10) or less shall:

(1) Conduct the initial performance test over 24 consecutive steam generating unit operating hours at full load;

(2) Determine compliance with the standards after the initial performance test based on the arithmetic average of the hourly emissions data during each steam generating unit operating day if a continuous emission measurement system (CEMS) is used, or based on a daily average if Method 6B or fuel sampling and analysis procedures under Method 19 are used.

(e) The owner or operator of an affected facility subject to § 60.42b(d)(1) shall demonstrate the maximum design capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. This demonstration will be made during the initial performance test and a subsequent demonstration may be requested at any other time. If the 24-hour average firing rate for the affected facility is less than the maximum design capacity provided by the manufacturer of the affected facility, the 24-hour average firing rate shall be used to determine the capacity utilization rate for the affected facility, otherwise the maximum design capacity provided by the manufacturer is used.

(f) For the initial performance test required under § 60.8, compliance with the sulfur dioxide emission limits and percent reduction requirements under § 60.42b is based on the average emission rates and the average percent reduction for sulfur dioxide for the first 30 consecutive steam generating unit operating days, except as provided under paragraph (d) of this section. The initial performance test is the only test for which at least 30 days prior notice is required unless otherwise specified by the Administrator. The initial performance test is to be scheduled so that the first steam generating unit operating day of the 30 successive steam generating unit operating days is completed within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility. The boiler load during the 30-day period does not have to be the maximum design load, but must be representative of future operating conditions and include at least one 24-hour period at full load.

(g) After the initial performance test required under § 60.8, compliance with the sulfur dioxide emission limits and percent reduction requirements under § 60.42b is based on the average emission rates and the average percent reduction for sulfur dioxide for 30 successive steam generating unit operating days, except as provided under paragraph (d). A separate performance test is completed at the end of each steam generating unit operating day after the initial performance test, and a new 30-day average emission rate and percent reduction for sulfur dioxide are calculated to show compliance with the standard.

(h) Except as provided under paragraph (i) of this section, the owner or operator of an affected facility shall use all valid sulfur dioxide emissions data in calculating % P_s and E_{ho} under paragraph (c), of this section whether or not the minimum emissions data requirements under § 60.46b are achieved. All valid emissions data, including valid sulfur dioxides emission data collected during periods of startup, shutdown and malfunction, shall be used in calculating % P_s and E_{ho} pursuant to paragraph (c) of this section.

(i) During periods of malfunction or maintenance of the sulfur dioxide control systems when oil is combusted as provided under § 60.42b(i), emission data are not used to calculate % P_s or E_s under § 60.42b (a), (b) or (c), however, the emissions data are used to determine compliance with the emission limit under § 60.42b(i).

(j) The owner or operator of an affected facility that combusts very low sulfur oil is not subject to the compliance and performance testing require-

ments of this section if the owner or operator obtains fuel receipts as described in § 60.49b(r).

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51820, 51825, Dec. 18, 1989]

§ 60.46b Compliance and performance test methods and procedures for particulate matter and nitrogen oxides.

(a) The particulate matter emission standards and opacity limits under § 60.43b apply at all times except during periods of startup, shutdown, or malfunction. The nitrogen oxides emission standards under § 60.44b apply at all times.

(b) Compliance with the particulate matter emission standards under § 60.43b shall be determined through performance testing as described in paragraph (d) of this section.

(c) Compliance with the nitrogen oxides emission standards under § 60.44b shall be determined through performance testing under paragraph (e) or (f), or under paragraphs (g) and (h) of this section, as applicable.

(d) To determine compliance with the particulate matter emission limits and opacity limits under § 60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under § 60.8 using the following procedures and reference methods:

(1) Method 3B is used for gas analysis when applying Method 5 or Method 17.

(2) Method 5, Method 5B, or Method 17 shall be used to measure the concentration of particulate matter as follows:

(i) Method 5 shall be used at affected facilities without wet flue gas desulfurization (FGD) systems; and

(ii) Method 17 may be used at facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of sections 2.1 and 2.3 of Method 5B may be used in Method 17 only if it is used after a wet FGD system. Do not use Method 17 after wet FGD systems if the effluent is saturated or laden with water droplets.

(iii) Method 5B is to be used only after wet FGD systems.

(3) Method 1 is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf) except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(4) For Method 5, the temperature of the sample gas in the probe and filter holder is monitored and is maintained at 160 °C (320 °F).

(5) For determination of particulate matter emissions, the oxygen or carbon dioxide sample is obtained simultaneously with each run of Method 5, Method 5B or Method 17 by traversing the duct at the same sampling location.

(6) For each run using Method 5, Method 5B or Method 17, the emission rate expressed in nanograms per joule heat input is determined using:

(i) The oxygen or carbon dioxide measurements and particulate matter measurements obtained under this section,

(ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 (appendix A).

(7) Method 9 is used for determining the opacity of stack emissions.

(e) To determine compliance with the emission limits for nitrogen oxides required under § 60.44b, the owner or operator of an affected facility shall conduct the performance test as required under § 60.8 using the continuous system for monitoring nitrogen oxides under § 60.48(b).

(1) For the initial compliance test, nitrogen oxides from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the nitrogen oxides emission standards under § 60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

(2) Following the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, the owner or operator of an affected facility which combusts coal or which combusts residual oil having a nitrogen content greater than 0.30 weight percent shall determine compliance with the nitrogen oxides emission standards under § 60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

(3) Following the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, the owner or operator of an affected facility which has a heat input capacity greater than 73 MW (250 million Btu/hour) and which combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall determine compliance with the nitrogen oxides standards under § 60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling

average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

(4) Following the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, the owner or operator of an affected facility which has a heat input capacity of 73 MW (250 million Btu/hour) or less and which combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the nitrogen oxides standards under § 60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, nitrogen oxides emissions data collected pursuant to § 60.48b(g)(1) or § 60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the nitrogen oxides emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

(5) If the owner or operator of an affected facility which combusts residual oil does not sample and analyze the residual oil for nitrogen content, as specified in § 60.49b(e), the requirements of paragraph (iii) of this section apply and the provisions of paragraph (iv) of this section are inapplicable.

(f) To determine compliance with the emission limit for nitrogen oxides required by § 60.44b(a)(4) for duct burners used in combined cycle systems, the owner or operator of an affected facility shall conduct the performance test required under § 60.8 using the nitrogen oxides and oxygen measurement procedures in 40 CFR part 60 appendix A, Method 20. During the performance test, one sampling site shall be located as close as practicable to the exhaust of the turbine, as provided by section 6.1.1 of Method 20. A second sampling site shall be located at the outlet to the steam generating unit. Measurements of nitrogen oxides and oxygen shall be taken at both sampling sites during the performance test. The nitrogen oxides emission rate from the combined cycle system shall be calculated by subtracting the nitrogen oxides emission rate measured at the sampling site at the outlet from the turbine from the nitrogen oxides emission rate measured at the sampling site at the outlet from the steam generating unit.

(g) The owner or operator of an affected facility described in § 60.44b(j) or § 60.44b(k) shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. The owner or operator of an affected facility shall determine the maximum heat input capacity using the heat loss method described in sections 5 and 7.3 of the ASME *Power Test Codes* 4.1 (see IBR § 60.17(h)). This demonstration of maximum heat input capacity shall be made during the initial performance test for affected facilities that meet the criteria of § 60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of § 60.44b(k). Subsequent demonstrations may be required by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used.

(h) The owner or operator of an affected facility described in § 60.44b(j) that has a heat input capacity greater than 73 MW (250 million Btu/hour) shall:

(1) Conduct an initial performance test as required under § 60.8 over a minimum of 24 consecutive steam generating unit operating hours at maximum heat input capacity to demonstrate compliance with the nitrogen oxides emission standards under § 60.44b using Method 7, 7A, 7E, or other approved reference methods; and

(2) Conduct subsequent performance tests once per calendar year or every 400 hours of operation (whichever comes first) to demonstrate compliance with the nitrogen oxides emission standards under § 60.44b over a minimum of 3 consecutive steam generating unit operating hours at maximum heat input capacity using Method 7, 7A, 7E, or other approved reference methods.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51820, 51825, Dec. 18, 1989; 55 FR 18876, May 7, 1990]

§ 60.47b Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (b) and (f) of this section, the owner or operator of an affected facility subject to the sulfur dioxide standards under § 60.42b shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) for measuring sulfur dioxide concentrations and either oxygen (O_2) or carbon dioxide (CO_2) concentrations and shall record the output of the systems. The sulfur dioxide and either oxygen or carbon dioxide concentrations shall both

be monitored at the inlet and outlet of the sulfur dioxide control device.

(b) As an alternative to operating CEMS as required under paragraph (a) of this section, an owner or operator may elect to determine the average sulfur dioxide emissions and percent reduction by:

(1) Collecting coal or oil samples in an as-fired condition at the inlet to the steam generating unit and analyzing them for sulfur and heat content according to Method 19. Method 19 provides procedures for converting these measurements into the format to be used in calculating the average sulfur dioxide input rate, or

(2) Measuring sulfur dioxide according to Method 6B at the inlet or outlet to the sulfur dioxide control system. An initial stratification test is required to verify the adequacy of the Method 6B sampling location. The stratification test shall consist of three paired runs of a suitable sulfur dioxide and carbon dioxide measurement train operated at the candidate location and a second similar train operated according to the procedures in section 3.2 and the applicable procedures in section 7 of Performance Specification 2. Method 6B, Method 6A, or a combination of Methods 6 and 3 or 3B or Methods 6C and 3A are suitable measurement techniques. If Method 6B is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent.

(3) A daily sulfur dioxide emission rate, E_D, shall be determined using the procedure described in Method 6A, section 7.6.2 (Equation 6A–8) and stated in ng/J (lb/million Btu) heat input.

(4) The mean 30-day emission rate is calculated using the daily measured values in ng/J (lb/million Btu) for 30 successive steam generating unit operating days using equation 19–20 of Method 19.

(c) The owner or operator of an affected facility shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive boiler operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator or the reference methods and procedures as described in paragraph (b) of this section.

(d) The 1-hour average sulfur dioxide emission rates measured by the CEMS required by paragraph (a) of this section and required under § 60.13(h) is expressed in ng/J or lb/million Btu heat input and is used to calculate the average emission rates under § 60.42b. Each 1-hour average sulfur dioxide emission rate must be based on more than 30 minutes of steam generating unit operation and include at least 2 data points with each representing a 15-minute period. Hourly sulfur dioxide emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(e) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 (appendix B).

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 (appendix F).

(3) For affected facilities combusting coal or oil, alone or in combination with other fuels, the span value of the sulfur dioxide CEMS at the inlet to the sulfur dioxide control device is 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the fuel combusted, and the span value of the CEMS at the outlet to the sulfur dioxide control device is 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the fuel combusted.

(f) The owner or operator of an affected facility that combusts very low sulfur oil is not subject to the emission monitoring requirements of this section if the owner or operator obtains fuel receipts as described in § 60.49b(r).

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51820, Dec. 18, 1989; 55 FR 5212, Feb. 14, 1990; 55 FR 18876, May 7, 1990]

§ 60.48b Emission monitoring for particulate matter and nitrogen oxides.

(a) The owner or operator of an affected facility subject to the opacity standard under § 60.43b shall install, calibrate, maintain, and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere and record the output of the system.

(b) Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under § 60.44b shall install, calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system.

(c) The continuous monitoring systems required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is

recorded during calibration checks, and zero and span adjustments.

(d) The 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor required by paragraph (b) of this section and required under § 60.13(h) shall be expressed in ng/J or lb/million Btu heat input and shall be used to calculate the average emission rates under § 60.44b. The 1-hour averages shall be calculated using the data points required under § 60.13(b). At least 2 data points must be used to calculate each 1-hour average.

(e) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

(1) For affected facilities combusting coal, wood or municipal-type solid waste, the span value for a continuous monitoring system for measuring opacity shall be between 60 and 80 percent.

(2) For affected facilities combusting coal, oil, or natural gas, the span value for nitrogen oxides is determined as follows:

Fuel	Span values for nitrogen oxides (PPM)
Natural gas	500
Oil	500
Coal	1,000
Mixtures	500(x+y)+1,000z

where:

x is the fraction of total heat input derived from natural gas,

y is the fraction of total heat input derived from oil, and

z is the fraction of total heat input derived from coal.

(3) All span values computed under paragraph (e)(2) of this section for combusting mixtures of regulated fuels are rounded to the nearest 500 ppm.

(f) When nitrogen oxides emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7, Method 7A, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

(g) The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 million Btu/hour) or less, and which has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, or any mixture of these fuels, greater than 10 percent (0.10) shall:

(1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section, or

(2) Monitor steam generating unit operating conditions and predict nitrogen oxides emission rates as specified in a plan submitted pursuant to § 60.49b(c).

(h) The owner or operator of an affected facility which is subject to the nitrogen oxides standards of § 60.44b(a)(4) is not required to install or operate a continuous monitoring system to measure nitrogen oxides emissions.

(i) The owner or operator of an affected facility described in § 60.44b(j) or § 60.44b(k) is not required to install or operate a continuous monitoring system for measuring nitrogen oxides emissions.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51825, Dec. 18, 1989]

§ 60.49b Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by § 60.7. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility,

(2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§ 60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii), (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i), (j), (k), 60.45b(d), (g), 60.46b(h), or 60.48b(i),

(3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired, and,

(4) Notification that an emerging technology will be used for controlling emissions of sulfur dioxide. The Administrator will examine the description of the emerging technology and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of § 60.42b(a) unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the sulfur dioxide, particulate matter, and/or nitrogen oxides emission limits under §§ 60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B. The owner or operator of each affected facility described in § 60.44b(j) or § 60.44b(k) shall submit to the Administrator the maximum heat input capacity data

from the demonstration of the maximum heat input capacity of the affected facility.

(c) The owner or operator of each affected facility subject to the nitrogen oxides standard of § 60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions under the provisions of § 60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored under § 60.48b(g)(2) and the records to be maintained under § 60.49b(j). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. The plan shall:

(1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and nitrogen oxides emission rates (i.e., ng/J or lbs/million Btu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (i.e., the ratio of primary air to secondary and/or tertiary air) and the level of excess air (i.e., flue gas oxygen level);

(2) Include the data and information that the owner or operator used to identify the relationship between nitrogen oxides emission rates and these operating conditions;

(3) Identify how these operating conditions, including steam generating unit load, will be monitored under § 60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under § 60.49b(j).

If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan.

(d) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for each calendar quarter. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

(e) For an affected facility that combusts residual oil and meets the criteria under §§ 60.46b(e)(4), 60.44b(j), or (k), the owner or operator shall maintain records of the nitrogen content of the residual oil combusted in the affected facility and calculate the average fuel nitrogen content on a per calendar quarter basis. The nitrogen content shall be determined using ASTM Method D3431–80, Test Method for Trace Nitrogen in Liquid Petroleum Hydrocarbons (IBR-see § 60.17), or fuel suppliers. If residual oil blends are being combusted, fuel nitrogen specifications may be prorated based on the ratio of residual oils of different nitrogen content in the fuel blend.

(f) For facilities subject to the opacity standard under § 60.43b, the owner or operator shall maintain records of opacity.

(g) Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under § 60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date.

(2) The average hourly nitrogen oxides emission rates (expressed as NO_2) (ng/J or lb/million Btu heat input) measured or predicted.

(3) The 30-day average nitrogen oxides emission rates (ng/J or lb/million Btu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.

(4) Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under § 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken.

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

(7) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(8) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

(9) Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(h) The owner or operator of any affected facility in any category listed in paragraphs (h)(1) or (2) of this section is required to submit excess emission reports for any calendar quarter during which there are excess emissions from the affected facility. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period.

(1) Any affected facility subject to the opacity standards under § 60.43b(e) or to the operating parameter monitoring requirements under § 60.13(i)(1).

(2) Any affected facility that is subject to the nitrogen oxides standard of § 60.44b, and that

(i) Combusts natural gas, distillate oil, or residual oil with a nitrogen content of 0.3 weight percent or less, or

(ii) Has a heat input capacity of 73 MW (250 million Btu/hour) or less and is required to monitor nitrogen oxides emissions on a continuous basis under § 60.48b(g)(1) or steam generating unit operating conditions under § 60.48b(g)(2).

(3) For the purpose of § 60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under § 60.43b(f).

(4) For purposes of § 60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average nitrogen oxides emission rate, as determined under § 60.46b(e), which exceeds the applicable emission limits in § 60.44b.

(i) The owner or operator of any affected facility subject to the continuous monitoring requirements for nitrogen oxides under § 60.48(b) shall submit a quarterly report containing the information recorded under paragraph (g) of this section. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

(j) The owner or operator of any affected facility subject to the sulfur dioxide standards under § 60.42b shall submit written reports to the Administrator for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

(k) For each affected facility subject to the compliance and performance testing requirements of § 60.45b and the reporting requirement in paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average sulfur dioxide emission rate (ng/J or lb/million Btu heat input) measured during the reporting period, ending with the last 30-day period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent reduction in sulfur dioxide emissions calculated during the reporting period, ending with the last 30-day period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken.

(4) Identification of the steam generating unit operating days that coal or oil was combusted and for which sulfur dioxide or diluent (oxygen or carbon dioxide) data have not been obtained by an approved method for at least 75 percent of the operating hours in the steam generating unit operating day; justification for not obtaining sufficient data; and description of corrective action taken.

(5) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(7) Identification of times when hourly averages have been obtained based on manual sampling methods.

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS.

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3.

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(11) The annual capacity factor of each fired as provided under paragraph (d) of this section.

(l) For each affected facility subject to the compliance and performance testing requirements of § 60.45b(d) and the reporting requirements of paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates when the facility was in operation during the reporting period;

(2) The 24-hour average sulfur dioxide emission rate measured for each steam generating unit operating day during the reporting period that coal or oil was combusted, ending in the last 24-hour period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(3) Identification of the steam generating unit operating days that coal or oil was combusted for which sulfur dioxide or diluent (oxygen or carbon dioxide) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining suffi-

cient data; and description of corrective action taken.

(4) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(5) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(6) Identification of times when hourly averages have been obtained based on manual sampling methods.

(7) Identification of the times when the pollutant concentration exceeded full span of the CEMS.

(8) Description of any modifications to the CEMS which could affect the ability of the CEMS to comply with Performance Specification 2 or 3.

(9) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(m) For each affected facility subject to the sulfur dioxide standards under § 60.42b for which the minimum amount of data required under § 60.47b(f) were not obtained during a calendar quarter, the following information is reported to the Administrator in addition to that required under paragraph (k) of this section:

(1) The number of hourly averages available for outlet emission rates and inlet emission rates.

(2) The standard deviation of hourly averages for outlet emission rates and inlet emission rates, as determined in Method 19, section 7.

(3) The lower confidence limit for the mean outlet emission rate and the upper confidence limit for the mean inlet emission rate, as calculated in Method 19, section 7.

(4) The ratio of the lower confidence limit for the mean outlet emission rate and the allowable emission rate, as determined in Method 19, section 7.

(n) If a percent removal efficiency by fuel pretreatment (i.e., % R_f) is used to determine the overall percent reduction (i.e., % R_o) under § 60.45b, the owner or operator of the affected facility shall submit a signed statement with the quarterly report:

(1) Indicating what removal efficiency by fuel pretreatment (i.e., % R_f) was credited for the calendar quarter;

(2) Listing the quantity, heat content, and date each pretreated fuel shipment was received during the previous calendar quarter; the name and location of the fuel pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the previous calendar quarter;

(3) Documenting the transport of the fuel from the fuel pretreatment facility to the steam generating unit.

(4) Including a signed statement from the owner or operator of the fuel pretreatment facility certifying that the percent removal efficiency achieved by fuel pretreatment was determined in accordance with the provisions of Method 19 (appendix A) and listing the heat content and sulfur content of each fuel before and after fuel pretreatment.

(o) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

(p) The owner or operator of an affected facility described in § 60.44b(j) or (k) shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date,

(2) The number of hours of operation, and

(3) A record of the hourly steam load.

(q) The owner or operator of an affected facility described in § 60.44b(j) or § 60.44b(k) shall submit to the Administrator on a quarterly basis:

(1) The annual capacity factor over the previous 12 months;

(2) The average fuel nitrogen content during the quarter, if residual oil was fired; and

(3) If the affected facility meets the criteria described in § 60.44b(j), the results of any nitrogen oxides emission tests required during the quarter, the hours of operation during the quarter, and the hours of operation since the last nitrogen oxides emission test.

(r) The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil under § 60.42b(j)(2) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier which certify that the oil meets the definition of distillate oil as defined in § 60.41b. For the purposes of this section, the oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Quarterly reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition was combusted in the affected facility during the preceding quarter.

(s) [Reserved]

(t) Facility-specific nitrogen oxides standard for Rohm and Haas Kentucky Incorporated's Boiler No. 100 located in Louisville, Kentucky:

(1) *Definitions.*

Air ratio control damper is defined as the part of the low nitrogen oxides burner that is adjusted to control the split of total combustion air delivered to the reducing and oxidation portions of the combustion flame.

Flue gas recirculation line is defined as the part of Boiler No. 100 that recirculates a portion of the boiler flue gas back into the combustion air.

(2) *Standard for nitrogen oxides.* (i) When fossil fuel alone is combusted, the nitrogen oxides emission limit for fossil fuel in § 60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the nitrogen oxides emission limit is 473 ng/J (1.1 lb/million Btu), and the air ratio control damper tee handle shall be at a minimum of 5 inches (12.7 centimeters) out of the boiler, and the flue gas recirculation line shall be operated at a minimum of 10 percent open as indicated by its valve opening position indicator.

(3) *Emission monitoring for nitrogen oxides.* (i) The air ratio control damper tee handle setting and the flue gas recirculation line valve opening position indicator setting shall be recorded during each 8-hour operating shift.

(ii) The nitrogen oxides emission limit shall be determined by the compliance and performance test methods and procedures for nitrogen oxides in § 60.46b.

(iii) The monitoring of the nitrogen oxides emission limit shall be performed in accordance with § 60.48b.

(4) *Reporting and recordkeeping requirements.* (i) The owner or operator of Boiler No. 100 shall submit a report on any excursions from the limits required by paragraph (b)(2) of this section to the Administrator with the quarterly report required by § 60.49b(i).

(ii) The owner or operator of Boiler No. 100 shall keep records of the monitoring required by paragraph (b)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of Boiler No. 100 shall perform all the applicable reporting and recordkeeping requirements of § 60.49b.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51820, 51825, Dec. 18, 1989; 60 FR 28062, May 30, 1995]

APPENDIX E

Subpart BB—Standards of Performance for Kraft Pulp Mills

§ 60.280 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities in kraft pulp mills: Digester system, brown stock washer system, multiple-effect evaporator system, recovery furnace, smelt dissolving tank, lime kiln, and condensate stripper system. In pulp mills where kraft pulping is combined with neutral sulfite semichemical pulping, the provisions of this subpart are applicable when any portion of the material charged to an affected facility is produced by the kraft pulping operation.

(b) Except as noted in § 60.283(a)(1)(iv), any facility under paragraph (a) of this section that commences construction or modification after September 24, 1976, is subject to the requirements of this subpart.

[51 FR 18544, May 20, 1986]

§ 60.281 Definitions.

As used in this subpart, all terms not defined herein shall have the same meaning given them in the Act and in subpart A.

(a) *Kraft pulp mill* means any stationary source which produces pulp from wood by cooking (digesting) wood chips in a water solution of sodium hydroxide and sodium sulfide (white liquor) at high temperature and pressure. Regeneration of the cooking chemicals through a recovery process is also considered part of the kraft pulp mill.

(b) *Neutral sulfite semichemical pulping operation* means any operation in which pulp is produced from wood by cooking (digesting) wood chips in a solution of sodium sulfite and sodium bicarbonate, followed by mechanical defibrating (grinding).

(c) *Total reduced sulfur (TRS)* means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide, that are released during the kraft pulping operation and measured by Reference Method 16.

(d) *Digester system* means each continuous digester or each batch digester used for the cooking of wood in white liquor, and associated flash tank(s), below tank(s), chip steamer(s), and condenser(s).

(e) *Brown stock washer system* means brown stock washers and associated knotters, vacuum pumps, and filtrate tanks used to wash the pulp following the digestion system. Diffusion washers are excluded from this definition.

(f) *Multiple-effect evaporator system* means the multiple-effect evaporators and associated condenser(s) and hotwell(s) used to concentrate the spent cooking liquid that is separated from the pulp (black liquor).

(g) *Black liquor oxidation system* means the vessels used to oxidize, with air or oxygen, the black liquor, and associated storage tank(s).

(h) *Recovery furnace* means either a straight kraft recovery furnace or a cross recovery furnace, and includes the direct-contact evaporator for a direct-contact furnace.

(i) *Straight kraft recovery furnace* means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains 7 weight percent or less of the total pulp solids from the neutral sulfite semichemical process or has green liquor sulfidity of 28 percent or less.

(j) *Cross recovery furnace* means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains more than 7 weight percent of the total pulp solids from the neutral sulfite semichemical process and has a green liquor sulfidity of more than 28 percent.

(k) *Black liquor solids* means the dry weight of the solids which enter the recovery furnace in the black liquor.

(l) *Green liquor sulfidity* means the sulfidity of the liquor which leaves the smelt dissolving tank.

(m) *Smelt dissolving tank* means a vessel used for dissolving the smelt collected from the recovery furnace.

(n) *Lime kiln* means a unit used to calcine lime mud, which consists primarily of calcium carbonate, into quicklime, which is calcium oxide.

(o) *Condensate stripper system* means a column, and associated condensers, used to strip, with air or steam, TRS compounds from condensate streams from various processes within a kraft pulp mill.

[43 FR 7572, Feb. 23, 1978, as amended at 51 FR 18544, May 20, 1986]

§ 60.282 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) From any recovery furnace any gases which:

(i) Contain particulate matter in excess of 0.10 g/dscm (0.044 gr/dscf) corrected to 8 percent oxygen.

(ii) Exhibit 35 percent opacity or greater.

(2) From any smelt dissolving tank any gases which contain particulate matter in excess of 0.1 g/kg black liquor solids (dry weight)[0.2 lb/ton black liquor solids (dry weight)].

(3) From any lime kiln any gases which contain particulate matter in excess of:

(i) 0.15 g/dscm (0.067 gr/dscf) corrected to 10 percent oxygen, when gaseous fossil fuel is burned.

(ii) 0.30 g/dscm (0.13 gr/dscf) corrected to 10 percent oxygen, when liquid fossil fuel is burned.

[43 FR 7572, Feb. 23, 1978]

§ 60.283 Standard for total reduced sulfur (TRS).

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) From any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen, unless the following conditions are met:

(i) The gases are combusted in a lime kiln subject to the provisions of paragraph (a)(5) of this section; or

(ii) The gases are combusted in a recovery furnace subject to the provisions of paragraphs (a)(2) or (a)(3) of this section; or

(iii) The gases are combusted with other waste gases in an incinerator or other device, or combusted in a lime kiln or recovery furnace not subject to the provisions of this subpart, and are subjected to a minimum temperature of 1200° F. for at least 0.5 second; or

(iv) It has been demonstrated to the Administrator's satisfaction by the owner or operator that incinerating the exhaust gases from a new, modified, or reconstructed brown stock washer system is technologically or economically unfeasible. Any exempt system will become subject to the provisions of this subpart if the facility is changed so that the gases can be incinerated.

(v) The gases from the digester system, brown stock washer system, or condensate stripper system are controlled by a means other than combustion. In this case, this system shall not discharge any gases to the atmosphere which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to the actual oxygen content of the untreated gas stream.

(vi) The uncontrolled exhaust gases from a new, modified, or reconstructed digester system contain TRS less than 0.005 g/kg ADP (0.01 lb/ton ADP).

(2) From any straight kraft recovery furnace any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 8 percent oxygen.

(3) From any cross recovery furnace any gases which contain TRS in excess of 25 ppm by volume on a dry basis, corrected to 8 percent oxygen.

(4) From any smelt dissolving tank any gases which contain TRS in excess of 0.016 g/kg black liquor solids as H_2S (0.033 lb/ton black liquor solids as H_2S).

(5) From any lime kiln any gases which contain TRS in excess of 8 ppm by volume on a dry basis, corrected to 10 percent oxygen.

[43 FR 7572, Feb. 23, 1978, as amended at 50 FR 6317, Feb. 14, 1985; 51 FR 18544, May 20, 1986]

§ 60.284 Monitoring of emissions and operations.

(a) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring systems:

(1) A continuous monitoring system to monitor and record the opacity of the gases discharged into the atmos- phere from any recovery furnace. The span of this system shall be set at 70 percent opacity.

(2) Continuous monitoring systems to monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the atmosphere from any lime kiln, recovery furnace, digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system, except where the provisions of § 60.283(a)(1) (iii) or (iv) apply. These systems shall be located downstream of the control device(s) and the spans of these continuous monitoring system(s) shall be set:

(i) At a TRS concentration of 30 ppm for the TRS continuous monitoring system, except that for any cross recovery furnace the span shall be set at 50 ppm.

(ii) At 20 percent oxygen for the continuous oxygen monitoring system.

(b) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring devices:

(1) For any incinerator, a monitoring device which measures and records the combustion temperature at the point of incineration of effluent gases which are emitted from any digester system, brown stock washer system, multiple-effect evaporator system, black liquor oxidation system, or condensate stripper system where the provisions of § 60.283(a)(1)(iii) apply. The monitoring device is to be certified by the manufacturer to be accurate within ±1 percent of the temperature being measured.

(2) For any lime kiln or smelt dissolving tank using a scrubber emission control device:

(i) A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate to within a gage pressure of ±500 pascals (ca. ±2 inches water gage pressure).

(ii) A monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ±15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point. The Administrator may be consulted for approval of alternative locations.

(c) Any owner or operator subject to the provisions of this subpart shall, except where the provisions of § 60.283 (a)(1)(iv) or (a)(4) apply.

(1) Calculate and record on a daily basis 12-hour average TRS concentrations for the two consecutive periods of each operating day. Each 12-hour average shall be determined as the arithmetic mean of the appropriate 12 contiguous 1-hour average total reduced sulfur concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section.

(2) Calculate and record on a daily basis 12-hour average oxygen concentrations for the two consecutive periods of each operating day for the recovery furnace and lime kiln. These 12-hour averages shall correspond to the 12-hour average TRS concentrations under paragraph (c)(1) of this section and shall be determined as an arithmetic mean of the appropriate 12 contiguous 1-hour average oxygen concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section.

(3) Correct all 12-hour average TRS concentrations to 10 volume percent oxygen, except that all 12-hour average TRS concentration from a recovery furnace shall be corrected to 8 volume percent using the following equation:

$$C_{corr}=C_{meas}\times(21-X/21-Y)$$

where:

C_{corr}=the concentration corrected for oxygen.

C_{meas}=the concentration uncorrected for oxygen.

X=the volumetric oxygen concentration in percentage to be corrected to (8 percent for recovery furnaces and 10 percent for lime kilns, incinerators, or other devices).

Y=the measured 12-hour average volumetric oxygen concentration.

(4) Record once per shift measurements obtained from the continuous monitoring devices installed under paragraph (b)(2) of this section.

(d) For the purpose of reports required under § 60.7(c), any owner or operator subject to the provisions of this subpart shall report semiannually periods of excess emissions as follows:

(1) For emissions from any recovery furnace periods of excess emissions are:

(i) All 12-hour averages of TRS concentrations above 5 ppm by volume for straight kraft recovery furnaces and above 25 ppm by volume for cross recovery furnaces.

(ii) All 6-minute average opacities that exceed 35 percent.

(2) For emissions from any lime kiln, periods of excess emissions are all 12-hour average TRS concentration above 8 ppm by volume.

(3) For emissions from any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system periods of excess emissions are:

(i) All 12-hour average TRS concentrations above 5 ppm by volume unless the provisions of § 60.283(a)(1) (i), (ii), or (iv) apply; or

(ii) All periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 1200 °F, where the provisions of § 60.283(a)(1)(iii) apply.

(e) The Administrator will not consider periods of excess emissions reported under paragraph (d) of this section to be indicative of a violation of § 60.11(d) provided that:

(1) The percent of the total number of possible contiguous periods of excess emissions in a quarter (excluding periods of startup, shutdown, or malfunction and periods when the facility is not operating) during which excess emissions occur does not exceed:

(i) One percent for TRS emissions from recovery furnaces.

(ii) Six percent for average opacities from recovery furnaces.

(2) The Administrator determines that the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions.

[43 FR 7572, Feb. 23, 1978, as amended at 51 FR 18545, May 20, 1986]

§ 60.285 Test methods and procedures.

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures in this section, except as provided in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.

(b) The owner or operator shall determine compliance with the particulate matter standards in § 60.282(a) (1) and (3) as follows:

(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at

least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. The particulate concentration shall be corrected to the appropriate oxygen concentration according to § 60.284(c)(3).

(2) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The gas sample shall be taken at the same time and at the same traverse points as the particulate sample.

(3) Method 9 and the procedures in § 60.11 shall be used to determine opacity.

(c) The owner or operator shall determine compliance with the particular matter standard in § 60.282(a)(2) as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$E=c_s Q_{sd}/BLS$

where:

E=emission rate of particulate matter, g/kg (lb/ton) of BLS.

c_s=concentration of particulate matter, g/dsm (lb/dscf).

Q_{sd}=volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

BLS=black liquor solids (dry weight) feed rate, kg/hr (ton/hr).

(2) Method 5 shall be used to determine the particulate matter concentration (c_s) and the volumetric flow rate (Q_{sd}) of the effluent gas. The sampling time and sample volume shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used instead of acetone in the sample recovery.

(3) Process data shall be used to determine the black liquor solids (BLS) feed rate on a dry weight basis.

(d) The owner or operator shall determine compliance with the TRS standards in § 60.283, except § 60.283(a)(1)(vi) and (4), as follows:

(1) Method 16 shall be used to determine the TRS concentration. The TRS concentration shall be corrected to the appropriate oxygen concentration using the procedure in § 60.284(c)(3). The sampling time shall be at least 3 hours, but no longer than 6 hours.

(2) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The sample shall be taken over the same time period as the TRS samples.

(3) When determining whether a furnace is a straight kraft recovery furnace or a cross recovery furnace, TAPPI Method T.624 (incorporated by reference—see § 60.17) shall be used to determine sodium sulfide, sodium hydroxide, and sodium carbonate. These determinations shall be made 3 times daily from the green liquor, and the daily average values shall be converted to sodium oxide (Na_2O) and substituted into the following equation to determine the green liquor sulfidity:

$GLS = 100\ C_{Na2S}/(C_{NA2S}+C_{Na2H}+C_{Na2CO3})$

Where:

GLS=green liquor sulfidity, percent.

C_{Na2S}=concentration of Na_2S as Na_2O, mg/liter (gr/gal).

C_{NaOH}=concentration of NaOH as Na_2O, mg/liter (gr/gal).

C_{Na2CO3}=concentration of Na_2CO_3 as Na_2O, mg/liter (gr/gal).

(e) The owner or operator shall determine compliance with the TRS standards in § 60.283(a)(1)(vi) and (4) as follows:

(1) The emission rate (E) of TRS shall be computed for each run using the following equation:

$E=C_{TRS}\ F\ Q_{sd}/P$

where:

E=emission rate of TRS, g/kg (lb/ton) of BLS or ADP.

C_{TRS}=average combined concentration of TRS, ppm.

F=conversion factor, 0.001417 g H_2S/m^3 ppm (0.08844×10^{-6} lb H_2S/ft^3 ppm).

Q_{sd}=volumetric flow rate of stack gas, dscm/hr (dscf/hr).

P=black liquor solids feed or pulp production rate, kg/hr (ton/hr).

(2) Method 16 shall be used to determine the TRS concentration (C_{TRS}).

(3) Method 2 shall be used to determine the volumetric flow rate (Q_{sd}) of the effluent gas.

(4) Process data shall be used to determine the black liquor feed rate or the pulp production rate (P).

(f) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For Method 5, Method 17 may be used if a constant value of 0.009 g/dscm (0.004 gr/dscf) is added to the results of Method 17 and the stack temperature is no greater than 205 °C (400 °F).

(2) For Method 16, Method 16A or 16B may be used if the sampling time is 60 minutes.

[54 FR 6673, Feb. 14, 1989; 54 FR 21344, May 17, 1989, as amended at 55 FR 5212, Feb. 14, 1990]

APPENDIX F

TABLE 1 TO SUBPART R—GENERAL PROVISIONS APPLICABILITY TO SUBPART R—Continued

Reference	Applies to subpart R	Comment
63.9(c)	Yes	
63.9(d)	Yes	
63.9(e)	Yes	
63.9(f)	Yes	
63.9(g)	Yes	
63.9(h)(1)–(h)(3)	Yes	
63.9(h)(4)	No	Section reserved
63.9(h)(5)–(h)(6)	Yes	
63.9(i)	Yes	
63.9(j)	Yes	
63.10(a)	Yes	
63.10(b)(1)	Yes	
63.10(b)(2)	Yes	
63.10(b)(3)	Yes	
63.10(c)(1)	Yes	
63.10(c)(2)–(c)(4)	No	Sections reserved
63.10(c)(5)–(c)(8)	Yes	
63.10(c)(9)	No	Section reserved
63.10(c)(5)–(c)(8)	Yes	
63.10(d)(1)	Yes	
63.10(d)(2)	Yes	
63.10(d)(3)	Yes	
63.10(d)(4)	Yes	
63.10(d)(5)	Yes	
63.10(e)	Yes	
63.10(f)	Yes	
63.11(a)–(b)	Yes	
63.12(a)–(c)	Yes	
63.13(a)–(c)	Yes	
63.14(a)–(b)	Yes	
63.15(a)–(b)	Yes	

[59 FR 64318, Dec. 14, 1994, as amended at 61 FR 7724, Feb. 29, 1996]

Subpart S—National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry

SOURCE: 63 FR 18617, Apr. 15, 1998, unless otherwise noted.

§63.440 Applicability.

(a) The provisions of this subpart apply to the owner or operator of processes that produce pulp, paper, or paperboard; that are located at a plant site that is a major source as defined in §63.2 of subpart A of this part; and that use the following processes and materials:

(1) Kraft, soda, sulfite, or semi-chemical pulping processes using wood; or

(2) Mechanical pulping processes using wood; or

(3) Any process using secondary or non-wood fibers.

(b) The affected source to which the existing sourceprovisions of this subpart apply is as follows:

(1) For the processes specified in paragraph (a)(1) of this section, the affected source is the total of all HAP emission points in the pulping and bleaching systems; or

(2) For the processes specified in paragraphs (a)(2) or (a)(3) of this section, the affected source is the total of all HAP emission points in the bleaching system.

(c) The new source provisions of this subpart apply to the total of all HAP emission points at new or existing sources as follows:

(1) Each affected source defined in paragraph (b)(1) of this section that commences construction or reconstruction after December 17, 1993;

(2) Each pulping system or bleaching system for the processes specified in paragraph (a)(1) of this section that commences construction or reconstruction after December 17, 1993;

(3) Each additional pulping or bleaching line at the processes specified in

paragraph (a)(1) of this section, that commences construction after December 17, 1993;

(4) Each affected source defined in paragraph (b)(2) of this section that commences construction or reconstruction after March 8, 1996; or

(5) Each additional bleaching line at the processes specified in paragraphs (a)(2) or (a)(3) of this section, that commences construction after March 8, 1996.

(d) Each existing source shall achieve compliance no later than April 16, 2001, except as provided in paragraphs (d)(1) through (d)(3) of this section.

(1) Each kraft pulping system shall achieve compliance with the pulping system provisions of §63.443 for the equipment listed in §63.443(a)(1)(ii) through (a)(1)(v) as expeditiously as practicable, but in no event later than April 17, 2006 and the owners and operators shall establish dates, update dates, and report the dates for the milestones specified in § 63.455(b).

(2) Each dissolving-grade bleaching system at either kraft or sulfite pulping mills shall achieve compliance with the bleach plant provisions of §63.445 of this subpart as expeditiously as practicable, but in no event later than 3 years after the promulgation of the revised effluent limitation guidelines and standards under 40 CFR 430.14 through 430.17 and 40 CFR 430.44 through 430.47.

(3) Each bleaching system complying with the Voluntary Advanced Technology Incentives Program for Effluent Limitation Guidelines in 40 CFR 430.24, shall comply with the requirements specified in either paragraph (d)(3)(i) or (d)(3)(ii) of this section for the effluent limitation guidelines and standards in 40 CFR 430.24.

(i) Comply with the bleach plant provisions of §63.445 of this subpart as expeditiously as practicable, but in no event later than April 16, 2001.

(ii) Comply with all of the following:

(A) The owner or operator of a bleaching system shall comply with the bleach plant provisions of §63.445 of this subpart as expeditiously as practicable, but in no event later than April 15, 2004.

(B) The owner or operator of a bleaching system shall not increase the application rate of chlorine or hypochlorite in kg of bleaching agent per megagram of ODP, in the bleaching system above the average daily rates used over the three months prior to June 15, 1998 until the requirements of paragraph (d)(3)(ii)(A) of this section are met and record application rates as specified in §63.454(c).

(C) Owners and operators shall establish dates, update dates, and report the dates for the milestones specified in §63.455(b).

(e) Each new source, specified as the total of all HAP emission points for the sources specified in paragraph (c) of this section, shall achieve compliance upon start-up or June 15, 1998, whichever is later, as provided in §63.6(b) of subpart A of this part.

(f) Each owner or operator of an affected source with affected process equipment shared by more than one type of pulping process, shall comply with the applicable requirement in this subpart that achieves the maximum degree of reduction in HAP emissions.

(g) Each owner or operator of an affected source specified in paragraphs (a) through (c) of this section must comply with the requirements of subpart A—General Provisions of this part, as indicated in table 1 to this subpart.

§63.441 Definitions.

All terms used in this subpart shall have the meaning given them in the CAA, in subpart A of this part, and in this section as follows:

Acid condensate storage tank means any storage tank containing cooking acid following the sulfur dioxide gas fortification process.

Black liquor means spent cooking liquor that has been separated from the pulp produced by the kraft, soda, or semi-chemical pulping process.

Bleaching means brightening of pulp by the addition of oxidizing chemicals or reducing chemicals.

Bleaching line means a group of bleaching stages arranged in series such that bleaching of the pulp progresses as the pulp moves from one stage to the next.

Bleaching stage means all process equipment associated with a discrete

step of chemical application and removal in the bleaching process including chemical and steam mixers, bleaching towers, washers, seal (filtrate) tanks, vacuum pumps, and any other equipment serving the same function as those previously listed.

Bleaching system means all process equipment after high-density pulp storage prior to the first application of oxidizing chemicals or reducing chemicals following the pulping system, up to and including the final bleaching stage.

Boiler means any enclosed combustion device that extracts useful energy in the form of steam. A boiler is not considered a thermal oxidizer.

Chip steamer means a vessel used for the purpose of preheating or pretreating wood chips prior to the digester, using flash steam from the digester or live steam.

Closed-vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapor from an emission point to a control device.

Combustion device means an individual unit of equipment, including but not limited to, a thermal oxidizer, lime kiln, recovery furnace, process heater, or boiler, used for the thermal oxidation of organic hazardous air pollutant vapors.

Decker system means all equipment used to thicken the pulp slurry or reduce its liquid content after the pulp washing system and prior to high-density pulp storage. The decker system includes decker vents, filtrate tanks, associated vacuum pumps, and any other equipment serving the same function as those previously listed.

Digester system means each continuous digester or each batch digester used for the chemical treatment of wood or non-wood fibers. The digester system equipment includes associated flash tank(s), blow tank(s), chip steamer(s) not using fresh steam, blow heat recovery accumulator(s), relief gas condenser(s), prehydrolysis unit(s) preceding the pulp washing system, and any other equipment serving the same function as those previously listed. The digester system includes any of the liquid streams or condensates associated with batch or continuous digester relief, blow, or flash steam processes.

Emission point means any part of a stationary source that emits hazardous air pollutants regulated under this subpart, including emissions from individual process vents, stacks, open pieces of process equipment, equipment leaks, wastewater and condensate collection and treatment system units, and those emissions that could reasonably be conveyed through a stack, chimney, or duct where such emissions first reach the environment.

Evaporator system means all equipment associated with increasing the solids content and/or concentrating spent cooking liquor from the pulp washing system including pre-evaporators, multi-effect evaporators, concentrators, and vacuum systems, as well as associated condensers, hotwells, and condensate streams, and any other equipment serving the same function as those previously listed.

Flow indicator means any device that indicates gas or liquid flow in an enclosed system.

HAP means a hazardous air pollutant as defined in §63.2 of subpart A of this part.

High volume, low concentration or HVLC collection system means the gas collection and transport system used to convey gases from the HVLC system to a control device.

High volume, low concentration or HVLC system means the collection of equipment including the pulp washing, knotter, screen, decker, and oxygen delignification systems, weak liquor storage tanks, and any other equipment serving the same function as those previously listed.

Knotter system means equipment where knots, oversized material, or pieces of uncooked wood are removed from the pulp slurry after the digester system and prior to the pulp washing system. The knotter system equipment includes the knotter, knot drainer tanks, ancillary tanks, and any other equipment serving the same function as those previously listed.

Kraft pulping means a chemical pulping process that uses a mixture of sodium hydroxide and sodium sulfide as the cooking liquor.

Lime kiln means an enclosed combustion device used to calcine lime mud, which consists primarily of calcium carbonate, into calcium oxide.

Low volume, high concentration or LVHC collection system means the gas collection and transport system used to convey gases from the LVHC system to a control device.

Low volume, high concentration or LVHC system means the collection of equipment including the digester, turpentine recovery, evaporator, steam stripper systems, and any other equipment serving the same function as those previously listed.

Mechanical pulping means a pulping process that only uses mechanical and thermo-mechanical processes to reduce wood to a fibrous mass. The mechanical pulping processes include, but are not limited to, stone groundwood, pressurized groundwood, refiner mechanical, thermal refiner mechanical, thermo-mechanical, and tandem thermo-mechanical.

Non-wood pulping means the production of pulp from fiber sources other than trees. The non-wood fiber sources include, but are not limited to, bagasse, cereal straw, cotton, flax straw, hemp, jute, kenaf, and leaf fibers.

Oven-dried pulp or ODP means a pulp sample at zero percent moisture content by weight. Pulp samples for applicability or compliance determinations for both the pulping and bleaching systems shall be unbleached pulp. For purposes of complying with mass emission limits in this subpart, megagram of ODP shall be measured to represent the amount of pulp entering and processed by the equipment system under the specified mass limit. For equipment that does not process pulp, megagram of ODP shall be measured to represent the amount of pulp that was processed to produce the gas and liquid streams.

Oxygen delignification system means the equipment that uses oxygen to remove lignin from pulp after high-density stock storage and prior to the bleaching system. The oxygen delignification system equipment includes the blow tank, washers, filtrate tanks, any interstage pulp storage tanks, and any other equipment serving the same function as those previously listed.

Primary fuel means the fuel that provides the principal heat input to the combustion device. To be considered primary, the fuel must be able to sustain operation of the combustion device without the addition of other fuels.

Process wastewater treatment system means a collection of equipment, a process, or specific technique that removes or destroys the HAP's in a process wastewater stream. Examples include, but are not limited to, a steam stripping unit, wastewater thermal oxidizer, or biological treatment unit.

Pulp washing system means all equipment used to wash pulp and separate spent cooking chemicals following the digester system and prior to the bleaching system, oxygen delignification system, or paper machine system (at unbleached mills). The pulp washing system equipment includes vacuum drum washers, diffusion washers, rotary pressure washers, horizontal belt filters, intermediate stock chests, and their associated vacuum pumps, filtrate tanks, foam breakers or tanks, and any other equipment serving the same function as those previously listed. The pulp washing system does not include deckers, screens, knotters, stock chests, or pulp storage tanks following the last stage of pulp washing.

Pulping line means a group of equipment arranged in series such that the wood chips are digested and the resulting pulp progresses through a sequence of steps that may include knotting, refining, washing, thickening, blending, storing, oxygen delignification, and any other equipment serving the same function as those previously listed.

Pulping process condensates means any HAP-containing liquid that results from contact of water with organic compounds in the pulping process. Examples of process condensates include digester system condensates, turpentine recovery system condensates, evaporator system condensates, LVHC system condensates, HVLC system condensates, and any other condensates from equipment serving the same function as those previously listed. Liquid streams that are intended for byproduct recovery are not considered process condensate streams.

Pulping system means all process equipment, beginning with the digester system, and up to and including the last piece of pulp conditioning equipment prior to the bleaching system, including treatment with ozone, oxygen, or peroxide before the first application of a chemical bleaching agent intended to brighten pulp. The pulping system includes pulping process condensates and can include multiple pulping lines.

Recovery furnace means an enclosed combustion device where concentrated spent liquor is burned to recover sodium and sulfur, produce steam, and dispose of unwanted dissolved wood components in the liquor.

Screen system means equipment in which oversized particles are removed from the pulp slurry prior to the bleaching or papermaking system washed stock storage.

Secondary fiber pulping means a pulping process that converts a fibrous material, that has previously undergone a manufacturing process, into pulp stock through the addition of water and mechanical energy. The mill then uses that pulp as the raw material in another manufactured product. These mills may also utilize chemical, heat, and mechanical processes to remove ink particles from the fiber stock.

Semi-chemical pulping means a pulping process that combines both chemical and mechanical pulping processes. The semi-chemical pulping process produces intermediate yields ranging from 55 to 90 percent.

Soda pulping means a chemical pulping process that uses sodium hydroxide as the active chemical in the cooking liquor.

Spent liquor means process liquid generated from the separation of cooking liquor from pulp by the pulp washing system containing dissolved organic wood materials and residual cooking compounds.

Steam stripper system means a column (including associated stripper feed tanks, condensers, or heat exchangers) used to remove compounds from wastewater or condensates using steam. The steam stripper system also contains all equipment associated with a methanol rectification process including rectifiers, condensers, decanters, storage tanks, and any other equipment serving the same function as those previously listed.

Strong liquor storage tanks means all storage tanks containing liquor that has been concentrated in preparation for combustion or oxidation in the recovery process.

Sulfite pulping means a chemical pulping process that uses a mixture of sulfurous acid and bisulfite ion as the cooking liquor.

Temperature monitoring device means a piece of equipment used to monitor temperature and having an accuracy of ±1.0 percent of the temperature being monitored expressed in degrees Celsius or ±0.5 degrees Celsius (°C), whichever is greater.

Thermal oxidizer means an enclosed device that destroys organic compounds by thermal oxidation.

Turpentine recovery system means all equipment associated with recovering turpentine from digester system gases including condensers, decanters, storage tanks, and any other equipment serving the same function as those previously listed. The turpentine recovery system includes any liquid streams associated with the turpentine recovery process such as turpentine decanter underflow. Liquid streams that are intended for byproduct recovery are not considered turpentine recovery system condensate streams.

Weak liquor storage tank means any storage tank except washer filtrate tanks containing spent liquor recovered from the pulping process and prior to the evaporator system.

§63.442 [Reserved]

§63.443 Standards for the pulping system at kraft, soda, and semi-chemical processes.

(a) The owner or operator of each pulping system using the kraft process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems, as specified in paragraphs (c) and (d) of this section.

(1) At existing affected sources, the total HAP emissions from the following equipment systems shall be controlled:

(i) Each LVHC system;

(ii) Each knotter or screen system with total HAP mass emission rates greater than or equal to the rates specified in paragraphs (a)(1)(ii)(A) or (a)(1)(ii)(B) of this section or the combined rate specified in paragraph (a)(1)(ii)(C) of this section.

(A) Each knotter system with emissions of 0.05 kilograms or more of total HAP per megagram of ODP (0.1 pounds per ton).

(B) Each screen system with emissions of 0.10 kilograms or more of total HAP per megagram of ODP (0.2 pounds per ton).

(C) Each knotter and screen system with emissions of 0.15 kilograms or more of total HAP per megagram of ODP (0.3 pounds per ton).

(iii) Each pulp washing system;

(iv) Each decker system that:

(A) Uses any process water other than fresh water or paper machine white water; or

(B) Uses any process water with a total HAP concentration greater than 400 parts per million by weight; and

(v) Each oxygen delignification system.

(2) At new affected sources, the total HAP emissions from the equipment systems listed in paragraphs (a)(1)(i), (a)(1)(iii), and (a)(1)(v) of this section and the following equipment systems shall be controlled:

(i) Each knotter system;

(ii) Each screen system;

(iii) Each decker system; and

(iv) Each weak liquor storage tank.

(b) The owner or operator of each pulping system using a semi-chemical or soda process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems as specified in paragraphs (c) and (d) of this section.

(1) At each existing affected sources, the total HAP emissions from each LVHC system shall be controlled.

(2) At each new affected source, the total HAP emissions from each LVHC system and each pulp washing system shall be controlled.

(c) Equipment systems listed in paragraphs (a) and (b) of this section shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (d) of this section. The enclosures and closed-vent system shall meet the requirements specified in § 63.450.

(d) The control device used to reduce total HAP emissions from each equipment system listed in paragraphs (a) and (b) of this section shall:

(1) Reduce total HAP emissions by 98 percent or more by weight; or

(2) Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis; or

(3) Reduce total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 871 °C (1600 °F) and a minimum residence time of 0.75 seconds; or

(4) Reduce total HAP emissions using a boiler, lime kiln, or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone.

(e) Periods of excess emissions reported under § 63.455 shall not be a violation of § 63.443 (c) and (d) provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels:

(1) One percent for control devices used to reduce the total HAP emissions from the LVHC system; and

(2) Four percent for control devices used to reduce the total HAP emissions from the HVLC system; and

(3) Four percent for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.

§ 63.444 Standards for the pulping system at sulfite processes.

(a) The owner or operator of each sulfite process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems as specified in paragraphs (b) and (c) of this section.

(1) At existing sulfite affected sources, the total HAP emissions from the following equipment systems shall be controlled:

(i) Each digester system vent;

(ii) Each evaporator system vent; and

(iii) Each pulp washing system.

(2) At new affected sources, the total HAP emissions from the equipment systems listed in paragraph (a)(1) of this section and the following equipment shall be controlled:

(i) Each weak liquor storage tank;

(ii) Each strong liquor storage tank; and

(iii) Each acid condensate storage tank.

(b) Equipment listed in paragraph (a) of this section shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (c) of this section. The enclosures and closed-vent system shall meet the requirements specified in § 63.450. Emissions from equipment listed in paragraph (a) of this section that is not necessary to be reduced to meet paragraph (c) of this section is not required to be routed to a control device.

(c) The total HAP emissions from both the equipment systems listed in paragraph (a) of this section and the vents, wastewater, and condensate streams from the control device used to reduce HAP emissions, shall be controlled as follows.

(1) Each calcium-based or sodium-based sulfite pulping process shall:

(i) Emit no more than 0.44 kilograms of total HAP or methanol per megagram (0.89 pounds per ton) of ODP; or

(ii) Remove 92 percent or more by weight of the total HAP or methanol.

(2) Each magnesium-based or ammonium-based sulfite pulping process shall:

(i) Emit no more than 1.1 kilograms of total HAP or methanol per megagram (2.2 pounds per ton) of ODP; or

(ii) Remove 87 percent or more by weight of the total HAP or methanol.

§ 63.445 Standards for the bleaching system.

(a) Each bleaching system that does not use any chlorine or chlorinated compounds for bleaching is exempt from the requirements of this section. Owners or operators of the following bleaching systems shall meet all the provisions of this section:

(1) Bleaching systems that use chlorine;

(2) Bleaching systems bleaching pulp from kraft, sulfite, or soda pulping processes that uses any chlorinated compounds; or

(3) Bleaching systems bleaching pulp from mechanical pulping processes using wood or from any process using secondary or non-wood fibers, that use chlorine dioxide.

(b) The equipment at each bleaching stage, of the bleaching systems listed in paragraph (a) of this section, where chlorinated compounds are introduced shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (c) of this section. The enclosures and closed-vent system shall meet the requirements specified in § 63.450.

(c) The control device used to reduce chlorinated HAP emissions (not including chloroform) from the equipment specified in paragraph (b) of this section shall:

(1) Reduce the total chlorinated HAP mass in the vent stream entering the control device by 99 percent or more by weight;

(2) Achieve a treatment device outlet concentration of 10 parts per million or less by volume of total chlorinated HAP; or

(3) Achieve a treatment device outlet mass emission rate of 0.001 kg of total chlorinated HAP mass per megagram (0.002 pounds per ton) of ODP.

(d) The owner or operator of each bleaching system subject to paragraph (a)(2) of this section shall comply with paragraph (d)(1) or (d)(2) of this section to reduce chloroform air emissions to the atmosphere, except the owner or operator of each bleaching system complying with extended compliance under § 63.440(d)(3)(ii) shall comply with paragraph (d)(1) of this section.

(1) Comply with the following applicable effluent limitation guidelines and standards specified in 40 CFR part 430:

(i) Dissolving-grade kraft bleaching systems and lines, 40 CFR 430.14 through 430.17;

(ii) Paper-grade kraft and soda bleaching systems and lines, 40 CFR 430.24(a)(1) and (e), and 40 CFR 430.26 (a) and (c);

(iii) Dissolving-grade sulfite bleaching systems and lines, 40 CFR 430.44 through 430.47; or

(iv) Paper-grade sulfite bleaching systems and lines, 40 CFR 430.54(a) and (c), and 430.56(a) and (c).

(2) Use no hypochlorite or chlorine for bleaching in the bleaching system or line.

§ 63.446 Standards for kraft pulping process condensates.

(a) The requirements of this section apply to owners or operators of kraft processes subject to the requirements of this subpart.

(b) The pulping process condensates from the following equipment systems shall be treated to meet the requirements specified in paragraphs (c), (d), and (e) of this section:

(1) Each digester system;

(2) Each turpentine recovery system;

(3) Each evaporator stage where weak liquor is introduced (feed stages) in the evaporator system;

(4) Each HVLC collection system; and

(5) Each LVHC collection system.

(c) One of the following combinations of HAP-containing pulping process condensates generated, produced, or associated with the equipment systems listed in paragraph (b) of this section shall be subject to the requirements of paragraphs (d) and (e) of this section:

(1) All pulping process condensates from the equipment systems specified in paragraphs (b)(1) through (b)(5) of this section.

(2) The combined pulping process condensates from the equipment systems specified in paragraphs (b)(4) and (b)(5) of this section, plus pulping process condensate stream(s) that in total contain at least 65 percent of the total HAP mass from the pulping process condensates from equipment systems listed in paragraphs (b)(1) through (b)(3) of this section.

(3) The pulping process condensates from equipment systems listed in paragraphs (b)(1) through (b)(5) of this section that in total contain a total HAP mass of 3.6 kilograms or more of total HAP per megagram (7.2 pounds per ton) of ODP for mills that do not perform bleaching or 5.5 kilograms or more of total HAP per megagram (11.1 pounds per ton) of ODP for mills that perform bleaching.

(d) The pulping process condensates from the equipment systems listed in paragraph (b) of this section shall be conveyed in a closed collection system that is designed and operated to meet the requirements specified in paragraphs (d)(1) and (d)(2) of this section.

(1) Each closed collection system shall meet the individual drain system requirements specified in § 63.960, 63.961, and 63.962 of subpart RR of this part, except for closed vent systems and control devices shall be designed and operated in accordance with §§ 63.443(d) and 63.450, instead of in accordance with § 63.693 as specified in § 63.962 (a)(3)(ii), (b)(3)(ii)(A), and (b)(3)(ii)(B)(*5*)(*iii*); and

(2) If a condensate tank is used in the closed collection system, the tank shall meet the following requirements:

(i) The fixed roof and all openings (e.g., access hatches, sampling ports, gauge wells) shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million above background, and vented into a closed-vent system that meets the requirements in § 63.450 and routed to a control device that meets the requirements in § 63.443(d); and

(ii) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that the tank contains pulping process condensates or any HAP removed from a pulping process condensate stream except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.

(e) Each pulping process condensate from the equipment systems listed in paragraph (b) of this section shall be treated according to one of the following options:

(1) Recycle the pulping process condensate to an equipment system specified in § 63.443(a) meeting the requirements specified in § 63.443(c) and (d); or

(2) Discharge the pulping process condensate below the liquid surface of a biological treatment system meeting the requirement specified in paragraph (e)(3) of this section; or

(3) Treat the pulping process condensates to reduce or destroy the total

HAP's by at least 92 percent or more by weight; or

(4) At mills that do not perform bleaching, treat the pulping process condensates to remove 3.3 kilograms or more of total HAP per megagram (6.6 pounds per ton) of ODP, or achieve a total HAP concentration of 210 parts per million or less by weight at the outlet of the control device; or

(5) At mills that perform bleaching, treat the pulping process condensates to remove 5.1 kilograms or more of total HAP per megagram (10.2 pounds per ton) of ODP, or achieve a total HAP concentration of 330 parts per million or less by weight at the outlet of the control device.

(f) Each HAP removed from a pulping process condensate stream during treatment and handling under paragraphs (d) or (e) of this section, except for those treated according to paragraph (e)(2) of this section, shall be controlled as specified in § 63.443(c) and (d).

(g) For each steam stripper system used to comply with the requirements specified in paragraph (e)(3) of this section, periods of excess emissions reported under § 63.455 shall not be a violation of paragraphs (d), (e), and (f) of this section provided that the time of excess emissions (including periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed 10 percent.

(h) Each owner or operator of a new or existing affected source subject to the requirements of this section shall evaluate all new or modified pulping process condensates or changes in the annual bleached or non-bleached ODP used to comply with paragraph (i) of this section, to determine if they meet the applicable requirements of this section.

(i) For the purposes of meeting the requirements in paragraphs (c)(2), (e)(4), or (e)(5) of this section at mills producing both bleached and unbleached pulp products, owners and operators may meet a prorated mass standard that is calculated by prorating the applicable mass standards (kilograms of total HAP per megagram of ODP) for bleached and unbleached specified in paragraphs (c)(2), (e)(4), or (e)(5) of this section by the ratio of annual megagrams of bleached and unbleached ODP.

§ 63.447 Clean condensate alternative.

As an alternative to the requirements specified in § 63.443(a)(1)(ii) through (a)(1)(v) for the control of HAP emissions from pulping systems using the kraft process, an owner or operator must demonstrate to the satisfaction of the Administrator, by meeting all the requirements below, that the total HAP emissions reductions achieved by this clean condensate alternative technology are equal to or greater than the total HAP emission reductions that would have been achieved by compliance with § 63.443(a)(1)(ii) through (a)(1)(v).

(a) For the purposes of this section only the following additional definitions apply.

(1) *Clean condensate alternative affected source* means the total of all HAP emission points in the pulping, bleaching, causticizing, and papermaking systems (exclusive of HAP emissions attributable to additives to paper machines and HAP emission points in the LVHC system).

(2) *Causticizing system* means all equipment associated with converting sodium carbonate into active sodium hydroxide. The equipment includes smelt dissolving tanks, lime mud washers and storage tanks, white and mud liquor clarifiers and storage tanks, slakers, slaker grit washers, lime kilns, green liquor clarifiers and storage tanks, and dreg washers ending with the white liquor storage tanks prior to the digester system, and any other equipment serving the same function as those previously listed.

(3) *Papermaking system* means all equipment used to convert pulp into paper, paperboard, or market pulp, including the stock storage and preparation systems, the paper or paperboard machines, and the paper machine white water system, broke recovery systems, and the systems involved in calendering, drying, on-machine coating, slitting, winding, and cutting.

(b) Each owner or operator shall install and operate a clean condensate alternative technology with a continuous monitoring system to reduce total

HAP emissions by treating and reducing HAP concentrations in the pulping process water used within the clean condensate alternative affected source.

(c) Each owner or operator shall calculate HAP emissions on a kilogram per megagram of ODP basis and measure HAP emissions according to the appropriate procedures contained in §63.457.

(d) Each owner or operator shall determine the baseline HAP emissions for each equipment system and the total of all equipment systems in the clean condensate alternative affected source based on the following:

(1) Process and air pollution control equipment installed and operating on or after December 17, 1993, and

(2) Compliance with the following requirements that affect the level of HAP emissions from the clean condensate alternative affected source:

(i) The pulping process condensates requirements in §63.446;

(ii) The applicable effluent limitation guidelines and standards in 40 CFR part 430, subparts A, B, D, and E; and

(iii) All other applicable requirements of local, State, or Federal agencies or statutes.

(e) Each owner or operator shall determine the following HAP emission reductions from the baseline HAP emissions determined in paragraph (d) of this section for each equipment system and the total of all equipment systems in the clean condensate alternative affected source:

(1) The HAP emission reduction occurring by complying with the requirements of §63.443(a)(1)(ii) through (a)(1)(v); and

(2) The HAP emissions reduction that occurring by complying with the clean condensate alternative technology.

(f) For the purposes of all requirements in this section, each owner or operator may use as an alternative, individual equipment systems (instead of total of all equipment systems) within the clean condensate alternative affected source to determine emissions and reductions to demonstrate equal or greater than the reductions that would have been achieved by compliance with §63.443(a)(1)(ii) through (a)(1)(v).

(g) The initial and updates to the control strategy report specified in §63.455(b) shall include to the extent possible the following information:

(1) A detailed description of:

(i) The equipment systems and emission points that comprise the clean condensate alternative affected source;

(ii) The air pollution control technologies that would be used to meet the requirements of §63.443(a)(1)(ii) through (a)(1)(v);

(iii) The clean condensate alternative technology to be used.

(2) Estimates and basis for the estimates of total HAP emissions and emissions reductions to fulfill the requirements paragraphs (d), (e), and (f) of this section.

(h) Each owner or operator shall report to the Administrator by the applicable compliance date specified in §63.440(d) or (e) the rationale, calculations, test procedures, and data documentation used to demonstrate compliance with all the requirements of this section.

§§ 63.448–63.449 [Reserved]

§ 63.450 Standards for enclosures and closed-vent systems.

(a) Each enclosure and closed-vent system specified in §§63.443(c), 63.444(b), and 63.445(b) for capturing and transporting vent streams that contain HAP shall meet the requirements specified in paragraphs (b) through (d) of this section.

(b) Each enclosure shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures specified §63.457(e). Each enclosure or hood opening closed during the initial performance test specified in §63.457(a) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs.

(c) Each component of the closed-vent system used to comply with §§63.443(c), 63.444(b), and 63.445(b) that is operated at positive pressure and located prior to a control device shall be designed for and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts

per million by volume above background, as measured by the procedures specified in §63.457(d).

(d) Each bypass line in the closed-vent system that could divert vent streams containing HAP to the atmosphere without meeting the emission limitations in §§63.443, 63.444, or 63.445 shall comply with either of the following requirements:

(1) On each bypass line, the owner or operator shall install, calibrate, maintain, and operate according to manufacturer's specifications a flow indicator that provides a record of the presence of gas stream flow in the bypass line at least once every 15 minutes. The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line; or

(2) For bypass line valves that are not computer controlled, the owner or operator shall maintain the bypass line valve in the closed position with a car seal or a seal placed on the valve or closure mechanism in such a way that valve or closure mechanism cannot be opened without breaking the seal.

§§63.451-63.452 [Reserved]

§63.453 Monitoring requirements.

(a) Each owner or operator subject to the standards specified in §§63.443(c) and (d), 63.444(b) and (c), 63.445(b) and (c), 63.446(c), (d), and (e), 63.447(b) or §63.450(d), shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS, as defined in §63.2 of this part) as specified in paragraphs (b) through (m) of this section, except as allowed in paragraph (m) of this section. The CMS shall include a continuous recorder.

(b) A CMS shall be operated to measure the temperature in the firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs for each thermal oxidizer used to comply with the requirements of §63.443(d)(1) through (d)(3). Owners and operators complying with the requirements in §63.443(d)(2) or (d)(3) shall monitor the parameter specified and for the temperature and concentration limits specified.

(c) A CMS shall be operated to measure the following parameters for each gas scrubber used to comply with the bleaching system requirements of §63.445(c) or the sulfite pulping system requirements of §63.444(c).

(1) The pH or the oxidation/reduction potential of the gas scrubber effluent;

(2) The gas scrubber vent gas inlet flow rate; and

(3) The gas scrubber liquid influent flow rate.

(d) As an option to the requirements specified in paragraph (c) of this section, a CMS shall be operated to measure the chlorine outlet concentration of each gas scrubber used to comply with the bleaching system outlet concentration requirement specified in §63.445(c)(2).

(e) The owner or operator of a bleaching system complying with 40 CFR 430.24, shall monitor the chlorine and hypochlorite application rates, in kg of bleaching agent per megagram of ODP, of the bleaching system during the extended compliance period specified in §63.440(d)(3).

(f) A CMS shall be operated to measure the gas scrubber parameters specified in paragraphs (c)(1) through (c)(3) of this section or those site specific parameters determined according to the procedures specified in paragraph (n) of this section to comply with the sulfite pulping system requirements specified in §63.444(c).

(g) A CMS shall be operated to measure the following parameters for each steam stripper used to comply with the treatment requirements in §63.446(e)(3), (4), or (5):

(1) The process wastewater feed rate;

(2) The steam feed rate; and

(3) The process wastewater column feed temperature.

(h) As an option to the requirements specified in paragraph (g) of this section, a CMS shall be operated to measure the methanol outlet concentration to comply with the steam stripper outlet concentration requirement specified in §63.446 (e)(4) or (e)(5).

(i) A CMS shall be operated to measure the appropriate parameters determined according to the procedures

specified in paragraph (n) of this section to comply with the condensate applicability requirements specified in § 63.446(c).

(j) Each owner or operator using a biological treatment system to comply with § 63.446(e)(2) shall perform the following monitoring procedures.

(1) On a daily basis, monitor the following parameters for each biological treatment unit:

(i) Composite daily sample of outlet soluble BOD_5 concentration to monitor for maximum daily and maximum monthly average;

(ii) Mixed liquor volatile suspended solids;

(iii) Horsepower of aerator unit(s);

(iv) Inlet liquid flow; and

(v) Liquid temperature.

(2) Obtain daily inlet and outlet liquid grab samples from each biological treatment unit to have HAP data available to perform quarterly percent reduction tests specified in paragraph (j)(2)(ii) of this section and the compliance percent reduction tests specified in paragraph (p)(1)(i) of this section. Perform the following procedures with the liquid samples:

(i) Store the samples for 5 days as specified in § 63.457(n). The 5 day storage requirement is required since the soluble BOD_5 test requires 5 days to obtain results. If the results of the soluble BOD_5 test are outside of the range established during the initial performance test, then the archive sample shall be used to perform the percent reduction test specified in § 63.457(l).

(ii) Perform the percent reduction test procedures specified in § 63.457(l) within 45 days after the beginning of each quarter as follows.

(A) The percent reduction test performed in the first quarter (annually) shall be performed for total HAP and the percent reduction obtained from the test shall be at least as great as the total HAP reduction specified in § 63.446(e)(2).

(B) The remaining quarterly percent reduction tests shall be performed for methanol and the percent reduction obtained from the test shall be at least as great as the methanol reduction determined in the previous first-quarter test specified in paragraph (j)(2)(ii)(A) of this section.

(C) The parameter values used to calculate the percent reductions required in paragraphs (j)(2)(ii)(A) and (j)(2)(ii)(B) of this section shall be parameter values measured and samples taken in paragraph (j)(1) of this section.

(k) Each enclosure and closed-vent system used to comply with § 63.450(a) shall comply with the requirements specified in paragraphs (k)(1) through (k)(6) of this section.

(1) For each enclosure opening, a visual inspection of the closure mechanism specified in § 63.450(b) shall be performed at least once every 30 days to ensure the opening is maintained in the closed position and sealed.

(2) Each closed-vent system required by § 63.450(a) shall be visually inspected every 30 days and at other times as requested by the Administrator. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.

(3) For positive pressure closed-vent systems or portions of closed-vent systems, demonstrate no detectable leaks as specified in § 63.450(c) measured initially and annually by the procedures in § 63.457(d).

(4) Demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in § 63.457(e).

(5) The valve or closure mechanism specified in § 63.450(d)(2) shall be inspected at least once every 30 days to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line.

(6) If an inspection required by paragraphs (k)(1) through (k)(5) of this section identifies visible defects in ductwork, piping, enclosures or connections to covers required by § 63.450, or if an instrument reading of 500 parts per million by volume or greater above background is measured, or if enclosure openings are not maintained at negative pressure, then the following corrective actions shall be taken as soon as practicable.

(i) A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than

5 calendar days after the problem is identified.

(ii) The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified.

(l) Each pulping process condensate closed collection system used to comply with §63.446(d) shall be visually inspected every 30 days and shall comply with the inspection and monitoring requirements specified in §63.964 of subpart RR of this part, except for the closed-vent system and control device inspection and monitoring requirements specified in §63.964(a)(2) of subpart RR of this part, the closed-vent system and the control device shall meet the requirements specified in paragraphs (a) and (k) of this section.

(m) Each owner or operator using a control device, technique or an alternative parameter other than those specified in paragraphs (b) through (l) of this section shall install a CMS and establish appropriate operating parameters to be monitored that demonstrate, to the Administrator's satisfaction, continuous compliance with the applicable control requirements.

(n) To establish or reestablish, the value for each operating parameter required to be monitored under paragraphs (b) through (j), (l), and (m) of this section or to establish appropriate parameters for paragraphs (f), (i), and (m) of this section, each owner or operator shall use the following procedures:

(1) During the initial performance test required in §63.457(a) or any subsequent performance test, continuously record the operating parameter;

(2) Determinations shall be based on the control performance and parameter data monitored during the performance test, supplemented if necessary by engineering assessments and the manufacturer's recommendations;

(3) The owner or operator shall provide for the Administrator's approval the rationale for selecting the monitoring parameters necessary to comply with paragraphs (f), (i), and (m) of this section; and

(4) Provide for the Administrator's approval the rationale for the selected operating parameter value, and monitoring frequency, and averaging time. Include all data and calculations used to develop the value and a description of why the value, monitoring frequency, and averaging time demonstrate continuous compliance with the applicable emission standard.

(o) Each owner or operator of a control device subject to the monitoring provisions of this section shall operate the control device in a manner consistent with the minimum or maximum (as appropriate) operating parameter value or procedure required to be monitored under paragraphs (a) through (n) of this section and established under this subpart. Except as provided in paragraph (p) of this section, §63.443(e), or §63.446(g), operation of the control device below minimum operating parameter values or above maximum operating parameter values established under this subpart or failure to perform procedures required by this subpart shall constitute a violation of the applicable emission standard of this subpart and be reported as a period of excess emissions.

(p) Each owner or operator of a biological treatment system complying with paragraph (j) of this section shall perform all the following requirements when the monitoring parameters specified in paragraphs (j)(1)(i) through (j)(1)(iii) of this section are below minimum operating parameter values or above maximum operating parameter values established in paragraph (n) of this section.

(1) The following shall occur and be recorded as soon as practical:

(i) Determine compliance with §63.446(e)(2) using the percent reduction test procedures specified in §63.457(l) and the monitoring data specified in paragraph (j)(1) of this section that coincide with the time period of the parameter excursion;

(ii) Steps shall be taken to repair or adjust the operation of the process to end the parameter excursion period; and

(iii) Steps shall be taken to minimize total HAP emissions to the atmosphere during the parameter excursion period.

(2) A parameter excursion is not a violation of the applicable emission standard if the percent reduction test specified in paragraph (p)(1)(i) of this section demonstrates compliance with §63.446(e)(2), and no maintenance or

changes have been made to the process or control device after the beginning of a parameter excursion that would influence the results of the determination.

§ 63.454 Recordkeeping requirements.

(a) The owner or operator of each affected source subject to the requirements of this subpart shall comply with the recordkeeping requirements of § 63.10 of subpart A of this part, as shown in table 1, and the requirements specified in paragraphs (b) through (d) of this section for the monitoring parameters specified in § 63.453.

(b) For each applicable enclosure opening, closed-vent system, and closed collection system, the owner or operator shall prepare and maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment and shall record the following information for each inspection:

(1) Date of inspection;

(2) The equipment type and identification;

(3) Results of negative pressure tests for enclosures;

(4) Results of leak detection tests;

(5) The nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);

(6) The date the defect or leak was detected and the date of each attempt to repair the defect or leak;

(7) Repair methods applied in each attempt to repair the defect or leak;

(8) The reason for the delay if the defect or leak is not repaired within 15 days after discovery;

(9) The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;

(10) The date of successful repair of the defect or leak;

(11) The position and duration of opening of bypass line valves and the condition of any valve seals; and

(12) The duration of the use of bypass valves on computer controlled valves.

(c) The owner or operator of a bleaching system complying with § 63.440(d)(3)(ii)(B) shall record the daily average chlorine and hypochlorite application rates, in kg of bleaching agent per megagram of ODP, of the bleaching system until the requirements specified in § 63.440(d)(3)(ii)(A) are met.

(d) The owner or operator shall record the CMS parameters specified in § 63.453 and meet the requirements specified in paragraph (a) of this section for any new affected process equipment or pulping process condensate stream that becomes subject to the standards in this subpart due to a process change or modification.

§ 63.455 Reporting requirements.

(a) Each owner or operator of a source subject to this subpart shall comply with the reporting requirements of subpart A of this part as specified in table 1 and all the following requirements in this section. The initial notification report specified under § 63.9(b)(2) of subpart A of this part shall be submitted by April 15, 1999.

(b) Each owner or operator of a kraft pulping system specified in § 63.440(d)(1) or a bleaching system specified in § 63.440(d)(3)(ii) shall submit, with the initial notification report specified under § 63.9(b)(2) of subpart A of this part and paragraph (a) of this section and update every two years thereafter, a non-binding control strategy report containing, at a minimum, the information specified in paragraphs (b)(1) through (b)(3) of this section in addition to the information required in § 63.9(b)(2) of subpart A of this part.

(1) A description of the emission controls or process modifications selected for compliance with the control requirements in this standard.

(2) A compliance schedule, including the dates by which each step toward compliance will be reached for each emission point or sets of emission points. At a minimum, the list of dates shall include:

(i) The date by which the major study(s) for determining the compliance strategy will be completed;

(ii) The date by which contracts for emission controls or process modifications will be awarded, or the date by which orders will be issued for the purchase of major components to accomplish emission controls or process changes;

(iii) The date by which on-site construction, installation of emission control equipment, or a process change is to be initiated;

(iv) The date by which on-site construction, installation of emissions control equipment, or a process change is to be completed;

(v) The date by which final compliance is to be achieved;

(vi) For compliance with paragraph § 63.440(d)(3)(ii), the tentative dates by which compliance with effluent limitation guidelines and standards intermediate pollutant load effluent reductions and as available, all the dates for the best available technology's milestones reported in the National Pollutant Discharge Elimination System authorized under section 402 of the Clean Water Act and for the best professional milestones in the Voluntary Advanced Technology Incentives Program under 40 CFR 430.24 (b)(2); and

(vii) The date by which the final compliance tests will be performed.

(3) Until compliance is achieved, revisions or updates shall be made to the control strategy report required by paragraph (b) of this section indicating the progress made towards completing the installation of the emission controls or process modifications during the 2-year period.

(c) The owner or operator of each bleaching system complying with § 63.440(d)(3)(ii)(B) shall certify in the report specified under § 63.10(e)(3) of subpart A of this part that the daily application rates of chlorine and hypochlorite for that bleaching system have not increased as specified in § 63.440(d)(3)(ii)(B) until the requirements of § 63.440(d)(3)(ii)(A) are met.

(d) The owner or operator shall meet the requirements specified in paragraph (a) of this section upon startup of any new affected process equipment or pulping process condensate stream that becomes subject to the standards of this subpart due to a process change or modification.

§ 63.456 [Reserved]

§ 63.457 Test methods and procedures.

(a) *Initial performance test.* An initial performance test is required for all emission sources subject to the limitations in §§ 63.443, 63.444, 63.445, 63.446, and 63.447, except those controlled by a combustion device that is designed and operated as specified in § 63.443(d)(3) or (d)(4).

(b) *Vent sampling port locations and gas stream properties.* For purposes of selecting vent sampling port locations and determining vent gas stream properties, required in §§ 63.443, 63.444, 63.445, and 63.447, each owner or operator shall comply with the applicable procedures in paragraphs (b)(1) through (b)(6) of this section.

(1) Method 1 or 1A of part 60, appendix A, as appropriate, shall be used for selection of the sampling site as follows:

(i) To sample for vent gas concentrations and volumetric flow rates, the sampling site shall be located prior to dilution of the vent gas stream and prior to release to the atmosphere;

(ii) For determining compliance with percent reduction requirements, sampling sites shall be located prior to the inlet of the control device and at the outlet of the control device; measurements shall be performed simultaneously at the two sampling sites; and

(iii) For determining compliance with concentration limits or mass emission rate limits, the sampling site shall be located at the outlet of the control device.

(2) No traverse site selection method is needed for vents smaller than 0.10 meter (4.0 inches) in diameter.

(3) The vent gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of part 60, appendix A, as appropriate.

(4) The moisture content of the vent gas shall be measured using Method 4 of part 60, appendix A.

(5) To determine vent gas concentrations, the owner or operator shall collect a minimum of three samples that are representative of normal conditions and average the resulting pollutant concentrations using the following procedures.

(i) Method 308 in Appendix A of this part shall be used to determine the methanol concentration.

(ii) Except for the modifications specified in paragraphs (b)(5)(ii)(A) through (b)(5)(ii)(K) of this section, Method 26A of part 60, appendix A shall

be used to determine chlorine concentration in the vent stream.

(A) *Probe/Sampling Line.* A separate probe is not required. The sampling line shall be an appropriate length of 0.64 cm (0.25 in) OD Teflon tubing. The sample inlet end of the sampling line shall be inserted into the stack in such a way as to not entrain liquid condensation from the vent gases. The other end shall be connected to the impingers. The length of the tubing may vary from one sampling site to another, but shall be as short as possible in each situation. If sampling is conducted in sunlight, opaque tubing shall be used. Alternatively, if transparent tubing is used, it shall be covered with opaque tape.

(B) *Impinger Train.* Three 30 milliliter (ml) capacity midget impingers shall be connected in series to the sampling line. The impingers shall have regular tapered stems. Silica gel shall be placed in the third impinger as a desiccant. All impinger train connectors shall be glass and/or Teflon®.

(C) *Critical Orifice.* The critical orifice shall have a flow rate of 200 to 250 ml/min and shall be followed by a vacuum pump capable of providing a vacuum of 640 millimeters of mercury (mm Hg). A 45 millimeter diameter in-line Teflon® 0.8 micrometer filter shall follow the impingers to project the critical orifice and vacuum pump.

(D) The following are necessary for the analysis apparatus:

(*1*) Wash bottle filled with deionized water;

(*2*) 25 or 50 ml graduated burette and stand;

(*3*) Magnetic stirring apparatus and stir bar;

(*4*) Calibrated pH Meter;

(*5*) 150-250 ml beaker or flask; and

(*6*) A 5 ml pipette.

(E) The procedures listed in paragraphs (b)(5)(ii)(E)(*1*) through (b)(5)(ii)(E)(*7*) of this section shall be used to prepare the reagents.

(*1*) To prepare the 1 molarity (M) potassium dihydrogen phosphate solution, dissolve 13.61 grams (g) of potassium dihydrogen phosphate in water and dilute to 100 ml.

(*2*) To prepare the 1 M sodium hydroxide solution (NaOH), dissolve 4.0 g of sodium hydroxide in water and dilute to 100 ml.

(*3*) To prepare the buffered 2 percent potassium iodide solution, dissolve 20 g of potassium iodide in 900 ml water. Add 50 ml of the 1 M potassium dihydrogen phosphate solution and 30 ml of the 1 M sodium hydroxide solution. While stirring solution, measure the pH of solution electrometrically and add the 1 M sodium hydroxide solution to bring pH to between 6.95 and 7.05.

(*4*) To prepare the 0.1 normality (N) sodium thiosulfate solution, dissolve 25 g of sodium thiosulfate, pentahydrate, in 800 ml of freshly boiled and cooled distilled water in a 1-liter volumetric flask. Dilute to volume. To prepare the 0.01 N sodium thiosulfate solution, add 10.0 ml standardized 0.1 N sodium thiosulfate solution to a 100 ml volumetric flask. and dilute to volume with water.

(*5*) To standardize the 0.1 N sodium thiosulfate solution, dissolve 3.249 g of anhydrous potassium bi-iodate, primary standard quality, or 3.567 g potassium iodate dried at 103 +/−2 degrees Centigrade for 1 hour, in distilled water and dilute to 1000 ml to yield a 0.1000 N solution. Store in a glass-stoppered bottle. To 80 ml distilled water, add, with constant stirring, 1 ml concentrated sulfuric acid, 10.00 ml 0.1000 N anhydrous potassium bi-iodate, and 1 g potassium iodide. Titrate immediately with 0.1 n sodium thiosulfate titrant until the yellow color of the liberated iodine is almost discharged. Add 1 ml starch indicator solution and continue titrating until the blue color disappears. The normality of the sodium thiosulfate solution is inversely proportional to the ml of sodium thiosulfate solution consumed:

$$\text{Normality of Sodium Thiosulfate} = \frac{1}{\text{ml Sodium Thiosulfate Consumed}}$$

(*6*) To prepare the starch indicator solution, add a small amount of cold water to 5 g starch and grind in a mortar to obtain a thin paste. Pour paste into 1 L of boiling distilled water, stir, and let settle overnight. Use clear supernate for starch indicator solution.

(*7*) To prepare the 10 percent sulfuric acid solution, add 10 ml of concentrated sulfuric acid to 80 ml water in an 100 ml volumetric flask. Dilute to volume.

(F) The procedures specified in paragraphs (b)(5)(ii)(F)(*1*) through (b)(5)(ii)(F)(*5*) of this section shall be used to perform the sampling.

(*1*) *Preparation of Collection Train.* Measure 20 ml buffered potassium iodide solution into each of the first two impingers and connect probe, impingers, filter, critical orifice, and pump. The sampling line and the impingers shall be shielded from sunlight.

(*2*) *Leak and Flow Check Procedure.* Plug sampling line inlet tip and turn on pump. If a flow of bubbles is visible in either of the liquid impingers, tighten fittings and adjust connections and impingers. A leakage rate not in excess of 2 percent of the sampling rate is acceptable. Carefully remove the plug from the end of the probe. Check the flow rate at the probe inlet with a bubble tube flow meter. The flow should be comparable or slightly less than the flow rate of the critical orifice with the impingers off-line. Record the flow and turn off the pump.

(*3*) *Sample Collection.* Insert the sampling line into the stack and secure it with the tip slightly lower than the port height. Start the pump, recording the time. End the sampling after 60 minutes, or after yellow color is observed in the second in-line impinger. Record time and remove the tubing from the vent. Recheck flow rate at sampling line inlet and turn off pump. If the flow rate has changed significantly, redo sampling with fresh capture solution. A slight variation (less than 5 percent) in flow may be averaged. With the inlet end of the line elevated above the impingers, add about 5 ml water into the inlet tip to rinse the line into the first impinger.

(*4*) *Sample Analysis.* Fill the burette with 0.01 N sodium thiosulfate solution to the zero mark. Combine the contents of the impingers in the beaker or flask. Stir the solution and titrate with thiosulfate until the solution is colorless. Record the volume of the first endpoint (TN, ml). Add 5 ml of the 10 percent sulfuric acid solution, and continue the titration until the contents of the flask are again colorless. Record the total volume of titrant required to go through the first and to the second endpoint (TA, ml). If the volume of neutral titer is less than 0.5 ml, repeat the testing for a longer period of time. It is important that sufficient lighting be present to clearly see the endpoints, which are determined when the solution turns from pale yellow to colorless. A lighted stirring plate and a white background are useful for this purpose.

(*5*) *Interferences.* Known interfering agents of this method are sulfur dioxide and hydrogen peroxide. Sulfur dioxide, which is used to reduce oxidant residuals in some bleaching systems, reduces formed iodine to iodide in the capture solution. It is therefore a negative interference for chlorine, and in some cases could result in erroneous negative chlorine concentrations. Any agent capable of reducing iodine to iodide could interfere in this manner. A chromium trioxide impregnated filter will capture sulfur dioxide and pass chlorine and chlorine dioxide. Hydrogen peroxide, which is commonly used as a bleaching agent in modern bleaching systems, reacts with iodide to form iodine and thus can cause a positive interference in the chlorine measurement. Due to the chemistry involved, the precision of the chlorine analysis will decrease as the ratio of chlorine dioxide to chlorine increases. Slightly negative calculated concentrations of chlorine may occur when sampling a vent gas with high concentrations of chlorine dioxide and very low concentrations of chlorine.

(G) The following calculation shall be performed to determine the corrected sampling flow rate:

$$S_C = S_U\left(\frac{BP - PW}{760}\right)\left(\frac{293}{273 + t}\right)$$

Where:

S_C=Corrected (dry standard) sampling flow rate, liters per minute;
S_U=Uncorrected sampling flow rate, L/min;
BP=Barometric pressure at time of sampling;
PW=Saturated partial pressure of water vapor, mm Hg at temperature; and
t=Ambient temperature, °C.

(H) The following calculation shall be performed to determine the moles of chlorine in the sample:

$$Cl_2 Moles = 1/8000(5\,T_N - T_A) \times N_{Thio}$$

Where:
T_N=Volume neutral titer, ml;
T_A=Volume acid titer (total), ml; and
N_{Thio}=Normality of sodium thiosulfate titrant.

(I) The following calculation shall be performed to determine the concentration of chlorine in the sample:

$$Cl_2 ppmv = \frac{3005(5\,T_N - T_A) \times N_{Thio}}{S_C \times t_S}$$

Where:
S_C=Corrected (dry standard) sampling flow rate, liters per minute;
t_S=Time sampled, minutes;
T_N=Volume neutral titer, ml;
T_A=Volume acid titer (total), ml; and
N_{Thio}=Normality of sodium thiosulfate titrant.

(J) The following calculation shall be performed to determine the moles of chlorine dioxide in the sample:

$$ClO_2\ Moles = 1/4000(T_A - T_N) \times N_{Thio}$$

Where:
T_A=Volume acid titer (total), ml;
T_N=Volume neutral titer, ml; and
N_{Thio}=Normality of sodium thiosulfate titrant.

(K) The following calculation shall be performed to determine the concentration of chlorine dioxide in the sample:

$$ClO_2\ ppmv = \frac{6010(T_A - T_N) \times N_{Thio}}{S_C \times t_S}$$

Where:
S_C=Corrected (dry standard) sampling flow rate, liters per minute;
t_S=Time sampled, minutes;
T_A=Volume acid titer (total), ml;
T_N=Volume neutral titer, ml; and
N_{Thio}=Normality of sodium thiosulfate titrant.

(iii) Any other method that measures the total HAP or methanol concentration that has been demonstrated to the Administrator's satisfaction.

(6) The minimum sampling time for each of the three runs per method shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

(c) *Liquid sampling locations and properties.* For purposes of selecting liquid sampling locations and for determining properties of liquid streams such as wastewaters, process waters, and condensates required in §§ 63.444, 63.446, and 63.447, the owner or operator shall comply with the following procedures:

(1) Samples shall be collected using the sampling procedures specified in Method 305 of part 60, appendix A;

(i) Where feasible, samples shall be taken from an enclosed pipe prior to the liquid stream being exposed to the atmosphere; and

(ii) When sampling from an enclosed pipe is not feasible, samples shall be collected in a manner to minimize exposure of the sample to the atmosphere and loss of HAP compounds prior to sampling.

(2) The volumetric flow rate of the entering and exiting liquid streams shall be determined using the inlet and outlet flow meters or other methods demonstrated to the Administrator's satisfaction. The volumetric flow rate measurements to determine actual mass removal shall be taken at the same time as the concentration measurements;

(3) To determine liquid stream total HAP or methanol concentrations, the owner or operator shall collect a minimum of three samples that are representative of normal conditions and average the resulting pollutant concentrations using one of the following:

(i) Method 305 in Appendix A of this part, adjusted using the following equation:

$$\overline{C} = \sum_{i=1}^{n} C_i / fm_i$$

Where:

$\bar{C}$=Pollutant concentration for the liquid stream, parts per million by weight.

C_i=Measured concentration of pollutant i in the liquid stream sample determined using Method 305, parts per million by weight.

fm_i=Pollutant-specific constant that adjusts concentration measured by Method 305 to actual liquid concentration; the fm for methanol is 0.85. Additional pollutant fm values can be found in table 34, subpart G of this part.

n=Number of individual pollutants, i, summed to calculate total HAP.

(ii) Any other method that measures total HAP concentration that has been demonstrated to the Administrator's satisfaction.

(4) To determine soluble BOD_5 in the effluent stream from a biological treatment unit used to comply with §§63.446(e)(2) and 63.453(j), the owner or operator shall use Method 405.1, of part 136, with the following modifications:

(i) Filter the sample through the filter paper, into Erlenmeyer flask by applying a vacuum to the flask sidearm. Minimize the time for which vacuum is applied to prevent stripping of volatile organics from the sample. Replace filter paper as often as needed in order to maintain filter times of less than approximately 30 seconds per filter paper. No rinsing of sample container or filter bowl into the Erlenmeyer flask is allowed.

(ii) Perform Method 405.1 on the filtrate obtained in paragraph (c)(4) of this section. Dilution water shall be seeded with 1 milliliter of final effluent per liter of dilution water. Dilution ratios may require adjustment to reflect the lower oxygen demand of the filtered sample in comparison to the total BOD_5. Three BOD bottles and different dilutions shall be used for each sample.

(d) *Detectable leak procedures.* To measure detectable leaks for closed-vent systems as specified in §63.450 or for pulping process wastewater collection systems as specified in §63.446(d)(2)(i), the owner or operator shall comply with the following:

(1) Method 21, of part 60, appendix A; and

(2) The instrument specified in Method 21 shall be calibrated before use according to the procedures specified in Method 21 on each day that leak checks are performed. The following calibration gases shall be used:

(i) Zero air (less than 10 parts per million by volume of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 parts per million by volume methane or n-hexane.

(e) *Negative pressure procedures.* To demonstrate negative pressure at process equipment enclosure openings as specified in §63.450(b), the owner or operator shall use one of the following procedures:

(1) An anemometer to demonstrate flow into the enclosure opening;

(2) Measure the static pressure across the opening;

(3) Smoke tubes to demonstrate flow into the enclosure opening; or

(4) Any other industrial ventilation test method demonstrated to the Administrator's satisfaction.

(f) *HAP concentration measurements.* For purposes of complying with the requirements in §§63.443, 63.444, and 63.447, the owner or operator shall measure the total HAP concentration as one of the following:

(1) As the sum of all individual HAP's; or

(2) As methanol.

(g) *Condensate HAP concentration measurement.* For purposes of complying with the kraft pulping condensate requirements in §63.446, the owner or operator shall measure the total HAP concentration as methanol except for the purposes of complying with the initial performance test specified in §63.457(a) for §63.446(e)(2) and as specified in §63.453(j)(2)(ii).

(h) *Bleaching HAP concentration measurement.* For purposes of complying with the bleaching system requirements in §63.445, the owner or operator shall measure the total HAP concentration as the sum of all individual chlorinated HAP's or as chlorine.

(i) *Vent gas stream calculations.* To demonstrate compliance with the mass emission rate, mass emission rate per megagram of ODP, and percent reduction requirements for vent gas streams specified in §§63.443, 63.444, 63.445, and 63.447, the owner or operator shall use the following:

(1) The total HAP mass emission rate shall be calculated using the following equation:

$$E = K_2 \left[\sum_{j=1}^{n} C_j M_j \right] Q_s$$

Where:

E=Mass emission rate of total HAP from the sampled vent, kilograms per hour.

K_2=Constant, 2.494×10^{-6} (parts per million by volume)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.

C_j=Concentration on a dry basis of pollutant j in parts per million by volume as measured by the test methods specified in paragraph (b) of this section.

M_j=Molecular weight of pollutant j, gram/gram-mole.

Q_s=Vent gas stream flow rate (dry standard cubic meter per minute) at a temperature of 20 °C as indicated in paragraph (b) of this section.

n=Number of individual pollutants, i, summed to calculate total HAP.

(2) The total HAP mass emission rate per megagram of ODP shall be calculated using the following equation:

$$F = \frac{E}{P}$$

Where:

F=Mass emission rate of total HAP from the sampled vent, in kilograms per megagram of ODP.

E=Mass emission rate of total HAP from the sampled vent, in kilograms per hour determined as specified in paragraph (i)(1) of this section.

P=The production rate of pulp during the sampling period, in megagrams of ODP per hour.

(3) The total HAP percent reduction shall be calculated using the following equation:

$$R = \frac{E_i - E_O}{E_i}(100)$$

Where:

R=Efficiency of control device, percent.

Ei=Inlet mass emission rate of total HAP from the sampled vent, in kilograms of pollutant per hour, determined as specified in paragraph (i)(1) of this section.

E_o=Outlet mass emission rate of total HAP from the sampled vent, in kilograms of pollutant per hour, determined as specified in paragraph (i)(1) of this section.

(j) *Liquid stream calculations.* To demonstrate compliance with the mass flow rate, mass per megagram of ODP, and percent reduction requirements for liquid streams specified in §63.446, the owner or operator shall use the following:

(1) The mass flow rates of total HAP or methanol entering and exiting the treatment process shall be calculated using the following equations:

$$E_b = \frac{K}{n \times 10^6} \left(\sum_{i=1}^{n} V_{bi} C_{bi} \right)$$

$$E_a = \frac{K}{n \times 10^6} \left(\sum_{i=1}^{n} V_{ai} C_{ai} \right)$$

Where:

E_b=Mass flow rate of total HAP or methanol in the liquid stream entering the treatment process, kilograms per hour.

E_a=Mass flow rate of total HAP or methanol in the liquid exiting the treatment process, kilograms per hour.

K=Density of the liquid stream, kilograms per cubic meter.

V_{bi}=Volumetric flow rate of liquid stream entering the treatment process during each run i, cubic meters per hour, determined as specified in paragraph (c) of this section.

V_{ai}=Volumetric flow rate of liquid stream exiting the treatment process during each run i, cubic meters per hour, determined as specified in paragraph (c) of this section.

C_{bi}=Concentration of total HAP or methanol in the stream entering the treatment process during each run i, parts per million by weight, determined as specified in paragraph (c) of this section.

C_{ai}=Concentration of total HAP or methanol in the stream exiting the treatment process during each run i, parts per million by weight, determined as specified in paragraph (c) of this section.

n=Number of runs.

(2) The mass of total HAP or methanol per megagram ODP shall be calculated using the following equation:

$$F = \frac{E_a}{P}$$

Where:

F=Mass loading of total HAP or methanol in the sample, in kilograms per megagram of ODP.

E_a=Mass flow rate of total HAP or methanol in the wastewater stream in kilograms per hour as determined using the procedures in paragraph (j)(1) of this section.

P=The production rate of pulp during the sampling period in megagrams of ODP per hour.

(3) The percent reduction of total HAP across the applicable treatment process shall be calculated using the following equation:

$$R = \frac{E_b - E_a}{E_b} \times 100$$

Where:

R=Control efficiency of the treatment process, percent.

E_b=Mass flow rate of total HAP in the stream entering the treatment process, kilograms per hour, as determined in paragraph (j)(1) of this section.

E_a=Mass flow rate of total HAP in the stream exiting the treatment process, kilograms per hour, as determined in paragraph (j)(1) of this section.

(4) Compounds that meet the requirements specified in paragraphs (j)(4)(i) or (4)(ii) of this section are not required to be included in the mass flow rate, mass per megagram of ODP, or the mass percent reduction determinations.

(i) Compounds with concentrations at the point of determination that are below 1 part per million by weight; or

(ii) Compounds with concentrations at the point of determination that are below the lower detection limit where the lower detection limit is greater than 1 part per million by weight.

(k) *Oxygen concentration correction procedures.* To demonstrate compliance with the total HAP concentration limit of 20 ppmv in §63.443(d)(2), the concentration measured using the methods specified in paragraph (b)(5) of this section shall be corrected to 10 percent oxygen using the following procedures:

(1) The emission rate correction factor and excess air integrated sampling and analysis procedures of Methods 3A or 3B of part 60, appendix A shall be used to determine the oxygen concentration. The samples shall be taken at the same time that the HAP samples are taken.

(2) The concentration corrected to 10 percent oxygen shall be computed using the following equation:

$$C_c = C_m \left(\frac{10.9}{20.9 - \%O_{2d}} \right)$$

Where:

C_c=Concentration of total HAP corrected to 10 percent oxygen, dry basis, parts per million by volume.

C_m=Concentration of total HAP dry basis, parts per million by volume, as specified in paragraph (b) of this section.

$\%0_{2d}$=Concentration of oxygen, dry basis, percent by volume.

(l) *Biological treatment system percent reduction calculation.* To determine compliance with an open biological treatment system option specified in §63.446(e)(2) and the monitoring requirements specified in §63.453(j)(2), the percent reduction due to destruction in the biological treatment system shall be calculated using the following equation:

$R = f_{bio} \times 100$

Where:

R=Destruction of total HAP or methanol in the biological treatment process, percent.

f_{bio}=The fraction of total HAP or methanol removed in the biological treatment system. The site-specific biorate constants shall be determined using the procedures specified and as limited in appendix C of part 63.

(m) *Condensate segregation procedures.* The following procedures shall be used to demonstrate compliance with the condensate segregation requirements specified in §63.446(c).

(1) To demonstrate compliance with the percent mass requirements specified in §63.446(c)(1), the procedures specified in paragraphs (m)(1)(i) through (m)(1)(iii) of this section shall be performed.

(i) Determine the total HAP mass of all condensates from each equipment system listed in §63.446 (b)(1) through (b)(3) using the procedures specified in paragraphs (c) and (j) of this section.

(ii) Multiply the total HAP mass determine in paragraph (m)(1)(i) of this section by 0.65 to determine the target HAP mass for the high-HAP fraction condensate stream or streams.

(iii) Compliance with the segregation requirements specified in § 63.446(c)(1) is demonstrated if the condensate stream or streams from each equipment system listed in § 63.446 (b)(1) through (b)(3) being treated as specified in § 63.446(e) contain at least as much total HAP mass as the target total HAP mass determined in paragraph (m)(1)(ii) of this section.

(2) To demonstrate compliance with the percent mass requirements specified in § 63.446(c)(2), the procedures specified in paragraphs (m)(2)(i) through (m)(2)(ii) of this section shall be performed.

(i) Determine the total HAP mass contained in the high-HAP fraction condensates from each equipment system listed in § 63.446(b)(1) through (b)(3) and the total condensates streams from the equipment systems listed in § 63.446(b)(4) and (b)(5), using the procedures specified in paragraphs (c) and (j) of this section.

(ii) Compliance with the segregation requirements specified in § 63.446(c)(2) is demonstrated if the total HAP mass determined in paragraph (m)(2)(i) of this section is equal to or greater than the appropriate mass requirements specified in § 63.446(c)(2).

(n) *Biological treatment system monitoring sampling storage.* The inlet and outlet grab samples required to be collected in § 63.453(j)(2) shall be stored at 4° C (40° F) to minimize the biodegradation of the organic compounds in the samples.

§ 63.458 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 112(d) of the CAA, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States:

(1) Section 63.6(g)—Use of an alternative nonopacity emission standard;

(2) Section 63.453(m)—Use of an alternative monitoring parameter;

(3) Section 63.457(b)(5)(iii)—Use of an alternative test method for total HAP or methanol in vents; and

(4) Section 63.457(c)(3)(ii)—Use of an alternative test method for total HAP or methanol in wastewater.

§ 63.459 [Reserved]

TABLE 1 TO SUBPART S—GENERAL PROVISIONS APPLICABILITY TO SUBPART S [a]

Reference	Applies to Subpart S	Comment
63.1(a)(1)–(3)	Yes.	
63.1(a)(4)	Yes	Subpart S (this table) specifies applicability of each paragraph in subpart A to subpart S.
63.1(a)(5)	No	Section reserved.
63.1(a)(6)–(8)	Yes.	
63.1(a)(9)	No	Section reserved.
63.1(a)(10)	No	Subpart S and other cross-referenced subparts specify calendar or operating day.
63.1(a)(11)–(14)	Yes.	
63.1(b)(1)	No	Subpart S specifies its own applicability.
63.1(b)(2)–(3)	Yes.	
63.1(c)(1)–(2)	Yes.	
63.1(c)(3)	No	Section reserved.
63.1(c)(4)–(5)	Yes.	
63.1(d)	No	Section reserved.
63.1(e)	Yes.	
63.2	Yes.	
63.3	Yes.	
63.4(a)(1)	Yes.	
63.4(a)(3).		
63.4(a)(4)	No	Section reserved.
63.4(a)(5)	Yes.	
63.4(b)	Yes.	
63.4(c)	Yes.	
63.5(a)	Yes.	
63.5(b)(1)	Yes.	
63.5(b)(2)	No	Section reserved.
63.5(b)(3)	Yes.	
63.5(b)(4)–(6)	Yes.	
63.5(c)	No	Section reserved.

TABLE 1 TO SUBPART S—GENERAL PROVISIONS APPLICABILITY TO SUBPART S[a]—Continued

Reference	Applies to Subpart S	Comment
63.5(d)	Yes.	
63.5(e)	Yes.	
63.5(f)	Yes.	
63.6(a)	Yes.	
63.6(b)	No	Subpart S specifies compliance dates for sources subject to subpart S.
63.6(c)	No	Subpart S specifies compliance dates for sources subject to subpart S.
63.6(d)	No	Section reserved.
63.6(e)	Yes.	
63.6(f)	Yes.	
63.6(g)	Yes.	
63.6(h)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.6(i)	Yes.	
63.6(j)	Yes.	
63.7	Yes.	
63.8(a)(1)	Yes.	
63.8(a)(2)	Yes.	
63.8(a)(3)	No	Section reserved.
63.8(a)(4)	Yes.	
63.8(b)(1)	Yes.	
63.8(b)(2)	No	Subpart S specifies locations to conduct monitoring.
63.8(b)(3)	Yes.	
63.8(c)(1)	Yes.	
63.8(c)(2)	Yes.	
63.8(c)(3)	Yes.	
63.8(c)(4)	No	Subpart S allows site specific determination of monitoring frequency in §63.453(n)(4).
63.8(c)(5)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.8(c)(6)	Yes.	
63.8(c)(7)	Yes.	
63.8(c)(8)	Yes.	
63.8(d)	Yes.	
63.8(e)	Yes.	
63.8(f)(1)–(5)	Yes.	
63.8(f)(6)	No	Subpart S does not specify relative accuracy test for CEM's.
63.8(g)	Yes.	
63.9(a)	Yes.	
63.9(b)	Yes	Initial notifications must be submitted within one year after the source becomes subject to the relevant standard.
63.9(c)	Yes.	
63.9(d)	No	Special compliance requirements are only applicable to kraft mills.
63.9(e)	Yes.	
63.9(f)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.9(g)(1)	Yes.	
63.9(g)(2)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.9(g)(3)	No	Subpart S does not specify relative accuracy tests, therefore no notification is required for an alternative.
63.9(h)	Yes.	
63.9(i)	Yes.	
63.9(j)	Yes.	
63.10(a)	Yes.	
63.10(b)	Yes.	
63.10(c)	Yes.	
63.10(d)(1)	Yes.	
63.10(d)(2)	Yes.	
63.10(d)(3)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(d)(4)	Yes.	
63.10(d)(5)	Yes.	
63.10(e)(1)	Yes.	
63.10(e)(2)(i)	Yes.	
63.10(e)(2)(ii)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(e)(3)	Yes.	
63.10(e)(4)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(f)	Yes.	
63.11–63.15	Yes.	

[a] Wherever subpart A specifies "postmark" dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent by the specified dates, but a postmark is not required.

CERTIFICATE OF SERVICE

I, Keith A. Michaels, hereby certify that a copy of this permit has been mailed by first class mail to International Paper Company Camden Mill, 1944 Adams Avenue, Camden, Arkansas 71701, on this 4th day of April, 2000.

Keith A. Michaels, Chief, Air Division

Title V

PERMIT CORRESPONDENCE ROUTING

NAME International Paper Co. Camden Mill

VERSATILE # yes ARD 047338454

ADDRESS 1944 Adams Ave. - Camden, Ar.

UNIT _____

ADDRESS _____

PSD-OP-PE -NSR _____

TOPIC : LETTER FROM: Michaels

TO: Delazen

LETTER STATING: Enclosed is a issued ark. operating permit.

ROUTING: UA 72099

PERMIT REVIEWER: _____

PERMIT ARCHIVE: _____

NO DUNS: _____

3 Days

$ 21.57

$ 45.00

ARD 047338454

ADEQ

ARKANSAS
Department of Environmental Quality

June 1, 1999

Russell Delezen, Superintendent of Environmental Services
International Paper Company Camden Mill
1944 Adams Avenue
Camden, Arkansas 71701

Dear Mr. Delezen:

The enclosed Permit No. 725-AOP-R1 is issued pursuant to the Arkansas Operating Permit Program, Regulation # 26.

After considering the facts and requirements of A.C.A. §8-4-101 et seq., and implementing regulations, I have determined that Permit No. 725-AOP-R1 for the construction, operation and maintenance of an air pollution control system for International Paper Company Camden Mill be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under §2.1.14 of Regulation No. 8, Arkansas Department of Pollution Control & Ecology Commission's Administrative Procedures, within thirty (30) days after service of this decision.

All persons submitting written comments during this thirty (30) day period, and all other persons entitled to do so, may request an adjudicatory hearing and Commission review on whether the decision of the Director should be reversed or modified. Such a request shall be in the form and manner required by §2.1.14 of Regulation No. 8.

This permit is subject to the conditions specified therein and the conditions, if any, which are specified in the enclosed summary report.

Sincerely,

Keith A. Michaels
Chief, Air Division

Enclosure

AIR DIVISION
8001 NATIONAL DRIVE / POST OFFICE BOX 8913 / LITTLE ROCK, ARKANSAS 72219-8913 / TELEPHONE 501-682-0739 / FAX 501-682-0753
www.adeq.state.ar.us

RESPONSE TO COMMENTS
International Paper Company
Permit #725-AOP-R0 CSN: 52-0013

On December 21, 1998, and December 23, 1998, the Director of the Arkansas Department of Pollution Control and Ecology gave notice of a draft permitting decision for the above referenced facility. During the comment period one person submitted written comments, data, views or arguments on the draft permitting decision. The Department's response to these issues is as follows.

ISSUE 1 (Comments 1 & 2)

Comment: The draft permit contains emission limits for virtually every pollutant quantified in the application. IP requested that the limits which are not strictly based on specific regulatory requirements be removed from the permit. Emission estimates in the permit application are provided for informational purposes only and are based on very limited data available on similar industry sources. As the EPA stated in the July 10, 1995, White Paper "operating permits required by Title V are meant to accomplish the largely procedural task of identifying and recording existing substantive requirements applicable to regulated sources and to assure compliance with these existing requirements. Accordingly, operating permits and their accompanying applications should be vehicles for defining existing compliance obligations rather than for imposing new requirements or accomplishing other objectives." IP requested that limits be restricted to pollutants already in permit 725-AR-2.

IP is concerned with the criteria pollutant emission limits included in the Title V and the previous permit that are not based on specific requirements in Regulation 19. These limits are called out as federally enforceable, making them targets for EPA periodic monitoring requirements and possible enforcement.

Section 103 of Regulation 19 endorses the above mentioned EPA White Paper. Section 501 of Regulation 19 states that limits may be imposed in a permit "if such limitations are necessary to comply with federal law or regulations." The Title V permit, therefore, should contain the specific applicable requirements of Regulation 19, and any additional limitations necessary to ensure compliance with ambient air quality standards and other applicable federal regulatory requirements. Limits on every pollutant at every source are not needed or required.

IP also requested that the non-criteria pollutant limitations regulated by the Cluster Rule (40 CFR Part 63, Subpart S) be removed since EPA contemplates HAP limitations in the NESHAP development and promulgated final rules that do not include the exhaustive list of HAPs presented in the draft Title V permit. IP believes that the NESHAP requirement of the draft permit (Plantwide Condition 15) will suffice in addressing the HAP emission control from affected units; thereby not further burdening the mills with requirements more stringent than requirements imposed on similar mills in other states. Examples of affected sources are the mill's NCG system, the brownstock washers, digester system, evaporator system, and turpentine

system. Additionally, EPA has proposed another MACT for pulp and paper mill combustion sources such as recovery furnaces, limes kilns, and smelt dissolving tanks. Since the MACT is proposed and is expected final soon, IP also requested HAP limitations for these sources consistent with the proposed MACT instead of non-criteria pollutant limits found in the draft permit.

Response: The emission limits listed in the permit are those which were either submitted in the Title V permit application or in additional information.

The emission limits for the non-criteria pollutants are based upon regulatory requirements. Section 18.801 of Regulation 18 requires the Department to regulate air contaminants in a manner that will prevent air pollution. The Department has evaluated the emission rates provided and deemed them to be acceptable under §18.801 of Regulation 18. The Title V permit identifies the rates and the recordkeeping/compliance demonstrations for these pollutants. The non-criteria pollutants are also identified as state-only requirements in the permit. Also, §19.103(C) of Regulation 19 states that "Regulation 19, as amended, presumes a single-permit system, encompassing both federal and state requirements." Therefore, the Title V permit may include the state-only requirements as long as they are identified as such in the permit.

The Department will not remove the HAP limits for sources which are subject to a MACT standard. The Department is still required to regulate these emissions under Regulation 18. Stating that the facility is subject to a MACT standard in the permit is not sufficient for addressing the HAP emissions control from affected units and will not demonstrate compliance with Regulation 18.

The criteria pollutant emission limits are needed in the permit in order to ensure compliance with the NAAQS. As the limits are needed to demonstrate compliance with the NAAQS, they must remain in the permit.

ISSUE 2 (Comment 3)

Comment: IP requested that the following wording be added to the general provisions: "Many emission limits in this permit are based on emission factors. If new emission factors are developed, or if mill tests indicate that actual emissions are higher than those predicted by the emission factors used at the time the permit was developed, the permit limits will be appropriately adjusted. Such a finding will not constitute a permit violation."

Response: The Department will add the following language to the permit for the non-criteria pollutants, excluding PM.

"The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or

development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits."

The following language will be added to the Plantwide Conditions pertaining to the criteria pollutant and the PM emission rates: "The criteria pollutant and the PM emission rates listed in this permit were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. This condition does not apply to pollutants for which test data is already available, pollutants with an NSPS or NESHAP standard, or limits which have been set through a PSD permitting action (those pollutants which have undergone a BACT analysis or which "netted out" of a PSD review)."

ISSUE 3 (Comment 4)

Comment: IP requested that the following wording be added to the General Provisions: "Deviations from permit conditions caused by startup, shutdown, or upset conditions shall not constitute violations of this permit if the Department finds that the permittee took appropriate action to eliminate future occurrences and/or to minimize the amount by which the permit's limits are exceeded and to reduce the length of time for which said limits are exceeded. The permittee shall report all such deviations pursuant to General Provision 8."

Response: The Department has reviewed this request and will add the following to the Plantwide Conditions:

Pursuant to §19.601 of Regulation 19, the Department may forego enforcement action for exceedances of federally regulated air pollutant emissions given that the person responsible for the source of the excess emissions does the following. The reporting of upset conditions is outlined in General Provision 8.

A. Demonstrates to the Department that the emissions resulted from:
   1. Equipment malfunction or upset and are not the result of negligence or improper maintenance; or
   2. Physical constraints on the ability of a source to comply with the emission standard, limitation, or rate during startup or shutdown; and
   3. That all reasonable measures have been taken to immediately minimize or eliminate the excess emissions.

ISSUE 4 (Comments 5, 8, 9, & 32)

Comment: Mass rate emission limits are set for pollutants by the permit as well as limits on production. IP requested that the production limits be removed and the compliance be demonstrated through the existing testing schedule and calculation of other emissions using the emission factors.

IP requested that the Introduction be changed to read that records are to be kept on a twelve month rolling total rather than a twelve month rolling average.

IP requested that they not be required to have records updated until the last day of the month following the month which the records represent.

IP also requested that Specific Condition 112 in the draft permit be modified to state that the records need only to be updated on a monthly basis.

Response: The production limits will remain in the permit. Use of emission factors to caculate emissions would require the use of production records. As the emission rates are based upon an emission factor and a production limit, it would require less work to just have a production limit in the permit. Also, if an emission factor were used, it would have to be listed in the permit. Therefore, the production limit would still remain public knowledge.

The Department has reviewed the other requests. As other paper mills are only required to update records by the end of the month following the month which the records represent, the permit's recordkeeping requirements will be changed. The other changes will be made as requested.

ISSUE 5 (Comments 6, 7, 10, 11, 13, 16, 17, 19, 20, 21, 24, 40, 41, 42, 44, 47, & 49)

Comment: IP requested several insignificant wording changes and clarifications throughout the permit.

Response: The changes will be made as requested.

ISSUE 6 (Comments 12, 18, & 37)

Comment: IP requested that Specific Conditions 26 and 135 be modified to state that excess emissions totaling less than 1% of the time in each calendar quarter would not be considered violations of the permit and that Specific Conditions 4 & 5 be modified to state that compliance with the listed emission rates will be demonstrated through "proper incineration of the gases at least 99% of each quarter." As an alternate, IP requested adding a general provision stating "Deviations from permit conditions caused by startup, shutdown, or upset conditions shall not constitute violations of this permit if the Department finds that the permittee took appropriate

actions to eliminate future occurences and/or to minimize the amount by which the permit's limits are exceeded and to reduce the length of time for which said limits are exceeded. The permittee shall report all such deviations pursuant to General Provision 8."

Response: The specific conditions in question contain requirements of 40 CFR Part 60, Subpart BB and/or §19.8 of Regulation 19. These regulations do not contain any provisions stating the amount of excess emissions which would be considered violations of the permit. Therefore, the Department cannot allow a certain percentage of excess emissions. The alternate language is similar to that added under Issue 3 of this Response to Comments. Therefore, the alternate language suggested by the permittee in the above comment will not be added to the permit.

ISSUE 7 (Comment 14)

Comment: Turpentine is a byproduct of wood and varies in the amount per ton of wood. A limit on the amount of turpentine collected seems inappropriate because turpentine not collected either becomes volatized or contributes to the loading of the waste water system. The more turpentine collected for a given amount of wood, the less the pollutants released to the environment. IP requested that the production limit for turpentine be replaced by the allowed pulp production as a permit requirement. Additional information was submitted to the Department relating the emissions from the turpentine recovery source group (source SN-21).

Response: The Department has reviewed the information relating the emissions from source SN-21 to the amount of pulp produced and is in agreement with the permittee. Therefore, the change will be made as requested.

ISSUE 8 (Comment 15)

Comment: The Brown Stock Washer source group (SN-15) consists of six brown stock washers, their associated equipment, and foam tank. The six washers are vented to the atmosphere through ceiling exhaust fans and not through stacks. Therefore, due to the impracticality of testing these sources and the large number of sources within the group, IP requested that the testing requirements for source SN-15 be removed from the permit.

Response: Due to the impracticality of testing this source, the Department will remove the test requirement from the permit.

ISSUE 9 (Comments 22 & 23)

Comment: Acrolein emission limits for the Black Liquor Oxidation source group (SN-18) were derived using an emission factor from a NCASI technical bulletin. This technical bulletin lists the results of seven stack tests on black liquor oxidation tanks. The factors range from non-detect to 3.1×10^{-5} lbs/TBLS. The mill was conservative in using the high end of this range to to estimate emissions from its black liquor oxidation tank. The high end factor yielded 0.0077 tons per year which was rounded up to 0.01 tons per year. There is no reason to believe that the Camden Mill acrolein emissions would be higher than any of the seven mills tested. In fact, it is believed that the actual emissions would be much lower.

Because a documented emission factor was used to estimate acrolein emissions, IP believes that stack testing is not necessary in this case to ensure compliance with emission limits. Recordkeeping of the total black liquor fired in the Recovery boilers should be sufficient to show compliance with the acrolein limit. Therefore, it is requested that the acrolein testing requirement be removed from the permit.

The VOC and the methanol limits for the Black Liquor Oxidation source group were developed using emission factors. A conservative approach in selecting these emission factors was taken. The factors chosen for VOC and methanol were in the mid to upper range of available factors. There is no reason to believe that the Camden Mill emissions would be higher than other similar mills. In fact, due to the conservative nature in which the factors were chosen, it is believed that actual emissions will be much lower than the permit limits. Additionally, the black liquor oxidation tank is not currently equipped with a stack sufficient for emission testing. Based on the conservative estimates of emissions, the physical limitations in testing this source without structural changes and the fact that testing of this sort is not consistently required in other Arkansas paper mill permits, IP requested that the testing requirements for VOC and methanol be removed from the permit. Recordkeeping of the total black liquor fired in the recovery boilers should be sufficient to show compliance with the VOC and the methanol emission limits.

Additional information detailing the emission factors used to estimate the emissions of acrolein, methanol, and VOC was submitted to the Department.

Response: The acrolein testing and the VOC testing will be removed from the permit. However, the methanol testing requirement will remain in the permit. If the methanol emission rate is exceeded on any one of the three runs, the permittee will be required to test this source for VOC emissions. Testing this source for methanol will still be required because of the large amount of methanol emisions (approximately 350 tpy) which is being permitted at this source for the first time.

ISSUE 10 (Comments 25, 26, 28, 29, 33, 35, & 36)

Comment: IP requested that the remainder of the opacity control requirement "Opacity of no more than 60 percent is allowed for no more than 6 minutes in 60 minutes and no more than three times in a 24 hour period" be added to Specific Conditions 42, 62, 107, 131, and 154.

IP requested that the daily visible emissions readings required by Specific Condition 63 be replaced with the language used in Specific Condition 81. IP also requested that the daily visible emissions readings required by Specific Condition 44 be replaced with the following language: "Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-04/05 shall be conducted by a person trained, but not necessarily certified, in EPA Reference Method 9. If emissions which appear to be in excess of 30% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, the permittee shall conduct another observation of the opacity from source SN-04/05. If the opacity observed does not appear to be in excess of 30%, then no further action is needed and the permittee will be considered in compliance with the permitted opacity limit. If visible emissions which appear to be in excess of 30% are still observed, a 6-minute visible emissions reading shall be conducted by a person certified in EPA Reference Method 9 to determine if the opacity is less than 40%. If the opacity observed is not in excess of 40%, then no further action is needed and the permittee will be considered in compliance with the permitted opacity limit. If no Method 9 reading is conducted despite emissions appearing to be in excess of 30% after corrective action has been taken, the permittee shall be considered out of compliance with the permitted opacity limit for that day."

The opacity for source SN-06 should be 20% rather than 40%.

IP requested that the opacity limit for source SN-12 be raised to 20% and the opacity compliance demonstration match the language in Specific Condition 81, with the exception of weekly rather than daily observations.

Response: As the language regarding 60 percent opacity is nearly identical to what is currently in Regulation 18 (effective July 1, 1997) and what is in Regulation 19 (as approved by the Arkansas Pollution Control & Ecology Commision on January 22, 1999), the change will be made to coincide with Regulations 18 and 19.

The opacity for source SN-06 will be changed to 20% as requested. The opacity compliance demonstration language will be changed to read the same as Specific Condition 81.

The opacity compliance demonstration for source SN-04/05 will be changed to read as IP has requested.

The Department has reviewed the information submitted concerning the opacity limit for source SN-12. The opacity limit will be raised to 20%. The compliance demonstration language for this source will be identical to the language found in Specific Condition 81. The permittee will be required to perform daily observations due to the 20% opacity limit. The daily observations are needed instead of weekly since sources with higher opacities tend to have more variability in their daily opacity readings.

ISSUE 11 (Comment 27)

Comment: All annual testing should be required "annually" rather then "no more than 12 months apart." If necessary, a window could be established to do annual testing no closer than six months apart and no more than 18 months apart. Otherwise, testing will need to be done every 11 months and will eventually be forced into the winter months on occasion with two sets of tests in some years.

Response: The Department has reviewed this request and will change the appropriate specific conditions. The permit will specify that the tests must take place no closer than 9 months apart and no more than 15 months apart.

ISSUE 12 (Comment 30)

Comment: Specific Conditions 86b and 97b require the monitoring of scrubbing liquid supply pressure. IP requested to be allowed to substitute flow for pressure. The scrubbing liquid supply pressure has little relation to scrubber performance. Scrubbing liquid flow rate is a much better indicator.

Response: Since the equipment being controlled by the emissions is not subject to 40 CFR Part 60, Subpart BB, the change will be made as requested.

ISSUE 13 (Comment 31)

Comment: IP requested that sources SN-28, SN-29, SN-30, SN-32, SN-33, and SN-34 be combined into a new source SN-28 Causticizing Area Source Group. They are in close proximity and are all limited by the amount of lime production allowed. Suggested language for the source description was submitted.

Response: The sources will be grouped onto one page since the compliance demonstrations for these sources are identical. However, since some of the sources emit TRS while others do not, the sources will retain their individual source numbers. This will achieve the more streamlined approach desired by the permittee. The source description will be a combination of the descriptions in the draft permit.

ISSUE 14 (Comment 38)

Comment: IP requested that the testing requirement for source SN-02 be deleted from the permit. After many years of annual tests the source has never shown significant emissions and at times a special instrument was required to measure the low flow from the stack. Otherwise, please refer to Comment 27 (Issue 11).

Response: The Department has reviewed past test results for particulate matter from SN-02. Due to the low emission rate at which this source was tested (0.1 lb/hr), the requirement will be removed from the permit.

ISSUE 15 (Comment 38)

Comment: IP requested a custom schedule to allow annual certification and testing by vendors that nitrogen content will not exceed 2% and sulfur content will be less than 0.8% by weight. The certification and test results will be on site. The turbine is limited to pipeline quality natural gas only and does not have a source of high sulfur natural gas. Custom schedules are allowed in Specific Condtion 150b. Additionally, the NO_X emissions are tracked by a CEMS.

IP proposes to provide annual written guarantees, contract, or tariff limits from their suppliers that the mill will be provided with pipeline quality natural gas with stated maxmimum concentrations of nitrogen and sulfur and annual test results to demonstrate compliance. Total sulfur will be no more than 0.01 percent sulfur (less than 0.8 percent is required). Nitrogen should not exceed 3.0 mole percent and NO_X emissions will not exceed 150 ppm by volume. These values are well within the requirements of 40 CFR Part 60, Subpart GG. There is no other fuel source for the gas turbin other than pipeline quality natural gas and a CEMS assures compliance with the NO_X emission limits.

Response: The Department is in agreement that custom schedules are allowed under 40 CFR §60.334(b). However, the Department has not been granted delegation to approve the customs plans allowed by this subpart and will be unable to approve or disapprove the custom plan proposed by the permittee. The permittee will need to request approval of the custom plan from US EPA Region VI.

ISSUE 16 (Comment 39)

Comment: IP requested the language from permit 725-AR-2 for fuels allowed for source SN-01: Bark, wood waste, natural gas, #6 fuel oil, sawdust containing small amounts of lubricating oil, small amounts of waste paper, and small amounts of lubricating oil incidentally burned from contact with the conveyor systems. Also, the use of diesel oil for starting bark fires was requested in the application and is necessary since this has been the practice since the boiler was built in 1947. The permittee also requested permission to burn small amounts of boxes in this

boiler. Information concerning the emissions which could be generated by burning the boxes was submitted to the Department.

Response: The Department has reviewed this request and determined that permitted emissions will not need to be increased as a result of allowing additional fuels to be fired at source SN-01. Therefore, the change will be made as requested. However, additional requirements for the fuels not listed in the draft permit will be added to the final permit.

ISSUE 17 (Comment 43)

Comment: IP requested that Specific Conditions 220 and 221 be deleted from the permit. These conditions apply to SN-49, not to SN-48. IP also requested that it be made clear that SN-48 and SN-49 do not include the smaller units in the Insignificant Activities lists.

Response: Specific Condition 220 will be changed to state that the diesel fired air compressors may operate only when the electrical air compressors are out of service. This will coincide with the information submitted prior to the issuance of the draft permit.

The permit will clarify that sources SN-48 and SN-49 do not include the small units in the Insignificant Activities list.

ISSUE 18 (Comment 45)

Comment: IP requested that the Insignificant Activities list attached to their comments be included in the permit and that miscellaneous lubricating oil storage tanks be included under Group A, #3.

Response: The Department has reviewed the Insignificant Activities List submitted in the permit application and in the comments made on the draft permit with regards to the new regulations. It has been determined that the justification for three sources listed in the draft needed to be changed. Also, the Group B Insignificant Activities List has been revised in the permit in accordance with the new regulations.

ISSUE 19 (Comment 46)

Comment: IP requested that Plantwide Condition 8 be removed from the permit. The use of fuel oil at all applicable sources is allowed under this permit and compliance with the applicable limits is ensured by fuel usage limits.

Response: The Department has reviewed this request and determined that the fuel oil recordkeeping requirements for the applicable sources are sufficient to demonstrate compliance with the permitted emission rates. Therefore, Plantwide Condition 8 will be removed from the permit as requested.

ISSUE 20 (Comment 48)

Comment: IP requested that the date of certification required in General Provision 21 be specified in the permit. An example is "The report is due 30 days following the one year anniversary of this permit and annually thereafter." IP also requested a period of 180 days to achieve compliance with the new requirements of this permit.

In subsequent information submitted to the Department, IP stated that the period of 180 days to achieve compliance with the permit was needed to install electronic data systems which will maintain data for a period of 5 years after the date of such record. Currently, some systems only store data for three months.

Response: General Provision 21 will be modified as requested. A plantwide condition will be added to the permit stating that hand written records may be kept for any source with an electronic data keeping system that does not store five years worth of data.

ISSUE 21 (Comment 20)

Comment: The permittee requested that Specific Conditions 30 and 31 be reworded by substituting "at SN-04, 05, and 06" for SN-26. The solids are tracked at the recovery boilers since there is no combustion associated with SN-26. This limit was originally set for SN-27 rather than SN-26.

Response: The permit will be modified to say "processed" instead of "fired." It will also be modified to state that the records of BLS for the recovery boilers will suffice.

ISSUE 23 (Comment 40)

Comment: I-P requested that the term "soot-blowing" be changed to "steam cleaning of the combustion chamber" in Specific Conditions 167 and 168. This better describes the activity that could cause increased emissions.

Response: New regulations went into effect on February 15, 1999. The permittee is required to comply with the opacity requirements in §19.503 of Regulation 19. This regulation does not contain any provisions for soot blowing or other activities which would be more than 6 minutes in duration. Therefore, Specific Conditions 167 and 168 will be removed from the permit.

ISSUE 24

Due to changes in Regulations 18 and 19, the Department has modified several regulatory citations in the permit. Also, the following changes have been made to the permit due to changes in the regulations: a compliance plan has been added, the DeMinimis Section of the permit has been changed to the Insignificant Activities Section, PM is now regulated under Regulation 18, and most opacity limits are now regulated under Regulation 19.

OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation #26:

Permit #: 725-AOP-R0

IS ISSUED TO:

International Paper Company
1944 Adams Avenue
Camden, AR 71701
Ouachita County
CSN:52-0013

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

June 1, 1999 and May 31, 2004

AND IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Keith A. Michaels

6/1/99
Date

SECTION I: FACILITY INFORMATION

PERMITTEE:	International Paper Company
CSN:	52-0013
PERMIT NUMBER:	725-AOP-R0
FACILITY MAILING ADDRESS:	1944 Adams Avenue Camden, AR 71701
PHYSICAL LOCATION:	1944 Adams Avenue Camden, AR 71701
COUNTY:	Ouachita
CONTACT POSITION:	Russell Delezen / Jay Wilson
TELEPHONE NUMBER:	870-231-2251 / 870-231-2250
REVIEWING ENGINEER:	Loretta Reiber
UTM North-South (X):	3711.5
UTM East-West (Y):	516.5

SECTION II: INTRODUCTION

International Paper Company owns and operates a facility in Camden which produces a variety of unbleached papers and linerboard. The primary Standard Industrial Classification Code (SIC) for this facility is 2611 and 2621. This permit will continue to classify this facility as a major source of criteria pollutant emissions (with the exception of lead) with respect to Title V and 40 CFR 52.21.

Wood is accepted in either chip or log form. Other chips are stored in piles. Logs are debarked, chipped, and screened prior to storage in the chip silos. Chips are conveyed to the pulp mill, cooked in a continuous digester, washed, stored, and transferred to the paper mill where they are refined. Recycled fiber is also produced from a post consumer recycle plant. Recycled fiber, virgin fiber, chemicals, and dyes form the feedstock for the three paper machines. The final paper product is trimmed, wound onto rolls, and prepared for shipment off site.

Weak black liquor from the pulp mill is concentrated in an evaporation system prior to combustion in one of the three recovery boilers. These boilers recover the spent cooking chemicals as green liquor. Energy from liquor combustion is captured to generate steam for mill use.

The green liquor is reacted with lime in the caustic and lime recovery area and clarified to produce white liquor. The lime mud from the clarifier is recovered, calcined in a lime kiln, and reused. Ancillary systems include the bark boiler and the two power boilers which provide supplemental plant-wide steam, two steam turbines, a gas turbine generator equipped with a heat recovery steam generator (HRSG), a wastewater treatment system, an electrical distribution system, maintenance areas, and laboratories.

Permit #725-AOP-R0 is the first operating permit issued to International Paper Company - Camden Mill under Regulation 26. Several sources are being deleted in this permit due to the removal of the bag plant. Several sources which have been in operation at this facility for some time will be permitted for the first time. Two new sources are also being added. The two new sources are a package boiler which will be brought on site whenever another boiler will be down for an extended period of time and a baghouse to control the particulate matter emissions from the lime handling operations. In addition to several additional sources now being permitted, non-criteria pollutants will also be quantified. Permitted emissions from several sources are increasing. This is due to a change in the method of calculation and not a change in the method of operation.

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All of the hourly emission rates for this facility were based upon the maximum capacity of the equipment. CEMs as required by §19.8 of Regulation 19 will show compliance with the permitted emission rates for total reduced sulfur from several pieces of equipment. There are no additional requirements for demonstrating compliance with the short term emission rates in this permit. Compliance with the annual emission rates will be demonstrated through several record keeping requirements. These specific conditions are specified for each set of emission rates in this permit. All of the records are to be kept on a twelve month rolling total so that compliance may be demonstrated for any twelve month period.

Following are a table of the facility wide emissions of federally regulated pollutants and a table of the facility wide non-criteria pollutant emissions. Specific unit information may be located using the indicated cross reference pages in the first table.

EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
Total Allowable Emissions		PM	547.2	2068.2	N/A
		PM_{10}	284.5	1143.7	
		SO_2	3930.8	2613.5	
		VOC	1138.9	4750.1	
		CO	1834.4	7046.7	
		NO_x	1035.2	2433.6	
		Pb	1.21	4.60	
		TRS	165.2	662.5	
		H_2S	13.6	58.0	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
01	Bark Boiler	PM	76.7	329.2	93
		PM_{10}	62.5	274.3	
		SO_2	706.5	22.3	
		VOC	28.0	122.7	
		CO	619.0	2711.1	
		NO_x	110.0	482.8	
		Pb	0.05	0.01	
02	Slaker Vent Scrubber	PM	5.0	21.9	81
		PM_{10}	5.0	21.9	
		VOC	3.3	14.4	
		TRS	0.1	0.2	
03	Lime Kiln	PM	70.0	306.6	74
		PM_{10}	34.9	152.9	
		SO_2	17.4	76.3	
		VOC	11.2	49.0	
		CO	35.0	153.3	
		NO_x	44.8	196.0	
		Pb	1.10	4.50	
		TRS	7.4	32.6	
		H_2S	1.9	8.3	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
04/05	Recovery Boiler #1	PM	200.0	876.3	46
		PM_{10}	77.6	340.2	
		SO_2	1318.8	1160.6	
		VOC	73.2	320.6	
		CO	412.6	1810.0	
		NO_x	192.0	401.6	
		Pb	0.02	0.04	
		TRS	31.8	140.6	
06	Recovery Boiler #2 and #3	PM	75.0	307.0	53
		PM_{10}	29.1	127.5	
		SO_2	1507.2	1066.1	
		VOC	167.8	735.8	
		CO	454.0	1991.6	
		NO_x	242.0	701.9	
		Pb	0.01	0.02	
		TRS	37.2	163.9	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
07	Smelt Dissolving Tank #1	PM	25.0	110.0	60
		PM_{10}	25.0	110.0	
		SO_2	7.5	32.9	
		VOC	28.0	122.3	
		NO_x	12.9	56.7	
		Pb	0.01	0.01	
		TRS	1.5	6.6	
08	Smelt Dissolving Tank #2	PM	8.4	76.3*	65
		PM_{10}	8.4	76.3*	
		SO_2	3.6	29.5*	
		VOC	13.6	115.5*	
		NO_x	6.1	51.0*	
		Pb	0.01	0.02*	
		TRS	0.7	5.8*	
09	Smelt Dissolving Tank #3	PM	9.0	76.3*	65
		PM_{10}	9.0	76.3*	
		SO_2	3.2	29.5*	
		VOC	12.2	115.5*	
		NO_x	5.5	51.0*	
		Pb	0.01	0.02*	
		TRS	0.6	5.8*	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
10	Auxiliary Power Boiler #1	This source is no longer in service.			
11	Auxiliary Power Boiler #2	This source is no longer in service.			
12	NCG Incinerator	PM	0.2	0.9	84
		PM_{10}	0.2	0.9	
		SO_2	3.5	15.2	
		VOC	4.0	17.3	
		CO	9.4	41.1	
		NO_x	7.3	32.1	
		TRS	0.7	3.0	
13	Cogeneration Unit	PM	5.6	24.6	89
		PM_{10}	5.6	24.6	
		SO_2	0.4	1.5	
		VOC	2.8	12.1	
		CO	51.6	226.2	
		NO_x	93.3	408.8	

EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
14	NCG Back-Up Flare	PM	0.2	0.9	84
		PM_{10}	0.2	0.9	
		SO_2	343.5	206.1	
		VOC	1.7	3.1	
		CO	9.4	41.1	
		NO_x	7.3	32.1	
		TRS	3.8	2.3	
15	Brown Stock Washers	VOC	266.1	1165.3	29
		TRS	45.7	200.3	
		H_2S	0.8	3.3	
16	Aeration Stabilization Basin and Process Sewers	VOC	10.0	43.8	112
		TRS	1.1	4.1	
		H_2S	0.1	0.1	
17	The printing presses are no longer in service.				
18	Black Liquor Oxidation Tank Vent	VOC	125.4	548.4	44
		TRS	25.0	62.2	
		H_2S	10.3	44.9	
19	Woodyard Source Group	PM	0.7	3.0	21
		PM_{10}	0.6	2.7	
		VOC	36.9	161.5	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
20	Digester and Blow Tanks Source Group	PM	0.1	0.1	24
		PM_{10}	0.1	0.1	
		VOC	2.4	10.1	
		TRS	0.9	3.8	
		H_2S	0.1	0.4	
21	Turpentine Recovery Source Group	VOC	0.2	0.9	26
22	Knotter System Source Group	VOC	20.4	88.7	27
		TRS	1.7	7.5	
23	High Density Storage Source Group	VOC	50.7	222.0	32
		TRS	2.9	12.8	
		H_2S	0.1	0.3	
24	Pine Stock Chest	VOC	50.7	222.0	34
		TRS	2.9	12.8	
		H_2S	0.1	0.3	
25	Weak Black Liquor Storage Source Group	VOC	6.8	29.0	37
		TRS	0.6	2.5	
26	Strong Black Liquor Storage Source Group	VOC	0.4	0.9	41
		TRS	0.2	0.6	
		H_2S	0.1	0.3	
27	Multiple Effect Evaporators	Emissions from this source are routed to sources SN-12 and/or SN-14.			39

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
28, 29, 30, 32, 33, & 34	Causticizing Area Sources	VOC	7.7	31.8	71
		TRS	0.3	0.8	
31	Lime Handling Source Group	PM	0.4	1.8	79
		PM_{10}	0.4	1.8	
35	Paper Mill Source Group	VOC	161.6	707.6	108
36	Active East Landfill	VOC	0.8	3.4	115
		CO	0.1	0.3	
		TRS	0.1	0.3	
		H_2S	0.1	0.1	
37	Gasoline Storage Tank	VOC	22.8	0.5	119
38	Maintenance Parts Cleaners	This is an insignificant activity under Group B.			
39 - 46	These sources were all part of the bag plant which has been removed from service.				
47	Package Boiler	PM	5.5	6.6	100
		PM_{10}	5.5	6.6	
		SO_2	0.2	0.2	
		VOC	0.4	0.4	
		CO	50.0	60.0	
		NO_x	25.0	30.0	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
48	Air Compressors	PM	2.0	2.5	121
		PM_{10}	2.0	2.5	
		SO_2	1.8	2.3	
		VOC	2.3	2.9	
		CO	5.9	7.4	
		NO_x	27.2	34.3	
49	Shutdown Equipment	PM	18.4	0.5	124
		PM_{10}	18.4	0.5	
		SO_2	17.2	0.5	
		VOC	27.5	0.7	
		CO	187.4	4.6	
		NO_x	261.8	6.3	

*These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

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EMISSION SUMMARY FOR NON-CRITERIA POLLUTANTS		
Pollutant	lb/hr	tpy
Acetaldehyde	13.57	58.95
Acetone**	2.84	7.50
Acetophenone	0.03	0.11
Acrolein	0.39	1.40
Acrylonitrile	0.01	0.02
Aldehydes	0.06	0.01
Ammonia**	167.67	734.31
Antimony Compounds	0.200	0.115
Arsenic Compounds	0.070	0.146
Benzene	0.50	1.45
Beryllium Compounds	0.010	0.007
Cadmium Compounds	0.04	0.123
Carbon Disulfide	0.76	3.20
Carbon Tetrachloride	0.03	0.08
Carbonyl Sulfide	0.02	0.05
Chlorobenzene	0.09	0.27
Chloroform	0.10	0.31
Chromium Compounds	0.85	3.60
Cobalt Compounds	0.160	0.154
Cresols & Hexachloroethane	0.06	0.27
Cumene	0.05	0.15
Dibenzofurans	0.01	0.01
Dimethyl Disulfide*	5.95	25.87

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EMISSION SUMMARY FOR NON-CRITERIA POLLUTANTS		
Pollutant	lb/hr	tpy
Dimethyl Sulfide*	50.81	222.65
Ethyl Benzene	0.01	0.02
Ethylene Glycol	0.44	1.92
Formaldehyde	3.89	14.52
Hydrogen Chloride**	32.52	105.92
Hydrogen Fluoride**	0.46	0.15
Lead Compounds	0.09	0.269
Manganese Compounds	2.41	10.132
Mercury Compounds	0.01	0.015
Methanol	394.5	1728.57
Methyl Ethyl Ketone	4.40	18.67
Methyl Isobutyl Ketone	0.38	1.25
Methylene Chloride**	0.51	2.21
Methyl Mercaptan*	12.79	55.78
n-Hexane	0.22	0.80
Napthalene	0.21	0.89
Nickel Compounds	1.000	0.785
Phenols	3.32	14.49
POM & PAH	0.11	0.36
Propionaldehyde	0.11	0.45
Selenium Compounds	0.020	0.021
Styrene	0.69	2.40
1,1,2,2-Tetrachloroethane	0.01	0.01

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EMISSION SUMMARY FOR NON-CRITERIA POLLUTANTS		
Pollutant	lb/hr	tpy
Tetrachloroethylene**	0.41	1.72
Toluene	0.36	1.01
1,2,4-Trichlorobenzene	0.80	3.31
1,1,1-Trichloroethane**	0.13	0.44
1,1,2-Trichloroethane	0.12	0.49
Trichloroethylene	0.07	0.19
Vinyl Chloride	0.01	0.02
Xylene	0.32	0.76
Zinc	25.67	112.49

*Components of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

SECTION III: PERMIT HISTORY

Operations at the facility now known as International Paper Company - Camden Mill began in early 1928. With the exception of the frames of the paper machines, all of the original equipment has been replaced.

Permit #725-A was issued to International Paper Company on March 23, 1984. This permit allowed for the rebuilding of the electrostatic precipitator controlling emissions from the #2 and #3 recovery boilers.

Permit #990-A was issued to International Paper Company on January 10, 1990. This permit allowed for the installation of the cogeneration unit at this facility. At this time, the facility took severe restrictions on the two auxiliary power boilers to net out of a PSD review.

Permit #1239-A was issued to International Paper Company on December 13, 1991. This permit allowed for the installation of a new multiple effect evaporator. Limits were taken on the amount of black liquor solids that could be burned in the recovery boilers in order to avoid a PSD review.

Permit #725-AR-1 was issued to International Paper Company on May 15, 1992. This permit consolidated permits #725-A, #990-A, and 1239-A. Annual emissions were quantified for the first time in this permit.

Permit #1458-A was issued to International Paper Company on June 2, 1993. At this time, the Department and International Paper were working on a PSD permit for the cogeneration facility. The facility wished to install a scrubber on source SN-01, the bark boiler, prior to the issuance of the draft permit. Therefore, the Department issued this temporary permit to allow for the installation of the scrubber.

Permit #725-AR-2 was issued to International Paper Company on November 1, 1996. This permit consolidated permits #725-AR-1 and #1458-A. Restrictions on the operation of the auxiliary power boilers (which have since been taken out of service) were changed which resulted in the need for a retroactive PSD review of the emissions from the cogeneration unit. Although the increase in particulate matter emissions from the cogeneration unit were above the PSD significant increase level, the permittee was able to net out of PSD review for particulate matter. Emissions of sulfur dioxide and volatile organic compounds were below significant increase levels without any corresponding offsets. A PSD review for the emissions of oxides of nitrogen and carbon monoxide from the cogeneration unit was conducted due to net emissions increases of 241.79 tpy of carbon monoxide and 240.01 tpy of oxides of nitrogen. As such, a Best Available Control Technology (BACT) analysis for oxides of nitrogen and carbon monoxide is required.

BACT is defined as an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation which the environmental authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts, determined is achievable. The BACT assessment identifies alternative control methods, considers the technical feasibility of each method, ranks the technically feasible alternatives in terms of control effectiveness, evaluates the economic, energy, and environmental aspects of technically feasible alternatives, and identifies the control method considered BACT for each pollutant and source combination.

NO_X Control Technologies

NO_X formation is a function of three main variables: fuel bound nitrogen in the fuel burned in the combustion chamber, combustion chamber flame temperature, and combustion chamber residence time. Conceptually, several types of NO_X control technologies exist to control the formation of NO_X at its source of formation. This can involve limiting the fuel bound nitrogen, lowering the flame temperature of the combustion chamber through wet injection, chamber design, and/or fuel to air ratios (combustion control), and decreasing the residence time of the fuel in the combustion chamber, usually through the design of the combustion device.

The other type of control technology involves reducing the NO_X content of the combustion exhaust gases (post-combustion control). This can involve selective catalytic reduction, nonselective catalytic reduction, and selective noncatalytic reduction. These control technologies can also be used in combination with the technologies that control NO_X at its source formation.

The permittee's cogeneration unit currently controls the amount of NO_X formed from fuel bound nitrogen by limit the fuel for this unit to only natural gas. The flame temperature of the gas turbine combustion chamber is lowered by steam injection, thereby reducing the amount of NO_X formed. Water injection is not used in the cogeneration unit. Also, the flame temperature of the downstream duct burner is controlled through the use of low NO_X burners. The control options of wet injection for NO_X reduction in the gas turbine, and the combustion control technologies built into the designs of the gas turbine and duct burner, represent the best control technology for this unit. Since these controls already exist for the cogeneration unit, no additional controls are proposed.

CO Control Technologies

Carbon monoxide emissions in gas turbines arise from inefficient or incomplete combustion of fuel. Three major factors which influence carbon monoxide formation in gas turbines are firing temperature, combustion chamber residence time, and combustion mixing characteristics. By increasing the combustion chamber temperature and residence time, the rate of CO conversion to CO_2 increases, thereby reducing CO emissions. However, increasing the combustion chamber temperature and residence time, NO_X emissions increase. Therefore, a dichotomy exists between

CO and NO_X at their source of formation. By reducing the rate of formation of one, the rate of formation of the other increases. Since NO_X is of greater concern from the point of ambient air quality and ozone formation, it is not considered environmentally acceptable to lower the CO emissions at the expense of additional NO_X emissions.

The control of CO emissions from the cogeneration unit involves oxidizing the CO to CO_2. The options currently available to reduce the CO emissions are thermal oxidation and catalytic oxidation. International Paper considers the duct burner to act as a thermal oxidizer to control or minimize CO emissions. The temperature of the exhaust gas is raised to 1560°F, which is near the range of thermal oxidation of CO and CO_2. No additional CO controls are proposed.

Ambient Air Quality Analysis

As required by the PSD Regulations, the increases in emissions were modeled to determine their impact. The results of this modeling may be found in the following table. As the ambient impacts caused by the increases in emissions were below the Modeling Significance Levels, the full impact analysis, which includes NAAQS modeling and an increment analysis, nor any ambient monitoring was required.

Pollutant	Averaging Period	Impact	Modeling Significance Level
CO	1-hour	37.20	2000
	8-hour	11.69	500
NO_X	Annual	0.54	1.0

Additional impact analyses indicated that there will be no construction and growth impacts associated with the scope of the proposed modification. Nor are any adverse impacts on soil or vegetation anticipated due to the cogeneration unit. It is unlikely that there would be any measurable impact on the nearest Class I area which is well over 250 km from this facility.

SECTION IV: EMISSION UNIT INFORMATION

WOODYARD

SN-19
Woodyard Source Group

Source Description

The woodyard source group includes emissions from roundwood chipping and screening, purchased chips unloading and storage, chip silo loading, debarking drums, roundwood chips rechipping, sawdust storage, purchased chips rechipping, chip conveying, and other associated equipment.

Due to the nature of the emissions from this source, an opacity limit would not be practical because of the difficulty in determining compliance with it. Instead, Plantwide Conditions 15 and 16 will require that the facility be operated in a manner that will not cause unnecessary visible emissions.

Specific Conditions

1. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at source SN-19. Compliance with these emission rates will be shown through compliance with the limit of wood chips that may be processed at this source.

Pollutant	lb/hr	tpy
PM_{10}	0.6	2.7
VOC	36.9	161.5

2. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-19. Compliance with these emission rates will be shown through compliance with the limit of wood chips that may be processed at this source.

Pollutant	lb/hr	tpy
PM	0.7	3.0

3. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not process more than 4.1 million tons of chips at source SN-19 in any consecutive twelve month period.

4. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of chips processed at source SN-19 in order to demonstrate compliance with Specific Condition 3 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

PULP MILL

SN-20
Digester and Blow Tank Source Group

Source Description

Source SN-20, which was installed or last modified in 1963, covers the emissions from the digester, vented either from the loading of chips or from the blow tanks following the digester. The digester are used to pressure cook the wood chips. The blow tanks are used to blow the pulp from the digester to atmospheric pressure. The particulate matter emissions result from loading the chips into the different digester. No control equipment for particulate matter emissions is associated with SN-20.

The emissions which occur at the digesters while the chips are being cooked are routed to the turpentine recovery source group (SN-21). The emissions from source SN-21 are then routed to the NCG Incinerator (SN-12) as required by §19.8 of Regulation 19.

No opacity limit has been assigned for this source group. The emissions are intermittent and occur only when loading chips into the digester and unloading and therefore it would be difficult in determining compliance with an opacity limit. Instead Plantwide Conditions 15 and 16 will require that this source group be operated in a manner that will not cause unnecessary visible emissions.

Specific Conditions

5. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-20. Compliance with these emission rates will be determined through compliance with the limit of air dried tons of pulp (ADTP) that may be processed at this facility and proper incineration of the gases which result from cooking the chips.

Pollutant	lb/hr	tpy
PM_{10}	0.1	0.1
VOC*	2.4	10.1
TRS	0.9	3.8
H_2S**	0.1	0.4

*Includes the TRS compounds also considered to be VOCs. **Component of TRS. Included in the TRS total.

6. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-20. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit of ADTP and proper incineration of the gases which result from cooking the chips.

Pollutant	lb/hr	tpy
PM	0.1	0.1
Acetaldehyde	0.02	0.09
Cresols & Hexachloroethane	0.06	0.27
Dimethyl Disulfide*	0.06	0.22
Dimethyl Sulfide*	0.71	3.11
Methanol	0.36	1.56
Methyl Ethyl Ketone	0.01	0.03

*Component of TRS.

7. Pursuant to §19.804 of Regulation 19, the exhaust gases from the digesters shall be incinerated at 1200°F for a minimum of 0.5 seconds. (Currently, the facility is routing the gases through the turpentine recovery source group prior to incineration at source SN-12 which meets this requirement.)

SN-21
Turpentine Recovery Source Group

Source Description

Source SN-21, which was installed or last modified in 1978, consists of several turpentine condensers, a decanter, a storage tank, and other associated equipment. Turpentine is recovered from the digester (see source SN-20), and flash tanks, decanted, and stored prior to being shipped off site. Emissions are routed to the NCG Incinerator (source SN-12). No control equipment is associated with this source group.

Specific Conditions

8. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-21. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	0.2	0.9

SN-22
Knotter System Source Group

Source Description

This source, which was not previously permitted, was installed or last modified in 1982. This source group consists of the screens, the reject refiners, the reject chests, and other equipment associated with the deknotting system. The knotter system removes the knots and other undissolved material from the wood pulp before it is sent to the brown stock washers. No control equipment is associated with this source group.

Specific Conditions

9. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-22. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC*	20.4	88.7
TRS	1.7	7.5

*Includes TRS compounds also considered to be VOCs.

10. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-22. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.16	0.67
Benzene	0.01	0.01
Dimethyl Disulfide*	0.19	0.83
Dimethyl Sulfide*	1.50	6.55
Formaldehyde	0.01	0.01
Methanol	17.2	75.2
Methyl Ethyl Ketone	0.05	0.21
Methyl Isobutyl Ketone	0.01	0.01
Methyl Mercaptan*	0.02	0.08
Styrene	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

SN-15
Brown Stock Washers Source Group

Source Description

Source SN-15, which was installed or last modified in 1968, consists of six brown stock washers (3 stages, 2 lines), their associated equipment, and the foam tank. In the brown stock washers, the pulp is washed with clean water and is separated from the digester chemicals. No control equipment is associated with this source group.

All emissions from this source are based upon NCASI factors. Previously, the VOC emissions were calculated using an emission factor from AP-42. The large increase in emissions from this source is due to the difference in the emission factors. This source was installed or last modified in 1968 and no physical modification or change in the method of operation is occurring at this source with the issuance of this permit. Therefore, this source was not required to undergo PSD review for the increase in VOC and TRS emissions.

Specific Conditions

11. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-15. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility as well as the testing requirements for this source.

Pollutant	lb/hr	tpy
VOC*	266.1	1165.3
TRS	45.7	200.3
H_2S**	0.8	3.3

*Includes the TRS compounds also considered to be VOCs.
**Component of TRS. Included in the TRS total.

12. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-15. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.47	2.02
Acrolein	0.01	0.05
Benzene	0.01	0.02
Carbon Disulfide	0.01	0.01
Carbon Tetrachloride	0.02	0.06
Chlorobenzene	0.01	0.01
Chloroform	0.07	0.28
Dimethyl Disulfide*	2.61	11.42
Dimethyl Sulfide*	41.8	183.00
Formaldehyde	0.17	0.75
Methanol	23.0	101.00
Methyl Ethyl Ketone	0.34	1.45
Methyl Isobutyl Ketone	0.02	0.09
Methylene Chloride**	0.05	0.22
Methyl Mercaptan*	0.59	2.56
n-Hexane	0.01	0.05
Styrene	0.12	0.49
Tetrachloroethylene**	0.01	0.02

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Pollutant	lb/hr	tpy
Toluene	0.02	0.07
1,2,4-Trichlorobenzene	0.01	0.01
1,1,1-Trichloroethane**	0.01	0.01
1,1,2-Trichloroethane	0.01	0.03
Trichloroethylene	0.01	0.02
Xylene	0.01	0.05

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

SN-23
High Density Storage Source Group

Source Description

Source SN-23, which was installed or last modified in 1947, consists of three parallel pulp storage tanks and associated equipment. Stock which has been washed and screened to remove the knots is stored in these tanks. No control equipment is associated with the high density storage source group.

Specific Conditions

13. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-23. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC*	50.7	222.0
TRS	2 9	12.8
H_2S**	0.1	0.3

*Includes the TRS compounds also considered to be VOCs.
**Component of TRS. Included in the TRS total.

14. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-23. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	1.07	4.67
Acrolein	0.01	0.01
Benzene	0.01	0.01
Dimethyl Disulfide*	1.16	5.06
Dimethyl Sulfide*	1.60	7.01
Methanol	33.10	145.00
Methyl Ethyl Ketone	0.07	0.30
Methyl Isobutyl Ketone	0.01	0.03
Methyl Mercaptan*	0.09	0.36
n-Hexane	0.01	0.03
Styrene	0.01	0.05
Toluene	0.01	0.01
1,2,4-Trichlorobenzene	0.10	0.42
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

SN-24
Pine Stock Chest

Source Description

The pine stock chest, which was installed or last modified in 1963, provides intermediate storage for pulp stock before being pumped to the paper mill. No control equipment is associated with the pine stock chest.

Specific Conditions

15. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-24. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC*	50.7	222.0
TRS	2.9	12.8
H_2S**	0.1	0.3

*Includes the TRS compounds also considered to be VOCs.
**Component of TRS. Included in the TRS total.

16. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-24. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	1.07	4.67
Acrolein	0.01	0.01
Benzene	0.01	0.01
Dimethyl Disulfide*	1.16	5.06
Dimethyl Sulfide*	1.60	7.01
Methanol	33.08	145.00
Methyl Ethyl Ketone	0.07	0.30
Methyl Isobutyl Ketone	0.01	0.03
Methyl Mercaptan*	0.09	0.36
n-Hexane	0.01	0.03
Styrene	0.01	0.05
Toluene	0.01	0.01
1,2,4-Trichlorobenzene	0.10	0.42
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

BLACK LIQUOR RECOVERY AREA

SN-25
Weak Black Liquor Storage Source Groups

Source Description

Source SN-47, which was installed or last modified in 1997, consists of several weak liquor storage tanks and associated equipment that store liquor either continuously or intermittently. This source also consists of the combination tank and the blow heat recovery tank, which store both weak and strong black liquor periodically. This source stores the weak black liquor from the pulp mill prior to sending it through a multiple effect evaporator which will concentrate the liquor. No control equipment is associated with this source group.

Specific Conditions

17. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-25. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC*	6.8	29.0
TRS	0.6	2.5

*Includes the TRS compounds also considered to be VOCs.

18. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-25. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.01	0.05
Acrolein	0.01	0.01

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Pollutant	lb/hr	tpy
Benzene	0.01	0.01
Carbon Tetrachloride	0.01	0.02
Dimethyl Disulfide*	0.13	0.56
Dimethyl Sulfide*	0.44	1.91
Formaldehyde	0.01	0.02
Methanol	2.30	10.10
Methyl Ethyl Ketone	0 04	0.17
Methyl Isobutyl Ketone	0.01	0.01
Methyl Mercaptan*	0.01	0.03
n-Hexane	0.01	0.01
Phenols	0.31	1.33
Styrene	0.01	0.01
Tetrachloroethylene**	0.08	0.34
Toluene	0.01	0.02
1,1,1-Trichloroethane**	0.01	0.01
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

SN-27
Multiple Effect Evaporator

Source Description

The multiple effect evaporator (MEE) is used to concentrate the weak black liquor. The concentrated black liquor is sent through a soap removal system. The desaponified black liquor is then returned to the evaporator before being transferred to the strong black liquor storage group.

The non condensible gases from the evaporator are incinerated at source SN-12. No emissions are vented at the evaporator.

Specific Conditions

19. Source SN-27 is subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart BB, *Standards of Performance for Kraft Pulp Mills*, due to an installation date after September 24, 1976. A copy of Subpart BB has been placed in Appendix E of this permit. The important requirements of this subpart are outlined in Specific Conditions 24 through 23.

20. Pursuant to 40 CFR §60.283(a)(1)(iii) and §19.304 and §19.804 of Regulation 19, the permittee shall combust all gases from source SN-27 at source SN-12 or as allowed at source SN-14 at a minimum temperature of 1200°F for a minimum of 0.5 seconds.

21. Pursuant to 40 CFR §60.284(b)(1) and §19.304 and §19.804 of Regulation 19, the permittee shall install, calibrate, maintain, and operate a monitoring device which measures and records the combustion temperature of the gases at SN-12 or SN-14. The monitoring device is to be certified by the manufacturer to be accurate within ± 1% of the temperature being measured.

22. Pursuant to 40 CFR §60.284d(3)(ii) and §19.304 and §19.804 of Regulation 19, for the purposes of reports required under §60.7(c), the permittee shall report semiannually periods of excess emissions from source SN-27. Excess emissions are defined as all periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 1200°F.

23. Pursuant to 40 CFR §60.284(e) and §19.304 and §19.804 of Regulation 19, the Administrator will not consider periods of excess emissions reported under paragraph (d) of this section to be indicative of a violation of §60.11(d) provided that the Administrator determines that the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions.

SN-26
Strong Black Liquor Storage Source Group

Source Description

Source SN-26, which was installed or last modified in 1996, consists of three black liquor storage tanks and associated equipment which store liquor either continuously or intermittently. It also consists of the combination tank and blow heat recovery tank and associated equipment which store both weak and strong black liquor periodically. The maximum throughput of the unit is limited by the firing rate of the recovery boilers of 390 gal/min of black liquor at the burner nozzles. The strong black liquor storage group stores the liquor from the MEE prior to sending it through the black liquor oxidation source group. No control equipment is associated with this source group.

Specific Conditions

24. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-26. Compliance with these emission rates will be determined through compliance with Specific Condition 26.

Pollutant	lb/hr	tpy
VOC*	0.4	0.9
TRS	0.2	0.6
H_2S**	0.1	0.3

*Includes the TRS compounds also considered to be VOCs.
**Component of TRS. Included in the TRS total.

25. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with Specific Condition 26.

Pollutant	lb/hr	tpy
Acetaldehyde	0.02	0.06
Benzene	0.01	0.01
Chloroform	0.01	0.01
Dimethyl Disulfide*	0.02	0.05
Dimethyl Sulfide*	0.08	0.23
Formaldehyde	0.01	0.01
Methanol	0.12	0.34
Methyl Ethyl Ketone	0.03	0.06
Methyl Isobutyl Ketone	0.01	0.01
Methyl Mercaptan*	0.01	0.01
n-Hexane	0.01	0.01
Styrene	0.01	0.01
Toluene	0.01	0.01
1,2,4-Trichlorobenzene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

26. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not process in excess of 496,382 tons of black liquor solids at source SN-26 in any consecutive twelve month period. Compliance with this specific condition will be verified through the record keeping requirements on the total amount of BLS fired at sources SN-04, SN-05, and SN-06.

27. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of black liquor solids processed at source SN-26 in order to demonstrate compliance with Specific Condition 26 and which may be used by the Department for enforcement purposes. The records of the amount of BLS fired in the recovery boilers may be used to fulfill the requirement of this specific condition. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

SN-18
Black Liquor Oxidation Source Group

Source Description

Source SN-18, which was installed or last modified in 1974, consists of a black liquor oxidation tank with its associated cyclone separator. The primary purpose of the black liquor oxidation system is to convert the sulfides in the black liquor to sulfates to minimize the TRS emissions from the recovery boilers. No control equipment in operation is associated with this source group.

Specific Conditions

28. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-18. Compliance with these emission rates will be determined through compliance with Specific Condition 26 and the testing requirements for this source.

Pollutant	lb/hr	tpy
VOC*	125.4	548.4
TRS	25.0	62.2
H_2S**	10.3	44.9

*Includes the TRS compounds also considered to be VOCs.
**Component of TRS. Included in the TRS total.

29. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-18. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with Specific Condition 26 and the testing requirements for this source.

Pollutant	lb/hr	tpy
Acetone**	1.00	3.00
Acetophenone	0.03	0.11
Acrolein	0.01	0.01
Carbon Disulfide	0.55	2.41
Dimethyl Disulfide*	0.26	1.13
Dimethyl Sulfide*	0.82	3.57
Formaldehyde	0.07	0.31
Methanol	80.00	350.31
Methyl Ethyl Ketone	2.19	9.57
Methyl Isobutyl Ketone	0.02	0.09
Methyl Mercaptan	2.89	12.65
n-Hexane	0.01	0.01
Propionaldehyde	0.11	0.45
Styrene	0.02	0.09

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

30. Pursuant to §18.1002 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall test source SN-18 for methanol using EPA Reference Method 308 within 180 days of permit issuance. This test shall take place in accordance with Plantwide Condition #3.

SN-04/SN-05
Recovery Boiler #1

Source Description

Source SN-04/SN-05 is a 480 MMBTU/hr recovery boiler which was installed or last modified in 1967. This recovery boiler has not been modified since and is therefore not subject to any NSPS subpart. Recovery Boiler #1 vents through 2 separate stacks. Because of the difficulty involved in determining exactly what is being emitted through each stack, emissions for the two stacks have been "bubbled." The main purpose of this recovery boiler is to recover inorganic chemicals from black liquor. Natural gas may be fired at any time. The facility is permitted to fire a limited amount of #6 fuel oil in the event of natural gas curtailment and to test the oil burning capabilities of the equipment. Particulate matter emissions from this source are controlled with an electrostatic precipitator.

This source has a CEM to monitor the emissions of TRS. Annual testing is required for the emissions of carbon monoxide, particulate matter, and sulfur dioxide.

Specific Conditions

31. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table when burning BLS. Compliance with these rates will be determined through compliance with Specific Condition 40, proper operation of the control equipment, and the required testing for this recovery boiler.

Pollutant	lb/hr	tpy
PM_{10}	77.6	339.9
SO_2	262.6	1150.0
VOC*	73.2	320.2
CO	412.6	1806.8
NO_x	192.0	400.0
Pb	0.02	0.02

*Includes the TRS compounds also considered to be VOCs.

32. Pursuant to §19.501 et seq and §19.804 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table when burning BLS. Compliance with these rates will be determined thru compliance with Specific Condition 40, proper operation of the control equipment and the CEMS required for this recovery boiler (Specific Condition 44). This TRS emission rate is based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	31.8	139.8

33. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 8% oxygen by volume at source SN-04/SN-05. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 44.

34. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-04/05 when burning #6 fuel oil. Compliance with these emission rates will be determined through compliance with Specific Condition 42 and proper operation of the control equipment.

Pollutant	lb/hr	tpy
PM_{10}	25.5	0.3
SO_2	1318.8	10.6
VOC*	73.2	0.4
CO	412.6	3.2
NO_x	192.0	1.9
Pb	0.02	0.02

*Includes the TRS compounds also considered to be VOCs.

35. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-04/05 when burning #6 fuel oil. Compliance with these emission rates will be determined through compliance with Specific Condition 42, proper operation of the control equipment, and the required CEMS for this recovery boiler. These emission rates are based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	31.8	0.8

36. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 40% opacity from source SN-04/SN-05 as measured by EPA Reference Method 9 except that emissions greater than 40% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 37.

37. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-04/05 shall be conducted by a person trained, but not necessarily certified, in EPA Reference Method 9. If emissions which appear to be in excess of 30% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, the permittee shall conduct another observation of the opacity from source SN-04/05. If the opacity observed does not appear to be in excess of 30%, then no further action is needed and the permittee will be considered in compliance with the permitted opacity limit. If visible emissions which appear to be in excess of 30% are still observed, a 6-minute visible emissions reading shall be conducted by a person certified in EPA Reference Method 9 to determine if the opacity is less than 40%. If the opacity observed is not in excess of 40%, then no further action is needed and the permittee will be considered in compliance with the permitted opacity limit. If no Method 9 reading is conducted despite emissions appearing to be in excess of 30% after corrective action has been taken, the permittee shall be considered out of compliance with the permitted opacity limit for that day.

38. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-04/SN-05 when burning black liquor solids. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with Specific Condition 40 and proper operation of the control equipment for this recovery boiler.

Pollutant	lb/hr	tpy
PM	200.0	876.0
Acetaldehyde	3.19	13.97
Antimony Compounds	0.013	0.053
Arsenic Compounds	0.013	0.056
Benzene	0.03	0.11
Cadmium Compounds	0.011	0.048
Chromium Compounds	0.419	1.834
Cobalt Compounds	0.010	0.040
Formaldehyde	0.43	1.88
Hydrogen Chloride**	12.27	53.75
Lead Compounds	0.011	0.047
Manganese Compounds	0.629	2.76
Methanol	34.05	149.20
Methyl Ethyl Ketone	0.38	1.63
Methyl Mercaptan*	6.06	26.60
Nickel Compounds	0.075	0.329
Phenols	1.56	6.84

Pollutant	lb/hr	tpy
Selenium Compounds	0.001	0.001
Styrene	0.13	0.53

*Component of TRS. Included in the TRS total
**Non-VOC non-criteria pollutant.

39. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at SN-04 when burning #6 fuel oil. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with Specific Condition 42 and proper operation of the control equipment associated with this recovery boiler.

Pollutant	lb/hr	tpy
PM	35.8	0.3
Antimony Compounds	0.065	0.001
Arsenic Compounds	0.012	0.001
Beryllium Compounds	0.001	0.001
Cadmium Compounds	0.002	0.001
Chromium Compounds	0.007	0.001
Cobalt Compounds	0.045	0.001
Formaldehyde	0.18	0.01
Hydrogen Chloride*	3.12	0.03
Hydrogen Fluoride*	0.16	0.01
Lead Compounds	0.010	0.001
Manganese Compounds	0.036	0.001
Mercury Compounds	0.001	0.001

Pollutant	lb/hr	tpy
Nickel Compounds	0.31	0.003
POM	0.01	0.01
Selenium Compounds	0.004	0.001

*Non-VOC, non-PM non-criteria pollutant.

40. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not process in excess of 392,886 tons of black liquor solids at source SN-04/SN-05 in any consecutive twelve month period.

41. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of black liquor solids processed at source SN-04/SN-05 in order to demonstrate compliance with Specific Condition 40 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

42. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not fire in excess of 44,800 gallons of #6 fuel oil at source SN-04/SN-05 in any consecutive twelve month period.

43. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of #6 fuel oil fired at source SN-04/SN-05 in order to demonstrate compliance with Specific Condition 42 and which may be used by the Department for enforcement purposes. These records shall be updated each day that fuel oil is used, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

44. Pursuant to §19.703 and §19.804 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a CEMS at source SN-04/SN-05 for TRS. The CEMS requirements which the permittee must comply with may be found in Appendix A.

45. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-04/SN-05 for particulate matter using EPA

Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place less than 9 months and no more than 15 months apart.

46. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-04/SN-05 for sulfur dioxide using EPA Reference Method 6C. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

47. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-04/SN-05 for carbon monoxide using EPA Reference Method 10. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

48. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not bypass the ESP at this source during required maintenance. In the event that a boiler is not shut down during ESP maintenance, one side of the ESP shall be isolated. During such times, the operation of source SN-04/SN-05 shall be limited to 50% of the full service load rating. (NOTE: If the maintenance does not affect operation of the ESP at this source, the permittee is not restricted by the Department on the service load rating.)

49. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall notify the Department within 24 hours of any maintenance which requires one side of the ESP being removed from service.

SN-06
Recovery Boilers #2 and #3

Source Description

Source SN-06 consists of two recovery boilers which were installed or last modified in 1947. These recovery boilers have a combined heat input capacity of 632 MMBTU/hr. The main purpose of these recovery boilers is to recover inorganic chemicals from black liquor. Natural gas may be fired in these recovery boilers at any time. The facility is permitted to fire a limited amount of #6 fuel oil in the event of natural gas curtailment and to test the oil burning capabilities of the equipment. Particulate matter emissions from this source are controlled with an electrostatic precipitator.

This source has a CEM to monitor the emissions of TRS. Annual testing is required for the emissions of carbon monoxide, particulate matter, and sulfur dioxide.

Specific Conditions

50. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning black liquor solids. Compliance with these emission rates will be determined through compliance with Specific Condition 59, proper operation of the control equipment, and the required testing for these recovery boilers.

Pollutant	lb/hr	tpy
PM_{10}	13.2	57.9
SO_2	240.6	1054.0
VOC*	167.8	735.0
CO	454.0	1988.0
NO_x	242.0	700.0
Pb	0.01	0.01

*Includes the TRS compounds also considered to be VOCs.

51. Pursuant to §19.501 et seq and §19.804 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning black liquor solids. Compliance with these emission rates will be determined through compliance with Specific Condition 59, proper operation of the control equipment, and the CEMS for these recovery boilers. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	37.2	163.0

52. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 8% oxygen by volume at source SN-06. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 63.

53. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning #6 fuel oil. Compliance with these emission rates will be determined through compliance with Specific Condition 61 and proper operation of the control equipment.

Pollutant	lb/hr	tpy
PM_{10}	29.1	0.3
SO_2	1507.2	12.1
VOC	2.4	0.8
CO	16.0	3.6
NO_x	214.0	1.9
Pb	0.01	0.01

*Includes the TRS compounds also considered to be VOCs.

54. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning #6 fuel oil. Compliance with these emission rates will be determined through compliance with Specific Condition 61, proper operation of the control equipment, and the CEMS required for these recovery boilers. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	37.2	0.9

55. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-06 as measured by EPA Reference Method 9 except that emissions greater than 20% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 56.

56. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-03 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

57. Pursuant to §18.801 of Regulation 18 and A.C.A. §8.4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-06 when burning black liquor solids. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with Specific Condition 59 and proper operation of the control equipment for these recovery boilers.

Pollutant	lb/hr	tpy
PM	75.0	306.6
Acetaldehyde	3.03	13.27
Antimony Compounds	0.012	0.048
Arsenic Compounds	0.012	0.051
Benzene	0.03	0.10
Cadmium Compounds	0.010	0.044
Chromium Compounds	0.390	1.690
Cobalt Compounds	0.009	0.037
Formaldehyde	0.41	1.79
Hydrogen Chloride**	11.25	49.27
Lead Compounds	0.010	0.043
Manganese Compounds	0.580	2.530
Methanol	32.34	141.65
Methyl Ethyl Ketone	0.36	1.55
Methyl Mercaptan*	5.56	24.4
Nickel Compounds	0.069	0.310
Phenols	1.43	6.27
Selenium Compounds	0.001	0.001

Pollutant	lb/hr	tpy
Styrene	0.12	0.51
Toluene	0.08	0.34

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

58. Pursuant to §18.801 of Regulation 18 and A.C.A. §8.4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning #6 fuel oil. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with Specific Condition 61 and proper operation of the control equipment associated with these recovery boilers.

Pollutant	lb/hr	tpy
PM	40.9	0.4
Antimony Compounds	0.074	0.001
Arsenic Compounds	0.014	0.001
Beryllium Compounds	0.001	0.001
Cadmium Compounds	0.002	0.001
Chromium Compounds	0.008	0.001
Cobalt Compounds	0.051	0.001
Formaldehyde	0.20	0.01
Hydrogen Chloride*	3.57	0.03
Hydrogen Fluoride*	0.18	0.01
Lead Compounds	0.011	0.001
Manganese Compounds	0.041	0.001
Mercury Compounds	0.001	0.001

Pollutant	lb/hr	tpy
Nickel Compounds	0.35	0.003
POM	0.01	0.01
Selenium Compounds	0.004	0.001

*Non-VOC, non-PM non-criteria pollutant.

59. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not process in excess of 361,757 tons of black liquor solids at source SN-06 in any consecutive twelve month period.

60. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of black liquor solids processed at source SN-06 in order to demonstrate compliance with Specific Condition 59 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

61. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not fire in excess of 51,200 gallons of #6 fuel oil at source SN-04 in any consecutive twelve month period.

62. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of #6 fuel oil fired at source SN-06 in order to demonstrate compliance with Specific Condition 61 and which may be used by the Department for enforcement purposes. These records shall be updated each day that fuel oil is used, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

63. Pursuant to §19.703 and §19.804 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a CEMS at source SN-06 for TRS. The CEMS requirements which the permittee must comply with may be found in Appendix A.

64. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-06 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

65. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-06 for sulfur dioxide using EPA Reference Method 6C. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

66. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-06 for carbon monoxide using EPA Reference Method 10. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

67. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, when an ESP is shut down for maintenance, the permittee shall not operate the boiler associated with that ESP. The service load rating is not affected if any maintenance is being performed which does not affect either of the ESPs located at SN-06. (NOTE: SN-06 is actually two boilers which both have an ESP.)

SN-07
Smelt Tank #1

Source Description

This source was installed or last modified in 1967. A wet scrubber is used to control the particulate matter and TRS emissions. The scrubbing liquids used for this piece of control equipment are weak wash, alkaline solution, or water.

Annual testing for particulate matter and TRS emissions was required in permit #725-AR-2 and is being carried forth in this permit. Additional testing is being required for VOC and methanol emissions.

Specific Conditions

68. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-07. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-04/05, proper operation of the control equipment, and the required testing for this smelt dissolving tank.

Pollutant	lb/hr	tpy
PM_{10}	25.0	110.0
SO_2	7.5	32.9
VOC*	28.0	122.3
NO_x	12.9	56.7
Pb	0.01	0.01

*Includes the TRS compounds also considered to be VOCs.

69. Pursuant to §19.501 et seq and §19.8 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-07. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-04/05, proper operation of the control equipment, and the required testing for this smelt dissolving tank. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	1.5	6.6

70. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 0.0168 grams of H_2S per kilogram of black liquor solids on a 12 hour average from source SN-07. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 75.

71. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-07. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-04/05, proper operation of the control equipment, and the required testing for this smelt dissolving tank.

Pollutant	lb/hr	tpy
PM	25.0	110.0
Ammonia*	16.80	73.60
Antimony Compounds	0.002	0.005
Arsenic Compounds	0.001	0.002
Benzene	0.02	0.09
Beryllium Compounds	0.001	0.001
Cadmium Compounds	0.001	0.001

Pollutant	lb/hr	tpy
Chlorobenzene	0.01	0.04
Chromium Compounds	0.002	0.009
Lead Compounds	0.001	0.004
Manganese Compounds	0.008	0.032
Mercury Compounds	0.001	0.001
Methanol	26.15	115.00
Methyl Ethyl Ketone	0.11	0.45
Methyl Isobutyl Ketone	0.06	0.25
Nickel Compounds	0.001	0.002
Selenium Compounds	0.001	0.001
Styrene	0.01	0.03
Toluene	0.04	0.15
Trichloroethylene	0.02	0.08
Xylene	0.03	0.11

*Non-HAP, non-VOC, non-criteria pollutant.

72. Pursuant to §19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-07 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 73.

73. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-07 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the excess visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if excess visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

74. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-07 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

75. Pursuant to §19.702 and §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-07 for TRS using EPA Reference Method 16. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

76. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall test source SN-07 for VOC emissions within 180 days of permit issuance using EPA Reference Method 25A. This test shall be conducted in accordance with Plantwide Condition #3.

77. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall test source SN-07 for methanol emissions within 180 days of permit issuance using EPA Reference Method 308. This test shall be conducted in accordance with Plantwide Condition #3.

78. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain the following at source SN-07:

    a. A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within a gage pressure of ±500 Pascals (ca. ± 2 inches water gage pressure).

    b. A monitoring device for the continuous measurement of the scrubbing liquid flow rate to the control equipment. The monitoring device is to be certified by the manufacturer to accurate within ± 15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point.

SN-08 and SN-09
Smelt Tanks #2 and #3

Source Description

Sources SN-08 and SN-09 were installed or last modified in 1947. Wet scrubbers are used to control the particulate matter and TRS emissions. The scrubbing liquids used are weak wash, alkaline solution, or water.

Annual testing for particulate matter and TRS emissions was required in permit #725-AR-2 and is being carried forth in this permit. Additional testing is being required for VOC and methanol emissions.

Specific Conditions

79. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-06, proper operation of the control equipment, and the required testing for these two smelt dissolving tanks.

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy**
PM_{10}	8.4	9.0	76.3
SO_2	3.6	3.2	29.5
VOC*	13.6	12.2	115.5
NO_x	6.1	5.5	51.0
Pb	0.01	0.01	0.02

*Includes the TRS compounds considered to be VOCs.
**These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

80. Pursuant to §19.501 et seq and §19.804 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-06, proper operation of the control equipment, and the required testing for these two smelt dissolving tanks. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy*
TRS	0.7	0.6	5.8

*These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

81. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 0.0168 grams of H_2S per kilogram of black liquor solids on a 12 hour average from sources SN-08 and SN-09. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 86.

82. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-06, proper operation of the control equipment, and the required testing for these two smelt dissolving tanks.

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy**
PM	8.4	9.0	76.3
Ammonia*	7.96	7.17	66.23
Antimony Compounds	0.001	0.001	0.005
Arsenic Compounds	0.001	0.001	0.002
Benzene	0.01	0.01	0.08
Beryllium Compounds	0.001	0.001	0.001
Cadmium Compounds	0.001	0.001	0.001

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy**
Chlorobenzene	0.01	0.01	0.04
Chromium Compounds	0.001	0.001	0.008
Lead Compounds	0.001	0.001	0.004
Manganese Compounds	0.004	0.004	0.030
Mercury Compounds	0.001	0.001	0.001
Methanol	12.70	11.41	105.50
Methyl Ethyl Ketone	0.05	0.05	0.42
Methyl Isobutyl Ketone	0.03	0.03	0.23
Nickel Compounds	0.001	0.001	0.002
Selenium Compounds	0.001	0.001	0.001
Styrene	0.01	0.01	0.03
Toluene	0.02	0.02	0.13
Trichloroethylene	0.01	0.01	0.07
Xylene	0.02	0.01	0.10

*Non-HAP, non-VOC, non-criteria pollutant.
**These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

83. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from sources SN-08 and SN-09 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 84.

84. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from sources SN-08 and SN-09 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the excess visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if excess visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

85. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at sources SN-08 and SN-09 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

86. Pursuant to §19.702 and §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at sources SN-08 and SN-09 for TRS using EPA Reference Method 16. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

87. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall test sources SN-08 and SN-09 for VOC emissions within 180 days of permit issuance using EPA Reference Method 25A. This test shall be conducted in accordance with Plantwide Condition #3.

88. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall test sources SN-08 and SN-09 for methanol emissions within 180 days of permit issuance using EPA Reference Method 308. This test shall be conducted in accordance with Plantwide Condition #3.

89. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain the following at sources SN-08 and SN-09:

    a. A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within a gage pressure of $\pm$500 Pascals (ca. $\pm$ 2 inches water gage pressure).

    b. A monitoring device for the continuous measurement of the scrubbing liquid flow rate to the control equipment. The monitoring device is to be certified by the manufacturer to accurate within $\pm$ 15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point.

CAUSTICIZING AREA

SN-28, SN-29, SN-30, SN-32, SN-33, and SN-34
Causticizing Area Sources

Source Description

Source SN-28 is used to store the green liquor prior to it being reacted with calcium oxide (lime) to form white liquor. This source group, which was installed or last modified in 1975, consists of two green liquor storage tanks and associated equipment.

Source SN-29, which was installed or last modified in 1947, consists of the green liquor clarifier and associated equipment. The clarifier removes contaminants from the green liquid prior to it being sent to the slaker.

Source SN-30 is the dregs washer. The contaminants removed at sources SN-28 and SN-29 are washed at the dregs washer prior to being discarded.

Source SN-32, which was installed or last modified in 1981, consists of five causticizers and their associated equipment. White liquor from the slaker passes through the causticizer prior to being sent to storage.

Source SN-33, which was installed or last modified in 1947, consists of four white liquor storage tanks and their associated equipment. After the white liquor is clarified, it may be stored prior to usage in the mill.

Source SN-34, which was installed or last modified in 1983, consists of two white liquor clarifiers and associated equipment. The lime mud which was formed in the slaker and the causticizer is removed from the white liquor in one of the two clarifiers. The lime mud is sent to storage and washing (considered to be a source of de minimis emissions). The white liquor is then sent to storage.

No control equipment is associated with any of these sources.

Specific Conditions

90. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. Compliance with these emission rates will be determined through compliance with the limit on the amount of lime that may be processed at this facility.

SN	Pollutant	lb/hr	tpy
28, 29, 30, 32, 33, & 34	VOC*	7.7	31.8
	TRS	0.3	0.8

*Includes TRS components which are also considered to be VOCs.

91. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of lime that may be processed at this facility.

SN	Pollutant	lb/hr	tpy
28, 29, 30, 32, 33, & 34	Acetaldehyde	0.34	1.34
	Acrolein	0.03	0.03
	Ammonia**	67.87	297.24
	Benzene	0.05	0.05
	Dimethyl Disulfide*	0.11	0.46
	Dimethyl Sulfide*	0.02	0.06
	Methanol	5.98	26.11
	Methyl Ethyl Ketone	0.07	0.14
	Methyl Isobutyl Ketone	0.05	0.05
	Methyl Mercaptan*	0.04	0.10
	Styrene	0.06	0.06
	Toluene	0.06	0.06
	Xylene	0.06	0.06

*Component of TRS.
**Non-criteria, non-VOC pollutant.

SN-03
Lime Kiln

Source Description

The lime kiln was installed or last modified in 1967. The lime kiln is used to regenerate the calcium oxide used in the slaker from the lime mud which is separated from the white liquor.

A wet scrubber is used to control the emissions of sulfur dioxide and particulate matter from the lime kiln. A CEM is used to track the emissions of TRS from the lime kiln. Annual testing for particulate matter is also required for the lime kiln.

The facility is permitted to fire #6 fuel oil at any time at this source. The facility is also allowed to use natural gas to fire the lime kiln at any time.

Specific Conditions

92. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-03. Compliance with these emission rates will be demonstrated through compliance with fuel usage limits, the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this lime kiln, and the required testing.

Pollutant	lb/hr	tpy
PM_{10}	34.9	152.9
SO_2	17.4	76.3
VOC*	11.2	49.0
CO	35.0	153.3
NO_x	44.8	196.0
Pb	1.1	4.5

*Includes the TRS compounds also considered to be VOCs.

93. Pursuant to §19.501 et seq and §19.804 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-03. Compliance with these emission rates will be demonstrated through compliance with fuel usage limits, the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this lime kiln, and the required CEMS. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	7.4	32.6
H_2S*	1.9	8.3

*Component of TRS. Included in the TRS total.

94. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions from source SN-03 shall not exceed 40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 10% oxygen by volume.

95. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-03 as measured by EPA Reference Method 9 except that emissions greater than 20% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 96.

96. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-03 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

97. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-03. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with fuel usage limits, the limit on the amount of lime that may be processed at this facility, and proper operation of the control equipment associated with this lime kiln.

Pollutant	lb/hr	tpy
PM	70.0	306.6
Acetaldehyde	0.39	1.71
Acrolein	0.02	0.08
Antimony Compounds	0.001	0.001
Arsenic Compounds	0.001	0.002
Benzene	0.03	0.12
Beryllium Compounds	0.001	0.002
Cadmium Compounds	0.006	0.023
Carbon Disulfide	0.05	0.19
Chromium Compounds	0.020	0.050
Cobalt Compounds	0.003	0.014
Dimethyl Disulfide*	0.15	0.65
Dimethyl Sulfide*	1.45	6.34
Formaldehyde	0.04	0.14
Hydrogen Chloride**	0.56	2.45
Hydrogen Fluoride**	0.03	0.12
Lead Compounds	0.019	0.082
Manganese Compounds	0.164	0.72

Pollutant	lb/hr	tpy
Mercury Compounds	0.002	0.008
Methanol	2.50	10.92
Methyl Ethyl Ketone	0.04	0.14
Methyl Isobutyl Ketone	0.01	0.04
Nickel Compounds	0.013	0.055
POM	0.01	0.01
Selenium Compounds	0.001	0.001
Styrene	0.02	0.06
Toluene	0.09	0.39
Xylene	0.07	0.29

*Component of TRS.
**Non-VOC, non-HAP, non-criteria pollutant.

98. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall only burn #6 fuel oil and pipeline quality natural gas at source SN-03.

99. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not burn in excess of 4.38 million gallons of #6 fuel oil in any consecutive twelve month period at source SN-03.

100. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of fuel oil fired at SN-03 in order to demonstrate compliance with Specific Condition 99 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

101. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing for particulate matter emissions from source SN-03 using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and take place no less than 9 months and no more than 15 months apart.

102. Pursuant to §19.703 and §19.804 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a Continuous Emissions Monitoring System (CEMS) at source SN-03 for TRS. The CEM standards which the permittee is required to comply with may be found in Appendix A.

SN-31
Lime Handling Source Group

Source Description

The lime handling source group consists of a hot lime chain, a lime bucket elevator, a lime crusher, reburn lime silo, and associated equipment. A baghouse was installed in late 1997 or early 1998 to control the emissions from the lime handling operations.

Specific Conditions

103. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-31. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this source, and the testing requirements for this source.

Pollutant	lb/hr	tpy
PM_{10}	0.4	1.8

104. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-31. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this source, and the testing requirements for this source.

Pollutant	lb/hr	tpy
PM	0.4	1.8

105. Pursuant to §18.503 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed 5% opacity from source SN-31 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 106.

106. Pursuant to§18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall conduct weekly observations of the opacity from source SN-31 and keep a record of these observations. If visible emissions are detected, the

permittee shall take immediate action to identify and to correct the cause of the visible emissions. After any necessary corrective action has taken place, the permittee shall conduct another observation of the opacity from source SN-31 to confirm that no visible emissions are present. If corrective action was needed, the permittee shall record the cause of the visible emissions, the corrective action taken, and if visible emissions were observed afterwards. These records shall be kept on site and made available to Department personnel upon request.

107. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall test the exhaust from the baghouse at source SN-31 for particulate matter using EPA Reference Method 5 within 180 days of permit issuance.

SN-02
Slaker

Source Description

The slaker was installed or last modified in 1980. Clarified green liquor, fresh lime, and reburned lime are reacted in the slaker to form sodium hydroxide and calcium carbonate. A wet scrubber is used to control the emissions from the slaker.

Specific Conditions

108. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-02. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this source, and the testing requirements.

Pollutant	lb/hr	tpy
PM_{10}	5.0	21.9
VOC*	3.3	14.4
TRS	0.1	0.2

*Includes TRS components also considered to be VOCs.

109. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-02 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 110.

110. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-02 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

111. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-02. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be shown through compliance with the limit on the amount of lime that may be processed at this facility as well as proper operation of the control equipment associated with this source.

Pollutant	lb/hr	tpy
PM	5.0	21.9
Acetaldehyde	0.26	1.11
Ammonia**	67.87	297.24
Dimethyl Disulfide*	0.05	0.20
Methanol	2.90	12.71
Methyl Ethyl Ketone	0.02	0.09
Styrene	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS.
**Non-VOC, non-HAP, non-criteria pollutant.

NCG SYSTEM

SN-12 and SN-14
NCG Incinerator and Back-Up Flare

Source Description

The NCG Incinerator was installed or last modified in 1988. This natural gas fired source incinerates the non-condensible gases from the multiple effect evaporator and the turpentine recovery system. (NOTE: The NCGs from the digesters are routed through the turpentine recovery system.) Source SN-14 was installed or last modified in 1992. The back-up flare is maintained in the event of primary incinerator failure.

There are two special requirements for this source because source SN-27 is subject to 40 CFR Part 60, Subpart BB. These requirements are outlined in Specific Conditions 137 and 138. The increase in VOC emissions from this source is due to the method of calculation. Due to discrepancy in testing methods, the total of HAPs which are also VOCs is often higher than the VOC tested rate.

Specific Conditions

112. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the combined emission rates set forth in the following table at SN-12 and SN-14 when firing natural gas. Compliance with these emission rates will be determined through compliance with fuel usage limits as well as maintaining the temperature and the residence time required by 40 CFR Part 60, Subpart BB.

SN	Pollutant	lb/hr	tpy
12	PM_{10}	0.2	0.9
	SO_2	3.5	15.2
	VOC*	4.0	17.3
	CO	9.4	41.1
	NO_x	7.3	32.1
	TRS	0.7	3.0

SN	Pollutant	lb/hr	tpy
14	PM_{10}	0.2	0.9
	SO_2	343.5	206.1
	VOC*	1.7	3.1
	CO	9.4	41.1
	NO_x	7.3	32.1
	TRS	3.8	2.3

*Includes TRS components which are also considered VOCs.

113. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from sources SN-12 and SN-14 as measured by EPA Reference Method 9 except that emissions greater than 20% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 116.

114. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at sources SN-12 and SN-14 when firing natural gas. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be shown through compliance with fuel usage limits and maintaining the temperature and the residence time required by 40 CFR Part 60, Subpart BB.

SN	Pollutant	lb/hr	tpy
12	PM	0.2	0.9
	Acetone	0.92	4.0
	Benzene	0.08	0.19
	Cumene	0.04	0.14
	Formaldehyde	0.80	2.04
	Methanol	1.00	4.36
	Methyl Ethyl Ketone	0.01	0.02
	Styrene	0.01	0.02
	Xylene	0.01	0.01
14	PM	0.2	0.9
	Acetone	0.92	0.58
	Benzene	0.08	0.19
	Cumene	0.04	0.14
	Formaldehyde	0.80	2.04
	Methanol	1.00	1.89
	Methyl Ethyl Ketone	0.01	0.02
	Styrene	0.01	0.02
	Xylene	0.01	0.01

115. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, pipeline quality natural gas shall be the only fuel fired at source SN-12.

116. Pursuant to §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, daily observations of the opacity from source SN-12 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the excess visible emissions. After corrective action has been taken, another observation of the opacity from source SN-12 shall be

conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emissions observations, the cause of any excess visible emissions, the corrective action taken, and if excess visible emissions were present after corrective action was taken. These records shall be kept on site and made available to Department personnel upon request.

117. Pursuant to 40 CFR §60.283(a)(1)(iii) and §19.804 of Regulation 19, the permittee shall combust all gases from source SN-27 at source SN-12 or as allowed at source SN-14 at a minimum temperature of 1200°F for a minimum of 0.5 seconds.

118. Pursuant to 40 CFR §60.284(b)(1) and §19.804 of Regulation 19, the permittee shall install, calibrate, maintain, and operate a monitoring device which measures and records the combustion temperature of the gases at SN-12 or SN-14. The monitoring device is to be certified by the manufacturer to be accurate within ± 1% of the temperature being measured.

POWER BOILERS

SN-13
Cogeneration Unit

Source Description

The cogeneration unit was installed or last modified in 1990. The cogeneration unit consists of a natural gas fired turbine and a natural gas fired duct burner. The cogeneration unit is used to produce power for use throughout the facility.

This source underwent PSD review for emissions of NO_x and CO in permit #725-AR-2. Steam injection and low NO_x burners are used to reduce the NO_x emissions from this unit.

The cogeneration unit is subject to the provisions of 40 CFR Part 60, Subpart GG. The initial testing required by this NSPS subpart has been performed.

Specific Conditions

119. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-13 when firing natural gas. Compliance with these emission rates will be shown through compliance with the fuel usage limitations.

Pollutant	lb/hr	tpy
PM_{10}	5.6	24.6
SO_2	0.4	1.5
VOC	2.8	12.1

120. Pursuant to §19.501 et seq and §19.901 et seq of Regulation 19, and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at source SN-11. Compliance with these emission rates will be shown through compliance with fuel usage limitations and the use of steam injection at this source.

Pollutant	lb/hr	tpy
CO	51.6	226.2
NO_x	93.3	408.8

121. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-13. Compliance with these emission rates will be shown through compliance with the fuel usage limitations.

Pollutant	lb/hr	tpy
PM	5.6	24.6

122. Pursuant to §18.503 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed 5% opacity from source SN-13 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 123.

123. Pursuant to §19.705 and §19.901 et seq of Regulation 19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, pipeline quality natural gas shall be the only fuel used to fire this source.

124. Pursuant to §19.705 and §19.901 et seq of Regulation 19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, natural gas usage at the gas turbine shall not exceed 351 Mscf/hr.

125. Pursuant to §19.705 and §19.901 et seq of Regulation 19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, natural gas usage at the duct burner shall not exceed 238 Mscf/hr.

126. Pursuant to §19.705 and §19.901 et seq of Regulation 19, 40 CFR Subpart E, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall continue to maintain a separate strip chart recorder to measure the gas used by the gas turbine and the duct burner. The recorders shall be inspected and adjusted once every twelve hours. The strip chart shall also measure the date and the time in addition to the gas flow. The strip charts shall be maintained on site for at least two years and shall be made available to Department personnel upon request.

127. Pursuant to §19.703 and §19.901 et seq of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a continuous emissions monitoring systems for CO and NO_x at source SN-13. The standards for the CEMS may be found in Appendix A.

128. Source SN-13 is subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart GG, *Standards of Performance for Stationary Gas Turbines* due to an

installation date of 1990 and a heat input at peak load greater than 10.7 gigajoules per hour. A copy of Subpart GG has been placed in Appendix B of this permit. The important requirements of this subpart are outlined in Specific Conditions 129 through 134.

129. Pursuant to 40 CFR 60.332(a)(2) and §19.304 of Regulation 19, the permittee shall not cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of 150 ppm (at 15% oxygen and on a dry basis).

130. Pursuant to 40 CFR 60.332(f) and §19.304 of Regulation 19, the limit set forth in Specific Condition 129 may be exceeded when ice fog is deemed to be a traffic hazard by the owner of operator of the gas turbine.

131. Pursuant to 40 CFR 60.333(a) and §19.304 of Regulation 19, the permittee shall not cause from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015% by volume at 15% oxygen and on a dry basis. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 132.

132. Pursuant to 40 CFR 60.333(b) and §19.304 of Regulation 19, the permittee shall not burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8% by weight.

133. Pursuant to 40 CFR 60.334(b) and §19.304 of Regulation 19, the owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine as follows or as outlined in an approved custom schedule. The frequency of determination shall be as follows:

a. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.

b. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators, or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.

134. Pursuant to 40 CFR 60.334(c)(2) and §19.304 of Regulation 19, for the purpose of reports required under §60.7(c), periods of excess emissions are defined as follows for sulfur dioxide: any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8%.

SN-01
Bark/Gas Boiler

Source Description

Source SN-01 is a 225 MMBTU/hr boiler which was installed in 1947. The main fuels for this boiler are natural gas, tire derived fuel (TDF), bark, and wood waste (sawdust, billet ends, and hardwood pallets). The facility is permitted to burn a limited amount of #6 fuel oil in the event of natural gas curtailment or to test the fuel burning capability of the equipment. The permittee is also allowed to fire sawdust containing small amounts of fuel oil from cleanups, small amounts of waste paper, and small amounts of lubricating oil incidentally burned from contact with the conveyor systems. Emissions from this source are controlled with a wet scrubber. While the source is burning natural gas and/or mill wood waste, water is used as a scrubbing liquor. When #6 fuel oil is being fired, a caustic scrubbing liquid is used.

Annual testing is required for carbon monoxide and particulate matter emissions.

Specific Conditions

135. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-01 when firing natural gas, wood waste, box plant clippings, shredded corrugated cardboard containers, and/or TDF. Compliance with these emission rates will be determined through compliance with the fuel usage and steam production limits, proper operation of the control equipment associated with this boiler, and the testing requirements for this boiler.

Pollutant	lb/hr	tpy
PM_{10}	62.5	273.8
SO_2	3.8	16.6
VOC	28.0	122.6
CO	619.0	2711.0
NO_x	110.0	482.0

136. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-01 when firing #6 fuel oil. Compliance with these emission rates will be determined through compliance with the fuel oil usage limits, proper operation of the control equipment associated with this boiler, and the testing requirements for this boiler.

Pollutant	lb/hr	tpy
PM_{10}	54.5	0.5
SO_2	706.5	5.7
VOC	1.2	0.1
CO	7.5	0.1
NO_x	100.5	0.8
Pb	0.05	0.01

137. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-01 as measured by EPA Reference Method 9 except that emissions greater than 40% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 138.

138. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-01 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the excess visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if excess visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

139. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-01 when firing natural gas, wood waste, box plant clippings, shredded corrugated cardboard containers, and/or TDF. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the fuel usage and steam production limits and proper operation of the control equipment associated with this boiler.

Pollutant	lb/hr	tpy
PM	75.0	328.5
Acetaldehyde	0.08	0.34
Acrolein	0.01	0.01
Arsenic Compounds	0.007	0.030
Benzene	0.09	0.40
Cadmium Compounds	0.001	0.003
Carbon Disulfide	0.03	0.13
Chloroform	0.01	0.01
Chromium Compounds	0.002	0.006
Cobalt Compounds	0.014	0.060
Cumene	0.01	0.01
Dibenzofurans	0.01	0.01
Formaldehyde	0.17	0.73
Hydrogen Chloride	0.08	0.34
Lead Compounds	0.020	0.086
Manganese Compounds	0.927	4.06
Mercury Compounds	0.001	0.002
Methanol	0.32	1.38

Pollutant	lb/hr	tpy
Methyl Ethyl Ketone	0.01	0.01
Methyl Isobutyl Ketone	0.05	0.21
Methylene Chloride*	0.21	0.92
Napthalene	0.06	0.26
Nickel Compounds	0.018	0.079
n-Hexane	0.13	0.55
Phenols	0.01	0.05
POM	0.07	0.31
Selenium Compounds	0.001	0.004
Styrene	0.01	0.02
Toluene	0.01	0.01
1,1,1-Trichloroethane	0.01	0.01
Trichloroethylene	0.01	0.01
Xylene	0.01	0.01
Zinc	25.67	112.49

*Non-VOC HAP.

140. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at SN-01 when firing #6 fuel oil. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the fuel oil usage limit and proper operation of the control equipment associated with this source.

Pollutant	lb/hr	tpy
PM	76.7	0.7
Antimony Compounds	0.035	0.001
Arsenic Compounds	0.007	0.001
Beryllium Compounds	0.001	0.001
Cadmium Compounds	0.001	0.001
Chromium Compounds	0.004	0.001
Cobalt Compounds	0.024	0.001
Formaldehyde	0.10	0.01
Hydrogen Chloride*	1.67	0.02
Hydrogen Fluoride*	0.09	0.01
Lead Compounds	0.006	0.001
Manganese Compounds	0.019	0.001
Mercury Compounds	0.001	0.001
Nickel Compounds	0.161	0.002
POM	0.01	0.01
Selenium Compounds	0.002	0.001

*Non-VOC, non-criteria pollutant

141. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall only fire pipeline quality natural gas, bark, wood waste (sawdust, billet ends, and hardwood pallets), TDF, sawdust containing small amounts of fuel oil from cleanups, small amounts of waste paper, small amounts of lubricating oil incidentally burned from contact with the conveyor systems, box plant clippings, shredded corrugated cardboard containers, and#6 fuel oil at source SN-01. The permittee may also use diesel fuel for starting bark fires.

142. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, steam production shall not exceed 1,314,000,000 pounds in any consecutive twelve month period.

143. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the steam production at source SN-01 in order to demonstrate compliance with Specific Condition 142 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual total shall be submitted to the Department in accordance with General Provision 7.

144 Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not fire in excess of 24,000 gallons of #6 fuel oil at source SN-01 in any consecutive twelve month period.

145. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of fuel oil fired at source SN-01 in order to demonstrate compliance with Specific Condition 144 and which may be used by the Department for enforcement purposes. These records shall be updated each day that fuel oil is used, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual total shall be submitted to the Department in accordance with General Provision 7.

146. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-31,1 and 40 CFR 70.6, the permittee shall not fire in excess of 210 tons of TDF at source SN-01 per week.

147. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of TDF fired at source SN-01 in order to demonstrate compliance with Specific Condition 146 and which may be used by the Department for enforcement purposes. These records shall be updated weekly, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual total shall be submitted to the Department in accordance with General Provision 7.

148. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing for carbon monoxide emissions from source SN-01 using EPA Reference Method 10. These tests shall be conducted in accordance with Plantwide Condition #3 and take place no less than 9 months and no more than 15 months apart.

149. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing for particulate matter emissions from source SN-01 using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and take place no less than 9 months and no more than 15 months apart.

SN-47
Package Boiler

Source Description

Source SN-47 is a package boiler which will be used to provide supplemental steam to various parts of the plant whenever another boiler is out of service for maintenance, etc. This source will only be on site whenever it is needed. The permittee will be required to comply with any applicable NSPS subpart (This will be dependent upon the size of the boiler being used.).

Natural gas will be the only fuel that this source will be permitted to fire. As this source will only be used when another boiler is out of service, there will be no net increase in emissions. Also, restrictions on the amount of fuel that may be fired in this boiler are being taken in order to stay below the PSD significant increase levels.

Specific Conditions

150. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-47. Compliance with these emission rates will be determined through compliance with Specific Condition 154.

Pollutant	lb/hr	tpy
PM_{10}	5.5	6.6
SO_2	0.2	0.2
VOC	0.4	0.4
CO	50.0	60.0
NO_x	25.0	30.0

151. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-47. Compliance with these emission rates will be determined through compliance with Specific Condition 154.

Pollutant	lb/hr	tpy
PM	5.5	6.6

152. Pursuant to §18.503 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed 5% opacity from source SN-47 as measured by EPA Reference Method 9. Compliance with this opacity limit will be demonstrated by compliance with Specific Condition 153.

153. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, pipeline quality natural gas shall be the only fuel used to fire the package boiler.

154. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, natural gas usage shall not exceed 575 MMSCF at source SN-47 in any consecutive twelve month period.

155. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of natural gas fired at source SN-47 in order to demonstrate compliance with Specific Condition 154 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

156. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the heat input capacity of source SN-47 shall not exceed 250 MMBTU/hr.

157. Source SN-47 is potentially subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart Dc - *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*. Source SN-47 will only be subject to this subpart if the facility chooses to install a boiler which has a heat input capacity between 10 MMBTU/hr and 100 MMBTU/hr. The important requirements of this subpart are outlined in Specific Conditions 158 and 159. A copy of Subpart Dc has been included in Appendix C.

158. Pursuant to 40 CFR 60.48c(g) and §19.304 of Regulation 19, the permittee shall record and maintain records of the amount of natural gas combusted during each day.

159. Pursuant to 40 CFR 60.48c(i) and §19.304 of Regulation 19, the permittee shall maintain the records required by Specific Condition 158 for a period of two years following the date of such record.

160. Source SN-47 is potentially subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart Db, *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units*. This source will be subject to this subpart if the facility chooses to install a boiler which has a heat input capacity greater than 100 MMBTU/hr. The important requirements of this subpart are outlined in Specific Conditions 161 through 178. A copy of subpart Db has been included in Appendix D.

161. Pursuant to 40 CFR 60.44b(a) and §19.304 of Regulation 19, the permittee shall not cause to be discharged to the atmosphere any gases that contain oxides of nitrogen in excess of 0.10 lb/MMBTU (expressed as NO_2).

162. Pursuant to 40 CFR 60.44b(a) and §19.304 of Regulation 19, the heat release rate shall not exceed 70,000 BTU/hr ft^3.

163. Pursuant to 40 CFR 60.46b(h) and §19.304 of Regulation 19, the oxides of nitrogen standards set forth in Specific Condition 161 shall apply at all times including periods of startup, shutdown, or malfunction.

164. Pursuant to 40 CFR 60.46b(e) and §19.304 of Regulation 19, to determine compliance with the emission limits for nitrogen oxides required under §60.44b, the owner or operator of an affected facility shall conduct the performance test as required under §60.8 using the continuous system for monitoring nitrogen oxides under §60.48b (Specific Condition 167).

165. Pursuant to 40 CFR 60.46b(e)(1), §19.304 and §19.702 of Regulation 19, and 40 CFR Part 52, Subpart E, for the initial compliance test, nitrogen oxides from the steam generating unit are monitored for 30 successive steam generating operating days and the 30-day average emission rate is used to determine compliance with the nitrogen oxides emission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

166. Pursuant to 40 CFR 60.46b(e)(4), following the date on which the initial performance test is completed or required to be completed under §60.8 of this subpart, whichever date comes first, the owner or operator of an affected facility which has a heat input capacity of 73 MW (250 million BTU/hr) or less and which combusts natural gas shall upon request determine compliance with the nitrogen oxide standards under §60.44b through

the use of a 30-day performance test. During periods when performance tests are not requested, nitrogen oxides emission data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports but will not be used to determine compliance with the nitrogen oxides emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

167. Pursuant to 40 CFR 60.48b(b), §19.304 and §19.703 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall install, calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system.

168. Pursuant to 40 CFR 60.48b(c) and §19.304 of Regulation 19, the continuous monitoring system required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

169. Pursuant to 40 CFR 60.48b(c) and §19.304 of Regulation 19, the 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor required by paragraph (b) of this section shall be expressed in ng/J or lb/million BTU heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(b). At least 2 data points must be used to calculate each 1-hour average.

170. Pursuant to 40 CFR 60.48b(e) and §19.304 of Regulation 19, the procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring system.

171. Pursuant to 40 CFR 60.48b(e)(2) and §19.304 of Regulation 19, the span value for the nitrogen oxides emission monitor shall be 500 ppm.

172. Pursuant to 40 CFR 60.49b(a) and §19.304 of Regulation 19, the permittee shall submit notification of initial startup as provided by §60.7. This notification shall include the following:

    a. The heat design input capacity of the affected facility and identification of the fuels to be combusted in the affected facility.

b. If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§60.44b.

c. The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired.

173. Pursuant to 40 CFR 60.49b(d) and §19.304 of Regulation 19, the owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for each calendar quarter. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

174. Pursuant to 40 CFR 60.49b(g) and §19.304 of Regulation 19, except as provided for under paragraph (p) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under §60.44b shall maintain records of the following information for each steam generating unit operating day.

a. Calendar date

b. The average hourly nitrogen oxides emission rates (expressed as NO_2) (ng/J or lb/million BTU heat input) measured or predicted

c. The 30-day average nitrogen oxides emission rates (ng/J or lb/million BTU heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.

d. Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken.

e. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective action taken.

f. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

g. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

h. Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

i. Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.

j. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

175. Pursuant to 40 CFR 60.49b(h)(2) and §19.304 of Regulation 19, the owner or operator of any affected facility that is subject to the nitrogen oxides standards of §60.44b, combusts natural gas, has a heat input capacity less than 73 MW (250 million BTU/hr), and is required to monitor nitrogen oxides emissions on a continuous basis under §60.48b(g)(1) or steam generating unit operating conditions under §60.48b(g)(2), shall submit excess emission reports for any calendar quarter during which there are excess emissions from the affected facility. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period.

176. Pursuant to 40 CFR 60.49b(h)(4) and §19.304 of Regulation 19, for purposes of §60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average nitrogen oxides emission rate, as determined under §60.46b(e), which exceeds the applicable emission limits in §60.44b.

177. Pursuant to 40 CFR 60.49b(i) and §19.304 of Regulation 19, the owner or operator of any affected facility subject to the continuous monitoring requirements for nitrogen oxides under §60.48b shall submit a quarterly report containing the information recorded under paragraph (g) of this section. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

178. Pursuant to 40 CFR 60.49b(o) and §19.304 of Regulation 19, all records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

179. Pursuant to§19.705 of Regulation 19, and 40 CFR 70.6, the permittee shall maintain records of the dates which the package boiler was brought on site, when operation of the boiler began, when operation of the boiler ceased, and when the boiler was removed from

this facility. The permittee shall also maintain records of the heat input capacity of the boiler and compliance date with any applicable NSPS requirements. These records shall be updated within one week of the boiler being brought in or taken out, kept on site for a minimum of two years following the date of such record, and shall be made available to Department personnel upon request.

180. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall only operate source SN-47 when another boiler is out of operation. However, if a boiler is subject to 40 CFR Part 60, Subpart Dc or is not subject to any NSPS subpart, the permittee may startup SN-47 a maximum of 72 hours prior to the boiler it is temporarily replacing is off line and the permittee may also operate SN-47 for a maximum of 48 hours after the permanent boiler is brought back on line. The permittee may maintain a warming fire in the boiler whenever it is on site in the event that the ambient temperature falls below freezing.

181. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which will demonstrate compliance with Specific Condition 180 and which may be used by the Department for enforcement purposes. These records shall be kept on site and made available to Department personnel upon request.

PAPER MILL

SN-35
Paper Mill Source Group

Source Description

The paper mill source group consists of the pulp and whitewater storage tanks and chests in the stock preparation area and all sections of the paper machine from the headbox to the reel for all three paper machines. It is in the paper mill source group where the pulp is converted to paper on one of the three machines. No control equipment is associated with the paper mill source group.

Specific Conditions

182. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-35. Compliance with these emission rates will be determined through compliance with the limit on the amount of paper that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	161.6	707.6

183. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-35. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the amount of paper that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	2.05	8.98
Acrolein	0.27	1.18
Benzene	0.02	0.09
Chlorobenzene	0.04	0.17
Ethylene Glycol	0.44	1.92
Formaldehyde	1.23	5.37
Methanol	75.12	329.00
Methyl Ethyl Ketone	0.46	1.99
Methyl Isobutyl Ketone	0.04	0.16
Methylene Chloride*	0.24	1.03
Napthalene	0.14	0.62
n-Hexane	0.02	0.09
Styrene	0.10	0.42
Tetrachloroethylene*	0.31	1.34
Toluene	0.02	0.09
1,2,4-Trichlorobenzene	0.56	2.41
1,1,1-Trichloroethane	0.09	0.40
1,1,2-Trichloroethane	0.11	0.46
Xylenes	0.07	0.28

*Non-VOC non-criteria pollutant

184. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not produce more than 438,000 tons of paper at the paper mill in any consecutive twelve month period.

185. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of paper produced at source SN-35 in order to demonstrate compliance with Specific Condition 184 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

WASTEWATER COLLECTION & TREATMENT AERATION STABILIZATION BASIN
PROCESS SEWER NON-POINT SOURCES

SN-16
Aeration Stabilization Basin & Process Sewer Non-Point Sources

Source Description

The waste water treatment process at the Camden mill consists of collection, screening, clarification, neutralization, aeration, settling, sludge dewatering, and disposal.

All process water is collected from the various process area sumps and pumped through the process sewer mains. The sewer mains also receive landfill leachate and surface drainage from culverts in various areas of the site.

The emissions from source SN-16 are related to the amount of pulp that is produced. Therefore, compliance with the emission rates will be demonstrated through compliance with the limit on the amount of ADTP that can be produced.

Specific Conditions

186. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-16. Compliance with these emission rates will be demonstrated through compliance with the amount of ADTP that may be produced.

Pollutant	lb/hr	tpy
VOC*	10.0	43.8
TRS	1.1	4.1
H_2S**	0.1	0.1

*Includes TRS components which are also considered to be VOCs.
**Component of TRS. Included in the TRS total.

187. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-16. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with the amount of ADTP that may be produced.

Pollutant	lb/hr	tpy
Acetaldehyde	1.36	5.96
Carbon Disulfide	0.11	0.45
Dimethyl Disulfide*	0.06	0.23
Dimethyl Sulfide*	0.85	3.70
Methanol	0.68	2.96
Methyl Ethyl Ketone	0.03	0.11
Methyl Isobutyl Ketone	0.01	0.03
Methyl Mercaptan*	0.02	0.05

*Component of TRS.

ACTIVE LANDFILLS

SN-36
East Landfill

Source Description

The east landfill is the only active landfill located at this facility. At this time, there are two other landfills which have been closed and no longer accept any plant refuse.

The emissions from this source are limited by the amount of plant refuse that can be accepted by this landfill.

Specific Conditions

188. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-36. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of mill waste that may be placed in the landfill.

Pollutant	lb/hr	tpy
VOC*	0.8	3.4
CO	0.1	0.3
TRS	0.1	0.3
H_2S**	0.1	0.1

*Includes TRS components which are also considered to be VOCs.
**Component of TRS. Included in the TRS total.

189. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of mill waste that may be placed in the landfill.

Pollutant	lb/hr	tpy
Acrylonitrile	0.01	0.02
Benzene	0.01	0.01
Carbon Disulfide	0.01	0.01
Carbonyl Sulfide	0.02	0.05
Chlorobenzene	0.01	0.01
Chloroform	0.01	0.01
Dimethyl Sulfide*	0.04	0.16
Ethyl Benzene	0.01	0.02
Methyl Ethyl Ketone	0.01	0.02
Methyl Isobutyl Ketone	0.01	0.01
Methylene Chloride**	0.01	0.04
Methyl Carpatan*	0.01	0.02
n-Hexane	0.01	0.02
1,1,2,2-Tetrachloroethane	0.01	0.01
Tetrachlorethylene	0.01	0.02
Toluene	0.01	0.03
1,1,1-Trichloroethane**	0.01	0.01
Trichloroethylene	0.01	0.01
Vinyl Chloride	0.01	0.02
Xylene	0.01	0.05

*Includes TRS components which are also considered to be VOCs.
**Component of TRS. Included in the TRS total.

190. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall use source SN-36 for plant refuse only.

191. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, source SN-36 shall not accept in excess of 113,200 cubic

yards of plant refuse in any consecutive twelve month period. For the purposes of this permit, 1 uncompacted cubic yard shall equal 300 pounds.

192. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of plant refuse accepted at source SN-36 in order to demonstrate compliance with Specific Condition 191 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

FUEL STORAGE

SN-37
Gasoline Storage Tank

Source Description

Source SN-37 is a horizontal fixed roof tank with a capacity of approximately 1763 gallons. The facility is permitted to store only gasoline at this source. This tank is used to store fuel for the vehicles used around the facility.

Specific Conditions

193. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-37. Compliance with these emission rates will be determined by compliance with Specific Conditions 194 and 195.

Pollutant	lb/hr	tpy
VOC	22.8	0.5

194. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall store only gasoline at source SN-37.

195. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, throughput of gasoline at source SN-37 shall not exceed 39,900 gallons of gasoline in any consecutive twelve month period.

196. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the gasoline throughput at source SN-37 in order to demonstrate compliance with Specific Condition 195 and which may be used by the Department for enforcement purposes. The records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

MILL SHUTDOWN EQUIPMENT

SN-48
Air Compressors

Source Description

The air compressors will be used when one or more of the electrical air compressors is out of service. These air compressors do not include the smaller units which may be found in Group B of the Insignificant Activities List.

Specific Conditions

197. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-48. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 199 and 200.

Pollutant	lb/hr	tpy
PM_{10}	2.0	2.5
SO_2	1.8	2.3
VOC	2.3	2.9
CO	5.9	7.4
NO_X	27.2	34.3

198. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-48. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 199 and 200.

Pollutant	lb/hr	tpy
PM	2.0	2.5
Acetaldehyde	0.05	0.01

Pollutant	lb/hr	tpy
Acrolein	0.01	0.01
Aldehydes	0.06	0.01
Benzene	0.06	0.01
Formaldehyde	0.07	0.01
Napthalene	0.01	0.01
PAH	0.01	0.01
Toluene	0.01	0.01
Xylenes	0.02	0.01

199. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, diesel fuel with a sulfur content not to exceed 3% by weight shall be the only fuel used to fire the air compressors.

200. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not use in excess of 113,400 gallons of diesel fuel at the air compressors in any consecutive twelve month period.

201. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the diesel fuel usage at source SN-48 and the sulfur content of the fuel in order to demonstrate compliance with Specific Conditions 199 and 200 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

202. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall only operate source SN-48 when the electrical air compressors are out of service.

203. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which will demonstrate compliance with Specific Condition 202 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

SN-49
Shutdown Equipment

Source Description

The shutdown equipment will consist mainly of generators which will supply some power to the facility when the mill is in a shutdown mode.

Specific Conditions

204. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-49. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 206, 207, and 209.

Pollutant	lb/hr	tpy
PM_{10}	18.4	0.5
SO_2	17.2	0.5
VOC	27.5	0.7
CO	187.4	4.6
NO_X	261.8	6.3

205. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-49. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 206, 207, and 209.

Pollutant	lb/hr	tpy
PM	18.4	0.5

206. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, diesel fuel with a sulfur content not to exceed 3% by weight and gasoline shall be the only fuels used to fire source SN-49.

207. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not use in excess of 20,520 gallons of diesel fuel at source SN-49 in any consecutive twelve month period.

208. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the diesel fuel usage at source SN-49 and the sulfur content in order to demonstrate compliance with Specific Conditions 206 and 207 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

209. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not use in excess of 805 gallons of gasoline at the source SN-49 in any consecutive twelve month period.

210. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the gasoline usage at source SN-49 in order to demonstrate compliance with Specific Condition 209 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

211. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall only operate source SN-49 during full or partial mill shutdowns. The permittee is allowed to operate this source for up to 48 hours prior to mill shut down and up to 48 after mill operations begin.

212. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which will demonstrate compliance with Specific Condition 211 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

SECTION VII: INSIGNIFICANT ACTIVITIES

Pursuant to §26.3(d) of Regulation 26, the following sources are insignificant activities. Insignificant and trivial activities will be allowable after approval and federal register notice publication of a final list as part of the operating air permit program. Any activity for which a state or federal applicable requirement applies is not insignificant even if this activity meets the criteria of §3(d) of Regulation 26 or is listed below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated August 23, 1996.

Mill Area	Description	Reason
Woodyard	Mobile Hydraulic Tank	Group A, #3
Woodyard	Lube Oil Storage Tank	Group A, #3
Pulp Mill	2 Oil Storage Tanks	Group A, #3
Pulp Mill	2 Hydrogen Chloride Tanks	Group A, #13
Paper Mill	Caustic Soda Tank	Group A, #4
Paper Mill	Paper Mill Bulk Lube Oil Storage Tank	Group A, #3
Paper Mill	3 Paper Machine Lube Oil Tanks	Group A, #3
Black Liquor Recovery Area	2 Diesel Fuel Tanks	Group A, #3
Black Liquor Recovery Area	Used Oil Tank	Group A, #3
Power Generation	3 Caustic Tanks	Group A, #4
Power Generation	Bark Boiler Reservoir	Group A, #3
Power Generation	Lube Oil Reservoir	Group A, #3
Causticizing Area	Caustic Storage Tank	Group A, #4
Causticizing Area	Caustic Soda Day Tank	Group A, #4
Causticizing Area	Quaker "3540" Flocculant Tank	Group A, #3
Causticizing Area	Caustic Plant Laboratory Plant	Group A, #5
Causticizing Area	OTE-25 Oil Tank	Group A, #3
Causticizing Area	600-W Oil Tank	Group A, #3

Mill Area	Description	Reason
Causticizing Area	630 Oil Tank	Group A, #3
Water Supply System	Caustic Soda Tank	Group A, #4
Mill Ancillary Services	4 Diesel Fuel Storage Tanks in the Clarifiers Area	Group A, #2
Mill Ancillary Services	2 Fuel Oil Storage Tanks	Group A, #2
Mill Ancillary Services	Diesel Fuel Storage Tank in the Causticizing Area	Group A, #2
Mill Ancillary Services	Lubrication Oil Storage Tank	Group A, #2
Mill Ancillary Services	Lubricating Oil and Hydraulic Fluid Storage	Group A, #2

Pursuant to §26.3(d) of Regulation 26, the following emission units, operations, or activities have been determined by the Department to be insignificant activities. Activities included in this list are allowable under this permit and need not be specifically identified.

1. Combustion emissions from propulsion of mobile sources and emissions from refueling these sources unless regulated by Title II and required to obtain a permit under Title V of the federal Clean Air Act, as amended. This does not include emissions from any transportable units, such as temporary compressors or boilers. This does not include emissions from loading racks or fueling operations covered under any applicable federal requirements.

2. Air conditioning and heating units used for comfort that do not have applicable requirements under Title VI of the Act.

3. Ventilating units used for human comfort that do not exhaust air pollutants into the ambient air from any manufacturing/industrial or commercial process.

4. Non-commercial food preparation or food preparation at restaurants, cafeterias, or caterers, etc.

5. Consumer use of office equipment and products, not including commercial printers or business primarily involved in photographic reproduction.

6. Janitorial services and consumer use of janitorial products.

7. Internal combustion engines used for landscaping purposes.

8. Laundry activities, except for dry-cleaning and steam boilers.

9. Bathroom/toilet emissions.

10. Emergency (backup) electrical generators at residential locations.

11. Tobacco smoking rooms and areas.

12. Blacksmith forges.

13. Maintenance of grounds or buildings, including: lawn care, weed control, pest control, and water washing activities.

14. Repair, up-keep, maintenance, or construction activities not related to the sources' primary business activity, and not otherwise triggering a permit modification. This may include, but is not limited to such activities as general repairs, cleaning, painting, welding, woodworking, plumbing, re-tarring roofs, installing insulation, paved/paving parking lots, miscellaneous solvent use, application of refractory, or insulation, brazing, soldering, the use of adhesives, grinding, and cutting.[1]

15. Surface-coating equipment during miscellaneous maintenance and construction activities. This activity specifically does not include any facility whose primary business activity is surface-coating or includes surface-coating or products.

16. Portable electrical generators that can be "moved by hand" from one location to another.[2]

17. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning, or machining wood, metal, or plastic.

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[1] Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must get a permit.

[2] "Moved by hand" means that it can be moved by one person without assistance of any motorized or non-motorized vehicle, conveyance, or device.

18. Brazing or soldering equipment related to manufacturing activities that do not result in emission of HAPs.[3]

19. Air compressors and pneumatically operated equipment, including hand tools.

20. Batteries and battery charging stations, except at battery manufacturing plants.

21. Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOCs or HAPs.[4]

22. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and no volatile aqueous salt solutions, provided appropriate lids and covers are used and appropriate odor control is achieved.

23. Equipment used to mix and package soaps, vegetable oil, grease, animal fat, and non-volatile aqueous salt solutions, provided appropriate lids and covers are used and appropriate odor control is achieved.

24. Drop hammers or presses for forging or metalworking.

25. Equipment used exclusively to slaughter animals, but not including other equipment at slaughter-houses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.

26. Vents from continuous emissions monitors and other analyzers.

27. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.

28. Hand-held applicator equipment for hot melt adhesives with no VOCs in the adhesive.

29. Lasers used only on metals and other materials which do not emit HAPs in the process.

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[3] Brazing, soldering, and welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals are more appropriate for treatment as insignificant activities based on size or production thresholds. Brazing, soldering, and welding equipment, and cutting torches related directly to plant maintenance and upkeep and repair or maintenance shop activities that emit HAP metals are treated as trivial and listed separately in this appendix.

[4] Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids are based on size and limits including storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.

30. Consumer use of paper trimmers/binders.

31. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.

32. Salt baths using non-volatile salts that do not result in emissions of any air pollutant covered by this regulation.

33. Laser trimmers using dust collection to prevent fugitive emissions.

34. Bench-scale laboratory equipment used for physical or chemical analysis not including lab fume hoods or vents.

35. Routine calibration and maintenance of laboratory equipment or other analytical instruments.

36. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.

37. Hydraulic and hydrostatic testing equipment.

38. Environmental chambers not using hazardous air pollutant gases.

39. Shock chambers, humidity chambers, and solar simulators.

40. Fugitive emissions related to movement of passenger vehicles, provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.

41. Process water filtration systems and demineralizers.

42. Demineralized water tanks and demineralizer vents.

43. Boiler water treatment operations, not including cooling towers.

44. Emissions from storage or use of water treatment chemicals, except for hazardous air pollutants or pollutants listed under regulations promulgated pursuant to Section 112(r) of the Act, for use in cooling towers, drinking water systems, and boiler water/feed systems.

45. Oxygen scavenging (de-aeration) of water.

46. Ozone generators.

47. Fire suppression systems.

48. Emergency road flares.

49. Steam vents and safety relief valves.

50. Steam leaks.

51. Steam cleaning operations.

52. Steam and microwave sterilizers.

53. Site assessment work to characterize waste disposal or remediation sites.

54. Miscellaneous additions or upgrades of instrumentation.

55. Emissions from combustion controllers or combustion shutoff devices but not combustion units itself.

56. Use of products for the purpose of maintaining motor vehicles operated by the facility, not including air cleaning units of such vehicles (i.e. antifreeze, fuel additives).

57. Stacks or vents to prevent escape of sanitary sewer gases through the plumbing traps.

58. Emissions from equipment lubricating systems (i.e. oil mist), not including storage tanks, unless otherwise exempt.

59. Residential wood heaters, cookstoves, or fireplaces.

60. Barbecue equipment or outdoor fireplaces used in connection with any residence or recreation.

61. Log wetting areas and log flumes.

62. Periodic use of pressurized air for cleanup.

63. Solid waste dumpsters.

64. Emissions of wet lime from lime mud tanks, lime mud washers, lime mud piles, lime mud filter and filtrate tanks, and lime mud slurry tanks.

65. Natural gas odoring activities unless the Department determines that emissions constitute air pollution.

66. Emissions from engine crankcase vents.

67. Storage tanks used for the temporary containment of materials resulting from an emergency reporting to an unanticipated release.

68. Equipment used exclusively to mill or grind coatings in roll grinding rebuilding, and molding compounds where all materials charged are in paste form.

69. Mixers, blenders, roll mills, or calendars for rubber or plastic for which no materials in powder form are added and in which no organic solvents, diluents, or thinners are used.

70. The storage , handling, and handling equipment for bark and wood residues not subject to fugitive dispersion offsite (this applies to the equipment only).

71. Maintenance dredging of pulp and paper mill surface impoundments and ditches containing cellulosic and cellulosic derived biosolids and inorganic materials such as lime, ash, or sand.

72. Tall oil soap storage, skimming, and loading.

73. Water heaters used strictly for domestic (non-process) purposes.

74. Facility roads and parking areas, unless necessary to control offsite fugitive emissions.

75. Agricultural operations, including onsite grain storage, not including IC engines or grain elevators.

76. The following natural gas and oil exploration production site equipment: separators, dehydration units, natural gas fired compressors, and pumping units. This does not include compressors located on natural gas transmission pipelines.

SECTION VII: PLANTWIDE CONDITIONS

1. Pursuant to §19.704 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the Director shall be notified in writing within thirty (30) days after construction has commenced, construction is complete, the equipment and/or facility is first placed in operation, and the equipment and/or facility first reaches the target production rate.

2. Pursuant to §19.410(B) of Regulation 19, and 40 CFR Part 52, Subpart E, the Director may cancel all or part of this permit if the construction or modification authorized herein is not begun within 18 months from the date of the permit issuance or if the work involved in the construction or modification is suspended for a total of 18 months or more.

3. Pursuant to §19.702(E) of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, each emission point for which an emission test method is specified in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. Compliance test results shall be submitted to the Department within thirty (30) days after the completed testing. The permittee shall provide:

   (1) Sampling ports adequate for applicable test methods
   (2) Safe sampling platforms
   (3) Safe access to sampling platforms
   (4) Utilities for sampling and testing equipment

4. Pursuant to Regulation 19.303 of Regulation 19 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the equipment, control apparatus and emission monitoring equipment shall be operated within their design limitations and maintained in good condition at all times.

5. Pursuant to Regulation 26 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit subsumes and incorporates all previously issued air permits for this facility.

6. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the sulfur content of the #6 fuel oil shall not exceed 3.0% by weight.

7. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall either obtain a manufacturer's certification of the sulfur content of the fuel oil or test each shipment of fuel oil received for the sulfur content. The manufacturer's certification or the test results shall be kept on site and shall be made available to Department personnel upon request.

8. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, natural gas usage at this facility shall not exceed 9.857 billion standard cubic feet of natural gas in any consecutive twelve month period. This includes the amount of natural gas that may be fired at the package boiler, source SN-47.

9. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records in order to demonstrate compliance with Plantwide Condition 8 and which may be used by the Department for enforcement purposes. These records shall include the amount of natural gas used at each natural gas burning source, shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

10. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not produce in excess of 324,850 air dried tons of pulp in any consecutive twelve month period.

11. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of air dried pulp produced in order to demonstrate compliance with Plantwide Condition 10 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

12. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not process more than 73,000 tons of lime in any consecutive twelve month period.

13. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of lime processed in order to demonstrate compliance with Plantwide Condition 12 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

14. International Paper Company is subject to the provisions of 40 CFR Part 63, Subpart A - *General Provisions* and 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry*. A copy of this subpart has been included in Appendix F of this permit. International Paper Company is required to comply with all applicable provisions of this subpart within the time frames specified. This includes notifications to the Department of applicability and options which have been chosen to demonstrate compliance with this regulation.

15. Pursuant to §18.801 of Regulation 18, the permittee shall not cause or permit the emission of air contaminants, including odors or water vapor and including an air contaminant whose emission is not otherwise prohibited by Regulation #18, if the emission of the air contaminant constitutes air pollution within the meaning of A.C.A. §8-4-303.

16. Pursuant to §18.901 of Regulation 18, the permittee shall not conduct operations in such a manner as to unnecessarily cause air contaminants and other pollutants from becoming airborne.

17. Pursuant to §19.601 of Regulation 19, the Department may forego enforcement action for exceedances of federally regulated air pollutant emissions given that the person responsible for the source of the excess emissions does the following. The reporting of upset conditions is outlined in General Provision 8.

    A. Demonstrates to the Department that the emissions resulted from:

        1. Equipment malfunction or upset and are not the result of negligence or improper maintenance; or

        2. Physical constraints on the ability of a source to comply with the emission standard, limitation, or rate during startup or shutdown; and

3. That all reasonable measures have been taken to immediately minimize or eliminate the excess emissions.

18. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, or §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the criteria pollutant and the PM emission rates listed in this permit were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. This condition does not apply to pollutants for which test data is already available, pollutants with an NSPS or NESHAP standard, or limits which have been set through a PSD permitting action (those pollutants which have undergone a BACT analysis or which "netted out" of a PSD review).

19. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee may maintain hand written records for those sources which do not have electronic data keeping systems or which have systems that only store recorded data for a period less than five years for a period not to exceed 1 year from the date of permit issuance. Any records shall be made available to Department personnel upon request.

Permit Shield.

20. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in item A of this condition:

A. The following have been specifically identified as applicable requirements based upon information submitted by the permittee in an application dated August 23, 1996.

Source No.	Regulation	Description
Facility	19	SIP
Facility	26	Arkansas Title V regulations
13	40 CFR Part 60, Subpart GG	Standards of Performance for Stationary Gas Turbines
12, 14, and 27	40 CFR Part 60, Subpart BB	Standards of Performance for Kraft Pulp Mills

B. The following requirements have been specifically identified as not applicable, based upon information submitted by the permittee in an application dated August 23, 1996.

Description of Regulation	Regulatory Citation	Affected Source	Basis for Determination
NESHAP Subpart for Halogenated Solvent Cleaning	40 CFR Part 63, Subpart T	Facility	This facility does not use halogenated solvents in the parts cleaning operations.
Relaxed Compliance Orders	40 CFR Part 65	Facility	This part includes specific EPA orders allowing designated sources to delay compliance with an otherwise applicable SIP requirement until a specific date. This facility is not included among the Arkansas sources listed in this part.
Assessment and Collection of Noncompliance Penalties by EPA	40 CFR Part 66	Facility	This part imposes requirements only on sources of air pollution which have received notices of noncompliance. This facility has received no such notices.
EPA Approval of State Noncompliance Penalty Programs	40 CFR Part 67	Facility	This part does not impose requirements of sources.
Acid Rain Program	40 CFR Parts 72 -78	Facility	This facility is not currently subject to any acid rain requirements.

C. Nothing shall alter or affect the following:

Provisions of Section 303 of the Clean Air Act;

The liability of an owner or operator for any violation of applicable requirements prior to or at the time of permit issuance;

The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; or

The ability of the EPA to obtain information under Section 114 of the Clean Air Act.

Title VI Provisions

21. The permittee shall comply with the standards for labeling of products using ozone depleting substances pursuant to 40 CFR Part 82, Subpart E:

A. All containers containing a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.

B. The placement of the required warning statement must comply with the requirements pursuant to §82.108.

C. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.

D. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

22. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:

A. Persons opening appliances for maintenance, service. repair, or disposal must comply with the required practices pursuant to §82.156.

B. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.

C. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.

D. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like appliance" as defined at §82.152.)

E. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.

F. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

23. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.

24. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or systems used on passenger busses using HCFC-22 refrigerant.

25. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, Significant New Alternatives Policy Program.

SECTION VII: GENERAL PROVISIONS

1. Pursuant to 40 C.F.R. 70.6(b)(2), any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute.

2. Pursuant to 40 C.F.R. 70.6(a)(2) and §26.7 of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26), this permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later.

3. Pursuant to §26.4 of Regulation #26, it is the duty of the permittee to submit a complete application for permit renewal at least six (6) months prior to the date of permit expiration. Permit expiration terminates the permittee's right to operate unless a complete renewal application was submitted at least six (6) months prior to permit expiration, in which case the existing permit shall remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due.

4. Pursuant to 40 C.F.R. 70.6(a)(1)(ii) and §26.7 of Regulation #26, where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq* (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions are incorporated into the permit and shall be enforceable by the Director or Administrator.

5. Pursuant to 40 C.F.R. 70.6(a)(3)(ii)(A) and §26.7 of Regulation #26, records of monitoring information required by this permit shall include the following:

   a. The date, place as defined in this permit, and time of sampling or measurements;
   b. The date(s) analyses were performed;
   c. The company or entity that performed the analyses;
   d. The analytical techniques or methods used;
   e. The results of such analyses; and
   f. The operating conditions existing at the time of sampling or measurement.

6. Pursuant to 40 C.F.R. 70.6(a)(3)(ii)(B) and §26.7 of Regulation #26, records of all required monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

7. Pursuant to 40 C.F.R. 70.6(a)(3)(iii)(A) and §26.7 of Regulation #26, the permittee shall submit reports of all required monitoring every 6 months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official as defined in §26.2 of Regulation #26 and must be sent to the address below.

   Arkansas Department of Environmental Quality
   Air Division
   ATTN: Compliance Inspector Supervisor
   Post Office Box 8913
   Little Rock, AR 72219-8913

8. Pursuant to 40 C.F.R. 70.6(a)(3)(iii)(B), §26.7 of Regulation #26, and §19.601 and §19.602 of Regulation #19, all deviations from permit requirements, including those attributable to upset conditions as defined in the permit shall be reported to the Department. An initial report shall be made to the Department by the next business day after discovery of the occurrence. The initial report may be made by telephone and shall include:

   a. The facility name and location,
   b. The process unit or emission source which is deviating from the permit limit,
   c. The permit limit, including the identification of pollutants, from which deviation occurs,
   d. The date and time the deviation started,
   e. The duration of the deviation,
   f. The average emissions during the deviation,
   g. The probable cause of such deviations,
   h. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and
   i. The name of the person submitting the report.

   A full report shall be made in writing to the Department within five (5) business days of discovery of the occurrence and shall include in addition to the information required by the initial report a schedule of actions to be taken to eliminate future occurrences and/or

to minimize the amount by which the permit's limits are exceeded and to reduce the length of time for which said limits are exceeded. If the permittee wishes, they may submit a full report in writing (by facsimile, overnight courier, or other means) the next business day after discovery of the occurrence and such report will serve as both the initial report and full report.

9. Pursuant to 40 C.F.R. 70.6(a)(5), §26.7 of Regulation #26, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, if any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable.

10. Pursuant to 40 C.F.R. 70.6(a)(6)(i) and §26.7 of Regulation #26, the permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation #26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.* and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Any permit noncompliance with a state requirement constitutes a violation of the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) and is also grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

11. Pursuant to 40 C.F.R. 70.6(a)(6)(ii) and §26.7 of Regulation #26, it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

12. Pursuant to 40 C.F.R. 70.6(a)(6)(iii) and §26.7 of Regulation #26, this permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

13. Pursuant to 40 C.F.R. 70.6(a)(6)(iv) and §26.7 of Regulation #26, this permit does not convey any property rights of any sort, or any exclusive privilege.

14. Pursuant to 40 C.F.R. 70.6(a)(6)(v) and §26.7 of Regulation #26, the permittee shall furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the

permit. Upon request, the permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the permittee may be required to furnish such records directly to the Administrator along with a claim of confidentiality.

15. Pursuant to 40 C.F.R. 70.6(a)(7) and §26.7 of Regulation #26, the permittee shall pay all permit fees in accordance with the procedures established in Regulation #9.

16. Pursuant to 40 C.F.R. 70.6(a)(8) and §26.7 of Regulation #26, no permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for elsewhere in this permit.

17. Pursuant to 40 C.F.R. 70.6(a)(9)(i) and §26.7 of Regulation #26, if the permittee is allowed to operate under different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the scenario under which the facility or source is operating.

18. Pursuant to 40 C.F.R. 70.6(b) and §26.7 of Regulation #26, all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Act unless the Department has specifically designated as not being federally enforceable under the Act any terms and conditions included in the permit that are not required under the Act or under any of its applicable requirements.

19. Pursuant to 40 C.F.R. 70.6(c)(1) and §26.7 of Regulation #26, any document (including reports) required by this permit shall contain a certification by a responsible official as defined in §26.2 of Regulation #26.

20. Pursuant to 40 C.F.R. 70.6(c)(2) and §26.7 of Regulation #26, the permittee shall allow an authorized representative of the Department, upon presentation of credentials, to perform the following:

    a. Enter upon the permittee's premises where the permitted source is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements.

21. Pursuant to 40 C.F.R. 70.6(c)(5) and §26.7 of Regulation #26, the permittee shall submit a compliance certification with terms and conditions contained in the permit, including emission limitations, standards, or work practices. This compliance certification shall be submitted annually and shall be submitted to the Administrator as well as to the Department. The first report shall be due 30 days following the one-year anniversary of the issuance of this permit. All compliance certifications required by this permit shall include the following:

a. The identification of each term or condition of the permit that is the basis of the certification;
b. The compliance status;
c. Whether compliance was continuous or intermittent;
d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
e. Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and 504(b) of the Act.

22. Pursuant to §26.7 of Regulation #26, nothing in this permit shall alter or affect the following:

a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
b. The liability the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act; or
d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.

23. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit authorizes only those pollutant emitting activities addressed herein.

APPENDIX A

Arkansas Department of Pollution Control & Ecology

CONTINUOUS EMISSION MONITORING SYSTEMS CONDITIONS

Revised October 1996

SECTION I

DEFINITIONS

Continuous Emission Monitoring System (CEMS) - The total equipment required for the determination of a gas concentration and/or emission rate so as to include sampling, analysis and recording of emission data. [1]

Calibration Drift (CD) - The difference in the CEMS output reading from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustments took place. [2]

Primary CEMS - The main reporting CEMS with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate.

Back-up CEM (Secondary CEM) - A CEM with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate. This CEM is to serve as a back-up to the primary CEMS to minimize monitor downtime.

Out-of-Control Period - Begins with the hour corresponding to the completion of a daily calibration error, linearity check, or quality assurance audit that indicates that the instrument is not measuring and recording within the applicable performance specifications. Out-of-Control Period ends with the hour corresponding to the completion of an additional calibration error, linearity check, or quality assurance audit following corrective action that demonstrates that the instrument is measuring and recording within the applicable performance specifications. [3]

Monitor Downtime - Any period during which the CEMS is unable to sample, analyze and record a minimum of four evenly spaced data points over an hour, except during one daily zero-span check during which two data points per hour are sufficient.

Excess Emissions - Any period in which the emissions exceed the permit limits.

SECTION II

MONITORING REQUIREMENTS

A. For new sources, the installation date for the CEMS shall be no later than thirty (30) days from the date of start-up of the source. [4]

B. For existing sources, the installation date for the CEMS shall be no later than sixty (60) days from the issuance of the permit unless a specific date is required by the permit. [4]

C. Within sixty (60) days of installation of a CEMS, a performance specification test (PST) must be completed. PST's are defined in 40 CFR, Part 60, Appendix B, PS 1-9. The Department may accept alternate PSTs for pollutants not covered by Appendix B on a case-by-case basis. Alternate PST's shall be approved, in writing, by the Compliance Inspector Supervisor prior to testing. [5]

D. Each CEMS shall have, as a minimum, a daily zero-span check. The zero-span shall be adjusted whenever the 24-hour zero or 24-hour span drift exceeds two times the limits in the applicable performance specification in 40 CFR, Part 60, Appendix B. Before any adjustments are made to either the zero or span drifts measured at the 24-hour interval the excess zero and span drifts measured must be quantified and recorded. [6]

E. All CEMS shall be in continuous operation and shall meet minimum frequency of operation requirements of 95% up-time for each quarter for each pollutant measured. Failure to maintain operation time shall constitute a violation of the CEMS conditions. [18]

F. All sources with a CEMS shall meet 95% compliance per quarter for each pollutant. Failure to maintain compliance shall constitute a violation of the CEMS conditions. [18]

G. All CEMS measuring emissions shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive fifteen minute period unless more cycles are required by the permit. For each CEMS, one-hour averages shall be computed from four or more data points equally spaced over each one hour period unless more data points are required by the permit. [7]

H. When the pollutant from a single affected facility is released through more than one point, a CEMS shall be installed on each point unless installation of fewer systems is approved, in writing, by the Compliance Inspector Supervisor. When more than one CEMS is used to monitor emissions from one affected facility (e.g. multiple breaching or multiple exhaust) the owner or operator shall report the results as required from each CEMS. [8]

SECTION III

NOTIFICATION AND RECORD KEEPING

A. When requested to do so by an owner or operator, the Compliance Inspector Supervisor will review plans for installation or modification for the purpose of providing technical advice to the owner or operator. [9]

B. Each facility which operates a CEMS shall notify the Compliance Inspector Supervisor of the date for which the demonstration of the CEMS performance will commence (ie. PST, RATA, RAA, CGA). Notification shall be received in writing no less than 15 days prior to testing. [10]

C. Each facility which operates a CEMS shall maintain records of the occurrence and duration of start up/shut down, cleaning/soot blowing, process problems, fuel problems, or other malfunction in the operation of the affected facility which causes excess emissions. This includes any malfunction of the air pollution control equipment or any period during which a continuous monitoring device/system is inoperative. [11]

D. Each facility required to install a CEMS shall submit an excess emission and monitoring system performance report to the Department (Attention: Air Division, Compliance Inspector Supervisor) at least quarterly, unless more frequent submittals are warranted to assess the compliance status of the facility. Quarterly reports shall be postmarked no later than the 30th day of the month following the end of each calendar quarter. [12]

E. All excess emissions shall be reported in terms of the applicable standard. Each report shall be submitted on ADPC&E Quarterly Excess Emission Report Forms. These forms may be obtained from the Air Division of the Little Rock office of ADPC&E. Alternate forms may be used with the prior written approval from the Department. [13]

F. Each facility which operates a CEMS must maintain on site a file of CEMS data including all raw data, corrected and adjusted, repair logs, calibration checks, adjustments, and test audits. This file must be retained for two years, and is required to be maintained in such a condition that it can easily be audited by an inspector. [14]

G. Quarterly reports shall be used by the Department to determine compliance with the permit. Violations of the CEMS Conditions may result in penalties and/or other enforcement action. [18]

SECTION IV

QUALITY ASSURANCE/QUALITY CONTROL

A. For each CEMS a Quality Assurance/Quality Control (QA/QC) plan shall be submitted to the Department (Attn.: Air Division, Compliance Inspector Supervisor). Quality assurance procedures are defined in 40 CFR, Part 60, Appendix F. This plan shall be submitted within 180 days of the CEMS installation. A QA/QC plan shall consist of procedure and practices which assures acceptable level of monitor data accuracy, precision, representativeness, and availability.

B. The submitted QA/QC plan for each CEMS shall not be considered as accepted until the facility receives a written notification of acceptance from the Department.

C. Facilities responsible for one, or more, CEMS used for compliance monitoring shall meet these minimum requirements and are encouraged to develop and implement a more extensive QA/QC program, or to continue such programs where they already exist. Each QA/QC program must include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities: [15]

1. Calibration of CEMS
   a. Daily calibrations (including the approximate time(s) that the daily zero and span drifts will be checked and the time required to perform these checks and return to stable operation)
2. Calibration drift determination and adjustment of CEMS
   a. Out-of-control period determination
   b. Steps of corrective action
3. Preventive maintenance of CEMS
   a. CEMS information
      1) Manufacture
      2) Model number
      3) Serial number
   b. Scheduled activities (check list)
   c. Spare part inventory
4. Data recording, calculations, and reporting
5. Accuracy audit procedures including sampling and analysis methods
6. Program of corrective action for malfunctioning CEMS

D. As part of the QA/QC plan for each CEMS, a Relative Accuracy Test Audit (RATA), shall be conducted at least once every four calendar quarters. A Relative Accuracy Audit (RAA), or a Cylinder Gas Audit (CGA), may be conducted in the other three quarters but in no more than three quarters in succession. The RATA, RAA, and CGA test procedures shall be included in the QA/QC plan submitted for approval. Additionally, the justification and methodology for any alternate tests shall be submitted with the QA/QC plan. [16]

E. If either the zero or span drift results exceed two times the applicable drift specification in 40 CFR, Part 60, Appendix B for five consecutive, daily periods, the CEMS is out-of-control. If either the zero or span drift results exceed four times the applicable drift specification in Appendix B during a calibration drift check, the CEMS is out-of-control. [17]

1. Out-of-control begins with the hour corresponding to the completion of a daily calibration error, linearity check, or quality assurance audit that indicates that the instrument is not measuring and recording within the applicable performance specifications.

2. Out-of-control ends with the hour corresponding to the completion of an additional calibration error, linearity check, or quality assurance audit following corrective action that demonstrates that the instrument is measuring and recording within the applicable performance specifications.

3. If a CEMS is out-of-control, the data from that out-of-control period is not counted towards meeting the minimum data availability as required and described in the applicable subpart.

F. A back-up monitor may be placed on an emission source to minimize monitor downtime. This back-up CEM is subject to the same QA/QC procedure and practices as the primary CEMS. The back-up CEM shall be certified by a PST. Daily zero-span checks must be performed and recorded in accordance with standard practices. When the primary CEMS goes down, the back-up CEMS may then be engaged to sample, analyze and record the emission source pollutant until repairs are made and the primary unit is placed back in service. Records must be maintained on site when the back-up CEMS is placed in service, these records shall include at a minium the reason the primary CEMS is out of service, the date and time the primary CEMS was out of service and the date and time the primary CEMS was placed back in service.

1 40 CFR, Part 60, Appendix F 2.1
2 40 CFR, Part 60, Appendix F 2.5
3 40 CFR, Part 60, Appendix F 4.3.1 & 5.2.1
4 40 CFR 60.13(b)
5 40 CFR 60.3(j)
6 40 CFR 60.13(d)(1), Part 60, Appendix F 4
7 40 CFR 60.13(e)(2)
8 40 CFR 60.13(g)
9 40 CFR 60.6(a)
10 40 CFR 60.7(5)
11 40 CFR 60.7(c)(2)
12 40 CFR 60.7(c)
13 40 CFR 60.7(d)
14 40 CFR 60.7(e)
15 40 CFR, Part 60, Appendix F 3
16 40 CFR, Part 60, Appendix F 5
17 40 CFR, Part 60, Appendix F 4.3
18 USEPA Guidance on the "Timely and Appropriate Enforcement Response to Significant Air Pollution Violators" (2/7/92)

APPENDIX B

Subpart GG—Standards of Performance for Stationary Gas Turbines

§ 60.330 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour, based on the lower heating value of the fuel fired.

(b) Any facility under paragraph (a) of this section which commences construction, modification, or reconstruction after October 3, 1977, is subject to the requirements of this part except as provided in paragraphs (e) and (j) of § 60.332.

[44 FR 52798, Sept. 10, 1979, as amended at 52 FR 42434, Nov. 5, 1987]

§ 60.331 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Stationary gas turbine* means any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self propelled. It may, however, be mounted on a vehicle for portability.

(b) *Simple cycle gas turbine* means any stationary gas turbine which does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or which does not recover heat from the gas turbine exhaust gases to heat water or generate steam.

(c) *Regenerative cycle gas turbine* means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine.

(d) *Combined cycle gas turbine* means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to heat water or generate steam.

(e) *Emergency gas turbine* means any stationary gas turbine which operates as a mechanical or electrical power source only when the primary power source for a facility has been rendered inoperable by an emergency situation.

(f) *Ice fog* means an atmospheric suspension of highly reflective ice crystals.

(g) *ISO standard day conditions* means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

(h) *Efficiency* means the gas turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output based on the lower heating value of the fuel.

(i) *Peak load* means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.

(j) *Base load* means the load level at which a gas turbine is normally operated.

(k) *Fire-fighting turbine* means any stationary gas turbine that is used solely to pump water for extinguishing fires.

(l) *Turbines employed in oil/gas production or oil/gas transportation* means any stationary gas turbine used to provide power to extract crude oil/natural gas from the earth or to move crude oil/natural gas, or products refined from these substances through pipelines.

(m) A *Metropolitan Statistical Area* or *MSA* as defined by the Department of Commerce.

(n) *Offshore platform gas turbines* means any stationary gas turbine located on a platform in an ocean.

(o) *Garrison facility* means any permanent military installation.

(p) *Gas turbine model* means a group of gas turbines having the same nominal air flow, combuster inlet pressure, combuster inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

(q) *Electric utility stationary gas turbine* means any stationary gas turbine constructed for the purpose of supplying more than one-third of its potential electric output capacity to any utility power distribution system for sale.

(r) *Emergency fuel* is a fuel fired by a gas turbine only during circumstances, such as natural gas supply curtailment or breakdown of delivery system, that make it impossible to fire natural gas in the gas turbine.

(s) *Regenerative cycle gas turbine* means any stationary gas turbine that recovers thermal energy from the exhaust gases and utilizes the thermal energy to preheat air prior to entering the combustor.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982]

§ 60.332 Standard for nitrogen oxides.

(a) On and after the date of the performance test required by § 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (b), (c), and (d) of this section shall comply with one of the following, except as provided in paragraphs (e), (f), (g), (h), (i), (j), (k), and (l) of this section.

(1) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0075 \frac{(14.4)}{Y} + F$$

where:

STD=allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y=manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F=NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

(2) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0150 \frac{(14.4)}{Y} + F$$

where:

STD=allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y=manufacturer's rated heat rate at manufacturer's rated peak load (kilojoules per watt hour), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F=NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

(3) F shall be defined according to the nitrogen content of the fuel as follows:

Fuel-bound nitrogen (percent by weight)	F (NO_x percent by volume)
N≤0.015	0
0.015<N≤0.1	0.04(N)
0.1<N≤0.25	0.004+0.0067(N–0.1)
N>0.25	0.005

where:

N=the nitrogen content of the fuel (percent by weight).

or:

Manufacturers may develop custom fuel-bound nitrogen allowances for each gas turbine model they manufacture. These fuel-bound nitrogen allowances shall be substantiated with data and must be approved for use by the Administrator before the initial performance test required by § 60.8. Notices of approval of custom fuel-bound nitrogen allowances will be published in the FEDERAL REGISTER.

(b) Electric utility stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.

(c) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired, shall comply with the provisions of paragraph (a)(2) of this section.

(d) Stationary gas turbines with a manufacturer's rated base load at ISO conditions of 30 megawatts or less except as provided in § 60.332(b) shall comply with paragraph (a)(2) of this section.

(e) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired and that have commenced construction prior to October 3, 1982 are exempt from paragraph (a) of this section.

(f) Stationary gas turbines using water or steam injection for control of NO_x emissions are exempt from paragraph (a) when ice fog is deemed a traffic hazard by the owner or operator of the gas turbine.

(g) Emergency gas turbines, military gas turbines for use in other than a garrison facility, military gas turbines installed for use as military training facilities, and fire fighting gas turbines are exempt from paragraph (a) of this section.

(h) Stationary gas turbines engaged by manufacturers in research and development of equipment for both gas turbine emission control techniques and gas turbine efficiency improvements are exempt from paragraph (a) on a case-by-case basis as determined by the Administrator.

(i) Exemptions from the requirements of paragraph (a) of this section will be granted on a case-by-case basis as determined by the Administrator in specific geographical areas where mandatory water restrictions are required by governmental agencies because of drought conditions. These exemptions will be allowed only while the mandatory water restrictions are in effect.

(j) Stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour that commenced construction, modification, or reconstruction between the dates of October 3, 1977, and January 27, 1982, and were required in the September 10, 1979, FEDERAL REGISTER (44 FR 52792) to comply with paragraph (a)(1) of this section, except electric utility stationary gas turbines, are exempt from paragraph (a) of this section.

(k) Stationary gas turbines with a heat input greater than or equal to 10.7 gigajoules per hour (10 million Btu/hour) when fired with natural gas are exempt from paragraph (a)(2) of this section when being fired with an emergency fuel.

(l) Regenerative cycle gas turbines with a heat input less than or equal to 107.2 gigajoules per

hour (100 million Btu/hour) are exempt from paragraph (a) of this section.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982]

§ 60.333 Standard for sulfur dioxide.

On and after the date on which the performance test required to be conducted by § 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with one or the other of the following conditions:

(a) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

[44 FR 52798, Sept. 10, 1979]

§ 60.334 Monitoring of operations.

(a) The owner or operator of any stationary gas turbine subject to the provisions of this subpart and using water injection to control NO_x emissions shall install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within ±5.0 percent and shall be approved by the Administrator.

(b) The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

(1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.

(2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.

(c) For the purpose of reports required under § 60.7(c), periods of excess emissions that shall be reported are defined as follows:

(1) *Nitrogen oxides.* Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with § 60.332 by the performance test required in § 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in § 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under § 60.335(a).

(2) *Sulfur dioxide.* Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.

(3) *Ice fog.* Each period during which an exemption provided in § 60.332(g) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

(4) *Emergency fuel.* Each period during which an exemption provided in § 60.332(k) is in effect shall be included in the report required in § 60.7(c). For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982]

§ 60.335 Test methods and procedures.

(a) To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.

(b) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided for in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.

(c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in §§ 60.332 and 60.333(a) as follows:

(1) The nitrogen oxides emission rate (NO_x) shall be computed for each run using the following equation:

$$NO_x=(NO_{xo})\ (P_r/P_o)^{0.5}\ e^{19(H_o-0.00633)}\ (288°K/T_a)^{1.53}$$

where:

NO_x=emission rate of NO_x at 15 percent O_2 and ISO standard ambient conditions, volume percent.
NO_{xo}=observed NO_x concentration, ppm by volume.
P_r=reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.
P_o=observed combustor inlet absolute pressure at test, mm Hg.
H_o=observed humidity of ambient air, g H_2O/g air.
e=transcendental constant, 2.718.
T_a=ambient temperature, °K.

(2) The monitoring device of § 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with § 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.

(3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NO_x emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.

(d) The owner or operator shall determine compliance with the sulfur content standard in § 60.333(b) as follows: ASTM D 2880–71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072–80, D 3031–81, D 4084–82, or D 3246–81 shall be used for the sulfur content of gaseous fuels (incorporated by reference—see § 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.

(e) To meet the requirements of § 60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

(f) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) Instead of using the equation in paragraph (b)(1) of this section, manufacturers may develop ambient condition correction factors to adjust the nitrogen oxides emission level measured by the performance test as provided in § 60.8 to ISO standard day conditions. These factors are developed for each gas turbine model they manufacture in terms of combustion inlet pressure, ambient air pressure, ambient air humidity, and ambient air temperature. They shall be substantiated with data and must be approved for use by the Administrator before the initial performance test required by § 60.8. Notices of approval of custom ambient condition correction factors will be published in the FEDERAL REGISTER.

[54 FR 6675, Feb. 14, 1989, as amended at 54 FR 27016, June 27, 1989]

APPENDIX C

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

SOURCE: 55 FR 37683, Sept. 12, 1990, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/hr).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, § 60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units which meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§ 60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in § 60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under § 60.14.

[55 FR 37683, Sept. 12, 1990, as amended at 61 FR 20736, May 8, 1996]

§ 60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society for Testing and Materials in ASTM D388–77, "Standard Specification for Classification of Coals by Rank" (incorporated by reference—see § 60.17); coal refuse; and petroleum coke. Synthetic fuels derived from coal for the purpose of creating useful heat, including but not limited to solvent-refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Cogeneration steam generating unit means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (i.e., the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396–78, "Standard Specification for Fuel Oils" (incorporated by reference—see § 60.17).

Dry flue gas desulfurization technology means a sulfur dioxide (SO_2) control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2 control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under § 60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR Parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means (1) a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane, or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835–86, "Standard Specification for Liquefied Petroleum Gases" (incorporated by reference—see § 60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO_2 emissions (nanograms per joule [ng/J], or pounds per million Btu [lb/million Btu] heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396–78, "Standard Specification for Fuel Oils" (incorporated by reference—see § 60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Wet flue gas desulfurization technology means an SO_2 control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of particulate matter (PM) or SO_2.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[55 FR 37683, Sept. 12, 1990, as amended at 61 FR 20736, May 8, 1996]

§ 60.42c Standard for sulfur dioxide.

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, the owner the operator of an affected facility that combusts only coal shall neither: (1) cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction); nor (2) cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/million Btu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 90 percent SO_2 reduction requirement specified in this paragraph and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 20 percent (0.20) of the potential SO_2 emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/million Btu) heat input. If coal is fired with coal refuse, the affected facility is subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 90 percent SO_2 reduction requirement specified in paragraph (a) of this section and the emission limit determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO_2 emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 50 percent (0.50) of the potential SO_2 emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 260 ng/J (0.60 lb/million Btu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO_2 reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under this paragraph.

(1) Affected facilities that have a heat input capacity of 22 MW (75 million Btu/hr) or less.

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a Federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area.

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam gen erating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 215 ng/J (0.50 lb/million Btu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the following:

(1) The percent of potential SO_2 emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel,

(ii) Has a heat input capacity greater than 22 MW (75 million Btu/hr), and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s=(K_aH_a+K_bH_b+K_cH_c)/H_a+H_b+H_c)$$

where:

E_s is the SO_2 emission limit, expressed in ng/J or lb/million Btu heat input,

K_a is 520 ng/J (1.2 lb/million Btu),

K_b is 260 ng/J (0.60 lb/million Btu),

K_c is 215 ng/J (0.50 lb/million Btu),

H_a is the heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [million Btu]

H_b is the heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (million Btu)

H_c is the heat input from the combustion of oil, in J (million Btu).

(f) Reduction in the potential SO_2 emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO_2 emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO_2 control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), or (3) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under § 60.48c(f)(1), (2), or (3), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 million Btu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 million Btu/hr).

(3) Coal-fired facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 million Btu/hr).

(i) The SO_2 emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

§ 60.43c Standard for particulate matter.

(a) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.05 lb/million Btu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/million Btu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/million Btu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/million Btu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever

date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and in § 60.8(b), performance tests required under § 60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in § 60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under § 60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO_2 emission limits under § 60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) and § 60.8, compliance with the percent reduction requirements and SO_2 emission limits under § 60.42c is based on the average percent reduction and the average SO_2 emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO_2 emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 are used to determine the hourly SO_2 emission rate (E_{ho}) and the 30-day average SO_2 emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the continuous emission monitoring system (CEMS). Method 19 shall be used to calculate E_{ao} when using daily fuel sampling or Method 6B.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E_{ho} ($E_{ho}°$) is used in Equation 19–19 of Method 19 to compute the adjusted E_{ao} ($E_{ao}°$). The $E_{ho}°$ is computed using the following formula:

$$E_{ho}°=[E_{ho}-E_w(1-X_k)]/X_k$$

where:

$E_{ho}°$ is the adjusted E_{ho}, ng/J (lb/million Btu)

E_{ho} is the hourly SO_2 emission rate, ng/J (lb/million Btu)

E_w is the SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9, ng/J (lb/million Btu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume E_w=0.

X_k is the fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19.

(2) The owner or operator of an affected facility that qualifies under the provisions of § 60.42c(c) or (d) [where percent reduction is not required] does not have to measure the parameters E_w or X_k if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19.

(f) Affected facilities subject to the percent reduction requirements under § 60.42c(a) or (b) shall determine compliance with the SO_2 emission limits under § 60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO_2 emission rate is computed using the following formula:

$$\%P_s=100(1-\%R_g/100)(1-\%R_f/100)$$

where

$\%P_s$ is the percent of potential SO_2 emission rate, in percent

$\%R_g$ is the SO_2 removal efficiency of the control device as determined by Method 19, in percent

$\%R_f$ is the SO_2 removal efficiency of fuel pretreatment as determined by Method 19, in percent

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g$ ($\%R_g°$) is computed from $E_{ao}°$ from paragraph (e)(1) of this section and an adjusted average SO_2 inlet rate ($E_{ai}°$) using the following formula:

$$\%R_g°=100\ [1.0-E_{ao}°/E_{ai}°)]$$

where:

$\%R_g^o$ is the adjusted $\%R_g$, in percent

E_{ao}^o is the adjusted E_{ao}, ng/J (lb/million Btu)

E_{ai}^o is the adjusted average SO_2 inlet rate, ng/J (lb/million Btu)

(ii) To compute E_{ai}^o, an adjusted hourly SO_2 inlet rate (E_{hi}^o) is used. The E_{hi}^o is computed using the following formula:

$$E_{hi}^o=[E_{hi} - E_w (1 - X_k)]/X_k$$

where:

E_{hi}^o is the adjusted E_{hi}, ng/J (lb/million Btu)

E_{hi} is the hourly SO_2 inlet rate, ng/J (lb/million Btu)

E_w is the SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19, ng/J (lb/million Btu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume $E_w = 0$.

X_k is the fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under § 60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under § 60.46c(d)(2).

(h) For affected facilities subject to § 60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under § 60.48c(f)(1), (2), or (3), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2 standards under § 60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour averaged firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under § 60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or E_{ho} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under § 60.43c shall conduct an initial performance test as required under § 60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods.

(1) Method 1 shall be used to select the sampling site and the number of traverse sampling points. The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry square cubic meters (dscm) [60 dry square cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(2) Method 3 shall be used for gas analysis when applying Method 5, Method 5B, of Method 17.

(3) Method 5, Method 5B, or Method 17 shall be used to measure the concentration of PM as follows:

(i) Method 5 may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 2.1 and 2.3 of Method 5B may be used in Method 17 only if Method 17 is used in conjuction with a wet scrubber system. Method 17 shall not be used in conjuction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B may be used in conjunction with a wet scrubber system.

(4) For Method 5 or Method 5B, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 °C (320 °F).

(5) For determination of PM emissions, an oxygen or carbon dioxide measurement shall be obtained simultaneously with each run of Method 5,

Method 5B, or Method 17 by traversing the duct at the same sampling location.

(6) For each run using Method 5, Method 5B, or Method 17, the emission rates expressed in ng/J (lb/million Btu) heat input shall be determined using:

(i) The oxygen or carbon dioxide measurements and PM measurements obtained under this section,

(ii) The dry basis F-factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 (appendix A).

(7) Method 9 (6-minute average of 24 observations) shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under § 60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

§ 60.46c Emission monitoring for sulfur dioxide

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO_2 emission limits under § 60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO_2 concentrations and either oxygen or carbon dioxide concentrations at the outlet of the SO_2 control device (or the outlet of the steam generating unit if no SO_2 control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under § 60.42c shall measure SO_2 concentrations and either oxygen or carbon dioxide concentrations at both the inlet and outlet of the SO_2 control device.

(b) The 1-hour average SO_2 emission rates measured by a CEM shall be expressed in ng/J or lb/million Btu heat input and shall be used to calculate the average emission rates under § 60.42c. Each 1-hour average SO_2 emission rate must be based on at least 30 minutes of operation and include at least 2 data points representing two 15-minute periods. Hourly SO_2 emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 (appendix B).

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 (appendix F).

(3) For affected facilities subject to the percent reduction requirements under § 60.42c, the span value of the SO_2 CEMS at the inlet to the SO_2 control device shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted, and the span value of the SO_2 CEMS at the outlet from the SO_2 control device shall be 50 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of § 60.42c, the span value of the SO_2 CEMS at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEM at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by using Method 6B. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19. Method 19 provides procedures for converting these measurements into the format to be used in calculating the average SO_2 input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fule tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur con-

tent of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B may be used in lieu of CEMS to measure SO_2 at the inlet or outlet of the SO_2 control system. An initial stratification test is required to verify the adequacy of the Method 6B sampling location. The stratification test shall consist of three paired runs of a suitable SO_2 and carbon dioxide measurement train operated at the candidate location and a second similar train operated according to the procedures in § 3.2 and the applicable procedures in section 7 of Performance Specification 2 (appendix B). Method 6B, Method 6A, or a combination of Methods 6 and 3 or Methods 6C and 3A are suitable measurement techniques. If Method 6B is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to § 60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, as described under § 60.48c(f) (1), (2), or (3), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§ 60.47c Emission monitoring for particulate matter.

(a) The owner or operator of an affected facility combusting coal, residual oil, or wood that is subject to the opacity standards under § 60.43c shall install, calibrate, maintain, and operate a CEMS for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system.

(b) All CEMS for measuring opacity shall be operated in accordance with the applicable procedures under Performance Specification 1 (appendix B). The span value of the opacity CEMS shall be between 60 and 80 percent.

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by § 60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under § 60.42c, or § 60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO_2 emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of § 60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2 emission limits of § 60.42c, or the PM or opacity limits of § 60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS using the applicable performance specifications in appendix B.

(c) The owner or operator of each coal-fired, residual oil-fired, or wood-fired affected facility subject to the opacity limits under § 60.43c(c) shall submit excess emission reports for any calendar

quarter for which there are excess emissions from the affected facility. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report semiannually stating that no excess emissioins occurred during the semiannual reporting period. The initial quarterly report shall be postmarked by the 30th day of the third month following the completion of the initial performance test, unless no excess emissions occur during that quarter. The initial semiannual report shall be postmarked by the 30th day of the sixth month following the completion of the initial performance test, or following the date of the previous quarterly report, as applicable. Each subsequent quarterly or semiannual report shall be postmarked by the 30th day following the end of the reporting period.

(d) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall submit quarterly reports to the Administrator. The initial quarterly report shall be postmarked by the 30th day of the third month following the completion of the initial performance test. Each subsequenty quarterly report shall be postmarked by the 30th day following the end of the reporting period.

(e) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.43c shall keep records and submit quarterly reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO_2 emission rate (ng/J or lb/million Btu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period in the quarter; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO_2 emission rate calculated during the reporting period, ending with the last 30-day period in the quarter; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO_2 or diluent (oxygen or carbon dioxide) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 (appendix B).

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), or (3) of this section, as applicable. In addition to records of fuel supplier certifications, the quarterly report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the quarter.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier; and

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in § 60.41c.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another lo-

cation. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(g) The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day.

(h) The owner or operator of each affected facility subject to a Federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under § 60.42c or § 60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

APPENDIX D

Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

SOURCE: 52 FR 47842, Dec. 16, 1987, unless otherwise noted.

§ 60.40b Applicability and delegation of authority.

(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu/hour).

(b) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1984, but on or before June 19, 1986, is subject to the following standards:

(1) Coal-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 million Btu/hour), inclusive, are subject to the particulate matter and nitrogen oxides standards under this subpart.

(2) Coal-fired affected facilities having a heat input capacity greater than 73 MW (250 million Btu/hour) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; § 60.40) are subject to the particulate matter and nitrogen oxides standards under this subpart and to the sulfur dioxide standards under subpart D (§ 60.43).

(3) Oil-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 million Btu/hour), inclusive, are subject to the nitrogen oxides standards under this subpart.

(4) Oil-fired affected facilities having a heat input capacity greater than 73 MW (250 million Btu/hour) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; § 60.40) are also subject to the nitrogen oxides standards under this subpart and the particulate matter and sulfur dioxide standards under subpart D (§ 60.42 and § 60.43).

(c) Affected facilities which also meet the applicability requirements under subpart J (Standards of performance for petroleum refineries; § 60.104) are subject to the particulate matter and nitrogen oxides standards under this subpart and the sulfur dioxide standards under subpart J (§ 60.104).

(d) Affected facilities which also meet the applicability requirements under subpart E (Standards of performance for incinerators; § 60.50) are subject to the nitrogen oxides and particulate matter standards under this subpart.

(e) Steam generating units meeting the applicability requirements under subpart Da (Standards of performance for electric utility steam generating units; § 60.40a) are not subject to this subpart.

(f) Any change to an existing steam generating unit for the sole purpose of combusting gases containing TRS as defined under § 60.281 is not considered a modification under § 60.14 and the steam generating unit is not subject to this subpart.

(g) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the following authorities shall be retained by the Administrator and not transferred to a State.

(1) Section 60.44b(f).

(2) Section 60.44b(g).

(3) Section 60.49b(a)(4).

§ 60.41b Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from the fuels listed in § 60.42b(a), § 60.43b(a), or § 60.44b(a), as applicable, during a calendar year and the potential heat input to the steam generating unit had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility in a calendar year.

Byproduct/waste means any liquid or gaseous substance produced at chemical manufacturing plants or petroleum refineries (except natural gas, distillate oil, or residual oil) and combusted in a steam generating unit for heat recovery or for disposal. Gaseous substances with carbon dioxide levels greater than 50 percent or carbon monoxide levels greater than 10 percent are not byproduct/waste for the purposes of this subpart.

Chemical manufacturing plants means industrial plants which are classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 28.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388–77, Standard Specification for Classification of Coals by Rank (IBR—see § 60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any byproduct of coal mining or coal cleaning operations with an ash content greater than 50 percent, by weight, and a heating value less than 13,900 kJ/kg (6,000 Btu/lb) on a dry basis.

Combined cycle system means a system in which a separate source, such as a gas turbine, internal combustion engine, kiln, etc., provides exhaust gas to a heat recovery steam generating unit.

Conventional technology means wet flue gas desulfurization (FGD) technology, dry FGD technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396–78, Standard Specifications for Fuel Oils (incorporated by reference—see § 60.17).

Dry flue gas desulfurization technology means a sulfur dioxide control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline slurries or solutions used in dry flue gas desulfurization technology include but are not limited to lime and sodium.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary gas turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.

Emerging technology means any sulfur dioxide control system that is not defined as a conventional technology under this section, and for which the owner or operator of the facility has applied to the Administrator and received approval to operate as an emerging technology under § 60.49b(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State Implementation Plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed combustion technology means combustion of fuel in a bed or series of beds (including but not limited to bubbling bed units and circulating bed units) of limestone aggregate (or other sorbent materials) in which these materials are forced upward by the flow of combustion air and the gaseous products of combustion.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Full capacity means operation of the steam generating unit at 90 percent or more of the maximum steady-state design heat input capacity.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat input from preheated combustion air, recirculated flue gases, or exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

Heat release rate means the steam generating unit design heat input capacity (in MW or Btu/hour) divided by the furnace volume (in cubic meters or cubic feet); the furnace volume is that volume bounded by the front furnace wall where the burner is located, the furnace side waterwall, and extending to the level just below or in front of the first row of convection pass tubes.

Heat transfer medium means any material that is used to transfer heat from one point to another point.

High heat release rate means a heat release rate greater than 730,000 J/sec-m^3 (70,000 Btu/hour-ft^3).

Lignite means a type of coal classified as lignite A or lignite B by the American Society of Testing and Materials in ASTM D388–77, Standard Specification for Classification of Coals by Rank (IBR—see § 60.17).

Low heat release rate means a heat release rate of 730,000 J/sec-m^3 (70,000 Btu/hour-ft^3) or less.

Mass-feed stoker steam generating unit means a steam generating unit where solid fuel is introduced directly into a retort or is fed directly onto a grate where it is combusted.

Maximum heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel on a steady state basis, as determined by the physical design and characteristics of the steam generating unit.

Municipal-type solid waste means refuse, more than 50 percent of which is waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible materials such as glass and rock.

Natural gas means (1) a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or (2) liquid petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835–82, "Standard Specification for Liquid Petroleum Gases" (IBR—see § 60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil.

Petroleum refinery means industrial plants as classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 29.

Potential sulfur dioxide emission rate means the theoretical sulfur dioxide emissions (ng/J, lb/million Btu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Pulverized coal-fired steam generating unit means a steam generating unit in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the steam generating unit where it is fired in suspension. This includes both conventional pulverized coal-fired and micropulverized coal-fired steam generating units.

Residual oil means crude oil, fuel oil numbers 1 and 2 that have a nitrogen content greater than 0.05 weight percent, and all fuel oil numbers 4, 5 and 6, as defined by the American Society of Testing and Materials in ASTM D396–78, Standard Specifications for Fuel Oils (IBR—see § 60.17).

Spreader stoker steam generating unit means a steam generating unit in which solid fuel is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

Steam generating unit means a device that combusts any fuel or byproduct/waste to produce steam or to heat water or any other heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters as they are defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Very low sulfur oil means an oil that contains no more than 0.5 weight percent sulfur or that, when combusted without sulfur dioxide emission control, has a sulfur dioxide emission rate equal to or less than 215 ng/J (0.5 lb/million Btu) heat input.

Wet flue gas desulfurization technology means a sulfur dioxide control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gas with an alkaline slurry or solution and forming a liquid material. This definition applies to devices where the aqueous liquid material product of this contact is subsequently converted to other forms. Alkaline reagents used in wet flue gas desulfurization technology include, but are not limited to, lime, limestone, and sodium.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of particulate matter or sulfur dioxide.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including, but not limited to, sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51819, Dec. 18, 1989]

§ 60.42b Standard for sulfur dioxide.

(a) Except as provided in paragraphs (b), (c), (d), or (j) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal or oil shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 10 percent (0.10) of the potential sulfur dioxide emission rate (90 percent reduction) and that contain sulfur dioxide in excess of the emission limit determined according to the following formula:

$$E_s=(K_aH_a+K_bH_b)/(H_a+H_b)$$

where:

E_s is the sulfur dioxide emission limit, in ng/J or lb/million Btu heat input,

K_a is 520 ng/J (or 1.2 lb/million Btu),

K_b is 340 ng/J (or 0.80 lb/million Btu),

H_a is the heat input from the combustion of coal, in J (million Btu),

H_b is the heat input from the combustion of oil, in J (million Btu).

Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat input to the affected facility from exhaust gases from another source,

such as gas turbines, internal combustion engines, kilns, etc.

(b) On and after the date on which the performance test is completed or required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility that combusts coal refuse alone in a fluidized bed combustion steam generating unit shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 20 percent of the potential sulfur dioxide emission rate (80 percent reduction) and that contain sulfur dioxide in excess of 520 ng/J (1.2 lb/million Btu) heat input. If coal or oil is fired with coal refuse, the affected facility is subject to paragraph (a) or (d) of this section, as applicable.

(c) On and after the date on which the performance test is completed or is required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility that combusts coal or oil, either alone or in combination with any other fuel, and that uses an emerging technology for the control of sulfur dioxide emissions, shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 50 percent of the potential sulfur dioxide emission rate (50 percent reduction) and that contain sulfur dioxide in excess of the emission limit determined according to the following formula:

$$E_s=(K_cH_c+K_dH_d)/H_c+H_d)$$

where:

E_s is the sulfur dioxide emission limit, expressed in ng/J (lb/million Btu) heat input,

K_c is 260 ng/J (0.60 lb/million Btu),

K_d is 170 ng/J (0.40 lb/million Btu),

H_c is the heat input from the combustion of coal, J (million Btu),

H_d is the heat input from the combustion of oil, J (million Btu).

Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels, or from the heat input to the affected facility from exhaust gases from another source, such as gas turbines, internal combustion engines, kilns, etc.

(d) On and after the date on which the performance test is completed or required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility listed in paragraphs (d) (1), (2), or (3) of this section shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 520 ng/J (1.2 lb/million Btu) heat input if the affected facility combusts coal, or 215 ng/J (0.5 lb/million Btu) heat input if the affected facility combusts oil other than very low sulfur oil. Percent reduction requirements are not applicable to affected facilities under this paragraph.

(1) Affected facilities that have an annual capacity factor for coal and oil of 30 percent (0.30) or less and are subject to a Federally enforceable permit limiting the operation of the affected facility to an annual capacity factor for coal and oil of 30 percent (0.30) or less;

(2) Affected facilities located in a noncontinental area; or

(3) Affected facilities combusting coal or oil, alone or in combination with any other fuel, in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat input to the steam generating unit is from combustion of coal and oil in the duct burner and 70 percent (0.70) or more of the heat input to the steam generating unit is from the exhaust gases entering the duct burner.

(e) Except as provided in paragraph (f) of this section, compliance with the emission limits, fuel oil sulfur limits, and/or percent reduction requirements under this section are determined on a 30-day rolling average basis.

(f) Except as provided in paragraph (j)(2) of this section, compliance with the emission limits or fuel oil sulfur limits under this section is determined on a 24-hour average basis for affected facilities that (1) have a Federally enforceable permit limiting the annual capacity factor for oil to 10 percent or less, (2) combust only very low sulfur oil, and (3) do not combust any other fuel.

(g) Except as provided in paragraph (i) of this section, the sulfur dioxide emission limits and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(h) Reductions in the potential sulfur dioxide emission rate through fuel pretreatment are not credited toward the percent reduction requirement under paragraph (c) of this section unless:

(1) Fuel pretreatment results in a 50 percent or greater reduction in potential sulfur dioxide emissions and

(2) Emissions from the pretreated fuel (without combustion or post combustion sulfur dioxide control) are equal to or less than the emission limits specified in paragraph (c) of this section.

(i) An affected facility subject to paragraph (a), (b), or (c) of this section may combust very low sulfur oil or natural gas when the sulfur dioxide control system is not being operated because of malfunction or maintenance of the sulfur dioxide control system.

(j) Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall

demonstrate that the oil meets the definition of very low sulfur oil by: (1) Following the performance testing procedures as described in § 60.45b(c) or § 60.45b(d), and following the monitoring procedures as described in § 60.47b(a) or § 60.47b(b) to determine sulfur dioxide emission rate or fuel oil sulfur content; or (2) maintaining fuel receipts as described in § 60.49b(r).

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51819, Dec. 18, 1989]

§ 60.43b Standard for particulate matter.

(a) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility which combusts coal or combusts mixtures of coal with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of the following emission limits:

(1) 22 ng/J (0.05 lb/million Btu) heat input,

(i) If the affected facility combusts only coal, or

(ii) If the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/million Btu) heat input if the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels greater than 10 percent (0.10) and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(3) 86 ng/J (0.20 lb/million Btu) heat input if the affected facility combusts coal or coal and other fuels and

(i) Has an annual capacity factor for coal or coal and other fuels of 30 percent (0.30) or less,

(ii) Has a maximum heat input capacity of 73 MW (250 million Btu/hour) or less,

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for coal or coal and other solid fuels, and

(iv) Construction of the affected facility commenced after June 19, 1984, and before November 25, 1986.

(b) On and after the date on which the performance test is completed or required to be completed under 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts oil (or mixtures of oil with other fuels) and uses a conventional or emerging technology to reduce sulfur dioxide emissions shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of 43 ng/J (0.10 lb/million Btu) heat input.

(c) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts wood, or wood with other fuels, except coal, shall cause to be discharged from that affected facility any gases that contain particulate matter in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/million Btu) heat input if the affected facility has an annual capacity factor greater than 30 percent (0.30) for wood.

(2) 86 ng/J (0.20 lb/million Btu) heat input if

(i) The affected facility has an annual capacity factor of 30 percent (0.30) or less for wood,

(ii) Is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for wood, and

(iii) Has a maximum heat input capacity of 73 MW (250 million Btu/hour) or less.

(d) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts municipal-type solid waste or mixtures of municipal-type solid waste with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/million Btu) heat input,

(i) If the affected facility combusts only municipal-type solid waste, or

(ii) If the affected facility combusts municipal-type solid waste and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 86 ng/J (0.20 lb/million Btu) heat input if the affected facility combusts municipal-type solid waste or municipal-type solid waste and other fuels; and

(i) Has an annual capacity factor for municipal-type solid waste and other fuels of 30 percent (0.30) or less,

(ii) Has a maximum heat input capacity of 73 MW (250 million Btu/hour) or less,

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) for municipal-type solid waste, or municipal-type solid waste and other fuels, and

(iv) Construction of the affected facility commenced after June 19, 1984, but before November 25, 1986.

(e) For the purposes of this section, the annual capacity factor is determined by dividing the actual heat input to the steam generating unit during the calendar year from the combustion of coal,

wood, or municipal-type solid waste, and other fuels, as applicable, by the potential heat input to the steam generating unit if the steam generating unit had been operated for 8,760 hours at the maximum design heat input capacity.

(f) On and after the date on which the initial performance test is completed or is required to be completed under 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(g) The particulate matter and opacity standards apply at all times, except during periods of startup, shutdown or malfunction.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51819, Dec. 18, 1989]

§ 60.44b Standard for nitrogen oxides.

(a) Except as provided under paragraph (k) of this section, on and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides (expressed as NO_2) in excess of the following emission limits:

Fuel/Steam generating unit type	Nitrogen oxide emission limits ng/J (lb/million Btu) (expressed as NO_2) heat input
(1) Natural gas and distillate oil, except (4):	
(i) Low heat release rate	43 (0.10)
(ii) High heat release rate	86 (0.20)
(2) Residual oil:	
(i) Low heat release rate	130 (0.30)
(ii) High heat release rate	170 (0.40)
(3) Coal:	
(i) Mass-feed stoker	210 (0.50)
(ii) Spreader stoker and fluidized bed combustion	260 (0.60)
(iii) Pulverized coal	300 (0.70)
(iv) Lignite, except (v)	260 (0.60)
(v) Lignite mined in North Dakota, South Dakota, or Montana and combusted in a slag tap furnace	340 (0.80)
(vi) Coal-derived synthetic fuels	210 (0.50)
(4) Duct burner used in a combined cycle system:	
(i) Natural gas and distillate oil	86 (0.20)
(ii) Residual oil	170 (0.40)

(b) Except as provided under paragraph (k) of this section, on and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts mixtures of coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of a limit determined by use of the following formula:

$$E_n=[(EL_{go}\ H_{go})+(EL_{ro}\ H_{ro})+(EL_c\ H_c)]/(H_{go}+H_{ro}+H_c)$$

where:

E_n is the nitrogen oxides emission limit (expressed as NO_2), ng/J (lb/million Btu)

EL_{go} is the appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/million Btu)

H_{go} is the heat input from combustion of natural gas or distillate oil,

EL_{ro} is the appropriate emission limit from paragraph (a)(2) for combustion of residual oil,

H_{ro} is the heat input from combustion of residual oil,

EL_c is the appropriate emission limit from paragraph (a)(3) for combustion of coal, and

H_c is the heat input from combustion of coal.

(c) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility that simultaneously combusts coal or oil, or a mixture of these fuels with natural gas, and wood, municipal-type solid waste, or any other fuel shall cause to be discharged into the atmosphere any gases that contain nitrogen oxides in excess of the emission limit for the coal or oil, or mixture of these fuels with natural gas combusted in the affected facility, as determined pursuant to paragraph (a) or (b) of this section, unless the affected facility has an annual capacity factor for coal or oil, or mixture of these fuels with natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, or a mixture of these fuels with natural gas.

(d) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts natural gas with wood, municipal-type solid waste, or other solid fuel, except coal, shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of 130 ng/J (0.30 lb/million Btu) heat input unless the affected facility has an annual capacity factor for natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for natural gas.

(e) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal, oil, or natural gas with byproduct/waste shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of an emission limit determined by the following formula unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement which limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less:

$$E_n=[(EL_{go}\ H_{go})+(EL_{ro}\ H_{ro})+(EL_c\ H_c)]/(H_{go}+H_{ro}+H_c)$$

where:

E_n is the nitrogen oxides emission limit (expressed as NO_2), ng/J (lb/million Btu)

EL_{go} is the appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/million Btu).

H_{go} is the heat input from combustion of natural gas, distillate oil and gaseous byproduct/waste, ng/J (lb/million Btu).

EL_{ro} is the appropriate emission limit from paragraph (a)(2) for combustion of residual oil, ng/J (lb/million Btu)

H_{ro} is the heat input from combustion of residual oil and/or liquid byproduct/waste.

EL_c is the appropriate emission limit from paragraph (a)(3) for combustion of coal, and

H_c is the heat input from combustion of coal.

(f) Any owner or operator of an affected facility that combusts byproduct/waste with either natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility to establish a nitrogen oxides emission limit which shall apply specifically to that affected facility when the byproduct/waste is combusted. The petition shall include sufficient and appropriate data, as determined by the Administrator, such as nitrogen oxides emissions from the affected facility, waste composition (including nitrogen content), and combustion conditions to allow the Administrator to confirm that the affected facility is unable to comply with the emission limits in paragraph (e) of this section and to determine the appropriate emission limit for the affected facility.

(1) Any owner or operator of an affected facility petitioning for a facility-specific nitrogen oxides emission limit under this section shall:

(i) Demonstrate compliance with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, by conducting a 30-day performance test as provided in § 60.46b(e). During the performance test only natural gas, distillate oil, or residual oil shall be combusted in the affected facility; and

(ii) Demonstrate that the affected facility is unable to comply with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, when gaseous or liquid byproduct/waste is combusted in the affected facility under the same conditions and using the same technological system of emission reduction applied when demonstrating compliance under paragraph (f)(1)(i) of this section.

(2) The nitrogen oxides emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, shall be applicable to the affected facility until and unless the petition is approved by the Administrator. If the petition is approved by the Administrator, a facility-specific nitrogen oxides emission limit will be established at the nitrogen oxides emission level achievable when the affected facility is combusting oil or natural gas and byproduct/waste in a manner that the Administrator determines to be consistent with minimizing nitrogen oxides emissions.

(g) Any owner or operator of an affected facility that combusts hazardous waste (as defined by 40 CFR part 261 or 40 CFR part 761) with natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility for a waiver from compliance with the nitrogen oxides emission limit which applies specifically to that affected facility. The petition must include sufficient and appropriate data, as determined by the Administrator, on nitrogen oxides emissions from the affected facility, waste destruction efficiencies, waste composition (including nitrogen content), the quantity of specific wastes to be combusted and combustion conditions to allow the Administrator to determine if the affected facility is able to comply with the nitrogen oxides emission limits required by this section. The owner or operator of the affected facility shall demonstrate that when hazardous waste is combusted in the affected facility, thermal destruction efficiency requirements for hazardous waste specified in an applicable federally enforceable requirement preclude compliance with the nitrogen oxides emission limits of this section. The nitrogen oxides emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, are applicable to the affected facility until and unless the petition is approved by the Administrator. (See 40 CFR 761.70 for regulations applicable to the incineration of materials containing polychlorinated biphenyls (PCB's).)

(h) For purposes of paragraph (i) of this section, the nitrogen oxide standards under this section

apply at all times including periods of startup, shutdown, or malfunction.

(i) Except as provided under paragraph (j) of this section, compliance with the emission limits under this section is determined on a 30-day rolling average basis.

(j) Compliance with the emission limits under this section is determined on a 24-hour average basis for the initial performance test and on a 3-hour average basis for subsequent performance tests for any affected facilities that:

(1) Combust, alone or in combination, only natural gas, distillate oil, or residual oil with a nitrogen content of 0.30 weight percent or less;

(2) Have a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less; and

(3) Are subject to a Federally enforceable requirement limiting operation of the affected facility to the firing of natural gas, distillate oil, and/or residual oil with a nitrogen content of 0.30 weight percent or less and limiting operation of the affected facility to a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil and a nitrogen content of 0.30 weight percent or less.

(k) Affected facilities that meet the criteria described in paragraphs (j) (1), (2), and (3) of this section, and that have a heat input capacity of 73 MW (250 million Btu/hour) or less, are not subject to the nitrogen oxides emission limits under this section.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51825, Dec. 18, 1989]

§ 60.45b Compliance and performance test methods and procedures for sulfur dioxide.

(a) The sulfur dioxide emission standards under § 60.42b apply at all times.

(b) In conducting the performance tests required under § 60.8, the owner or operator shall use the methods and procedures in appendix A of this part or the methods and procedures as specified in this section, except as provided in § 60.8(b). Section 60.8(f) does not apply to this section. The 30-day notice required in § 60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(c) The owner or operator of an affected facility shall conduct performance tests to determine compliance with the percent of potential sulfur dioxide emission rate (% P_s) and the sulfur dioxide emission rate (E_s) pursuant to § 60.42b following the procedures listed below, except as provided under paragraph (d) of this section.

(1) The initial performance test shall be conducted over the first 30 consecutive operating days of the steam generating unit. Compliance with the sulfur dioxide standards shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility.

(2) If only coal or only oil is combusted, the following procedures are used:

(i) The procedures in Method 19 are used to determine the hourly sulfur dioxide emission rate (E_{ho}) and the 30-day average emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the continuous emission monitoring system of § 60.47b (a) or (b).

(ii) The percent of potential sulfur dioxide emission rate (% P_s) emitted to the atmosphere is computed using the following formula:

$$\% P_s = 100\ (1 - \% R_g/100)(1 - \% R_f/100)$$

where:

% R_g is the sulfur dioxide removal efficiency of the control device as determined by Method 19, in percent.

% R_f is the sulfur dioxide removal efficiency of fuel pretreatment as determined by Method 19, in percent.

(3) If coal or oil is combusted with other fuels, the same procedures required in paragraph (c)(2) of this section are used, except as provided in the following:

(i) An adjusted hourly sulfur dioxide emission rate (E_{ho}^o) is used in Equation 19–19 of Method 19 to compute an adjusted 30-day average emission rate (E_{ao}^o). The E_{ho} is computed using the following formula:

$$E_{ho}^o = [E_{ho} - E_w(1 - X_k)]/X_k$$

where:

E_{ho}^o is the adjusted hourly sulfur dioxide emission rate, ng/J (lb/million Btu).

E_{ho} is the hourly sulfur dioxide emission rate, ng/J (lb/million Btu).

E_w is the sulfur dioxide concentration in fuels other than coal and oil combusted in the affected facility, as determined by the fuel sampling and analysis procedures in Method 19, ng/J (lb/million Btu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted.

X_k is the fraction of total heat input from fuel combustion derived from coal, oil, or coal and oil, as determined by applicable procedures in Method 19.

(ii) To compute the percent of potential sulfur dioxide emission rate (% P_s), an adjusted % R_g (% R_g^o) is computed from the adjusted E_{ao}^o from paragraph (b)(3)(i) of this section and an adjusted average sulfur dioxide inlet rate (E_{ai}^o) using the following formula:

$$\% R_g^o = 100\ (1.0 - E_{ao}^o/E_{ai}^o)$$

To compute E_{ai}^{o}, an adjusted hourly sulfur dioxide inlet rate (E_{hi}^{o}) is used. The E_{hi}^{o} is computed using the following formula:

$$E_{hi}^{o}=[E_{hi} \cdot E_{w}(1 \cdot X_{k})]/X_{k}$$

where:

E_{hi}^{o} is the adjusted hourly sulfur dioxide inlet rate, ng/J (lb/million Btu).

E_{hi} is the hourly sulfur dioxide inlet rate, ng/J (lb/million Btu).

(4) The owner or operator of an affected facility subject to paragraph (b)(3) of this section does not have to measure parameters E_w or X_k if the owner or operator elects to assume that X_k=1.0. Owners or operators of affected facilities who assume X_k=1.0 shall

(i) Determine % P_s following the procedures in paragraph (c)(2) of this section, and

(ii) Sulfur dioxide emissions (E_s) are considered to be in compliance with sulfur dioxide emission limits under § 60.42b.

(5) The owner or operator of an affected facility that qualifies under the provisions of § 60.42b(d) does not have to measure parameters E_w or X_k under paragraph (b)(3) of this section if the owner or operator of the affected facility elects to measure sulfur dioxide emission rates of the coal or oil following the fuel sampling and analysis procedures under Method 19.

(d) Except as provided in paragraph (j), the owner or operator of an affected facility that combusts only very low sulfur oil, has an annual capacity factor for oil of 10 percent (0.10) or less, and is subject to a Federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for oil of 10 percent (0.10) or less shall:

(1) Conduct the initial performance test over 24 consecutive steam generating unit operating hours at full load;

(2) Determine compliance with the standards after the initial performance test based on the arithmetic average of the hourly emissions data during each steam generating unit operating day if a continuous emission measurement system (CEMS) is used, or based on a daily average if Method 6B or fuel sampling and analysis procedures under Method 19 are used.

(e) The owner or operator of an affected facility subject to § 60.42b(d)(1) shall demonstrate the maximum design capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. This demonstration will be made during the initial performance test and a subsequent demonstration may be requested at any other time. If the 24-hour average firing rate for the affected facility is less than the maximum design capacity provided by the manufacturer of the affected facility, the 24-hour average firing rate shall be used to determine the capacity utilization rate for the affected facility, otherwise the maximum design capacity provided by the manufacturer is used.

(f) For the initial performance test required under § 60.8, compliance with the sulfur dioxide emission limits and percent reduction requirements under § 60.42b is based on the average emission rates and the average percent reduction for sulfur dioxide for the first 30 consecutive steam generating unit operating days, except as provided under paragraph (d) of this section. The initial performance test is the only test for which at least 30 days prior notice is required unless otherwise specified by the Administrator. The initial performance test is to be scheduled so that the first steam generating unit operating day of the 30 successive steam generating unit operating days is completed within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility. The boiler load during the 30-day period does not have to be the maximum design load, but must be representative of future operating conditions and include at least one 24-hour period at full load.

(g) After the initial performance test required under § 60.8, compliance with the sulfur dioxide emission limits and percent reduction requirements under § 60.42b is based on the average emission rates and the average percent reduction for sulfur dioxide for 30 successive steam generating unit operating days, except as provided under paragraph (d). A separate performance test is completed at the end of each steam generating unit operating day after the initial performance test, and a new 30-day average emission rate and percent reduction for sulfur dioxide are calculated to show compliance with the standard.

(h) Except as provided under paragraph (i) of this section, the owner or operator of an affected facility shall use all valid sulfur dioxide emissions data in calculating % P_s and E_{ho} under paragraph (c), of this section whether or not the minimum emissions data requirements under § 60.46b are achieved. All valid emissions data, including valid sulfur dioxides emission data collected during periods of startup, shutdown and malfunction, shall be used in calculating % P_s and E_{ho} pursuant to paragraph (c) of this section.

(i) During periods of malfunction or maintenance of the sulfur dioxide control systems when oil is combusted as provided under § 60.42b(i), emission data are not used to calculate % P_s or E_s under § 60.42b (a), (b) or (c), however, the emissions data are used to determine compliance with the emission limit under § 60.42b(i).

(j) The owner or operator of an affected facility that combusts very low sulfur oil is not subject to the compliance and performance testing require-

ments of this section if the owner or operator obtains fuel receipts as described in § 60.49b(r).

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51820, 51825, Dec. 18, 1989]

§ 60.46b Compliance and performance test methods and procedures for particulate matter and nitrogen oxides.

(a) The particulate matter emission standards and opacity limits under § 60.43b apply at all times except during periods of startup, shutdown, or malfunction. The nitrogen oxides emission standards under § 60.44b apply at all times.

(b) Compliance with the particulate matter emission standards under § 60.43b shall be determined through performance testing as described in paragraph (d) of this section.

(c) Compliance with the nitrogen oxides emission standards under § 60.44b shall be determined through performance testing under paragraph (e) or (f), or under paragraphs (g) and (h) of this section, as applicable.

(d) To determine compliance with the particulate matter emission limits and opacity limits under § 60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under § 60.8 using the following procedures and reference methods:

(1) Method 3B is used for gas analysis when applying Method 5 or Method 17.

(2) Method 5, Method 5B, or Method 17 shall be used to measure the concentration of particulate matter as follows:

(i) Method 5 shall be used at affected facilities without wet flue gas desulfurization (FGD) systems; and

(ii) Method 17 may be used at facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of sections 2.1 and 2.3 of Method 5B may be used in Method 17 only if it is used after a wet FGD system. Do not use Method 17 after wet FGD systems if the effluent is saturated or laden with water droplets.

(iii) Method 5B is to be used only after wet FGD systems.

(3) Method 1 is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf) except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(4) For Method 5, the temperature of the sample gas in the probe and filter holder is monitored and is maintained at 160 °C (320 °F).

(5) For determination of particulate matter emissions, the oxygen or carbon dioxide sample is obtained simultaneously with each run of Method 5, Method 5B or Method 17 by traversing the duct at the same sampling location.

(6) For each run using Method 5, Method 5B or Method 17, the emission rate expressed in nanograms per joule heat input is determined using:

(i) The oxygen or carbon dioxide measurements and particulate matter measurements obtained under this section,

(ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 (appendix A).

(7) Method 9 is used for determining the opacity of stack emissions.

(e) To determine compliance with the emission limits for nitrogen oxides required under § 60.44b, the owner or operator of an affected facility shall conduct the performance test as required under § 60.8 using the continuous system for monitoring nitrogen oxides under § 60.48(b).

(1) For the initial compliance test, nitrogen oxides from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the nitrogen oxides emission standards under § 60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

(2) Following the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, the owner or operator of an affected facility which combusts coal or which combusts residual oil having a nitrogen content greater than 0.30 weight percent shall determine compliance with the nitrogen oxides emission standards under § 60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

(3) Following the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, the owner or operator of an affected facility which has a heat input capacity greater than 73 MW (250 million Btu/hour) and which combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall determine compliance with the nitrogen oxides standards under § 60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling

average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

(4) Following the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, the owner or operator of an affected facility which has a heat input capacity of 73 MW (250 million Btu/hour) or less and which combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the nitrogen oxides standards under § 60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, nitrogen oxides emissions data collected pursuant to § 60.48b(g)(1) or § 60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the nitrogen oxides emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

(5) If the owner or operator of an affected facility which combusts residual oil does not sample and analyze the residual oil for nitrogen content, as specified in § 60.49b(e), the requirements of paragraph (iii) of this section apply and the provisions of paragraph (iv) of this section are inapplicable.

(f) To determine compliance with the emission limit for nitrogen oxides required by § 60.44b(a)(4) for duct burners used in combined cycle systems, the owner or operator of an affected facility shall conduct the performance test required under § 60.8 using the nitrogen oxides and oxygen measurement procedures in 40 CFR part 60 appendix A, Method 20. During the performance test, one sampling site shall be located as close as practicable to the exhaust of the turbine, as provided by section 6.1.1 of Method 20. A second sampling site shall be located at the outlet to the steam generating unit. Measurements of nitrogen oxides and oxygen shall be taken at both sampling sites during the performance test. The nitrogen oxides emission rate from the combined cycle system shall be calculated by subtracting the nitrogen oxides emission rate measured at the sampling site at the outlet from the turbine from the nitrogen oxides emission rate measured at the sampling site at the outlet from the steam generating unit.

(g) The owner or operator of an affected facility described in § 60.44b(j) or § 60.44b(k) shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. The owner or operator of an affected facility shall determine the maximum heat input capacity using the heat loss method described in sections 5 and 7.3 of the ASME *Power Test Codes* 4.1 (see IBR § 60.17(h)). This demonstration of maximum heat input capacity shall be made during the initial performance test for affected facilities that meet the criteria of § 60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of § 60.44b(k). Subsequent demonstrations may be required by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used.

(h) The owner or operator of an affected facility described in § 60.44b(j) that has a heat input capacity greater than 73 MW (250 million Btu/hour) shall:

(1) Conduct an initial performance test as required under § 60.8 over a minimum of 24 consecutive steam generating unit operating hours at maximum heat input capacity to demonstrate compliance with the nitrogen oxides emission standards under § 60.44b using Method 7, 7A, 7E, or other approved reference methods; and

(2) Conduct subsequent performance tests once per calendar year or every 400 hours of operation (whichever comes first) to demonstrate compliance with the nitrogen oxides emission standards under § 60.44b over a minimum of 3 consecutive steam generating unit operating hours at maximum heat input capacity using Method 7, 7A, 7E, or other approved reference methods.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51820, 51825, Dec. 18, 1989; 55 FR 18876, May 7, 1990]

§ 60.47b Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (b) and (f) of this section, the owner or operator of an affected facility subject to the sulfur dioxide standards under § 60.42b shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) for measuring sulfur dioxide concentrations and either oxygen (O_2) or carbon dioxide (CO_2) concentrations and shall record the output of the systems. The sulfur dioxide and either oxygen or carbon dioxide concentrations shall both

be monitored at the inlet and outlet of the sulfur dioxide control device.

(b) As an alternative to operating CEMS as required under paragraph (a) of this section, an owner or operator may elect to determine the average sulfur dioxide emissions and percent reduction by:

(1) Collecting coal or oil samples in an as-fired condition at the inlet to the steam generating unit and analyzing them for sulfur and heat content according to Method 19. Method 19 provides procedures for converting these measurements into the format to be used in calculating the average sulfur dioxide input rate, or

(2) Measuring sulfur dioxide according to Method 6B at the inlet or outlet to the sulfur dioxide control system. An initial stratification test is required to verify the adequacy of the Method 6B sampling location. The stratification test shall consist of three paired runs of a suitable sulfur dioxide and carbon dioxide measurement train operated at the candidate location and a second similar train operated according to the procedures in section 3.2 and the applicable procedures in section 7 of Performance Specification 2. Method 6B, Method 6A, or a combination of Methods 6 and 3 or 3B or Methods 6C and 3A are suitable measurement techniques. If Method 6B is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent.

(3) A daily sulfur dioxide emission rate, E_D, shall be determined using the procedure described in Method 6A, section 7.6.2 (Equation 6A–8) and stated in ng/J (lb/million Btu) heat input.

(4) The mean 30-day emission rate is calculated using the daily measured values in ng/J (lb/million Btu) for 30 successive steam generating unit operating days using equation 19–20 of Method 19.

(c) The owner or operator of an affected facility shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive boiler operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator or the reference methods and procedures as described in paragraph (b) of this section.

(d) The 1-hour average sulfur dioxide emission rates measured by the CEMS required by paragraph (a) of this section and required under § 60.13(h) is expressed in ng/J or lb/million Btu heat input and is used to calculate the average emission rates under § 60.42b. Each 1-hour average sulfur dioxide emission rate must be based on more than 30 minutes of steam generating unit operation and include at least 2 data points with each representing a 15-minute period. Hourly sulfur dioxide emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(e) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 (appendix B).

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 (appendix F).

(3) For affected facilities combusting coal or oil, alone or in combination with other fuels, the span value of the sulfur dioxide CEMS at the inlet to the sulfur dioxide control device is 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the fuel combusted, and the span value of the CEMS at the outlet to the sulfur dioxide control device is 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the fuel combusted.

(f) The owner or operator of an affected facility that combusts very low sulfur oil is not subject to the emission monitoring requirements of this section if the owner or operator obtains fuel receipts as described in § 60.49b(r).

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51820, Dec. 18, 1989; 55 FR 5212, Feb. 14, 1990; 55 FR 18876, May 7, 1990]

§ 60.48b Emission monitoring for particulate matter and nitrogen oxides.

(a) The owner or operator of an affected facility subject to the opacity standard under § 60.43b shall install, calibrate, maintain, and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere and record the output of the system.

(b) Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under § 60.44b shall install, calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system.

(c) The continuous monitoring systems required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is

recorded during calibration checks, and zero and span adjustments.

(d) The 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor required by paragraph (b) of this section and required under § 60.13(h) shall be expressed in ng/J or lb/million Btu heat input and shall be used to calculate the average emission rates under § 60.44b. The 1-hour averages shall be calculated using the data points required under § 60.13(b). At least 2 data points must be used to calculate each 1-hour average.

(e) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

(1) For affected facilities combusting coal, wood or municipal-type solid waste, the span value for a continuous monitoring system for measuring opacity shall be between 60 and 80 percent.

(2) For affected facilities combusting coal, oil, or natural gas, the span value for nitrogen oxides is determined as follows:

Fuel	Span values for nitrogen oxides (PPM)
Natural gas	500
Oil	500
Coal	1,000
Mixtures	500(x+y)+1,000z

where:

x is the fraction of total heat input derived from natural gas,

y is the fraction of total heat input derived from oil, and

z is the fraction of total heat input derived from coal.

(3) All span values computed under paragraph (e)(2) of this section for combusting mixtures of regulated fuels are rounded to the nearest 500 ppm.

(f) When nitrogen oxides emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7, Method 7A, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

(g) The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 million Btu/hour) or less, and which has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, or any mixture of these fuels, greater than 10 percent (0.10) shall:

(1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section, or

(2) Monitor steam generating unit operating conditions and predict nitrogen oxides emission rates as specified in a plan submitted pursuant to § 60.49b(c).

(h) The owner or operator of an affected facility which is subject to the nitrogen oxides standards of § 60.44b(a)(4) is not required to install or operate a continuous monitoring system to measure nitrogen oxides emissions.

(i) The owner or operator of an affected facility described in § 60.44b(j) or § 60.44b(k) is not required to install or operate a continuous monitoring system for measuring nitrogen oxides emissions.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51825, Dec. 18, 1989]

§ 60.49b Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by § 60.7. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility,

(2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§ 60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii), (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i), (j), (k), 60.45b(d), (g), 60.46b(h), or 60.48b(i),

(3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired, and,

(4) Notification that an emerging technology will be used for controlling emissions of sulfur dioxide. The Administrator will examine the description of the emerging technology and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of § 60.42b(a) unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the sulfur dioxide, particulate matter, and/or nitrogen oxides emission limits under §§ 60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B. The owner or operator of each affected facility described in § 60.44b(j) or § 60.44b(k) shall submit to the Administrator the maximum heat input capacity data

from the demonstration of the maximum heat input capacity of the affected facility.

(c) The owner or operator of each affected facility subject to the nitrogen oxides standard of § 60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions under the provisions of § 60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored under § 60.48b(g)(2) and the records to be maintained under § 60.49b(j). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. The plan shall:

(1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and nitrogen oxides emission rates (i.e., ng/J or lbs/million Btu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (i.e., the ratio of primary air to secondary and/or tertiary air) and the level of excess air (i.e., flue gas oxygen level);

(2) Include the data and information that the owner or operator used to identify the relationship between nitrogen oxides emission rates and these operating conditions;

(3) Identify how these operating conditions, including steam generating unit load, will be monitored under § 60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under § 60.49b(j).

If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan.

(d) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for each calendar quarter. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

(e) For an affected facility that combusts residual oil and meets the criteria under §§ 60.46b(e)(4), 60.44b(j), or (k), the owner or operator shall maintain records of the nitrogen content of the residual oil combusted in the affected facility and calculate the average fuel nitrogen content on a per calendar quarter basis. The nitrogen content shall be determined using ASTM Method D3431–80, Test Method for Trace Nitrogen in Liquid Petroleum Hydrocarbons (IBR-see § 60.17), or fuel suppliers. If residual oil blends are being combusted, fuel nitrogen specifications may be prorated based on the ratio of residual oils of different nitrogen content in the fuel blend.

(f) For facilities subject to the opacity standard under § 60.43b, the owner or operator shall maintain records of opacity.

(g) Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under § 60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date.

(2) The average hourly nitrogen oxides emission rates (expressed as NO_2) (ng/J or lb/million Btu heat input) measured or predicted.

(3) The 30-day average nitrogen oxides emission rates (ng/J or lb/million Btu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.

(4) Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under § 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken.

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

(7) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(8) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

(9) Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(h) The owner or operator of any affected facility in any category listed in paragraphs (h)(1) or (2) of this section is required to submit excess emission reports for any calendar quarter during which there are excess emissions from the affected facility. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period.

(1) Any affected facility subject to the opacity standards under § 60.43b(e) or to the operating parameter monitoring requirements under § 60.13(i)(1).

(2) Any affected facility that is subject to the nitrogen oxides standard of § 60.44b, and that

(i) Combusts natural gas, distillate oil, or residual oil with a nitrogen content of 0.3 weight percent or less, or

(ii) Has a heat input capacity of 73 MW (250 million Btu/hour) or less and is required to monitor nitrogen oxides emissions on a continuous basis under § 60.48b(g)(1) or steam generating unit operating conditions under § 60.48b(g)(2).

(3) For the purpose of § 60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under § 60.43b(f).

(4) For purposes of § 60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average nitrogen oxides emission rate, as determined under § 60.46b(e), which exceeds the applicable emission limits in § 60.44b.

(i) The owner or operator of any affected facility subject to the continuous monitoring requirements for nitrogen oxides under § 60.48(b) shall submit a quarterly report containing the information recorded under paragraph (g) of this section. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

(j) The owner or operator of any affected facility subject to the sulfur dioxide standards under § 60.42b shall submit written reports to the Administrator for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

(k) For each affected facility subject to the compliance and performance testing requirements of § 60.45b and the reporting requirement in paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average sulfur dioxide emission rate (ng/J or lb/million Btu heat input) measured during the reporting period, ending with the last 30-day period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent reduction in sulfur dioxide emissions calculated during the reporting period, ending with the last 30-day period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken.

(4) Identification of the steam generating unit operating days that coal or oil was combusted and for which sulfur dioxide or diluent (oxygen or carbon dioxide) data have not been obtained by an approved method for at least 75 percent of the operating hours in the steam generating unit operating day; justification for not obtaining sufficient data; and description of corrective action taken.

(5) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(7) Identification of times when hourly averages have been obtained based on manual sampling methods.

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS.

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3.

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(11) The annual capacity factor of each fired as provided under paragraph (d) of this section.

(l) For each affected facility subject to the compliance and performance testing requirements of § 60.45b(d) and the reporting requirements of paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates when the facility was in operation during the reporting period;

(2) The 24-hour average sulfur dioxide emission rate measured for each steam generating unit operating day during the reporting period that coal or oil was combusted, ending in the last 24-hour period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(3) Identification of the steam generating unit operating days that coal or oil was combusted for which sulfur dioxide or diluent (oxygen or carbon dioxide) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining suffi-

cient data; and description of corrective action taken.

(4) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(5) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(6) Identification of times when hourly averages have been obtained based on manual sampling methods.

(7) Identification of the times when the pollutant concentration exceeded full span of the CEMS.

(8) Description of any modifications to the CEMS which could affect the ability of the CEMS to comply with Performance Specification 2 or 3.

(9) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(m) For each affected facility subject to the sulfur dioxide standards under § 60.42b for which the minimum amount of data required under § 60.47b(f) were not obtained during a calendar quarter, the following information is reported to the Administrator in addition to that required under paragraph (k) of this section:

(1) The number of hourly averages available for outlet emission rates and inlet emission rates.

(2) The standard deviation of hourly averages for outlet emission rates and inlet emission rates, as determined in Method 19, section 7.

(3) The lower confidence limit for the mean outlet emission rate and the upper confidence limit for the mean inlet emission rate, as calculated in Method 19, section 7.

(4) The ratio of the lower confidence limit for the mean outlet emission rate and the allowable emission rate, as determined in Method 19, section 7.

(n) If a percent removal efficiency by fuel pretreatment (i.e., % R_f) is used to determine the overall percent reduction (i.e., % R_o) under § 60.45b, the owner or operator of the affected facility shall submit a signed statement with the quarterly report:

(1) Indicating what removal efficiency by fuel pretreatment (i.e., % R_f) was credited for the calendar quarter;

(2) Listing the quantity, heat content, and date each pretreated fuel shipment was received during the previous calendar quarter; the name and location of the fuel pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the previous calendar quarter;

(3) Documenting the transport of the fuel from the fuel pretreatment facility to the steam generating unit.

(4) Including a signed statement from the owner or operator of the fuel pretreatment facility certifying that the percent removal efficiency achieved by fuel pretreatment was determined in accordance with the provisions of Method 19 (appendix A) and listing the heat content and sulfur content of each fuel before and after fuel pretreatment.

(o) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

(p) The owner or operator of an affected facility described in § 60.44b(j) or (k) shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date,

(2) The number of hours of operation, and

(3) A record of the hourly steam load.

(q) The owner or operator of an affected facility described in § 60.44b(j) or § 60.44b(k) shall submit to the Administrator on a quarterly basis:

(1) The annual capacity factor over the previous 12 months;

(2) The average fuel nitrogen content during the quarter, if residual oil was fired; and

(3) If the affected facility meets the criteria described in § 60.44b(j), the results of any nitrogen oxides emission tests required during the quarter, the hours of operation during the quarter, and the hours of operation since the last nitrogen oxides emission test.

(r) The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil under § 60.42b(j)(2) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier which certify that the oil meets the definition of distillate oil as defined in § 60.41b. For the purposes of this section, the oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Quarterly reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition was combusted in the affected facility during the preceding quarter.

(s) [Reserved]

(t) Facility-specific nitrogen oxides standard for Rohm and Haas Kentucky Incorporated's Boiler No. 100 located in Louisville, Kentucky:

(1) *Definitions.*

Air ratio control damper is defined as the part of the low nitrogen oxides burner that is adjusted to control the split of total combustion air delivered to the reducing and oxidation portions of the combustion flame.

Flue gas recirculation line is defined as the part of Boiler No. 100 that recirculates a portion of the boiler flue gas back into the combustion air.

(2) *Standard for nitrogen oxides.* (i) When fossil fuel alone is combusted, the nitrogen oxides emission limit for fossil fuel in § 60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the nitrogen oxides emission limit is 473 ng/J (1.1 lb/million Btu), and the air ratio control damper tee handle shall be at a minimum of 5 inches (12.7 centimeters) out of the boiler, and the flue gas recirculation line shall be operated at a minimum of 10 percent open as indicated by its valve opening position indicator.

(3) *Emission monitoring for nitrogen oxides.* (i) The air ratio control damper tee handle setting and the flue gas recirculation line valve opening position indicator setting shall be recorded during each 8-hour operating shift.

(ii) The nitrogen oxides emission limit shall be determined by the compliance and performance test methods and procedures for nitrogen oxides in § 60.46b.

(iii) The monitoring of the nitrogen oxides emission limit shall be performed in accordance with § 60.48b.

(4) *Reporting and recordkeeping requirements.* (i) The owner or operator of Boiler No. 100 shall submit a report on any excursions from the limits required by paragraph (b)(2) of this section to the Administrator with the quarterly report required by § 60.49b(i).

(ii) The owner or operator of Boiler No. 100 shall keep records of the monitoring required by paragraph (b)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of Boiler No. 100 shall perform all the applicable reporting and recordkeeping requirements of § 60.49b.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51820, 51825, Dec. 18, 1989; 60 FR 28062, May 30, 1995]

APPENDIX E

Subpart BB—Standards of Performance for Kraft Pulp Mills

§ 60.280 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities in kraft pulp mills: Digester system, brown stock washer system, multiple-effect evaporator system, recovery furnace, smelt dissolving tank, lime kiln, and condensate stripper system. In pulp mills where kraft pulping is combined with neutral sulfite semichemical pulping, the provisions of this subpart are applicable when any portion of the material charged to an affected facility is produced by the kraft pulping operation.

(b) Except as noted in § 60.283(a)(1)(iv), any facility under paragraph (a) of this section that commences construction or modification after September 24, 1976, is subject to the requirements of this subpart.

[51 FR 18544, May 20, 1986]

§ 60.281 Definitions.

As used in this subpart, all terms not defined herein shall have the same meaning given them in the Act and in subpart A.

(a) *Kraft pulp mill* means any stationary source which produces pulp from wood by cooking (digesting) wood chips in a water solution of sodium hydroxide and sodium sulfide (white liquor) at high temperature and pressure. Regeneration of the cooking chemicals through a recovery process is also considered part of the kraft pulp mill.

(b) *Neutral sulfite semichemical pulping operation* means any operation in which pulp is produced from wood by cooking (digesting) wood chips in a solution of sodium sulfite and sodium bicarbonate, followed by mechanical defibrating (grinding).

(c) *Total reduced sulfur (TRS)* means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide, that are released during the kraft pulping operation and measured by Reference Method 16.

(d) *Digester system* means each continuous digester or each batch digester used for the cooking of wood in white liquor, and associated flash tank(s), below tank(s), chip steamer(s), and condenser(s).

(e) *Brown stock washer system* means brown stock washers and associated knotters, vacuum pumps, and filtrate tanks used to wash the pulp following the digestion system. Diffusion washers are excluded from this definition.

(f) *Multiple-effect evaporator system* means the multiple-effect evaporators and associated condenser(s) and hotwell(s) used to concentrate the spent cooking liquid that is separated from the pulp (black liquor).

(g) *Black liquor oxidation system* means the vessels used to oxidize, with air or oxygen, the black liquor, and associated storage tank(s).

(h) *Recovery furnace* means either a straight kraft recovery furnace or a cross recovery furnace, and includes the direct-contact evaporator for a direct-contact furnace.

(i) *Straight kraft recovery furnace* means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains 7 weight percent or less of the total pulp solids from the neutral sulfite semichemical process or has green liquor sulfidity of 28 percent or less.

(j) *Cross recovery furnace* means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains more than 7 weight percent of the total pulp solids from the neutral sulfite semichemical process and has a green liquor sulfidity of more than 28 percent.

(k) *Black liquor solids* means the dry weight of the solids which enter the recovery furnace in the black liquor.

(l) *Green liquor sulfidity* means the sulfidity of the liquor which leaves the smelt dissolving tank.

(m) *Smelt dissolving tank* means a vessel used for dissolving the smelt collected from the recovery furnace.

(n) *Lime kiln* means a unit used to calcine lime mud, which consists primarily of calcium carbonate, into quicklime, which is calcium oxide.

(o) *Condensate stripper system* means a column, and associated condensers, used to strip, with air or steam, TRS compounds from condensate streams from various processes within a kraft pulp mill.

[43 FR 7572, Feb. 23, 1978, as amended at 51 FR 18544, May 20, 1986]

§ 60.282 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) From any recovery furnace any gases which:

(i) Contain particulate matter in excess of 0.10 g/dscm (0.044 gr/dscf) corrected to 8 percent oxygen.

(ii) Exhibit 35 percent opacity or greater.

(2) From any smelt dissolving tank any gases which contain particulate matter in excess of 0.1 g/kg black liquor solids (dry weight)[0.2 lb/ton black liquor solids (dry weight)].

(3) From any lime kiln any gases which contain particulate matter in excess of:

(i) 0.15 g/dscm (0.067 gr/dscf) corrected to 10 percent oxygen, when gaseous fossil fuel is burned.

(ii) 0.30 g/dscm (0.13 gr/dscf) corrected to 10 percent oxygen, when liquid fossil fuel is burned.

[43 FR 7572, Feb. 23, 1978]

§ 60.283 Standard for total reduced sulfur (TRS).

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) From any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen, unless the following conditions are met:

(i) The gases are combusted in a lime kiln subject to the provisions of paragraph (a)(5) of this section; or

(ii) The gases are combusted in a recovery furnace subject to the provisions of paragraphs (a)(2) or (a)(3) of this section; or

(iii) The gases are combusted with other waste gases in an incinerator or other device, or combusted in a lime kiln or recovery furnace not subject to the provisions of this subpart, and are subjected to a minimum temperature of 1200° F. for at least 0.5 second; or

(iv) It has been demonstrated to the Administrator's satisfaction by the owner or operator that incinerating the exhaust gases from a new, modified, or reconstructed brown stock washer system is technologically or economically unfeasible. Any exempt system will become subject to the provisions of this subpart if the facility is changed so that the gases can be incinerated.

(v) The gases from the digester system, brown stock washer system, or condensate stripper system are controlled by a means other than combustion. In this case, this system shall not discharge any gases to the atmosphere which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to the actual oxygen content of the untreated gas stream.

(vi) The uncontrolled exhaust gases from a new, modified, or reconstructed digester system contain TRS less than 0.005 g/kg ADP (0.01 lb/ton ADP).

(2) From any straight kraft recovery furnace any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 8 percent oxygen.

(3) From any cross recovery furnace any gases which contain TRS in excess of 25 ppm by volume on a dry basis, corrected to 8 percent oxygen.

(4) From any smelt dissolving tank any gases which contain TRS in excess of 0.016 g/kg black liquor solids as H_2S (0.033 lb/ton black liquor solids as H_2S).

(5) From any lime kiln any gases which contain TRS in excess of 8 ppm by volume on a dry basis, corrected to 10 percent oxygen.

[43 FR 7572, Feb. 23, 1978, as amended at 50 FR 6317, Feb. 14, 1985; 51 FR 18544, May 20, 1986]

§ 60.284 Monitoring of emissions and operations.

(a) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring systems:

(1) A continuous monitoring system to monitor and record the opacity of the gases discharged into the atmos- phere from any recovery furnace. The span of this system shall be set at 70 percent opacity.

(2) Continuous monitoring systems to monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the atmosphere from any lime kiln, recovery furnace, digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system, except where the provisions of § 60.283(a)(1) (iii) or (iv) apply. These systems shall be located downstream of the control device(s) and the spans of these continuous monitoring system(s) shall be set:

(i) At a TRS concentration of 30 ppm for the TRS continuous monitoring system, except that for any cross recovery furnace the span shall be set at 50 ppm.

(ii) At 20 percent oxygen for the continuous oxygen monitoring system.

(b) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring devices:

(1) For any incinerator, a monitoring device which measures and records the combustion temperature at the point of incineration of effluent gases which are emitted from any digester system, brown stock washer system, multiple-effect evaporator system, black liquor oxidation system, or condensate stripper system where the provisions of § 60.283(a)(1)(iii) apply. The monitoring device is to be certified by the manufacturer to be accurate within ±1 percent of the temperature being measured.

(2) For any lime kiln or smelt dissolving tank using a scrubber emission control device:

(i) A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate to within a gage pressure of ±500 pascals (ca. ±2 inches water gage pressure).

(ii) A monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ±15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point. The Administrator may be consulted for approval of alternative locations.

(c) Any owner or operator subject to the provisions of this subpart shall, except where the provisions of § 60.283 (a)(1)(iv) or (a)(4) apply.

(1) Calculate and record on a daily basis 12-hour average TRS concentrations for the two consecutive periods of each operating day. Each 12-hour average shall be determined as the arithmetic mean of the appropriate 12 contiguous 1-hour average total reduced sulfur concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section.

(2) Calculate and record on a daily basis 12-hour average oxygen concentrations for the two consecutive periods of each operating day for the recovery furnace and lime kiln. These 12-hour averages shall correspond to the 12-hour average TRS concentrations under paragraph (c)(1) of this section and shall be determined as an arithmetic mean of the appropriate 12 contiguous 1-hour average oxygen concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section.

(3) Correct all 12-hour average TRS concentrations to 10 volume percent oxygen, except that all 12-hour average TRS concentration from a recovery furnace shall be corrected to 8 volume percent using the following equation:

$$C_{corr}=C_{meas}\times(21-X/21-Y)$$

where:

C_{corr}=the concentration corrected for oxygen.

C_{meas}=the concentration uncorrected for oxygen.

X=the volumetric oxygen concentration in percentage to be corrected to (8 percent for recovery furnaces and 10 percent for lime kilns, incinerators, or other devices).

Y=the measured 12-hour average volumetric oxygen concentration.

(4) Record once per shift measurements obtained from the continuous monitoring devices installed under paragraph (b)(2) of this section.

(d) For the purpose of reports required under § 60.7(c), any owner or operator subject to the provisions of this subpart shall report semiannually periods of excess emissions as follows:

(1) For emissions from any recovery furnace periods of excess emissions are:

(i) All 12-hour averages of TRS concentrations above 5 ppm by volume for straight kraft recovery furnaces and above 25 ppm by volume for cross recovery furnaces.

(ii) All 6-minute average opacities that exceed 35 percent.

(2) For emissions from any lime kiln, periods of excess emissions are all 12-hour average TRS concentration above 8 ppm by volume.

(3) For emissions from any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system periods of excess emissions are:

(i) All 12-hour average TRS concentrations above 5 ppm by volume unless the provisions of § 60.283(a)(1) (i), (ii), or (iv) apply; or

(ii) All periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 1200 °F, where the provisions of § 60.283(a)(1)(iii) apply.

(e) The Administrator will not consider periods of excess emissions reported under paragraph (d) of this section to be indicative of a violation of § 60.11(d) provided that:

(1) The percent of the total number of possible contiguous periods of excess emissions in a quarter (excluding periods of startup, shutdown, or malfunction and periods when the facility is not operating) during which excess emissions occur does not exceed:

(i) One percent for TRS emissions from recovery furnaces.

(ii) Six percent for average opacities from recovery furnaces.

(2) The Administrator determines that the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions.

[43 FR 7572, Feb. 23, 1978, as amended at 51 FR 18545, May 20, 1986]

§ 60.285 Test methods and procedures.

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures in this section, except as provided in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.

(b) The owner or operator shall determine compliance with the particulate matter standards in § 60.282(a) (1) and (3) as follows:

(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at

least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. The particulate concentration shall be corrected to the appropriate oxygen concentration according to § 60.284(c)(3).

(2) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The gas sample shall be taken at the same time and at the same traverse points as the particulate sample.

(3) Method 9 and the procedures in § 60.11 shall be used to determine opacity.

(c) The owner or operator shall determine compliance with the particular matter standard in § 60.282(a)(2) as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$E = c_s Q_{sd}/BLS$

where:

E=emission rate of particulate matter, g/kg (lb/ton) of BLS.

c_s=concentration of particulate matter, g/dsm (lb/dscf).

Q_{sd}=volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

BLS=black liquor solids (dry weight) feed rate, kg/hr (ton/hr).

(2) Method 5 shall be used to determine the particulate matter concentration (c_s) and the volumetric flow rate (Q_{sd}) of the effluent gas. The sampling time and sample volume shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used instead of acetone in the sample recovery.

(3) Process data shall be used to determine the black liquor solids (BLS) feed rate on a dry weight basis.

(d) The owner or operator shall determine compliance with the TRS standards in § 60.283, except § 60.283(a)(1)(vi) and (4), as follows:

(1) Method 16 shall be used to determine the TRS concentration. The TRS concentration shall be corrected to the appropriate oxygen concentration using the procedure in § 60.284(c)(3). The sampling time shall be at least 3 hours, but no longer than 6 hours.

(2) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The sample shall be taken over the same time period as the TRS samples.

(3) When determining whether a furnace is a straight kraft recovery furnace or a cross recovery furnace, TAPPI Method T.624 (incorporated by reference—see § 60.17) shall be used to determine sodium sulfide, sodium hydroxide, and sodium carbonate. These determinations shall be made 3 times daily from the green liquor, and the daily average values shall be converted to sodium oxide (Na_2O) and substituted into the following equation to determine the green liquor sulfidity:

$GLS = 100\ C_{Na2S}/(C_{NA2S}+C_{Na2H}+C_{Na2CO3})$

Where:

GLS=green liquor sulfidity, percent.

C_{Na2S}=concentration of Na_2S as Na_2O, mg/liter (gr/gal).

C_{NaOH}=concentration of NaOH as Na_2O, mg/liter (gr/gal).

C_{Na2CO3}=concentration of Na_2CO_3 as Na_2O, mg/liter (gr/gal).

(e) The owner or operator shall determine compliance with the TRS standards in § 60.283(a)(1)(vi) and (4) as follows:

(1) The emission rate (E) of TRS shall be computed for each run using the following equation:

$E = C_{TRS}\ F\ Q_{sd}/P$

where:

E=emission rate of TRS, g/kg (lb/ton) of BLS or ADP.

C_{TRS}=average combined concentration of TRS, ppm.

F=conversion factor, 0.001417 g H_2S/m^3 ppm (0.08844×10^{-6} lb H_2S/ft^3 ppm).

Q_{sd}=volumetric flow rate of stack gas, dscm/hr (dscf/hr).

P=black liquor solids feed or pulp production rate, kg/hr (ton/hr).

(2) Method 16 shall be used to determine the TRS concentration (C_{TRS}).

(3) Method 2 shall be used to determine the volumetric flow rate (Q_{sd}) of the effluent gas.

(4) Process data shall be used to determine the black liquor feed rate or the pulp production rate (P).

(f) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For Method 5, Method 17 may be used if a constant value of 0.009 g/dscm (0.004 gr/dscf) is added to the results of Method 17 and the stack temperature is no greater than 205 °C (400 °F).

(2) For Method 16, Method 16A or 16B may be used if the sampling time is 60 minutes.

[54 FR 6673, Feb. 14, 1989; 54 FR 21344, May 17, 1989, as amended at 55 FR 5212, Feb. 14, 1990]

APPENDIX F

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401, et seq.

2. Part 63 is amended by adding subpart S to read as follows:

Subpart S--National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry

Sec.

63.440 Applicability.
63.441 Definitions.
63.442 [Reserved]
63.443 Standards for the pulping system at kraft, soda, and semi-chemical processes.
63.444 Standards for the pulping system at sulfite processes.
63.445 Standards for the bleaching system.
63.446 Standards for kraft pulping process condensates.
63.447 Clean condensate alternative.
63.448-63.449 [Reserved]
63.450 Standards for enclosures and closed-vent systems.
63.451-63.452 [Reserved]
63.453 Monitoring requirements.
63.454 Recordkeeping requirements.
63.455 Reporting requirements.
63.456 [Reserved]
63.457 Test methods and procedures.
63.458 Delegation of authority.
63.459 [Reserved]

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Table 1 to Subpart S.--General Provisions Applicability to Subpart S

Subpart S--National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry

Sec. 63.440 Applicability.

(a) The provisions of this subpart apply to the owner or operator of processes that produce pulp, paper, or paperboard; that are located at a plant site that is a major source as defined in Sec. 63.2 of subpart A of this part; and that use the following processes and materials:

(1) Kraft, soda, sulfite, or semi-chemical pulping processes using wood; or

(2) Mechanical pulping processes using wood; or

(3) Any process using secondary or non-wood fibers.

(b) The affected source to which the existing source provisions of this subpart apply is as follows:

(1) For the processes specified in paragraph (a)(1) of this section, the affected source is the total of all HAP emission points in the pulping and bleaching systems; or

(2) For the processes specified in paragraphs (a)(2) or (a)(3) of this section, the affected source is the total of all HAP emission points in the bleaching system.

(c) The new source provisions of this subpart apply to the total of all HAP emission points at new or existing sources as follows:

(1) Each affected source defined in paragraph (b)(1) of this section that commences construction or reconstruction after December 17, 1993;

(2) Each pulping system or bleaching system for the processes specified in paragraph (a)(1) of this section that commences construction or reconstruction after December 17, 1993;

(3) Each additional pulping or bleaching line at the processes specified in paragraph (a)(1) of this section, that commences construction after December 17, 1993;

(4) Each affected source defined in paragraph (b)(2) of this section that commences construction or reconstruction after March 8,

1996; or

(5) Each additional bleaching line at the processes specified in paragraphs (a)(2) or (a)(3) of this section, that commences construction after March 8, 1996.

(d) Each existing source shall achieve compliance no later than April 16, 2001, except as provided in paragraphs (d)(1) through (d)(3) of this section.

(1) Each kraft pulping system shall achieve compliance with the pulping system provisions of Sec. 63.443 for the equipment listed in Sec. 63.443(a)(1)(ii) through (a)(1)(v) as expeditiously as practicable, but in no event later than April 17, 2006 and the owners and operators shall establish dates, update dates, and report the dates for the milestones specified in Sec. 63.455(b).

(2) Each dissolving-grade bleaching system at either kraft or sulfite pulping mills shall achieve compliance with the bleach plant provisions of Sec. 63.445 of this subpart as expeditiously as practicable, but in no event later than 3 years after the promulgation of the revised effluent limitation guidelines and standards under 40 CFR 430.14 through 430.17 and 40 CFR 430.44 through 430.47.

(3) Each bleaching system complying with the Voluntary Advanced Technology Incentives Program for Effluent Limitation Guidelines in 40 CFR 430.24, shall comply with the requirements specified in either paragraph (d)(3)(i) or (d)(3)(ii) of this section for the effluent limitation guidelines and standards in 40 CFR 430.24.

(i) Comply with the bleach plant provisions of Sec. 63.445 of this subpart as expeditiously as practicable, but in no event later than April 16, 2001.

(ii) Comply with all of the following:

(A) The owner or operator of a bleaching system shall comply with the bleach plant provisions of Sec. 63.445 of this subpart as expeditiously as practicable, but in no event later than April 15, 2004.

(B) The owner or operator of a bleaching system shall not increase the application rate of chlorine or hypochlorite in kg of bleaching agent per megagram of ODP, in the bleaching system above the average

daily rates used over the three months prior to June 15, 1998 until the requirements of paragraph (d)(3)(ii)(A) of this section are met and record application rates as specified in Sec. 63.454(c).

(C) Owners and operators shall establish dates, update dates, and report the dates for the milestones specified in Sec. 63.455(b).

(e) Each new source, specified as the total of all HAP emission points for the sources specified in paragraph (c) of this section, shall achieve compliance upon start-up or June 15, 1998, whichever is later, as provided in Sec. 63.6(b) of subpart A of this part.

(f) Each owner or operator of an affected source with affected process equipment shared by more than one type of pulping process, shall comply with the applicable requirement in this subpart that achieves the maximum degree of reduction in HAP emissions.

(g) Each owner or operator of an affected source specified in paragraphs (a) through (c) of this section must comply with the requirements of subpart A--General Provisions of this part, as indicated in table 1 to this subpart.

Sec. 63.441 Definitions.

All terms used in this subpart shall have the meaning given them in the CAA, in subpart A of this part, and in this section as follows:

Acid condensate storage tank means any storage tank containing cooking acid following the sulfur dioxide gas fortification process.

Black liquor means spent cooking liquor that has been separated from the pulp produced by the kraft, soda, or semi-chemical pulping process.

Bleaching means brightening of pulp by the addition of oxidizing chemicals or reducing chemicals.

Bleaching line means a group of bleaching stages arranged in series such that bleaching of the pulp progresses as the pulp moves from one stage to the next.

Bleaching stage means all process equipment associated with a

discrete step of chemical application and removal in the bleaching process including chemical and steam mixers, bleaching towers, washers, seal (filtrate) tanks, vacuum pumps, and any other equipment serving the same function as those previously listed.

Bleaching system means all process equipment after high-density pulp storage prior to the first application of oxidizing chemicals or reducing chemicals following the pulping system, up to and including the final bleaching stage.

Boiler means any enclosed combustion device that extracts useful energy in the form of steam. A boiler is not considered a thermal oxidizer.

Chip steamer means a vessel used for the purpose of preheating or pretreating wood chips prior to the digester, using flash steam from the digester or live steam.

Closed-vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapor from an emission point to a control device.

Combustion device means an individual unit of equipment, including but not limited to, a thermal oxidizer, lime kiln, recovery furnace, process heater, or boiler, used for the thermal oxidation of organic hazardous air pollutant vapors.

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Decker system means all equipment used to thicken the pulp slurry or reduce its liquid content after the pulp washing system and prior to high-density pulp storage. The decker system includes decker vents, filtrate tanks, associated vacuum pumps, and any other equipment serving the same function as those previously listed.

Digester system means each continuous digester or each batch digester used for the chemical treatment of wood or non-wood fibers. The digester system equipment includes associated flash tank(s), blow tank(s), chip steamer(s) not using fresh steam, blow heat recovery

accumulator(s), relief gas condenser(s), prehydrolysis unit(s) preceding the pulp washing system, and any other equipment serving the same function as those previously listed. The digester system includes any of the liquid streams or condensates associated with batch or continuous digester relief, blow, or flash steam processes.

Emission point means any part of a stationary source that emits hazardous air pollutants regulated under this subpart, including emissions from individual process vents, stacks, open pieces of process equipment, equipment leaks, wastewater and condensate collection and treatment system units, and those emissions that could reasonably be conveyed through a stack, chimney, or duct where such emissions first reach the environment.

Evaporator system means all equipment associated with increasing the solids content and/or concentrating spent cooking liquor from the pulp washing system including pre-evaporators, multi-effect evaporators, concentrators, and vacuum systems, as well as associated condensers, hotwells, and condensate streams, and any other equipment serving the same function as those previously listed.

Flow indicator means any device that indicates gas or liquid flow in an enclosed system.

HAP means a hazardous air pollutant as defined in Sec. 63.2 of subpart A of this part.

High volume, low concentration or HVLC collection system means the gas collection and transport system used to convey gases from the HVLC system to a control device.

High volume, low concentration or HVLC system means the collection of equipment including the pulp washing, knotter, screen, decker, and oxygen delignification systems, weak liquor storage tanks, and any other equipment serving the same function as those previously listed.

Knotter system means equipment where knots, oversized material, or pieces of uncooked wood are removed from the pulp slurry after the digester system and prior to the pulp washing system. The knotter system equipment includes the knotter, knot drainer tanks, ancillary tanks, and any other equipment serving the same function as those previously listed.

Kraft pulping means a chemical pulping process that uses a mixture of sodium hydroxide and sodium sulfide as the cooking liquor.

Lime kiln means an enclosed combustion device used to calcine lime mud, which consists primarily of calcium carbonate, into calcium oxide.

Low volume, high concentration or LVHC collection system means the gas collection and transport system used to convey gases from the LVHC system to a control device.

Low volume, high concentration or LVHC system means the collection of equipment including the digester, turpentine recovery, evaporator, steam stripper systems, and any other equipment serving the same function as those previously listed.

Mechanical pulping means a pulping process that only uses mechanical and thermo-mechanical processes to reduce wood to a fibrous mass. The mechanical pulping processes include, but are not limited to, stone groundwood, pressurized groundwood, refiner mechanical, thermal refiner mechanical, thermo-mechanical, and tandem thermo-mechanical.

Non-wood pulping means the production of pulp from fiber sources other than trees. The non-wood fiber sources include, but are not limited to, bagasse, cereal straw, cotton, flax straw, hemp, jute, kenaf, and leaf fibers.

Oven-dried pulp or ODP means a pulp sample at zero percent moisture content by weight. Pulp samples for applicability or compliance determinations for both the pulping and bleaching systems shall be unbleached pulp. For purposes of complying with mass emission limits in this subpart, megagram of ODP shall be measured to represent the amount of pulp entering and processed by the equipment system under the specified mass limit. For equipment that does not process pulp, megagram of ODP shall be measured to represent the amount of pulp that was processed to produce the gas and liquid streams.

Oxygen delignification system means the equipment that uses oxygen to remove lignin from pulp after high-density stock storage and prior to the bleaching system. The oxygen delignification system equipment includes the blow tank, washers, filtrate tanks, any interstage pulp storage tanks, and any other equipment serving the same function as

those previously listed.

Primary fuel means the fuel that provides the principal heat input to the combustion device. To be considered primary, the fuel must be able to sustain operation of the combustion device without the addition of other fuels.

Process wastewater treatment system means a collection of equipment, a process, or specific technique that removes or destroys the HAP's in a process wastewater stream. Examples include, but are not limited to, a steam stripping unit, wastewater thermal oxidizer, or biological treatment unit.

Pulp washing system means all equipment used to wash pulp and separate spent cooking chemicals following the digester system and prior to the bleaching system, oxygen delignification system, or paper machine system (at unbleached mills). The pulp washing system equipment includes vacuum drum washers, diffusion washers, rotary pressure washers, horizontal belt filters, intermediate stock chests, and their associated vacuum pumps, filtrate tanks, foam breakers or tanks, and any other equipment serving the same function as those previously listed. The pulp washing system does not include deckers, screens, knotters, stock chests, or pulp storage tanks following the last stage of pulp washing.

Pulping line means a group of equipment arranged in series such that the wood chips are digested and the resulting pulp progresses through a sequence of steps that may include knotting, refining, washing, thickening, blending, storing, oxygen delignification, and any other equipment serving the same function as those previously listed.

Pulping process condensates means any HAP-containing liquid that results from contact of water with organic compounds in the pulping process. Examples of process condensates include digester system condensates, turpentine recovery system condensates, evaporator system condensates, LVHC system condensates, HVLC system condensates, and any other condensates from equipment serving the same function as those previously listed. Liquid streams that are intended for byproduct recovery are not considered process condensate streams.

Pulping system means all process equipment, beginning with the

digester system, and up to and including the last piece of pulp conditioning equipment prior to the bleaching system, including

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treatment with ozone, oxygen, or peroxide before the first application of a chemical bleaching agent intended to brighten pulp. The pulping system includes pulping process condensates and can include multiple pulping lines.

Recovery furnace means an enclosed combustion device where concentrated spent liquor is burned to recover sodium and sulfur, produce steam, and dispose of unwanted dissolved wood components in the liquor.

Screen system means equipment in which oversized particles are removed from the pulp slurry prior to the bleaching or papermaking system washed stock storage.

Secondary fiber pulping means a pulping process that converts a fibrous material, that has previously undergone a manufacturing process, into pulp stock through the addition of water and mechanical energy. The mill then uses that pulp as the raw material in another manufactured product. These mills may also utilize chemical, heat, and mechanical processes to remove ink particles from the fiber stock.

Semi-chemical pulping means a pulping process that combines both chemical and mechanical pulping processes. The semi-chemical pulping process produces intermediate yields ranging from 55 to 90 percent.

Soda pulping means a chemical pulping process that uses sodium hydroxide as the active chemical in the cooking liquor.

Spent liquor means process liquid generated from the separation of cooking liquor from pulp by the pulp washing system containing dissolved organic wood materials and residual cooking compounds.

Steam stripper system means a column (including associated stripper feed tanks, condensers, or heat exchangers) used to remove compounds from wastewater or condensates using steam. The steam stripper system also contains all equipment associated with a methanol rectification

process including rectifiers, condensers, decanters, storage tanks, and any other equipment serving the same function as those previously listed.

Strong liquor storage tanks means all storage tanks containing liquor that has been concentrated in preparation for combustion or oxidation in the recovery process.

Sulfite pulping means a chemical pulping process that uses a mixture of sulfurous acid and bisulfite ion as the cooking liquor.

Temperature monitoring device means a piece of equipment used to monitor temperature and having an accuracy of 1.0 percent of the temperature being monitored expressed in degrees Celsius or 0.5 degrees Celsius (deg.C), whichever is greater.

Thermal oxidizer means an enclosed device that destroys organic compounds by thermal oxidation.

Turpentine recovery system means all equipment associated with recovering turpentine from digester system gases including condensers, decanters, storage tanks, and any other equipment serving the same function as those previously listed. The turpentine recovery system includes any liquid streams associated with the turpentine recovery process such as turpentine decanter underflow. Liquid streams that are intended for byproduct recovery are not considered turpentine recovery system condensate streams.

Weak liquor storage tank means any storage tank except washer filtrate tanks containing spent liquor recovered from the pulping process and prior to the evaporator system.

Sec. 63.442 [Reserved]

Sec. 63.443 Standards for the pulping system at kraft, soda, and semi-chemical processes.

(a) The owner or operator of each pulping system using the kraft process subject to the requirements of this subpart shall control the

total HAP emissions from the following equipment systems, as specified in paragraphs (c) and (d) of this section.

(1) At existing affected sources, the total HAP emissions from the following equipment systems shall be controlled:

(i) Each LVHC system;

(ii) Each knotter or screen system with total HAP mass emission rates greater than or equal to the rates specified in paragraphs (a)(1)(ii)(A) or (a)(1)(ii)(B) of this section or the combined rate specified in paragraph (a)(1)(ii)(C) of this section.

(A) Each knotter system with emissions of 0.05 kilograms or more of total HAP per megagram of ODP (0.1 pounds per ton).

(B) Each screen system with emissions of 0.10 kilograms or more of total HAP per megagram of ODP (0.2 pounds per ton).

(C) Each knotter and screen system with emissions of 0.15 kilograms or more of total HAP per megagram of ODP (0.3 pounds per ton).

(iii) Each pulp washing system;

(iv) Each decker system that:

(A) Uses any process water other than fresh water or paper machine white water; or

(B) Uses any process water with a total HAP concentration greater than 400 parts per million by weight; and

(v) Each oxygen delignification system.

(2) At new affected sources, the total HAP emissions from the equipment systems listed in paragraphs (a)(1)(i), (a)(1)(iii), and (a)(1)(v) of this section and the following equipment systems shall be controlled:

(i) Each knotter system;

(ii) Each screen system;

(iii) Each decker system; and

(iv) Each weak liquor storage tank.

(b) The owner or operator of each pulping system using a semi-chemical or soda process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems as specified in paragraphs (c) and (d) of this section.

(1) At each existing affected sources, the total HAP emissions from each LVHC system shall be controlled.

(2) At each new affected source, the total HAP emissions from each LVHC system and each pulp washing system shall be controlled.

(c) Equipment systems listed in paragraphs (a) and (b) of this section shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (d) of this section. The enclosures and closed-vent system shall meet the requirements specified in Sec. 63.450.

(d) The control device used to reduce total HAP emissions from each equipment system listed in paragraphs (a) and (b) of this section shall:

(1) Reduce total HAP emissions by 98 percent or more by weight; or

(2) Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis; or

(3) Reduce total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 871 deg.C (1600 deg.F) and a minimum residence time of 0.75 seconds; or

(4) Reduce total HAP emissions using a boiler, lime kiln, or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone.

(e) Periods of excess emissions reported under Sec. 63.455 shall not be a violation of Sec. 63.443 (c) and (d) provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels:

(1) One percent for control devices used to reduce the total HAP emissions from the LVHC system; and

(2) Four percent for control devices used to reduce the total HAP emissions from the HVLC system; and

(3) Four percent for control devices used to reduce the total HAP

emissions from both the LVHC and HVLC systems.

Sec. 63.444 Standards for the pulping system at sulfite processes.

(a) The owner or operator of each sulfite process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems as specified in paragraphs (b) and (c) of this section.

(1) At existing sulfite affected sources, the total HAP emissions from the following equipment systems shall be controlled:

(i) Each digester system vent;

(ii) Each evaporator system vent; and

(iii) Each pulp washing system.

(2) At new affected sources, the total HAP emissions from the equipment systems listed in paragraph (a)(1) of this section and the following equipment shall be controlled:

(i) Each weak liquor storage tank;

(ii) Each strong liquor storage tank; and

(iii) Each acid condensate storage tank.

(b) Equipment listed in paragraph (a) of this section shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (c) of this section. The enclosures and closed-vent system shall meet the requirements specified in Sec. 63.450. Emissions from equipment listed in paragraph (a) of this section that is not necessary to be reduced to meet paragraph (c) of this section is not required to be routed to a control device.

(c) The total HAP emissions from both the equipment systems listed in paragraph (a) of this section and the vents, wastewater, and condensate streams from the control device used to reduce HAP emissions, shall be controlled as follows.

(1) Each calcium-based or sodium-based sulfite pulping process shall:

(i) Emit no more than 0.44 kilograms of total HAP or methanol per megagram (0.89 pounds per ton) of ODP; or

(ii) Remove 92 percent or more by weight of the total HAP or methanol.

(2) Each magnesium-based or ammonium-based sulfite pulping process shall:

(i) Emit no more than 1.1 kilograms of total HAP or methanol per megagram (2.2 pounds per ton) of ODP; or

(ii) Remove 87 percent or more by weight of the total HAP or methanol.

Sec. 63.445 Standards for the bleaching system.

(a) Each bleaching system that does not use any chlorine or chlorinated compounds for bleaching is exempt from the requirements of this section. Owners or operators of the following bleaching systems shall meet all the provisions of this section:

(1) Bleaching systems that use chlorine;

(2) Bleaching systems bleaching pulp from kraft, sulfite, or soda pulping processes that uses any chlorinated compounds; or

(3) Bleaching systems bleaching pulp from mechanical pulping processes using wood or from any process using secondary or non-wood fibers, that use chlorine dioxide.

(b) The equipment at each bleaching stage, of the bleaching systems listed in paragraph (a) of this section, where chlorinated compounds are introduced shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (c) of this section. The enclosures and closed-vent system shall meet the requirements specified in Sec. 63.450.

(c) The control device used to reduce chlorinated HAP emissions (not including chloroform) from the equipment specified in paragraph (b) of this section shall:

(1) Reduce the total chlorinated HAP mass in the vent stream entering the control device by 99 percent or more by weight;

(2) Achieve a treatment device outlet concentration of 10 parts per million or less by volume of total chlorinated HAP; or

(3) Achieve a treatment device outlet mass emission rate of 0.001 kg of total chlorinated HAP mass per megagram (0.002 pounds per ton) of ODP.

(d) The owner or operator of each bleaching system subject to paragraph (a)(2) of this section shall comply with paragraph (d)(1) or (d)(2) of this section to reduce chloroform air emissions to the atmosphere, except the owner or operator of each bleaching system complying with extended compliance under Sec. 63.440(d)(3)(ii) shall comply with paragraph (d)(1) of this section.

(1) Comply with the following applicable effluent limitation guidelines and standards specified in 40 CFR part 430:

(i) Dissolving-grade kraft bleaching systems and lines, 40 CFR 430.14 through 430.17;

(ii) Paper-grade kraft and soda bleaching systems and lines, 40 CFR 430.24(a)(1) and (e), and 40 CFR 430.26 (a) and (c);

(iii) Dissolving-grade sulfite bleaching systems and lines, 40 CFR 430.44 through 430.47; or

(iv) Paper-grade sulfite bleaching systems and lines, 40 CFR 430.54(a) and (c), and 430.56(a) and (c).

(2) Use no hypochlorite or chlorine for bleaching in the bleaching system or line.

Sec. 63.446 Standards for kraft pulping process condensates.

(a) The requirements of this section apply to owners or operators of kraft processes subject to the requirements of this subpart.

(b) The pulping process condensates from the following equipment systems shall be treated to meet the requirements specified in paragraphs (c), (d), and (e) of this section:

(1) Each digester system;

(2) Each turpentine recovery system;

(3) Each evaporator stage where weak liquor is introduced (feed stages) in the evaporator system;

(4) Each HVLC collection system; and

(5) Each LVHC collection system.

(c) One of the following combinations of HAP-containing pulping process condensates generated, produced, or associated with the equipment systems listed in paragraph (b) of this section shall be subject to the requirements of paragraphs (d) and (e) of this section:

(1) All pulping process condensates from the equipment systems specified in paragraphs (b)(1) through (b)(5) of this section.

(2) The combined pulping process condensates from the equipment systems specified in paragraphs (b)(4) and (b)(5) of this section, plus pulping process condensate stream(s) that in total contain at least 65 percent of the total HAP mass from the pulping process condensates from equipment systems listed in paragraphs (b)(1) through (b)(3) of this section.

(3) The pulping process condensates from equipment systems listed in paragraphs (b)(1) through (b)(5) of this section that in total contain a total HAP mass of 3.6 kilograms or more of total HAP per megagram (7.2 pounds per ton) of ODP for mills that do not perform bleaching or 5.5 kilograms or more of total HAP per megagram (11.1 pounds per ton) of ODP for mills that perform bleaching.

(d) The pulping process condensates from the equipment systems listed in paragraph (b) of this section shall be conveyed in a closed collection system that is designed and operated to meet the requirements specified in paragraphs (d)(1) and (d)(2) of this section.

(1) Each closed collection system shall meet the individual drain system

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requirements specified in Sec. 63.960, 63.961, and 63.962 of subpart RR of this part, except for closed vent systems and control devices shall be designed and operated in accordance with Secs. 63.443(d) and 63.450, instead of in accordance with Sec. 63.693 as specified in Sec. 63.962

(a)(3)(ii), (b)(3)(ii)(A), and (b)(3)(ii)(B)(5)(iii); and

(2) If a condensate tank is used in the closed collection system, the tank shall meet the following requirements:

(i) The fixed roof and all openings (e.g., access hatches, sampling ports, gauge wells) shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million above background, and vented into a closed-vent system that meets the requirements in Sec. 63.450 and routed to a control device that meets the requirements in Sec. 63.443(d); and

(ii) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that the tank contains pulping process condensates or any HAP removed from a pulping process condensate stream except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.

(e) Each pulping process condensate from the equipment systems listed in paragraph (b) of this section shall be treated according to one of the following options:

(1) Recycle the pulping process condensate to an equipment system specified in Sec. 63.443(a) meeting the requirements specified in Sec. 63.443(c) and (d); or

(2) Discharge the pulping process condensate below the liquid surface of a biological treatment system meeting the requirement specified in paragraph (e)(3) of this section; or

(3) Treat the pulping process condensates to reduce or destroy the total HAP's by at least 92 percent or more by weight; or

(4) At mills that do not perform bleaching, treat the pulping process condensates to remove 3.3 kilograms or more of total HAP per megagram (6.6 pounds per ton) of ODP, or achieve a total HAP concentration of 210 parts per million or less by weight at the outlet of the control device; or

(5) At mills that perform bleaching, treat the pulping process condensates to remove 5.1 kilograms or more of total HAP per megagram (10.2 pounds per ton) of ODP, or achieve a total HAP concentration of

330 parts per million or less by weight at the outlet of the control device.

(f) Each HAP removed from a pulping process condensate stream during treatment and handling under paragraphs (d) or (e) of this section, except for those treated according to paragraph (e)(2) of this section, shall be controlled as specified in Sec. 63.443(c) and (d).

(g) For each steam stripper system used to comply with the requirements specified in paragraph (e)(3) of this section, periods of excess emissions reported under Sec. 63.455 shall not be a violation of paragraphs (d), (e), and (f) of this section provided that the time of excess emissions (including periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed 10 percent.

(h) Each owner or operator of a new or existing affected source subject to the requirements of this section shall evaluate all new or modified pulping process condensates or changes in the annual bleached or non-bleached ODP used to comply with paragraph (i) of this section, to determine if they meet the applicable requirements of this section.

(i) For the purposes of meeting the requirements in paragraphs (c)(2), (e)(4), or (e)(5) of this section at mills producing both bleached and unbleached pulp products, owners and operators may meet a prorated mass standard that is calculated by prorating the applicable mass standards (kilograms of total HAP per megagram of ODP) for bleached and unbleached specified in paragraphs (c)(2), (e)(4), or (e)(5) of this section by the ratio of annual megagrams of bleached and unbleached ODP.

Sec. 63.447 Clean condensate alternative.

As an alternative to the requirements specified in Sec. 63.443(a)(1)(ii) through (a)(1)(v) for the control of HAP emissions from pulping systems using the kraft process, an owner or operator must demonstrate to the satisfaction of the Administrator, by meeting all the requirements below, that the total HAP emissions

reductions achieved by this clean condensate alternative technology are equal to or greater than the total HAP emission reductions that would have been achieved by compliance with Sec. 63.443(a)(1)(ii) through (a)(1)(v).

(a) For the purposes of this section only the following additional definitions apply.

(1) Clean condensate alternative affected source means the total of all HAP emission points in the pulping, bleaching, causticizing, and papermaking systems (exclusive of HAP emissions attributable to additives to paper machines and HAP emission points in the LVHC system).

(2) Causticizing system means all equipment associated with converting sodium carbonate into active sodium hydroxide. The equipment includes smelt dissolving tanks, lime mud washers and storage tanks, white and mud liquor clarifiers and storage tanks, slakers, slaker grit washers, lime kilns, green liquor clarifiers and storage tanks, and dreg washers ending with the white liquor storage tanks prior to the digester system, and any other equipment serving the same function as those previously listed.

(3) Papermaking system means all equipment used to convert pulp into paper, paperboard, or market pulp, including the stock storage and preparation systems, the paper or paperboard machines, and the paper machine white water system, broke recovery systems, and the systems involved in calendering, drying, on-machine coating, slitting, winding, and cutting.

(b) Each owner or operator shall install and operate a clean condensate alternative technology with a continuous monitoring system to reduce total HAP emissions by treating and reducing HAP concentrations in the pulping process water used within the clean condensate alternative affected source.

(c) Each owner or operator shall calculate HAP emissions on a kilogram per megagram of ODP basis and measure HAP emissions according to the appropriate procedures contained in Sec. 63.457.

(d) Each owner or operator shall determine the baseline HAP

emissions for each equipment system and the total of all equipment systems in the clean condensate alternative affected source based on the following:

(1) Process and air pollution control equipment installed and operating on or after December 17, 1993, and

(2) Compliance with the following requirements that affect the level of HAP emissions from the clean condensate alternative affected source:

(i) The pulping process condensates requirements in Sec. 63.446;

(ii) The applicable effluent limitation guidelines and standards in 40 CFR part 430, subparts A, B, D, and E; and

(iii) All other applicable requirements of local, State, or Federal agencies or statutes.

(e) Each owner or operator shall determine the following HAP emission reductions from the baseline HAP emissions determined in paragraph (d) of this section for each equipment system and the total of all equipment

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systems in the clean condensate alternative affected source:

(1) The HAP emission reduction occurring by complying with the requirements of Sec. 63.443(a)(1)(ii) through (a)(1)(v); and

(2) The HAP emissions reduction that occurring by complying with the clean condensate alternative technology.

(f) For the purposes of all requirements in this section, each owner or operator may use as an alternative, individual equipment systems (instead of total of all equipment systems) within the clean condensate alternative affected source to determine emissions and reductions to demonstrate equal or greater than the reductions that would have been achieved by compliance with Sec. 63.443(a)(1)(ii) through (a)(1)(v).

(g) The initial and updates to the control strategy report specified in Sec. 63.455(b) shall include to the extent possible the following information:

(1) A detailed description of:

(i) The equipment systems and emission points that comprise the clean condensate alternative affected source;

(ii) The air pollution control technologies that would be used to meet the requirements of Sec. 63.443(a)(1)(ii) through (a)(1)(v);

(iii) The clean condensate alternative technology to be used.

(2) Estimates and basis for the estimates of total HAP emissions and emissions reductions to fulfill the requirements paragraphs (d), (e), and (f) of this section.

(h) Each owner or operator shall report to the Administrator by the applicable compliance date specified in Sec. 63.440(d) or (e) the rationale, calculations, test procedures, and data documentation used to demonstrate compliance with all the requirements of this section.

Secs. 63.448-63.449 [Reserved]

Sec. 63.450 Standards for enclosures and closed-vent systems.

(a) Each enclosure and closed-vent system specified in Secs. 63.443(c), 63.444(b), and 63.445(b) for capturing and transporting vent streams that contain HAP shall meet the requirements specified in paragraphs (b) through (d) of this section.

(b) Each enclosure shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures specified Sec. 63.457(e). Each enclosure or hood opening closed during the initial performance test specified in Sec. 63.457(a) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs.

(c) Each component of the closed-vent system used to comply with Secs. 63.443(c), 63.444(b), and 63.445(b) that is operated at positive pressure and located prior to a control device shall be designed for

and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million by volume above background, as measured by the procedures specified in Sec. 63.457(d).

(d) Each bypass line in the closed-vent system that could divert vent streams containing HAP to the atmosphere without meeting the emission limitations in Secs. 63.443, 63.444, or 63.445 shall comply with either of the following requirements:

(1) On each bypass line, the owner or operator shall install, calibrate, maintain, and operate according to manufacturer's specifications a flow indicator that provides a record of the presence of gas stream flow in the bypass line at least once every 15 minutes. The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line; or

(2) For bypass line valves that are not computer controlled, the owner or operator shall maintain the bypass line valve in the closed position with a car seal or a seal placed on the valve or closure mechanism in such a way that valve or closure mechanism cannot be opened without breaking the seal.

Secs. 63.451-63.452 [Reserved]

Sec. 63.453 Monitoring requirements.

(a) Each owner or operator subject to the standards specified in Secs. 63.443(c) and (d), 63.444(b) and (c), 63.445(b) and (c), 63.446(c), (d), and (e), 63.447(b) or Sec. 63.450(d), shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS, as defined in Sec. 63.2 of this part) as specified in paragraphs (b) through (m) of this section, except as allowed in paragraph (m) of this section. The CMS shall include a continuous recorder.

(b) A CMS shall be operated to measure the temperature in the firebox or in the ductwork immediately downstream of the firebox and

before any substantial heat exchange occurs for each thermal oxidizer used to comply with the requirements of Sec. 63.443(d)(1) through (d)(3). Owners and operators complying with the requirements in Sec. 63.443(d)(2) or (d)(3) shall monitor the parameter specified and for the temperature and concentration limits specified.

(c) A CMS shall be operated to measure the following parameters for each gas scrubber used to comply with the bleaching system requirements of Sec. 63.445(c) or the sulfite pulping system requirements of Sec. 63.444(c).

(1) The pH or the oxidation/reduction potential of the gas scrubber effluent;

(2) The gas scrubber vent gas inlet flow rate; and

(3) The gas scrubber liquid influent flow rate.

(d) As an option to the requirements specified in paragraph (c) of this section, a CMS shall be operated to measure the chlorine outlet concentration of each gas scrubber used to comply with the bleaching system outlet concentration requirement specified in Sec. 63.445(c)(2).

(e) The owner or operator of a bleaching system complying with 40 CFR 430.24, shall monitor the chlorine and hypochlorite application rates, in kg of bleaching agent per megagram of ODP, of the bleaching system during the extended compliance period specified in Sec. 63.440(d)(3).

(f) A CMS shall be operated to measure the gas scrubber parameters specified in paragraphs (c)(1) through (c)(3) of this section or those site specific parameters determined according to the procedures specified in paragraph (n) of this section to comply with the sulfite pulping system requirements specified in Sec. 63.444(c).

(g) A CMS shall be operated to measure the following parameters for each steam stripper used to comply with the treatment requirements in Sec. 63.446(e) (3), (4), or (5):

(1) The process wastewater feed rate;

(2) The steam feed rate; and

(3) The process wastewater column feed temperature.

(h) As an option to the requirements specified in paragraph (g) of

this section, a CMS shall be operated to measure the methanol outlet concentration to comply with the steam stripper outlet concentration requirement specified in Sec. 63.446 (e)(4) or (e)(5).

(i) A CMS shall be operated to measure the appropriate parameters determined according to the procedures specified in paragraph (n) of this section to comply with the condensate applicability requirements specified in Sec. 63.446(c).

(j) Each owner or operator using a biological treatment system to comply with Sec. 63.446(e)(2) shall perform the following monitoring procedures.

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(1) On a daily basis, monitor the following parameters for each biological treatment unit:

(i) Composite daily sample of outlet soluble BOD5 concentration to monitor for maximum daily and maximum monthly average;

(ii) Mixed liquor volatile suspended solids;

(iii) Horsepower of aerator unit(s);

(iv) Inlet liquid flow; and

(v) Liquid temperature.

(2) Obtain daily inlet and outlet liquid grab samples from each biological treatment unit to have HAP data available to perform quarterly percent reduction tests specified in paragraph (j)(2)(ii) of this section and the compliance percent reduction tests specified in paragraph (p)(1)(i) of this section. Perform the following procedures with the liquid samples:

(i) Store the samples for 5 days as specified in Sec. 63.457(n). The 5 day storage requirement is required since the soluble BOD5 test requires 5 days to obtain results. If the results of the soluble BOD5 test are outside of the range established during the initial performance test, then the archive sample shall be used to perform the percent reduction test specified in Sec. 63.457(1).

(ii) Perform the percent reduction test procedures specified in

Sec. 63.457(l) within 45 days after the beginning of each quarter as follows.

(A) The percent reduction test performed in the first quarter (annually) shall be performed for total HAP and the percent reduction obtained from the test shall be at least as great as the total HAP reduction specified in Sec. 63.446(e)(2).

(B) The remaining quarterly percent reduction tests shall be performed for methanol and the percent reduction obtained from the test shall be at least as great as the methanol reduction determined in the previous first-quarter test specified in paragraph (j)(2)(ii)(A) of this section.

(C) The parameter values used to calculate the percent reductions required in paragraphs (j)(2)(ii)(A) and (j)(2)(ii)(B) of this section shall be parameter values measured and samples taken in paragraph (j)(1) of this section.

(k) Each enclosure and closed-vent system used to comply with Sec. 63.450(a) shall comply with the requirements specified in paragraphs (k)(1) through (k)(6) of this section.

(1) For each enclosure opening, a visual inspection of the closure mechanism specified in Sec. 63.450(b) shall be performed at least once every 30 days to ensure the opening is maintained in the closed position and sealed.

(2) Each closed-vent system required by Sec. 63.450(a) shall be visually inspected every 30 days and at other times as requested by the Administrator. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.

(3) For positive pressure closed-vent systems or portions of closed-vent systems, demonstrate no detectable leaks as specified in Sec. 63.450(c) measured initially and annually by the procedures in Sec. 63.457(d).

(4) Demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in Sec. 63.457(e).

(5) The valve or closure mechanism specified in Sec. 63.450(d)(2)

shall be inspected at least once every 30 days to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line.

(6) If an inspection required by paragraphs (k)(1) through (k)(5) of this section identifies visible defects in ductwork, piping, enclosures or connections to covers required by Sec. 63.450, or if an instrument reading of 500 parts per million by volume or greater above background is measured, or if enclosure openings are not maintained at negative pressure, then the following corrective actions shall be taken as soon as practicable.

(i) A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.

(ii) The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified.

(l) Each pulping process condensate closed collection system used to comply with Sec. 63.446(d) shall be visually inspected every 30 days and shall comply with the inspection and monitoring requirements specified in Sec. 63.964 of subpart RR of this part, except for the closed-vent system and control device inspection and monitoring requirements specified in Sec. 63.964(a)(2) of subpart RR of this part, the closed-vent system and the control device shall meet the requirements specified in paragraphs (a) and (k) of this section.

(m) Each owner or operator using a control device, technique or an alternative parameter other than those specified in paragraphs (b) through (l) of this section shall install a CMS and establish appropriate operating parameters to be monitored that demonstrate, to the Administrator's satisfaction, continuous compliance with the applicable control requirements.

(n) To establish or reestablish, the value for each operating parameter required to be monitored under paragraphs (b) through (j), (l), and (m) of this section or to establish appropriate parameters for paragraphs (f), (i), and (m) of this section, each owner or operator shall use the following procedures:

(1) During the initial performance test required in Sec. 63.457(a)

or any subsequent performance test, continuously record the operating parameter;

(2) Determinations shall be based on the control performance and parameter data monitored during the performance test, supplemented if necessary by engineering assessments and the manufacturer's recommendations;

(3) The owner or operator shall provide for the Administrator's approval the rationale for selecting the monitoring parameters necessary to comply with paragraphs (f), (i), and (m) of this section; and

(4) Provide for the Administrator's approval the rationale for the selected operating parameter value, and monitoring frequency, and averaging time. Include all data and calculations used to develop the value and a description of why the value, monitoring frequency, and averaging time demonstrate continuous compliance with the applicable emission standard.

(o) Each owner or operator of a control device subject to the monitoring provisions of this section shall operate the control device in a manner consistent with the minimum or maximum (as appropriate) operating parameter value or procedure required to be monitored under paragraphs (a) through (n) of this section and established under this subpart. Except as provided in paragraph (p) of this section, Sec. 63.443(e), or Sec. 63.446(g), operation of the control device below minimum operating parameter values or above maximum operating parameter values established under this subpart or failure to perform procedures required by this subpart shall constitute a violation of the applicable emission standard of this subpart and be reported as a period of excess emissions.

(p) Each owner or operator of a biological treatment system complying with paragraph (j) of this section shall perform all the following requirements when the monitoring parameters specified in paragraphs (j)(1)(i) through (j)(1)(iii) of this section are below minimum operating parameter values or

above maximum operating parameter values established in paragraph (n) of this section.

(1) The following shall occur and be recorded as soon as practical:

(i) Determine compliance with Sec. 63.446(e)(2) using the percent reduction test procedures specified in Sec. 63.457(l) and the monitoring data specified in paragraph (j)(1) of this section that coincide with the time period of the parameter excursion;

(ii) Steps shall be taken to repair or adjust the operation of the process to end the parameter excursion period; and

(iii) Steps shall be taken to minimize total HAP emissions to the atmosphere during the parameter excursion period.

(2) A parameter excursion is not a violation of the applicable emission standard if the percent reduction test specified in paragraph (p)(1)(i) of this section demonstrates compliance with Sec. 63.446(e)(2), and no maintenance or changes have been made to the process or control device after the beginning of a parameter excursion that would influence the results of the determination.

Sec. 63.454 Recordkeeping requirements.

(a) The owner or operator of each affected source subject to the requirements of this subpart shall comply with the recordkeeping requirements of Sec. 63.10 of subpart A of this part, as shown in table 1, and the requirements specified in paragraphs (b) through (d) of this section for the monitoring parameters specified in Sec. 63.453.

(b) For each applicable enclosure opening, closed-vent system, and closed collection system, the owner or operator shall prepare and maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment and shall record the following information for each inspection:

(1) Date of inspection;

(2) The equipment type and identification;

(3) Results of negative pressure tests for enclosures;

(4) Results of leak detection tests;

(5) The nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);

(6) The date the defect or leak was detected and the date of each attempt to repair the defect or leak;

(7) Repair methods applied in each attempt to repair the defect or leak;

(8) The reason for the delay if the defect or leak is not repaired within 15 days after discovery;

(9) The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;

(10) The date of successful repair of the defect or leak;

(11) The position and duration of opening of bypass line valves and the condition of any valve seals; and

(12) The duration of the use of bypass valves on computer controlled valves.

(c) The owner or operator of a bleaching system complying with Sec. 63.440(d)(3)(ii)(B) shall record the daily average chlorine and hypochlorite application rates, in kg of bleaching agent per megagram of ODP, of the bleaching system until the requirements specified in Sec. 63.440(d)(3)(ii)(A) are met.

(d) The owner or operator shall record the CMS parameters specified in Sec. 63.453 and meet the requirements specified in paragraph (a) of this section for any new affected process equipment or pulping process condensate stream that becomes subject to the standards in this subpart due to a process change or modification.

Sec. 63.455 Reporting requirements.

(a) Each owner or operator of a source subject to this subpart shall comply with the reporting requirements of subpart A of this part as specified in table 1 and all the following requirements in this

section. The initial notification report specified under Sec. 63.9(b)(2) of subpart A of this part shall be submitted by April 15, 1999.

(b) Each owner or operator of a kraft pulping system specified in Sec. 63.440(d)(1) or a bleaching system specified in Sec. 63.440(d)(3)(ii) shall submit, with the initial notification report specified under Sec. 63.9(b)(2) of subpart A of this part and paragraph (a) of this section and update every two years thereafter, a non-binding control strategy report containing, at a minimum, the information specified in paragraphs (b)(1) through (b)(3) of this section in addition to the information required in Sec. 63.9(b)(2) of subpart A of this part.

(1) A description of the emission controls or process modifications selected for compliance with the control requirements in this standard.

(2) A compliance schedule, including the dates by which each step toward compliance will be reached for each emission point or sets of emission points. At a minimum, the list of dates shall include:

(i) The date by which the major study(s) for determining the compliance strategy will be completed;

(ii) The date by which contracts for emission controls or process modifications will be awarded, or the date by which orders will be issued for the purchase of major components to accomplish emission controls or process changes;

(iii) The date by which on-site construction, installation of emission control equipment, or a process change is to be initiated;

(iv) The date by which on-site construction, installation of emissions control equipment, or a process change is to be completed;

(v) The date by which final compliance is to be achieved;

(vi) For compliance with paragraph Sec. 63.440(d)(3)(ii), the tentative dates by which compliance with effluent limitation guidelines and standards intermediate pollutant load effluent reductions and as available, all the dates for the best available technology's milestones reported in the National Pollutant Discharge Elimination System authorized under section 402 of the Clean Water Act and for the best professional milestones in the Voluntary Advanced Technology Incentives

Program under 40 CFR 430.24 (b)(2); and

(vii) The date by which the final compliance tests will be performed.

(3) Until compliance is achieved, revisions or updates shall be made to the control strategy report required by paragraph (b) of this section indicating the progress made towards completing the installation of the emission controls or process modifications during the 2-year period.

(c) The owner or operator of each bleaching system complying with Sec. 63.440(d)(3)(ii)(B) shall certify in the report specified under Sec. 63.10(e)(3) of subpart A of this part that the daily application rates of chlorine and hypochlorite for that bleaching system have not increased as specified in Sec. 63.440(d)(3)(ii)(B) until the requirements of Sec. 63.440(d)(3)(ii)(A) are met.

(d) The owner or operator shall meet the requirements specified in paragraph (a) of this section upon startup of any new affected process equipment or pulping process condensate stream that becomes subject to the standards of this subpart due to a process change or modification.

Sec. 63.456 [Reserved]

Sec. 63.457 Test methods and procedures.

(a) Initial performance test. An initial performance test is required for all emission sources subject to the limitations in Secs. 63.443, 63.444, 63.445, 63.446, and 63.447, except those controlled by a combustion device that is designed and operated as specified in Sec. 63.443(d)(3) or (d)(4).

(b) Vent sampling port locations and gas stream properties. For purposes of

selecting vent sampling port locations and determining vent gas stream properties, required in Secs. 63.443, 63.444, 63.445, and 63.447, each owner or operator shall comply with the applicable procedures in paragraphs (b)(1) through (b)(6) of this section.

(1) Method 1 or 1A of part 60, appendix A, as appropriate, shall be used for selection of the sampling site as follows:

(i) To sample for vent gas concentrations and volumetric flow rates, the sampling site shall be located prior to dilution of the vent gas stream and prior to release to the atmosphere;

(ii) For determining compliance with percent reduction requirements, sampling sites shall be located prior to the inlet of the control device and at the outlet of the control device; measurements shall be performed simultaneously at the two sampling sites; and

(iii) For determining compliance with concentration limits or mass emission rate limits, the sampling site shall be located at the outlet of the control device.

(2) No traverse site selection method is needed for vents smaller than 0.10 meter (4.0 inches) in diameter.

(3) The vent gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of part 60, appendix A, as appropriate.

(4) The moisture content of the vent gas shall be measured using Method 4 of part 60, appendix A.

(5) To determine vent gas concentrations, the owner or operator shall collect a minimum of three samples that are representative of normal conditions and average the resulting pollutant concentrations using the following procedures.

(i) Method 308 in Appendix A of this part shall be used to determine the methanol concentration.

(ii) Except for the modifications specified in paragraphs (b)(5)(ii)(A) through (b)(5)(ii)(K) of this section, Method 26A of part 60, appendix A shall be used to determine chlorine concentration in the vent stream.

(A) Probe/Sampling Line. A separate probe is not required. The sampling line shall be an appropriate length of 0.64 cm (0.25 in) OD

Teflon※ tubing. The sample inlet end of the sampling line shall be inserted into the stack in such a way as to not entrain liquid condensation from the vent gases. The other end shall be connected to the impingers. The length of the tubing may vary from one sampling site to another, but shall be as short as possible in each situation. If sampling is conducted in sunlight, opaque tubing shall be used. Alternatively, if transparent tubing is used, it shall be covered with opaque tape.

(B) Impinger Train. Three 30 milliliter (ml) capacity midget impingers shall be connected in series to the sampling line. The impingers shall have regular tapered stems. Silica gel shall be placed in the third impinger as a desiccant. All impinger train connectors shall be glass and/or Teflon※.

(C) Critical Orifice. The critical orifice shall have a flow rate of 200 to 250 ml/min and shall be followed by a vacuum pump capable of providing a vacuum of 640 millimeters of mercury (mm Hg). A 45 millimeter diameter in-line Teflon※ 0.8 micrometer filter shall follow the impingers to project the critical orifice and vacuum pump.

(D) The following are necessary for the analysis apparatus:

(1) Wash bottle filled with deionized water;

(2) 25 or 50 ml graduated burette and stand;

(3) Magnetic stirring apparatus and stir bar;

(4) Calibrated pH Meter;

(5) 150-250 ml beaker or flask; and

(6) A 5 ml pipette.

(E) The procedures listed in paragraphs (b)(5)(ii)(E)(1) through (b)(5)(ii)(E)(7) of this section shall be used to prepare the reagents.

(1) To prepare the 1 molarity (M) potassium dihydrogen phosphate solution, dissolve 13.61 grams (g) of potassium dihydrogen phosphate in water and dilute to 100 ml.

(2) To prepare the 1 M sodium hydroxide solution (NaOH), dissolve 4.0 g of sodium hydroxide in water and dilute to 100 ml.

(3) To prepare the buffered 2 percent potassium iodide solution,

dissolve 20 g of potassium iodide in 900 ml water. Add 50 ml of the 1 M potassium dihydrogen phosphate solution and 30 ml of the 1 M sodium hydroxide solution. While stirring solution, measure the pH of solution electrometrically and add the 1 M sodium hydroxide solution to bring pH to between 6.95 and 7.05.

(4) To prepare the 0.1 normality (N) sodium thiosulfate solution, dissolve 25 g of sodium thiosulfate, pentahydrate, in 800 ml of freshly boiled and cooled distilled water in a 1-liter volumetric flask. Dilute to volume. To prepare the 0.01 N sodium thiosulfate solution, add 10.0 ml standardized 0.1 N sodium thiosulfate solution to a 100 ml volumetric flask, and dilute to volume with water.

(5) To standardize the 0.1 N sodium thiosulfate solution, dissolve 3.249 g of anhydrous potassium bi-iodate, primary standard quality, or 3.567 g potassium iodate dried at 103 +/-2 degrees Centigrade for 1 hour, in distilled water and dilute to 1000 ml to yield a 0.1000 N solution. Store in a glass-stoppered bottle. To 80 ml distilled water, add, with constant stirring, 1 ml concentrated sulfuric acid, 10.00 ml 0.1000 N anhydrous potassium bi-iodate, and 1 g potassium iodide. Titrate immediately with 0.1 n sodium thiosulfate titrant until the yellow color of the liberated iodine is almost discharged. Add 1 ml starch indicator solution and continue titrating until the blue color disappears. The normality of the sodium thiosulfate solution is inversely proportional to the ml of sodium thiosulfate solution consumed:

[GRAPHIC] [TIFF OMITTED] TR15AP98.000

(6) To prepare the starch indicator solution, add a small amount of cold water to 5 g starch and grind in a mortar to obtain a thin paste. Pour paste into 1 L of boiling distilled water, stir, and let settle overnight. Use clear supernate for starch indicator solution.

(7) To prepare the 10 percent sulfuric acid solution, add 10 ml of concentrated sulfuric acid to 80 ml water in an 100 ml volumetric flask. Dilute to volume.

(F) The procedures specified in paragraphs (b)(5)(ii)(F)(1) through

(b)(5)(ii)(F)(5) of this section shall be used to perform the sampling.

(1) Preparation of Collection Train. Measure 20 ml buffered potassium iodide solution into each of the first two impingers and connect probe, impingers, filter, critical orifice, and pump. The sampling line and the impingers shall be shielded from sunlight.

(2) Leak and Flow Check Procedure. Plug sampling line inlet tip and turn on pump. If a flow of bubbles is visible in either of the liquid impingers, tighten fittings and adjust connections and

impingers. A leakage rate not in excess of 2 percent of the sampling rate is acceptable. Carefully remove the plug from the end of the probe. Check the flow rate at the probe inlet with a bubble tube flow meter. The flow should be comparable or slightly less than the flow rate of the critical orifice with the impingers off-line. Record the flow and turn off the pump.

(3) Sample Collection. Insert the sampling line into the stack and secure it with the tip slightly lower than the port height. Start the pump, recording the time. End the sampling after 60 minutes, or after yellow color is observed in the second in-line impinger. Record time and remove the tubing from the vent. Recheck flow rate at sampling line inlet and turn off pump. If the flow rate has changed significantly, redo sampling with fresh capture solution. A slight variation (less than 5 percent) in flow may be averaged. With the inlet end of the line elevated above the impingers, add about 5 ml water into the inlet tip to rinse the line into the first impinger.

(4) Sample Analysis. Fill the burette with 0.01 N sodium thiosulfate solution to the zero mark. Combine the contents of the impingers in the beaker or flask. Stir the solution and titrate with thiosulfate until the solution is colorless. Record the volume of the first endpoint (TN, ml). Add 5 ml of the 10 percent sulfuric acid solution, and continue the titration until the contents of the flask are again colorless. Record the total volume of titrant required to go through the first and to the second endpoint (TA, ml). If the volume of

neutral titer is less than 0.5 ml, repeat the testing for a longer period of time. It is important that sufficient lighting be present to clearly see the endpoints, which are determined when the solution turns from pale yellow to colorless. A lighted stirring plate and a white background are useful for this purpose.

(5) Interferences. Known interfering agents of this method are sulfur dioxide and hydrogen peroxide. Sulfur dioxide, which is used to reduce oxidant residuals in some bleaching systems, reduces formed iodine to iodide in the capture solution. It is therefore a negative interference for chlorine, and in some cases could result in erroneous negative chlorine concentrations. Any agent capable of reducing iodine to iodide could interfere in this manner. A chromium trioxide impregnated filter will capture sulfur dioxide and pass chlorine and chlorine dioxide. Hydrogen peroxide, which is commonly used as a bleaching agent in modern bleaching systems, reacts with iodide to form iodine and thus can cause a positive interference in the chlorine measurement. Due to the chemistry involved, the precision of the chlorine analysis will decrease as the ratio of chlorine dioxide to chlorine increases. Slightly negative calculated concentrations of chlorine may occur when sampling a vent gas with high concentrations of chlorine dioxide and very low concentrations of chlorine.

(G) The following calculation shall be performed to determine the corrected sampling flow rate:

[GRAPHIC] [TIFF OMITTED] TR15AP98.001

Where:

SC=Corrected (dry standard) sampling flow rate, liters per minute;

SU=Uncorrected sampling flow rate, L/min;

BP=Barometric pressure at time of sampling;

PW=Saturated partial pressure of water vapor, mm Hg at temperature; and

t=Ambient temperature, deg.C.

(H) The following calculation shall be performed to determine the moles of chlorine in the sample:

[GRAPHIC] [TIFF OMITTED] TR15AP98.002

Where:

TN=Volume neutral titer, ml;

TA=Volume acid titer (total), ml; and

NThio=Normality of sodium thiosulfate titrant.

(I) The following calculation shall be performed to determine the concentration of chlorine in the sample:

[GRAPHIC] [TIFF OMITTED] TR15AP98.003

Where:

SC=Corrected (dry standard) sampling flow rate, liters per minute;

tS=Time sampled, minutes;

TN=Volume neutral titer, ml;

TA=Volume acid titer (total), ml; and

NThio=Normality of sodium thiosulfate titrant.

(J) The following calculation shall be performed to determine the moles of chlorine dioxide in the sample:

[GRAPHIC] [TIFF OMITTED] TR15AP98.004

Where:

TA=Volume acid titer (total), ml;

TN=Volume neutral titer, ml; and

NThio=Normality of sodium thiosulfate titrant.

(K) The following calculation shall be performed to determine the

concentration of chlorine dioxide in the sample:

[GRAPHIC] [TIFF OMITTED] TR15AP98.005

Where:

SC=Corrected (dry standard) sampling flow rate, liters per minute;

tS=Time sampled, minutes;

TA=Volume acid titer (total), ml;

TN=Volume neutral titer, ml; and

NThio=Normality of sodium thiosulfate titrant.

(iii) Any other method that measures the total HAP or methanol concentration that has been demonstrated to the Administrator's satisfaction.

(6) The minimum sampling time for each of the three runs per method shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

(c) Liquid sampling locations and properties. For purposes of selecting liquid sampling locations and for determining properties of liquid streams such as wastewaters, process waters, and condensates required in Secs. 63.444, 63.446, and 63.447, the owner or operator shall comply with the following procedures:

(1) Samples shall be collected using the sampling procedures specified in Method 305 of part 60, appendix A;

(i) Where feasible, samples shall be taken from an enclosed pipe prior to the liquid stream being exposed to the atmosphere; and

(ii) When sampling from an enclosed pipe is not feasible, samples shall be collected in a manner to minimize exposure of the sample to the atmosphere and loss of HAP compounds prior to sampling.

(2) The volumetric flow rate of the entering and exiting liquid streams shall be determined using the inlet and outlet flow meters or

other methods demonstrated to the Administrator's satisfaction. The volumetric flow rate measurements to determine actual mass removal shall be taken at the same time as the concentration measurements;

(3) To determine liquid stream total HAP or methanol concentrations, the owner or operator shall collect a minimum of three samples that are representative of normal conditions and average the resulting pollutant concentrations using one of the following:

(i) Method 305 in Appendix A of this part, adjusted using the following equation:

[GRAPHIC] [TIFF OMITTED] TR15AP98.006

Where:

C=Pollutant concentration for the liquid stream, parts per million by weight.

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Ci=Measured concentration of pollutant i in the liquid stream sample determined using Method 305, parts per million by weight.
fmi=Pollutant-specific constant that adjusts concentration measured by Method 305 to actual liquid concentration; the fm for methanol is 0.85. Additional pollutant fm values can be found in table 34, subpart G of this part.
n=Number of individual pollutants, i, summed to calculate total HAP.

(ii) Any other method that measures total HAP concentration that has been demonstrated to the Administrator's satisfaction.

(4) To determine soluble BOD5 in the effluent stream from a biological treatment unit used to comply with Secs. 63.446(e)(2) and 63.453(j), the owner or operator shall use Method 405.1, of part 136, with the following modifications:

(i) Filter the sample through the filter paper, into Erlenmeyer

flask by applying a vacuum to the flask sidearm. Minimize the time for which vacuum is applied to prevent stripping of volatile organics from the sample. Replace filter paper as often as needed in order to maintain filter times of less than approximately 30 seconds per filter paper. No rinsing of sample container or filter bowl into the Erlenmeyer flask is allowed.

(ii) Perform Method 405.1 on the filtrate obtained in paragraph (c)(4) of this section. Dilution water shall be seeded with 1 milliliter of final effluent per liter of dilution water. Dilution ratios may require adjustment to reflect the lower oxygen demand of the filtered sample in comparison to the total BOD5. Three BOD bottles and different dilutions shall be used for each sample.

(d) Detectable leak procedures. To measure detectable leaks for closed-vent systems as specified in Sec. 63.450 or for pulping process wastewater collection systems as specified in Sec. 63.446(d)(2)(i), the owner or operator shall comply with the following:

(1) Method 21, of part 60, appendix A; and

(2) The instrument specified in Method 21 shall be calibrated before use according to the procedures specified in Method 21 on each day that leak checks are performed. The following calibration gases shall be used:

(i) Zero air (less than 10 parts per million by volume of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 parts per million by volume methane or n-hexane.

(e) Negative pressure procedures. To demonstrate negative pressure at process equipment enclosure openings as specified in Sec. 63.450(b), the owner or operator shall use one of the following procedures:

(1) An anemometer to demonstrate flow into the enclosure opening;

(2) Measure the static pressure across the opening;

(3) Smoke tubes to demonstrate flow into the enclosure opening; or

(4) Any other industrial ventilation test method demonstrated to the Administrator's satisfaction.

(f) HAP concentration measurements. For purposes of complying with the requirements in Secs. 63.443, 63.444, and 63.447, the owner or operator shall measure the total HAP concentration as one of the following:

(1) As the sum of all individual HAP's; or

(2) As methanol.

(g) Condensate HAP concentration measurement. For purposes of complying with the kraft pulping condensate requirements in Sec. 63.446, the owner or operator shall measure the total HAP concentration as methanol except for the purposes of complying with the initial performance test specified in Sec. 63.457(a) for Sec. 63.446(e)(2) and as specified in Sec. 63.453(j)(2)(ii).

(h) Bleaching HAP concentration measurement. For purposes of complying with the bleaching system requirements in Sec. 63.445, the owner or operator shall measure the total HAP concentration as the sum of all individual chlorinated HAP's or as chlorine.

(i) Vent gas stream calculations. To demonstrate compliance with the mass emission rate, mass emission rate per megagram of ODP, and percent reduction requirements for vent gas streams specified in Secs. 63.443, 63.444, 63.445, and 63.447, the owner or operator shall use the following:

(1) The total HAP mass emission rate shall be calculated using the following equation:

[GRAPHIC] [TIFF OMITTED] TR15AP98.007

Where:

E=Mass emission rate of total HAP from the sampled vent, kilograms per hour.

K2=Constant, 2.494×10^{-6} (parts per million by volume)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 deg.C.

Cj=Concentration on a dry basis of pollutant j in parts

per million by volume as measured by the test methods specified in paragraph (b) of this section.

Mj=Molecular weight of pollutant j, gram/gram-mole.

Qs=Vent gas stream flow rate (dry standard cubic meter per minute) at a temperature of 20 deg.C as indicated in paragraph (b) of this section.

n=Number of individual pollutants, i, summed to calculate total HAP.

(2) The total HAP mass emission rate per megagram of ODP shall be calculated using the following equation:

[GRAPHIC] [TIFF OMITTED] TR15AP98.008

Where:

F=Mass emission rate of total HAP from the sampled vent, in kilograms per megagram of ODP.

E=Mass emission rate of total HAP from the sampled vent, in kilograms per hour determined as specified in paragraph (i)(1) of this section.

P=The production rate of pulp during the sampling period, in megagrams of ODP per hour.

(3) The total HAP percent reduction shall be calculated using the following equation:

[GRAPHIC] [TIFF OMITTED] TR15AP98.009

Where:

R=Efficiency of control device, percent.

Ei=Inlet mass emission rate of total HAP from the sampled vent, in kilograms of pollutant per hour, determined as specified in paragraph (i)(1) of this section.

Eo=Outlet mass emission rate of total HAP from the sampled vent, in kilograms of pollutant per hour, determined as specified in paragraph (i)(1) of this section.

(j) Liquid stream calculations. To demonstrate compliance with the mass flow rate, mass per megagram of ODP, and percent reduction requirements for liquid streams specified in Sec. 63.446, the owner or operator shall use the following:

(1) The mass flow rates of total HAP or methanol entering and exiting the treatment process shall be calculated using the following equations:

[GRAPHIC] [TIFF OMITTED] TR15AP98.010

Where:

Eb=Mass flow rate of total HAP or methanol in the liquid stream entering the treatment process, kilograms per hour.
Ea=Mass flow rate of total HAP or methanol in the liquid exiting the treatment process, kilograms per hour.

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K=Density of the liquid stream, kilograms per cubic meter.
Vbi=Volumetric flow rate of liquid stream entering the treatment process during each run i, cubic meters per hour, determined as specified in paragraph (c) of this section.
Vai=Volumetric flow rate of liquid stream exiting the treatment process during each run i, cubic meters per hour, determined as specified in paragraph (c) of this section.
Cbi=Concentration of total HAP or methanol in the stream entering the treatment process during each run i, parts per million by weight, determined as specified in paragraph (c) of this section.
Cai=Concentration of total HAP or methanol in the stream exiting the treatment process during each run i, parts per million by weight, determined as specified in paragraph (c) of this section.
n=Number of runs.

(2) The mass of total HAP or methanol per megagram ODP shall be calculated using the following equation:

[GRAPHIC] [TIFF OMITTED] TR15AP98.011

Where:

F=Mass loading of total HAP or methanol in the sample, in kilograms per megagram of ODP.

Ea=Mass flow rate of total HAP or methanol in the wastewater stream in kilograms per hour as determined using the procedures in paragraph (j)(1) of this section.

P=The production rate of pulp during the sampling period in megagrams of ODP per hour.

(3) The percent reduction of total HAP across the applicable treatment process shall be calculated using the following equation:

[GRAPHIC] [TIFF OMITTED] TR15AP98.012

Where:

R=Control efficiency of the treatment process, percent.

Eb=Mass flow rate of total HAP in the stream entering the treatment process, kilograms per hour, as determined in paragraph (j)(1) of this section.

Ea=Mass flow rate of total HAP in the stream exiting the treatment process, kilograms per hour, as determined in paragraph (j)(1) of this section.

(4) Compounds that meet the requirements specified in paragraphs (j)(4)(i) or (4)(ii) of this section are not required to be included in the mass flow rate, mass per megagram of ODP, or the mass percent reduction determinations.

(i) Compounds with concentrations at the point of determination that are below 1 part per million by weight; or

(ii) Compounds with concentrations at the point of determination that are below the lower detection limit where the lower detection limit is greater than 1 part per million by weight.

(k) Oxygen concentration correction procedures. To demonstrate compliance with the total HAP concentration limit of 20 ppmv in Sec. 63.443(d)(2), the concentration measured using the methods specified in paragraph (b)(5) of this section shall be corrected to 10 percent oxygen using the following procedures:

(1) The emission rate correction factor and excess air integrated sampling and analysis procedures of Methods 3A or 3B of part 60, appendix A shall be used to determine the oxygen concentration. The samples shall be taken at the same time that the HAP samples are taken.

(2) The concentration corrected to 10 percent oxygen shall be computed using the following equation:

[GRAPHIC] [TIFF OMITTED] TR15AP98.013

Where:

Cc=Concentration of total HAP corrected to 10 percent oxygen, dry basis, parts per million by volume.

Cm=Concentration of total HAP dry basis, parts per million by volume, as specified in paragraph (b) of this section.

%02d=Concentration of oxygen, dry basis, percent by volume.

(1) Biological treatment system percent reduction calculation. To determine compliance with an open biological treatment system option specified in Sec. 63.446(e)(2) and the monitoring requirements specified in Sec. 63.453(j)(2), the percent reduction due to destruction in the biological treatment system shall be calculated using the following equation:

R=fbio x 100

Where:

R=Destruction of total HAP or methanol in the biological treatment process, percent.

fbio=The fraction of total HAP or methanol removed in the biological treatment system. The site-specific biorate constants shall be determined using the procedures specified and as limited in appendix C of part 63.

(m) Condensate segregation procedures. The following procedures shall be used to demonstrate compliance with the condensate segregation requirements specified in Sec. 63.446(c).

(1) To demonstrate compliance with the percent mass requirements specified in Sec. 63.446(c)(1), the procedures specified in paragraphs (m)(1)(i) through (m)(1)(iii) of this section shall be performed.

(i) Determine the total HAP mass of all condensates from each equipment system listed in Sec. 63.446 (b)(1) through (b)(3) using the procedures specified in paragraphs (c) and (j) of this section.

(ii) Multiply the total HAP mass determine in paragraph (m)(1)(i) of this section by 0.65 to determine the target HAP mass for the high-HAP fraction condensate stream or streams.

(iii) Compliance with the segregation requirements specified in Sec. 63.446(c)(1) is demonstrated if the condensate stream or streams from each equipment system listed in Sec. 63.446 (b)(1) through (b)(3) being treated as specified in Sec. 63.446(e) contain at least as much total HAP mass as the target total HAP mass determined in paragraph (m)(1)(ii) of this section.

(2) To demonstrate compliance with the percent mass requirements specified in Sec. 63.446(c)(2), the procedures specified in paragraphs (m)(2)(i) through (m)(2)(ii) of this section shall be performed.

(i) Determine the total HAP mass contained in the high-HAP fraction condensates from each equipment system listed in Sec. 63.446(b)(1) through (b)(3) and the total condensates streams from the equipment systems listed in Sec. 63.446(b)(4) and (b)(5), using the procedures specified in paragraphs (c) and (j) of this section.

(ii) Compliance with the segregation requirements specified in Sec. 63.446(c)(2) is demonstrated if the total HAP mass determined in paragraph (m)(2)(i) of this section is equal to or greater than the appropriate mass requirements specified in Sec. 63.446(c)(2).

(n) Biological treatment system monitoring sampling storage. The inlet and outlet grab samples required to be collected in Sec. 63.453(j)(2) shall be stored at 4 deg. C (40 deg. F) to minimize the biodegradation of the organic compounds in the samples.

Sec. 63.458 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 112(d) of the CAA, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States:

(1) Section 63.6(g)--Use of an alternative nonopacity emission standard;

(2) Section 63.453(m)--Use of an alternative monitoring parameter;

(3) Section 63.457(b)(5)(iii)--Use of an alternative test method for total HAP or methanol in vents; and

(4) Section 63.457(c)(3)(ii)--Use of an alternative test method for total HAP or methanol in wastewater.

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Sec. 63.459 [Reserved]

Table 1 to Subpart S--General Provisions Applicability to Subpart S [a]

Reference	Applies to Subpart S	Comment
63.1(a)(1)-(3).....	Yes.....	

63.1(a)(4)	Yes	Subpart S (this table) specifies applicability of each paragraph in subpart A to subpart S.
63.1(a)(5)	No	Section reserved.
63.1(a)(6)-(8)	Yes	
63.1(a)(9)	No	Section reserved.
63.1(a)(10)	No	Subpart S and other cross-referenced subparts specify calendar or operating day.
63.1(a)(11)-(14)	Yes	
63.1(b)(1)	No	Subpart S specifies its own applicability.
63.1(b)(2)-(3)	Yes	
63.1(c)(1)-(2)	Yes	
63.1(c)(3)	No	Section reserved.
63.1(c)(4)-(5)	Yes	
63.1(d)	No	Section reserved.
63.1(e)	Yes	
63.2	Yes	
63.3	Yes	
63.4(a)(1)	Yes	
63.4(a)(3)		
63.4(a)(4)	No	Section reserved.
63.4(a)(5)	Yes	
63.4(b)	Yes	
63.4(c)	Yes	
63.5(a)	Yes	
63.5(b)(1)	Yes	
63.5(b)(2)	No	Section reserved.
63.5(b)(3)	Yes	
63.5(b)(4)-(6)	Yes	
63.5(c)	No	Section reserved.
63.5(d)	Yes	
63.5(e)	Yes	
63.5(f)	Yes	
63.6(a)	Yes	
63.6(b)	No	Subpart S specifies compliance dates for

		sources subject to subpart S.
63.6(c)	No	Subpart S specifies compliance dates for sources subject to subpart S.
63.6(d)	No	Section reserved.
63.6(e)	Yes	
63.6(f)	Yes	
63.6(g)	Yes	
63.6(h)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.6(i)	Yes	
63.6(j)	Yes	
63.7	Yes	
63.8(a)(1)	Yes	
63.8(a)(2)	Yes	
63.8(a)(3)	No	Section reserved.
63.8(a)(4)	Yes	
63.8(b)(1)	Yes	
63.8(b)(2)	No	Subpart S specifies locations to conduct monitoring.
63.8(b)(3)	Yes	
63.8(c)(1)	Yes	
63.8(c)(2)	Yes	
63.8(c)(3)	Yes	
63.8(c)(4)	No	Subpart S allows site specific determination of monitoring frequency in Sec. 63.453(n)(4).
63.8(c)(5)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.8(c)(6)	Yes	
63.8(c)(7)	Yes	
63.8(c)(8)	Yes	
63.8(d)	Yes	

63.8(e)	Yes	
63.8(f)(1)-(5)	Yes	
63.8(f)(6)	No	Subpart S does not specify relative accuracy test for CEM's.
63.8(g)	Yes	
63.9(a)	Yes	
63.9(b)	Yes	Initial notifications must be submitted within one year after the source becomes subject to the relevant standard.
63.9(c)	Yes	
63.9(d)	No	Special compliance requirements are only applicable to kraft mills.
63.9(e)	Yes	
63.9(f)	No	Pertains to continuous opacity monitors that are not part of this standard.

[[Page 18630]]

63.9(g)(1)	Yes	
63.9(g)(2)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.9(g)(3)	No	Subpart S does not specify relative accuracy tests, therefore no notification is required for an alternative.
63.9(h)	Yes	
63.9(i)	Yes	
63.9(j)	Yes	

63.10(a)	Yes	
63.10(b)	Yes	
63.10(c)	Yes	
63.10(d)(1)	Yes	
63.10(d)(2)	Yes	
63.10(d)(3)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(d)(4)	Yes	
63.10(d)(5)	Yes	
63.10(e)(1)	Yes	
63.10(e)(2)(i)	Yes	
63.10(e)(2)(ii)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(e)(3)	Yes	
63.10(e)(4)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(f)	Yes	
63.11-63.15	Yes	

a Wherever subpart A specifies ``postmark'' dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent by the specified dates, but a postmark is not required.

CERTIFICATE OF SERVICE

I, Keith A. Michaels, hereby certify that a copy of this permit has been mailed by first class mail to International Paper Company Camden Mill, 1944 Adams Avenue, Camden, Arkansas 71701, on this 1st day of June, 1999.

Keith A. Michaels, Chief, Air Division

ADEQ

ARKANSAS
Department of Environmental Quality

ARD 047338454

May 12, 2000

Ms. Jole Luehrs (6PD-R)
U.S. Environmental Protection Agency
Region VI
1445 Ross Avenue
Dallas, Texas 75202-2733

RECEIVED
MAY 22 2000
NSR SECTION
6T-AN

RE: Proposed Operating Permit
International Paper Company Camden Mill
Permit No.: *725-AOP-R1*
CSN: 52-0013

Dear Ms. Luehrs:

Please find enclosed a copy of the proposed operating permit and request for public comment for the referenced facility. A copy of the complete permit application will be provided upon request.

Written comments on the proposed permit should be submitted to the Arkansas Department of Environmental Quality, Air Division, Post Office Box 8913, Little Rock, Arkansas 72219-8913. If you have any questions please feel free to contact me at (501) 682-0730.

Sincerely,

for Keith A. Michaels
Chief, Air Division

Enclosures
Draft Permit
Application
Public Notice
Mailing List

DRAFT OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation #26:

Permit #: 725-AOP-R~~1~~2

IS ISSUED TO:

International Paper Company
1944 Adams Avenue
Camden, AR 71701
Ouachita County
CSN:52-0013

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

June 1, 1999 and May 31, 2004

AND IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Keith A. Michaels

Date Modified

SECTION I: FACILITY INFORMATION

PERMITTEE:	International Paper Company
CSN:	52-0013
PERMIT NUMBER:	725-AOP-R~~1~~2
FACILITY MAILING ADDRESS:	1944 Adams Avenue Camden, AR 71701
PHYSICAL LOCATION:	1944 Adams Avenue Camden, AR 71701
COUNTY:	Ouachita
CONTACT POSITION:	Russell Delezen / Jay Wilson
TELEPHONE NUMBER:	870-231-2251 / 870-231-2250
REVIEWING ENGINEER:	Loretta Reiber
UTM North-South (X):	3711.5
UTM East-West (Y):	516.5

SECTION II: INTRODUCTION

International Paper Company owns and operates a facility in Camden which produces a variety of unbleached papers and linerboard. The primary Standard Industrial Classification Code (SIC) for this facility is 2611 and 2621. This permit will continue to classify this facility as a major source of criteria pollutant emissions (with the exception of lead) with respect to Title V and 40 CFR 52.21.

Wood is accepted in either chip or log form. Other chips are stored in piles. Logs are debarked, chipped, and screened prior to storage in the chip silos. Chips are conveyed to the pulp mill, cooked in a continuous digester, washed, stored, and transferred to the paper mill where they are refined. Recycled fiber is also produced from a post consumer recycle plant. Recycled fiber, virgin fiber, chemicals, and dyes form the feedstock for the three paper machines. The final paper product is trimmed, wound onto rolls, and prepared for shipment off site.

Weak black liquor from the pulp mill is concentrated in an evaporation system prior to combustion in one of the three recovery boilers. These boilers recover the spent cooking chemicals as green liquor. Energy from liquor combustion is captured to generate steam for mill use.

The green liquor is reacted with lime in the caustic and lime recovery area and clarified to produce white liquor. The lime mud from the clarifier is recovered, calcined in a lime kiln, and reused. Ancillary systems include the bark boiler and the two power boilers which provide supplemental plant-wide steam, two steam turbines, a gas turbine generator equipped with a heat recovery steam generator (HRSG), a wastewater treatment system, an electrical distribution system, maintenance areas, and laboratories.

~~Permit #725-AOP-R1 is the second operating permit issued to International Paper Company under Regulation 26. Under this permit, several changes are being made in order to comply with the applicable requirements of 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry*. These changes include, but are not limited to, collecting Low Volume High Concentration (LVHC) gases from various sources and feeding them to the LVHC system for destruction in either the incinerator or the lime kiln. The permittee will be collecting the pulping condensate from several sources in a hard piping system for routing to treatment in the Aeration Stabilization Basin. The permittee will also be replacing the scrubber located at the NCG Incinerator. Increases in permitted and/or actual emissions will not be increasing above the PSD Significant Increase Levels. The permittee is also combining the #6 fuel oil usage limits for sources SN-01, SN-04/05, and SN-06 for flexibility purposes. The permitted emission rate for the lime handling system is increasing to allow for a safety factor. A custom schedule for monitoring the sulfur content of the fuel used at the cogeneration unit is being granted in this permit.~~Permit #725-AOP-R2 is the third operating permit issued to

International Paper Company under Regulation 26. This modified permit is being issued to allow for the installation of a roundwood slasher at the woodyard. Permitted emissions will be increasing by 0.1 tons per year. An averaging time will not be specified in this permit for demonstrating compliance with the HAP emissions from the pulping process condensates. The permittee will now be required to demonstrate an appropriate averaging period prior to the effective date of the Cluster Rule.

All of the hourly emission rates for this facility were based upon the maximum capacity of the equipment. CEMs as required by §19.804 of Regulation 19 will show compliance with the permitted emission rates for total reduced sulfur from several pieces of equipment. There are no additional requirements for demonstrating compliance with the short term emission rates in this permit. Compliance with the annual emission rates will be demonstrated through several record keeping requirements. These specific conditions are specified for each set of emission rates in this permit. All of the records are to be kept on a twelve month rolling total so that compliance may be demonstrated for any twelve month period.

REGULATIONS

International Paper Company - Camden Mill is subject to the applicable provisions of the following regulations.

Regulation	Description
18	Arkansas Air Pollution Control Code
19	Regulations of the Arkansas Plan of Implementation for Air Pollution Control
26	Regulations of the Arkansas Operating Air Permit Program
40 CFR 52.21	Prevention of Significant Deterioration
40 CFR Part 60, Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
40 CFR Part 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
40 CFR Part 60, Subpart BB	Standards of Performance for Kraft Pulp Mills
40 CFR Part 60, Subpart GG	Standards of Performance for Stationary Gas Turbines

International Paper Company
CSN: 52-0013 Permit #:725-AOP-R~~1~~2

Regulation	Description
40 CFR Part 63, Subpart S	National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry

Following are a table of the facility wide emissions of federally regulated pollutants and a table of the facility wide non-criteria pollutant emissions. Specific unit information may be located using the indicated cross reference pages in the first table. The annual emission totals for sources SN-01, SN-04/05, and SN-06 include emissions generated by the firing of #6 fuel oil. The permitted annual emission rates for these sources while firing #6 fuel oil may be found in the plantwide conditions as the amount of #6 fuel which the permittee is allowed to fire at each of these sources has been combined.

EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
Total Allowable Emissions		PM	547.8	2070.~~1~~2	N/A
		PM_{10}	285.1	1076.3	
		SO_2	4132.1	2481.7	
		VOC	1063.3	4417.8	
		CO	1834.4	7011.3	
		NO_x	1035.2	2406.2	
		Pb	1.21	4.60	
		TRS	170.2	650.5	

International Paper Company
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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
01	Bark Boiler	PM	76.7	329.2	96
		PM_{10}	62.5	274.3	
		SO_2	706.5	22.3	
		VOC	28.0	122.7	
		CO	619.0	2711.1	
		NO_x	110.0	482.8	
		Pb	0.05	0.01	
02	Slaker Vent Scrubber	PM	5.0	21.9	81
		PM_{10}	5.0	21.9	
		VOC	3.3	14.2	
		TRS	0.1	0.2	
03	Lime Kiln	PM	70.0	306.6	74
		PM_{10}	34.9	152.9	
		SO_2	17.4	76.3	
		VOC	5.1	22.3	
		CO	35.0	153.3	
		NO_x	44.8	196.0	
		Pb	1.10	4.50	
		TRS	7.4	19.1	

International Paper Company
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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
04/05	Recovery Boiler #1	PM	200.0	876.3	48
		PM_{10}	77.6	340.2	
		SO_2	1318.8	1160.6	
		VOC	66.60	294.0	
		CO	412.6	1810.0	
		NO_x	192.0	401.9	
		Pb	0.02	0.04	
		TRS	31.8	140.6	

International Paper Company
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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
06	Recovery Boiler #2 and #3	PM	75.0	307.0	55
		PM_{10}	29.1	58.2	
		SO_2	1507.2	1066.1	
		VOC	162.3	711.4	
		CO	454.0	1991.6	
		NO_x	242.0	701.9	
		Pb	0.01	0.02	
		TRS	37.2	163.9	
07	Smelt Dissolving Tank #1	PM	25.0	110.0	62
		PM_{10}	25.0	110.0	
		SO_2	7.5	32.9	
		VOC	28.0	122.3	
		NO_x	12.9	56.7	
		Pb	0.01	0.01	
		TRS	1.5	6.6	
08	Smelt Dissolving Tank #2	PM	8.4	76.3*	66
		PM_{10}	8.4	76.3*	
		SO_2	3.6	29.5*	
		VOC	13.6	115.5*	
		NO_x	6.1	51.0*	
		Pb	0.01	0.02*	
		TRS	0.7	5.8*	

EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
09	Smelt Dissolving Tank #3	PM	9.0	76.3*	66
		PM_{10}	9.0	76.3*	
		SO_2	3.2	29.5*	
		VOC	12.2	115.5*	
		NO_x	5.5	51.0*	
		Pb	0.01	0.02*	
		TRS	0.6	5.8*	
10	Auxiliary Power Boiler #1	This source is no longer in service.			
11	Auxiliary Power Boiler #2	This source is no longer in service.			
12	NCG Incinerator	PM	0.2	0.9	84
		PM_{10}	0.2	0.9	
		SO_2	10.9	15.2	
		VOC	4.0	17.3	
		CO	9.4	41.1	
		NO_x	7.3	32.1	
		TRS	1.8	4.3	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
13	Cogeneration Unit	PM	5.6	24.6	92
		PM_{10}	5.6	24.6	
		SO_2	0.4	1.5	
		VOC	2.8	12.1	
		CO	51.6	226.2	
		NO_x	93.3	408.8	
14	NCG Back-Up Flare	PM	0.2	0.2	84
		PM_{10}	0.2	0.2	
		SO_2	544.8	74.3	
		VOC	3.0	3.1	
		CO	9.4	5.7	
		NO_x	7.3	4.4	
		TRS	7.6	2.3	
15	Brown Stock Washers	VOC	221.1	968.4	31
		TRS	45.7	200.3	
16	Aeration Stabilization Basin and Process Sewers	VOC	9.1	39.9	115
		TRS	1.2	4.1	
17	The printing presses are no longer in service.				
18	Black Liquor Oxidation Tank Vent	VOC	121.5	531.1	46
		TRS	25.0	62.2	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
19	Woodyard Source Group	PM	0.7	~~3.03~~ 1	22
		PM_{10}	0.6	2.7	
		VOC	36.9	161.5	
20	Digester and Blow Tanks Source Group	PM	0.1	0.1	25
		PM_{10}	0.1	0.1	
		VOC	1.7	6.8	
		TRS	0.9	3.8	
21	Turpentine Recovery Source Group	VOC	0.2	0.9	28
22	Knotter System Source Group	VOC	18.7	81.3	29
		TRS	1.7	7.5	
23	High Density Storage Source Group	VOC	47.9	209.6	34
		TRS	2.9	12.8	
24	Pine Stock Chest	VOC	47.9	209.6	36
		TRS	2.9	12.8	
25	Weak Black Liquor Storage Source Group	VOC	6.3	26.5	39
		TRS	0.6	2.5	
26	Strong Black Liquor Storage Source Group	VOC	0.3	0.7	43
		TRS	0.2	0.6	
27	Multiple Effect Evaporators	Emissions from this source are routed to sources SN-12 and/or SN-14.			41

International Paper Company
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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
28, 29, 30, 32, 33, & 34	Causticizing Area Sources	VOC	7.4	31.2	71
		TRS	0.3	0.8	
31	Lime Handling Source Group	PM	1.0	4.4	79
		PM_{10}	1.0	4.4	
35	Paper Mill Source Group	VOC	161.6	707.6	111
36	Active East Landfill	VOC	0.8	3.3	122
		CO	0.1	0.3	
		TRS	0.1	0.3	
37	Gasoline Storage Tank	VOC	22.8	0.5	126
38	Maintenance Parts Cleaners	This is an insignificant activity under Group B.			
39 - 46	These sources were all part of the bag plant which has been removed from service.				
47	Package Boiler	PM	5.5	6.6	102
		PM_{10}	5.5	6.6	
		SO_2	0.2	0.2	
		VOC	0.4	0.4	
		CO	50.0	60.0	
		NO_x	25.0	30.0	

International Paper Company
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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
48	Air Compressors	PM	2.0	2.5	128
		PM_{10}	2.0	2.5	
		SO_2	1.8	2.3	
		VOC	2.3	2.9	
		CO	5.9	7.4	
		NO_x	27.2	34.3	
49	Shutdown Equipment	PM	18.4	0.5	131
		PM_{10}	18.4	0.5	
		SO_2	17.2	0.5	
		VOC	27.5	0.7	
		CO	187.4	4.6	
		NO_x	261.8	6.3	

*These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

International Paper Company
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EMISSION SUMMARY FOR NON-CRITERIA POLLUTANTS		
Pollutant	lb/hr	tpy
Acetaldehyde	13.57	58.95
Acetone**	4.35	12.22
Acetophenone	0.03	0.11
Acrolein	0.39	1.40
Acrylonitrile	0.01	0.02
Aldehydes	0.06	0.01
Ammonia**	167.67	734.31
Antimony Compounds	0.200	0.115
Arsenic Compounds	0.070	0.146
Benzene	0.50	1.29
Beryllium Compounds	0.010	0.007
Cadmium Compounds	0.04	0.123
Carbon Disulfide	0.76	3.20
Carbon Tetrachloride	0.03	0.08
Carbonyl Sulfide	0.02	0.05
Chlorobenzene	0.09	0.27
Chloroform	0.10	0.31
Chromium Compounds	0.85	3.60
Cobalt Compounds	0.160	0.154
Cresols & Hexachloroethane	0.06	0.27
Cumene	0.05	0.15
Dibenzofurans	0.01	0.01
Dimethyl Disulfide*	5.95	25.87

International Paper Company
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EMISSION SUMMARY FOR NON-CRITERIA POLLUTANTS		
Pollutant	lb/hr	tpy
Dimethyl Sulfide*	50.81	222.65
Ethyl Benzene	0.01	0.02
Ethylene Glycol	0.44	1.92
Formaldehyde	3.89	12.72
Hydrogen Chloride**	32.52	105.92
Hydrogen Fluoride**	0.46	0.15
H_2S	13.6	58.0
Lead Compounds	0.09	0.269
Manganese Compounds	2.41	10.132
Mercury Compounds	0.01	0.015
Methanol	396.42	1732.79
Methyl Ethyl Ketone	4.40	18.66
Methyl Isobutyl Ketone	0.38	1.25
Methylene Chloride**	0.51	2.21
Methyl Mercaptan*	12.79	55.78
n-Hexane	0.22	0.80
Napthalene	0.21	0.89
Nickel Compounds	1.000	0.785
Phenols	3.32	14.49
POM & PAH	0.11	0.36
Propionaldehyde	0.11	0.45
Selenium Compounds	0.020	0.021
Styrene	0.69	2.39

International Paper Company
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EMISSION SUMMARY FOR NON-CRITERIA POLLUTANTS		
Pollutant	lb/hr	tpy
1,1,2,2-Tetrachloroethane	0.01	0.01
Tetrachloroethylene**	0.41	1.72
Toluene	0.36	1.01
1,2,4-Trichlorobenzene	0.80	3.31
1,1,1-Trichloroethane**	0.13	0.44
1,1,2-Trichloroethane	0.12	0.49
Trichloroethylene	0.07	0.19
Vinyl Chloride	0.01	0.02
Xylene	0.32	0.76
Zinc	25.67	112.49

*Components of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

SECTION III: PERMIT HISTORY

Operations at the facility now known as International Paper Company - Camden Mill began in early 1928. With the exception of the frames of the paper machines, all of the original equipment has been replaced.

Permit #725-A was issued to International Paper Company on March 23, 1984. This permit allowed for the rebuilding of the electrostatic precipitator controlling emissions from the #2 and #3 recovery boilers.

Permit #990-A was issued to International Paper Company on January 10, 1990. This permit allowed for the installation of the cogeneration unit at this facility. At this time, the facility took severe restrictions on the two auxiliary power boilers to net out of a PSD review.

Permit #1239-A was issued to International Paper Company on December 13, 1991. This permit allowed for the installation of a new multiple effect evaporator. Limits were taken on the amount of black liquor solids that could be burned in the recovery boilers in order to avoid a PSD review.

Permit #725-AR-1 was issued to International Paper Company on May 15, 1992. This permit consolidated permits #725-A, #990-A, and 1239-A. Annual emissions were quantified for the first time in this permit.

Permit #1458-A was issued to International Paper Company on June 2, 1993. At this time, the Department and International Paper were working on a PSD permit for the cogeneration facility. The facility wished to install a scrubber on source SN-01, the bark boiler, prior to the issuance of the draft permit. Therefore, the Department issued this temporary permit to allow for the installation of the scrubber.

Permit #725-AR-2 was issued to International Paper Company on November 1, 1996. This permit consolidated permits #725-AR-1 and #1458-A. Restrictions on the operation of the auxiliary power boilers (which have since been taken out of service) were changed which resulted in the need for a retroactive PSD review of the emissions from the cogeneration unit. Although the increase in particulate matter emissions from the cogeneration unit were above the PSD significant increase level, the permittee was able to net out of PSD review for particulate matter. Emissions of sulfur dioxide and volatile organic compounds were below significant increase levels without any corresponding offsets. A PSD review for the emissions of oxides of nitrogen and carbon monoxide from the cogeneration unit was conducted due to net emissions increases of 241.79 tpy of carbon monoxide and 240.01 tpy of oxides of nitrogen. As such, a Best Available Control Technology (BACT) analysis for oxides of nitrogen and carbon monoxide is required.

BACT is defined as an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation which the environmental authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts, determined is achievable. The BACT assessment identifies alternative control methods, considers the technical feasibility of each method, ranks the technically feasible alternatives in terms of control effectiveness, evaluates the economic, energy, and environmental aspects of technically feasible alternatives, and identifies the control method considered BACT for each pollutant and source combination.

NO_X Control Technologies

NO_X formation is a function of three main variables: fuel bound nitrogen in the fuel burned in the combustion chamber, combustion chamber flame temperature, and combustion chamber residence time. Conceptually, several types of NO_X control technologies exist to control the formation of NO_X at its source of formation. This can involve limiting the fuel bound nitrogen, lowering the flame temperature of the combustion chamber through wet injection, chamber design, and/or fuel to air ratios (combustion control), and decreasing the residence time of the fuel in the combustion chamber, usually through the design of the combustion device.

The other type of control technology involves reducing the NO_X content of the combustion exhaust gases (post-combustion control). This can involve selective catalytic reduction, nonselective catalytic reduction, and selective noncatalytic reduction. These control technologies can also be used in combination with the technologies that control NO_X at its source formation.

The permittee's cogeneration unit currently controls the amount of NO_X formed from fuel bound nitrogen by limit the fuel for this unit to only natural gas. The flame temperature of the gas turbine combustion chamber is lowered by steam injection, thereby reducing the amount of NO_X formed. Water injection is not used in the cogeneration unit. Also, the flame temperature of the downstream duct burner is controlled through the use of low NO_X burners. The control options of wet injection for NO_X reduction in the gas turbine, and the combustion control technologies built into the designs of the gas turbine and duct burner, represent the best control technology for this unit. Since these controls already exist for the cogeneration unit, no additional controls are proposed.

CO Control Technologies

Carbon monoxide emissions in gas turbines arise from inefficient or incomplete combustion of fuel. Three major factors which influence carbon monoxide formation in gas turbines are firing temperature, combustion chamber residence time, and combustion mixing characteristics. By increasing the combustion chamber temperature and residence time, the rate of CO conversion to CO_2 increases, thereby reducing CO emissions. However, increasing the combustion chamber temperature and residence time, NO_X emissions increase. Therefore, a dichotomy exists between

CO and NO_X at their source of formation. By reducing the rate of formation of one, the rate of formation of the other increases. Since NO_X is of greater concern from the point of ambient air quality and ozone formation, it is not considered environmentally acceptable to lower the CO emissions at the expense of additional NO_X emissions.

The control of CO emissions from the cogeneration unit involves oxidizing the CO to CO_2. The options currently available to reduce the CO emissions are thermal oxidation and catalytic oxidation. International Paper considers the duct burner to act as a thermal oxidizer to control or minimize CO emissions. The temperature of the exhaust gas is raised to 1560°F, which is near the range of thermal oxidation of CO and CO_2. No additional CO controls are proposed.

Ambient Air Quality Analysis

As required by the PSD Regulations, the increases in emissions were modeled to determine their impact. The results of this modeling may be found in the following table. As the ambient impacts caused by the increases in emissions were below the Modeling Significance Levels, the full impact analysis, which includes NAAQS modeling and an increment analysis, nor any ambient monitoring was required.

Pollutant	Averaging Period	Impact	Modeling Significance Level
CO	1-hour	37.20	2000
	8-hour	11.69	500
NO_X	Annual	0.54	1.0

Additional impact analyses indicated that there will be no construction and growth impacts associated with the scope of the proposed modification. Nor are any adverse impacts on soil or vegetation anticipated due to the cogeneration unit. It is unlikely that there would be any measurable impact on the nearest Class I area which is well over 250 km from this facility.

International Paper Company
CSN: 52-0013 Permit #:725-AOP-R~~1~~2

Permit #725-AOP-R0 was issued to International Paper Company - Camden Mill on June 1, 1999. Several sources were deleted in this permit due to the removal of the bag plant. Several sources which have been in operation at this facility for some time were permitted for the first time. Two new sources were also added. The two new sources were a package boiler which will be brought on site whenever another boiler will be down for an extended period of time and a baghouse to control the particulate matter emissions from the lime handling operations. In addition to several additional sources being permitted, non-criteria pollutants were also quantified. Permitted emissions from several sources were increased. This was due to a change in the method of calculation and not a change in the method of operation.

Permit #725-AOP-R1 was the second operating permit issued to International Paper Company under Regulation 26 and was issued on April 4, 2000. Under this permit, several changes were made in order to comply with the applicable requirements of 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry*. These changes included, but were not limited to, collecting Low Volume High Concentration (LVHC) gases from various sources and feeding them to the LVHC system for destruction in either the incinerator or the lime kiln. The permittee will be collecting the pulping condensate from several sources in a hard piping system for routing to treatment in the Aeration Stabilization Basin. The permittee also replaced the scrubber located at the NCG Incinerator. Increases in permitted and/or actual emissions were not above the PSD Significant Increase Levels. The permittee also combined the #6 fuel oil usage limits for sources SN-01, SN-04/05, and SN-06 for flexibility purposes. The permitted emission rate for the lime handling system was increased to allow for a safety factor. A custom schedule for monitoring the sulfur content of the fuel used at the cogeneration unit was granted in this permit.

SECTION IV: EMISSION UNIT INFORMATION

WOODYARD

SN-19
Woodyard Source Group

Source Description

The woodyard source group includes emissions from roundwood chipping and screening, purchased chips unloading and storage, chip silo loading, debarking drums, roundwood chips rechipping, sawdust storage, purchased chips rechipping, chip conveying, and other associated equipment. Under this permit, a roundwood slasher will be added to the woodyard source group.

Due to the nature of the emissions from this source, an opacity limit would not be practical because of the difficulty in determining compliance with it. Instead, Plantwide Conditions 19 and 20 will require that the facility be operated in a manner that will not cause unnecessary visible emissions.

Specific Conditions

1. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at source SN-19. Compliance with these emission rates will be shown through compliance with the limit of wood chips that may be processed at this source.

Pollutant	lb/hr	tpy
PM_{10}	0.6	2.7
VOC	36.9	161.5

2. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-19. Compliance with these emission rates will be shown through compliance with the limit of wood chips that may be processed at this source.

Pollutant	lb/hr	tpy
PM	0.7	~~3.03~~.1

3. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not process more than 4.1 million tons of chips at source SN-19 in any consecutive twelve month period.

4. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of chips processed at source SN-19 in order to demonstrate compliance with Specific Condition 3 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

PULP MILL

SN-20
Digester and Blow Tank Source Group

Source Description

Source SN-20, which was installed or last modified in 1963, covers the emissions from the digester, vented either from the loading of chips or from the blow tanks following the digester. The digester are used to pressure cook the wood chips. The blow tanks are used to blow the pulp from the digester to atmospheric pressure. The particulate matter emissions result from loading the chips into the different digester. No control equipment for particulate matter emissions is associated with SN-20.

The emissions which occur at the digesters while the chips are being cooked are routed to the turpentine recovery source group (SN-21). The emissions from source SN-21 are then routed to the NCG Incinerator (SN-12) as required by §19.804 of Regulation 19. Under this permit, the emissions from the blow tank, two low pressure feeders, and after blow tank condenser will also be collected and routed to either SN-12 or the lime kiln (SN-03). The facility may route these emissions to the back-up flare (SN-14) for a limited amount of time as provided in Specific Condition 114.

No opacity limit has been assigned for this source group. The particulate matter emissions are intermittent and occur when loading chips into the digester chipper hoppers. Instead Plantwide Conditions 19 and 20 will require that this source group be operated in a manner that will not cause unnecessary visible emissions.

Source SN-20 is subject to the applicable provisions of 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry.*

Specific Conditions

5. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-20. Compliance with these emission rates will be determined through compliance with the limit of air dried tons of pulp (ADTP) that may be processed at this facility and proper incineration of the gases which result from cooking the chips.

Pollutant	lb/hr	tpy
PM_{10}	0.1	0.1

Pollutant	lb/hr	tpy
VOC	1.7	6.8
TRS	0.9	3.8

6. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-20. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit of ADTP and proper incineration of the gases which result from cooking the chips.

Pollutant	lb/hr	tpy
PM	0.1	0.1
Acetaldehyde	0.02	0.09
Cresols & Hexachloroethane	0.06	0.27
Dimethyl Disulfide*	0.06	0.22
Dimethyl Sulfide*	0.71	3.11
H_2S*	0.1	0.4
Methanol	0.36	1.56
Methyl Ethyl Ketone	0.01	0.03

*Component of TRS.

7. Pursuant to §19.804 of Regulation 19, the exhaust gases from the digesters shall be incinerated at 1200°F for a minimum of 0.5 seconds. (Currently, the facility is routing the gases through the turpentine recovery source group prior to incineration at source SN-12 which meets this requirement.)

8. Pursuant to 40 CFR §63.443(c), §19.304 and §19.705 of Regulation 19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the non-condensible gases from the digesters, the #1 and the #2 low pressure feeders, the blow tank, and the after blow tank condenser shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (d) of this section. The enclosures and closed-vent system shall meet the requirements specified in §63.450. The lime kiln (SN-03), the NCG Incinerator (SN-12), and the NCG Back-Up Flare (SN-14) are control devices that may be used at this facility.

SN-21
Turpentine Recovery Source Group

Source Description

Source SN-21, which was installed or last modified in 1978, consists of several turpentine condensers, a decanter, a storage tank, and other associated equipment. Turpentine is recovered from the digester (see source SN-20), and flash tanks, decanted, and stored prior to being shipped off site. Emissions are routed to the NCG Incinerator (SN-12), the Back-Up Flare (SN-14), or the Lime Kiln (SN-03).

Source SN-21 is subject to the applicable provisions of 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry*. Upon full implementation of the LVHC standards contained in this subpart, source SN-21 will no longer be considered an emission point at this facility.

Specific Conditions

9. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-21. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	0.2	0.9

10. Pursuant to 40 CFR §63.443(c), §19.304 and §19.705 of Regulation 19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the non-condensible gases from the turpentine condensers, turpentine decanter, and turpentine decanter foul condensate collection tank shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (d) of this section. The enclosures and closed-vent system shall meet the requirements specified in §63.450. The lime kiln (SN-03), the NCG Incinerator (SN-12), and the NCG Back-Up Flare (SN-14) are control devices that may be used at this facility.

SN-22
Knotter System Source Group

Source Description

This source, which was not previously permitted, was installed or last modified in 1982. This source group consists of the screens, the reject refiners, the reject chests, and other equipment associated with the deknotting system. The knotter system removes the knots and other undissolved material from the wood pulp before it is sent to the brown stock washers. No control equipment is associated with this source group.

Specific Conditions

11. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-22. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	18.70	81.3
TRS	1.7	7.5

12. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-22. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.16	0.67
Benzene	0.01	0.01
Dimethyl Disulfide*	0.19	0.83
Dimethyl Sulfide*	1.50	6.55
Formaldehyde	0.01	0.01
Methanol	17.2	75.2
Methyl Ethyl Ketone	0.05	0.21
Methyl Isobutyl Ketone	0.01	0.01
Methyl Mercaptan*	0.02	0.08
Styrene	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

SN-15
Brown Stock Washers Source Group

Source Description

Source SN-15, which was installed or last modified in 1968, consists of six brown stock washers (3 stages, 2 lines), their associated equipment, and the foam tank. In the brown stock washers, the pulp is washed with clean water and is separated from the digester chemicals. No control equipment is associated with this source group.

All emissions from this source are based upon NCASI factors. Previously, the VOC emissions were calculated using an emission factor from AP-42. The large increase in emissions from this source is due to the difference in the emission factors. This source was installed or last modified in 1968 and no physical modification or change in the method of operation is occurring at this source with the issuance of this permit. Therefore, this source was not required to undergo PSD review for the increase in VOC and TRS emissions.

Specific Conditions

13. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-15. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility as well as the testing requirements for this source.

Pollutant	lb/hr	tpy
VOC	221.1	968.4
TRS	45.7	200.3

14. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-15. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.47	2.02
Acrolein	0.01	0.05
Benzene	0.01	0.02
Carbon Disulfide	0.01	0.01
Carbon Tetrachloride	0.02	0.06
Chlorobenzene	0.01	0.01
Chloroform	0.07	0.28
Dimethyl Disulfide*	2.61	11.42
Dimethyl Sulfide*	41.8	183.00
Formaldehyde	0.17	0.75
H_2S*	0.8	3.3
Methanol	23.0	101.00
Methyl Ethyl Ketone	0.34	1.45
Methyl Isobutyl Ketone	0.02	0.09
Methylene Chloride**	0.05	0.22
Methyl Mercaptan*	0.59	2.56
n-Hexane	0.01	0.05
Styrene	0.12	0.49

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Pollutant	lb/hr	tpy
Tetrachloroethylene**	0.01	0.02
Toluene	0.02	0.07
1,2,4-Trichlorobenzene	0.01	0.01
1,1,1-Trichloroethane**	0.01	0.01
1,1,2-Trichloroethane	0.01	0.03
Trichloroethylene	0.01	0.02
Xylene	0.01	0.05

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

SN-23
High Density Storage Source Group

Source Description

Source SN-23, which was installed or last modified in 1947, consists of three parallel pulp storage tanks and associated equipment. Stock which has been washed and screened to remove the knots is stored in these tanks. No control equipment is associated with the high density storage source group.

Specific Conditions

15. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-23. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	47.9	209.6
TRS	2.9	12.8

16. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-23. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	1.07	4.67
Acrolein	0.01	0.01
Benzene	0.01	0.01
Dimethyl Disulfide*	1.16	5.06
Dimethyl Sulfide*	1.60	7.01
H_2S*	0.1	0.3
Methanol	33.10	145.00
Methyl Ethyl Ketone	0.07	0.30
Methyl Isobutyl Ketone	0.01	0.03
Methyl Mercaptan*	0.09	0.36
n-Hexane	0.01	0.03
Styrene	0.01	0.05
Toluene	0.01	0.01
1,2,4-Trichlorobenzene	0.10	0.42
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

SN-24
Pine Stock Chest

Source Description

The pine stock chest, which was installed or last modified in 1963, provides intermediate storage for pulp stock before being pumped to the paper mill. No control equipment is associated with the pine stock chest.

Specific Conditions

17. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-24. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	47.9	209.6
TRS	2.9	12.8

18. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-24. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	1.07	4.67
Acrolein	0.01	0.01
Benzene	0.01	0.01
Dimethyl Disulfide*	1.16	5.06
Dimethyl Sulfide*	1.60	7.01
H_2S*	0.1	0.3
Methanol	33.08	145.00
Methyl Ethyl Ketone	0.07	0.30
Methyl Isobutyl Ketone	0.01	0.03
Methyl Mercaptan*	0.09	0.36
n-Hexane	0.01	0.03
Styrene	0.01	0.05
Toluene	0.01	0.01
1,2,4-Trichlorobenzene	0.10	0.42
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

BLACK LIQUOR RECOVERY AREA

SN-25
Weak Black Liquor Storage Source Groups

Source Description

Source SN-47, which was installed or last modified in 1997, consists of several weak liquor storage tanks and associated equipment that store liquor either continuously or intermittently. This source also consists of the combination tank and the blow heat recovery tank, which store both weak and strong black liquor periodically. This source stores the weak black liquor from the pulp mill prior to sending it through a multiple effect evaporator which will concentrate the liquor. No control equipment is associated with this source group.

Specific Conditions

19. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-25. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	6.3	26.5
TRS	0.6	2.5

20. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-25. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.01	0.05
Acrolein	0.01	0.01

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Pollutant	lb/hr	tpy
Benzene	0.01	0.01
Carbon Tetrachloride	0.01	0.02
Dimethyl Disulfide*	0.13	0.56
Dimethyl Sulfide*	0.44	1.91
Formaldehyde	0.01	0.02
Methanol	2.30	10.10
Methyl Ethyl Ketone	0.04	0.17
Methyl Isobutyl Ketone	0.01	0.01
Methyl Mercaptan*	0.01	0.03
n-Hexane	0.01	0.01
Phenols	0.31	1.33
Styrene	0.01	0.01
Tetrachloroethylene**	0.08	0.34
Toluene	0.01	0.02
1,1,1-Trichloroethane**	0.01	0.01
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

SN-27
Multiple Effect Evaporator

Source Description

The multiple effect evaporator (MEE) is used to concentrate the weak black liquor. The concentrated black liquor is sent through a soap removal system. The desaponified black liquor is then returned to the evaporator before being transferred to the strong black liquor storage group.

The non condensible gases from the evaporator are incinerated at source SN-12. No emissions are vented at the evaporator.

Source SN-27 is subject to the applicable provisions of 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry.*

Specific Conditions

21. Source SN-27 is subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart BB, *Standards of Performance for Kraft Pulp Mills*, due to an installation date after September 24, 1976. A copy of Subpart BB has been placed in Appendix E of this permit. The important requirements of this subpart are outlined in Specific Conditions 20 through 25.

22. Pursuant to 40 CFR §60.283(a)(1)(iii) and §19.304 and §19.804 of Regulation 19, the permittee shall combust all gases from source SN-27 at source SN-12 or as allowed at source SN-14 at a minimum temperature of 1200°F for a minimum of 0.5 seconds.

23. Pursuant to 40 CFR §60.284(b)(1) and §19.304 and §19.804 of Regulation 19, the permittee shall install, calibrate, maintain, and operate a monitoring device which measures and records the combustion temperature of the gases at SN-12 or SN-14. The monitoring device is to be certified by the manufacturer to be accurate within ± 1% of the temperature being measured.

24. Pursuant to 40 CFR §60.284d(3)(ii) and §19.304 and §19.804 of Regulation 19, for the purposes of reports required under §60.7(c), the permittee shall report semiannually periods of excess emissions from source SN-27. Excess emissions are defined as all periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 1200°F.

25. Pursuant to 40 CFR §60.284(e) and §19.304 and §19.804 of Regulation 19, the Administrator will not consider periods of excess emissions reported under paragraph (d) of this section to be indicative of a violation of §60.11(d) provided that the Administrator determines that the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions.

26. Pursuant to 40 CFR §63.443(c), §19.304 and §19.705 of Regulation 19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the non-condensible gases from the multiple effect evaporators (evaporator hotwell) shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (d) of this section. The enclosures and closed-vent system shall meet the requirements specified in §63.450. The lime kiln (SN-03), the NCG Incinerator (SN-12), and the NCG Back-Up Flare (SN-14) are control devices that may be used at this facility.

SN-26
Strong Black Liquor Storage Source Group

Source Description

Source SN-26, which was installed or last modified in 1996, consists of three black liquor storage tanks and associated equipment which store liquor either continuously or intermittently. It also consists of the combination tank and blow heat recovery tank and associated equipment which store both weak and strong black liquor periodically. The maximum throughput of the unit is limited by the firing rate of the recovery boilers of 390 gal/min of black liquor at the burner nozzles. The strong black liquor storage group stores the liquor from the MEE prior to sending it through the black liquor oxidation source group. No control equipment is associated with this source group.

Specific Conditions

27. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-26. Compliance with these emission rates will be determined through compliance with Specific Condition 29.

Pollutant	lb/hr	tpy
VOC	0.3	0.7
TRS	0.2	0.6

28. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table. The non-criteria pollutant emission rates listed below were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with Specific Condition 29.

Pollutant	lb/hr	tpy
Acetaldehyde	0.02	0.06
Benzene	0.01	0.01
Chloroform	0.01	0.01
Dimethyl Disulfide*	0.02	0.05
Dimethyl Sulfide*	0.08	0.23
Formaldehyde	0.01	0.01
H_2S*	0.1	0.3
Methanol	0.12	0.34
Methyl Ethyl Ketone	0.03	0.06
Methyl Isobutyl Ketone	0.01	0.01
Methyl Mercaptan*	0.01	0.01
n-Hexane	0.01	0.01
Styrene	0.01	0.01
Toluene	0.01	0.01
1,2,4-Trichlorobenzene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

29. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not process in excess of 496,382 tons of black liquor solids at source SN-26 in any consecutive twelve month period. Compliance with this specific condition will be verified through the record keeping requirements on the total amount of BLS fired at sources SN-04, SN-05, and SN-06.

30. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of black liquor solids processed at source SN-26 in order to demonstrate compliance with Specific Condition 29 and which may be used by the Department for enforcement purposes. The records of the amount of BLS fired in the recovery boilers may be used to fulfill the requirement of this specific condition. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

SN-18
Black Liquor Oxidation Source Group

Source Description

Source SN-18, which was installed or last modified in 1974, consists of a black liquor oxidation tank with its associated cyclone separator. The primary purpose of the black liquor oxidation system is to convert the sulfides in the black liquor to sulfates to minimize the TRS emissions from the recovery boilers. No control equipment in operation is associated with this source group.

Specific Conditions

31. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-18. Compliance with these emission rates will be determined through compliance with Specific Condition 29 and the testing requirements for this source.

Pollutant	lb/hr	tpy
VOC	121.5	531.1
TRS	25.0	62.2

32. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-18. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with Specific Condition 29 and the testing requirements for this source.

Pollutant	lb/hr	tpy
Acetone**	1.00	3.00
Acetophenone	0.03	0.11
Acrolein	0.01	0.01
Carbon Disulfide	0.55	2.41
Dimethyl Disulfide*	0.26	1.13
Dimethyl Sulfide*	0.82	3.57
Formaldehyde	0.07	0.31
H_2S*	10.3	44.9
Methanol	80.00	350.31
Methyl Ethyl Ketone	2.19	9.57
Methyl Isobutyl Ketone	0.02	0.09
Methyl Mercaptan	2.89	12.65
n-Hexane	0.01	0.01
Propionaldehyde	0.11	0.45
Styrene	0.02	0.09

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

SN-04/SN-05
Recovery Boiler #1

Source Description

Source SN-04/SN-05 is a 480 MMBTU/hr recovery boiler which was installed or last modified in 1967. This recovery boiler has not been modified since and is therefore not subject to any NSPS subpart. Recovery Boiler #1 vents through 2 separate stacks. Because of the difficulty involved in determining exactly what is being emitted through each stack, emissions for the two stacks have been "bubbled." The main purpose of this recovery boiler is to recover inorganic chemicals from black liquor. Natural gas may be fired at any time. The facility is permitted to fire a limited amount of #6 fuel oil in the event of natural gas curtailment and to test the oil burning capabilities of the equipment. Particulate matter emissions from this source are controlled with an electrostatic precipitator.

This source has a CEM to monitor the emissions of TRS. Annual testing is required for the emissions of carbon monoxide, particulate matter, and sulfur dioxide.

Specific Conditions

33. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table when burning BLS. Compliance with these rates will be determined through compliance with Specific Condition 42, proper operation of the control equipment, and the required testing for this recovery boiler.

Pollutant	lb/hr	tpy
PM_{10}	77.6	339.9
SO_2	262.6	1150.0
VOC	66.6	293.6
CO	412.6	1806.8
NO_x	192.0	400.0
Pb	0.02	0.02

34. Pursuant to §19.501 et seq and §19.804 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table when burning BLS. Compliance with these rates will be determined thru compliance with Specific Condition 42, proper operation of the control equipment and the CEMS required for this recovery boiler (Specific Condition 44). This TRS emission rate is based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	31.8	139.8

35. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 8% oxygen by volume at source SN-04/SN-05. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 44.

36. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-04/05 when burning #6 fuel oil. Compliance with these emission rates will be determined through proper operation of the control equipment.

Pollutant	lb/hr	tpy
PM_{10}	25.5	*
SO_2	1318.8	*
VOC	66.6	*
CO	412.6	*
NO_x	192.0	*
Pb	0.02	*

*Annual emissions have been bubbled with sources SN-01 and SN-06 and may be found in the plantwide conditions.

37. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-04/05 when burning #6 fuel oil. Compliance with these emission rates will be determined through proper operation of the control equipment and the required CEMS for this recovery boiler. These emission rates are based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	31.8	*

*Annual emissions have been included in the emissions when firing BLS.

38. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 40% opacity from source SN-04/SN-05 as measured by EPA Reference Method 9 except that emissions greater than 40% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 39.

39. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-04/05 shall be conducted by a person trained, but not necessarily certified, in EPA Reference Method 9. If emissions which appear to be in excess of 30% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, the permittee shall conduct another observation of the opacity from source SN-04/05. If the opacity observed does not appear to be in excess of 30%, then no further action is needed and the permittee will be considered in compliance with the permitted opacity limit. If visible emissions which appear to be in excess of 30% are still observed, a 6-minute visible emissions reading shall be conducted by a person certified in EPA Reference Method 9 to determine if the opacity is less than 40%. If the opacity observed is not in excess of 40%, then no further action is needed and the permittee will be considered in compliance with the permitted opacity limit. If no Method 9 reading is conducted despite emissions appearing to be in excess of 30% after corrective action has been taken, the permittee shall be considered out of compliance with the permitted opacity limit for that day.

40. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-04/SN-05 when burning black liquor solids. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with Specific Condition 42 and proper operation of the control equipment for this recovery boiler.

Pollutant	lb/hr	tpy
PM	200.0	876.0
Acetaldehyde	3.19	13.97
Antimony Compounds	0.013	0.053
Arsenic Compounds	0.013	0.056
Benzene	0.03	0.11
Cadmium Compounds	0.011	0.048
Chromium Compounds	0.419	1.834
Cobalt Compounds	0.010	0.040
Formaldehyde	0.43	1.88
Hydrogen Chloride**	12.27	53.75
Lead Compounds	0.011	0.047
Manganese Compounds	0.629	2.76
Methanol	34.05	149.20
Methyl Ethyl Ketone	0.38	1.63
Methyl Mercaptan*	6.06	26.60
Nickel Compounds	0.075	0.329
Phenols	1.56	6.84

Pollutant	lb/hr	tpy
Selenium Compounds	0.001	0.001
Styrene	0.13	0.53

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

41. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at SN-04 when burning #6 fuel oil. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through proper operation of the control equipment associated with this recovery boiler.

Pollutant	lb/hr	tpy
PM	35.8	**
Antimony Compounds	0.065	**
Arsenic Compounds	0.012	**
Beryllium Compounds	0.001	**
Cadmium Compounds	0.002	**
Chromium Compounds	0.007	**
Cobalt Compounds	0.045	**
Formaldehyde	0.18	**
Hydrogen Chloride*	3.12	**
Hydrogen Fluoride*	0.16	**
Lead Compounds	0.010	**
Manganese Compounds	0.036	**
Mercury Compounds	0.001	**

Pollutant	lb/hr	tpy
Nickel Compounds	0.31	**
POM	0.01	**
Selenium Compounds	0.004	**

*Non-VOC, non-PM non-criteria pollutant.
**Annual emissions have been bubbled with sources SN-01 and SN-06 and may be found in the plantwide conditions.

42. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not process in excess of 392,886 tons of black liquor solids at source SN-04/SN-05 in any consecutive twelve month period.

43. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of black liquor solids processed at source SN-04/SN-05 in order to demonstrate compliance with Specific Condition 42 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

44. Pursuant to §19.703 and §19.804 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a CEMS at source SN-04/SN-05 for TRS. The CEMS requirements which the permittee must comply with may be found in Appendix A.

45. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-04/SN-05 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place less than 9 months and no more than 15 months apart.

46. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-04/SN-05 for sulfur dioxide using EPA Reference Method 6C. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

47. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-04/SN-05 for carbon monoxide using EPA Reference Method 10. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

48. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not bypass the ESP at this source during required maintenance. In the event that a boiler is not shut down during ESP maintenance, one side of the ESP shall be isolated. During such times, the operation of source SN-04/SN-05 shall be limited to 50% of the full service load rating. (NOTE: If the maintenance does not affect operation of the ESP at this source, the permittee is not restricted by the Department on the service load rating.)

49. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall notify the Department within 24 hours of any maintenance which requires one side of the ESP being removed from service.

SN-06
Recovery Boilers #2 and #3

Source Description

Source SN-06 consists of two recovery boilers which were installed or last modified in 1947. These recovery boilers have a combined heat input capacity of 632 MMBTU/hr. The main purpose of these recovery boilers is to recover inorganic chemicals from black liquor. Natural gas may be fired in these recovery boilers at any time. The facility is permitted to fire a limited amount of #6 fuel oil in the event of natural gas curtailment and to test the oil burning capabilities of the equipment. Particulate matter emissions from this source are controlled with an electrostatic precipitator.

This source has a CEM to monitor the emissions of TRS. Annual testing is required for the emissions of carbon monoxide, particulate matter, and sulfur dioxide.

Specific Conditions

50. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning black liquor solids. Compliance with these emission rates will be determined through compliance with Specific Condition 59, proper operation of the control equipment, and the required testing for these recovery boilers.

Pollutant	lb/hr	tpy
PM_{10}	13.2	57.9
SO_2	240.6	1054.0
VOC	162.3	710.6
CO	454.0	1988.0
NO_x	242.0	700.0
Pb	0.01	0.01

51. Pursuant to §19.501 et seq and §19.804 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning black liquor solids. Compliance with these emission rates will be determined through compliance with Specific Condition 59, proper operation of the control equipment, and the CEMS for these recovery boilers. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	37.2	163.0

52. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 8% oxygen by volume at source SN-06. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 61.

53. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning #6 fuel oil. Compliance with these emission rates will be determined through proper operation of the control equipment.

Pollutant	lb/hr	tpy
PM_{10}	29.1	*
SO_2	1507.2	*
VOC	2.4	*
CO	16.0	*
NO_x	214.0	*
Pb	0.01	*

*Annual emissions have been bubbled with sources SN-01 and SN-04/05 and may be found in the plantwide conditions.

54. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning #6 fuel oil. Compliance with these emission rates will be determined through proper operation of the control equipment and the CEMS required for these recovery boilers. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	37.2	*

*Annual emissions are included in the emission rates when firing BLS.

55. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-06 as measured by EPA Reference Method 9 except that emissions greater than 20% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 56.

56. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-03 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

57. Pursuant to §18.801 of Regulation 18 and A.C.A. §8.4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-06 when burning black liquor solids. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with Specific Condition 59 and proper operation of the control equipment for these recovery boilers.

Pollutant	lb/hr	tpy
PM	75.0	306.6
Acetaldehyde	3.03	13.27
Antimony Compounds	0.012	0.048
Arsenic Compounds	0.012	0.051
Benzene	0.03	0.10
Cadmium Compounds	0.010	0.044
Chromium Compounds	0.390	1.690
Cobalt Compounds	0.009	0.037
Formaldehyde	0.41	1.79
Hydrogen Chloride**	11.25	49.27
Lead Compounds	0.010	0.043
Manganese Compounds	0.580	2.530
Methanol	32.34	141.65
Methyl Ethyl Ketone	0.36	1.55
Methyl Mercaptan*	5.56	24.4
Nickel Compounds	0.069	0.310
Phenols	1.43	6.27
Selenium Compounds	0.001	0.001

Pollutant	lb/hr	tpy
Styrene	0.12	0.51
Toluene	0.08	0.34

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

58. Pursuant to §18.801 of Regulation 18 and A.C.A. §8.4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning #6 fuel oil. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through proper operation of the control equipment associated with these recovery boilers.

Pollutant	lb/hr	tpy
PM	40.9	**
Antimony Compounds	0.074	**
Arsenic Compounds	0.014	**
Beryllium Compounds	0.001	**
Cadmium Compounds	0.002	**
Chromium Compounds	0.008	**
Cobalt Compounds	0.051	**
Formaldehyde	0.20	**
Hydrogen Chloride*	3.57	**
Hydrogen Fluoride*	0.18	**
Lead Compounds	0.011	**
Manganese Compounds	0.041	**
Mercury Compounds	0.001	**

Pollutant	lb/hr	tpy
Nickel Compounds	0.35	**
POM	0.01	**
Selenium Compounds	0.004	**

*Non-VOC, non-PM non-criteria pollutant.
*Annual emissions have been bubbled with sources SN-01 and SN-04/05 and may be found in the plantwide conditions.

59. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not process in excess of 361,757 tons of black liquor solids at source SN-06 in any consecutive twelve month period.

60. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of black liquor solids processed at source SN-06 in order to demonstrate compliance with Specific Condition 59 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

61. Pursuant to §19.703 and §19.804 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a CEMS at source SN-06 for TRS. The CEMS requirements which the permittee must comply with may be found in Appendix A.

62. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-06 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

63. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-06 for sulfur dioxide using EPA Reference Method 6C. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

64. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-06 for carbon monoxide using EPA Reference Method 10. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

65. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, when an ESP is shut down for maintenance, the permittee shall not operate the boiler associated with that ESP. The service load rating is not affected if any maintenance is being performed which does not affect either of the ESPs located at SN-06. (NOTE: SN-06 is actually two boilers which both have an ESP.)

SN-07
Smelt Tank #1

Source Description

This source was installed or last modified in 1967. A wet scrubber is used to control the particulate matter and TRS emissions. The scrubbing liquids used for this piece of control equipment are weak wash, alkaline solution, or water.

Annual testing for particulate matter and TRS emissions was required in permit #725-AR-2 and is being carried forth in this permit. Additional testing is being required for VOC and methanol emissions.

Specific Conditions

66. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-07. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-04/05, proper operation of the control equipment, and the required testing for this smelt dissolving tank.

Pollutant	lb/hr	tpy
PM_{10}	25.0	110.0
SO_2	7.5	32.9
VOC	28.0	122.3
NO_x	12.9	56.7
Pb	0.01	0.01

67. Pursuant to §19.501 et seq and §19.804 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-07. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-04/05, proper operation of the control equipment, and the required testing for this smelt dissolving tank. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	1.5	6.6

68. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 0.0168 grams of H_2S per kilogram of black liquor solids on a 12 hour average from source SN-07. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 73.

69. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-07. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-04/05, proper operation of the control equipment, and the required testing for this smelt dissolving tank.

Pollutant	lb/hr	tpy
PM	25.0	110.0
Ammonia*	16.80	73.60
Antimony Compounds	0.002	0.005
Arsenic Compounds	0.001	0.002
Benzene	0.02	0.09
Beryllium Compounds	0.001	0.001
Cadmium Compounds	0.001	0.001

Pollutant	lb/hr	tpy
Chlorobenzene	0.01	0.04
Chromium Compounds	0.002	0.009
Lead Compounds	0.001	0.004
Manganese Compounds	0.008	0.032
Mercury Compounds	0.001	0.001
Methanol	26.15	115.00
Methyl Ethyl Ketone	0.11	0.45
Methyl Isobutyl Ketone	0.06	0.25
Nickel Compounds	0.001	0.002
Selenium Compounds	0.001	0.001
Styrene	0.01	0.03
Toluene	0.04	0.15
Trichloroethylene	0.02	0.08
Xylene	0.03	0.11

*Non-HAP, non-VOC, non-criteria pollutant.

70. Pursuant to §19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-07 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 71.

71. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-07 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the excess visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if excess visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

72. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-07 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

73. Pursuant to §19.702 and §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-07 for TRS using EPA Reference Method 16. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

74. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain the following at source SN-07:

    a. A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within a gage pressure of $\pm$500 Pascals (ca. $\pm$ 2 inches water gage pressure).

    b. A monitoring device for the continuous measurement of the scrubbing liquid flow rate to the control equipment. The monitoring device is to be certified by the manufacturer to accurate within $\pm$ 15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point.

SN-08 and SN-09
Smelt Tanks #2 and #3

Source Description

Sources SN-08 and SN-09 were installed or last modified in 1947. Wet scrubbers are used to control the particulate matter and TRS emissions. The scrubbing liquids used are weak wash, alkaline solution, or water.

Annual testing for particulate matter and TRS emissions was required in permit #725-AR-2 and is being carried forth in this permit. Additional testing is being required for VOC and methanol emissions.

Specific Conditions

75. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-06, proper operation of the control equipment, and the required testing for these two smelt dissolving tanks.

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy*
PM_{10}	8.4	9.0	76.3
SO_2	3.6	3.2	29.5
VOC	13.6	12.2	115.5
NO_x	6.1	5.5	51.0
Pb	0.01	0.01	0.02

*These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

76. Pursuant to §19.501 et seq and §19.804 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-06, proper operation of the control equipment, and the required testing for these two smelt dissolving tanks. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy*
TRS	0.7	0.6	5.8

*These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

77. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 0.0168 grams of H_2S per kilogram of black liquor solids on a 12 hour average from sources SN-08 and SN-09. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 82.

78. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-06, proper operation of the control equipment, and the required testing for these two smelt dissolving tanks.

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy**
PM	8.4	9.0	76.3
Ammonia*	7.96	7.17	66.23
Antimony Compounds	0.001	0.001	0.005
Arsenic Compounds	0.001	0.001	0.002
Benzene	0.01	0.01	0.08
Beryllium Compounds	0.001	0.001	0.001
Cadmium Compounds	0.001	0.001	0.001

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy**
Chlorobenzene	0.01	0.01	0.04
Chromium Compounds	0.001	0.001	0.008
Lead Compounds	0.001	0.001	0.004
Manganese Compounds	0.004	0.004	0.030
Mercury Compounds	0.001	0.001	0.001
Methanol	12.70	11.41	105.50
Methyl Ethyl Ketone	0.05	0.05	0.42
Methyl Isobutyl Ketone	0.03	0.03	0.23
Nickel Compounds	0.001	0.001	0.002
Selenium Compounds	0.001	0.001	0.001
Styrene	0.01	0.01	0.03
Toluene	0.02	0.02	0.13
Trichloroethylene	0.01	0.01	0.07
Xylene	0.02	0.01	0.10

*Non-HAP, non-VOC, non-criteria pollutant.
**These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

79. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from sources SN-08 and SN-09 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 80.

80. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from sources SN-08 and SN-09 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the excess visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if excess visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

81. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at sources SN-08 and SN-09 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

82. Pursuant to §19.702 and §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at sources SN-08 and SN-09 for TRS using EPA Reference Method 16. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no less than 9 months and no more than 15 months apart.

83. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain the following at sources SN-08 and SN-09:

    a. A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within a gage pressure of $\pm$500 Pascals (ca. $\pm$ 2 inches water gage pressure).

    b. A monitoring device for the continuous measurement of the scrubbing liquid flow rate to the control equipment. The monitoring device is to be certified by the manufacturer to accurate within $\pm$ 15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point.

CAUSTICIZING AREA

SN-28, SN-29, SN-30, SN-32, SN-33, and SN-34
Causticizing Area Sources

Source Description

Source SN-28 is used to store the green liquor prior to it being reacted with calcium oxide (lime) to form white liquor. This source group, which was installed or last modified in 1975, consists of two green liquor storage tanks and associated equipment.

Source SN-29, which was installed or last modified in 1947, consists of the green liquor clarifier and associated equipment. The clarifier removes contaminants from the green liquid prior to it being sent to the slaker.

Source SN-30 is the dregs washer. The contaminants removed at sources SN-28 and SN-29 are washed at the dregs washer prior to being discarded.

Source SN-32, which was installed or last modified in 1981, consists of five causticizers and their associated equipment. White liquor from the slaker passes through the causticizer prior to being sent to storage.

Source SN-33, which was installed or last modified in 1947, consists of four white liquor storage tanks and their associated equipment. After the white liquor is clarified, it may be stored prior to usage in the mill.

Source SN-34, which was installed or last modified in 1983, consists of two white liquor clarifiers and associated equipment. The lime mud which was formed in the slaker and the causticizer is removed from the white liquor in one of the two clarifiers. The lime mud is sent to storage and washing (considered to be a source of de minimis emissions). The white liquor is then sent to storage.

No control equipment is associated with any of these sources.

Specific Conditions

84. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. Compliance with these emission rates will be determined through compliance with the limit on the amount of lime that may be processed at this facility.

SN	Pollutant	lb/hr	tpy
28, 29, 30, 32, 33, & 34	VOC	7.4	31.2
	TRS	0.3	0.8

85. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the limit on the amount of lime that may be processed at this facility.

SN	Pollutant	lb/hr	tpy
28, 29, 30, 32, 33, & 34	Acetaldehyde	0.34	1.34
	Acrolein	0.03	0.03
	Ammonia**	67.87	297.24
	Benzene	0.05	0.05
	Dimethyl Disulfide*	0.11	0.46
	Dimethyl Sulfide*	0.02	0.06
	Methanol	5.98	26.11
	Methyl Ethyl Ketone	0.07	0.14
	Methyl Isobutyl Ketone	0.05	0.05
	Methyl Mercaptan*	0.04	0.10
	Styrene	0.06	0.06
	Toluene	0.06	0.06
	Xylene	0.06	0.06

*Component of TRS.
**Non-criteria, non-VOC pollutant.

SN-03
Lime Kiln

Source Description

The lime kiln was installed or last modified in 1967. The lime kiln is used to regenerate the calcium oxide used in the slaker from the lime mud which is separated from the white liquor.

A wet scrubber is used to control the emissions of sulfur dioxide and particulate matter from the lime kiln. A CEM is used to track the emissions of TRS from the lime kiln. Annual testing for particulate matter is also required for the lime kiln.

The facility is permitted to fire #6 fuel oil at any time at this source. The facility is also allowed to use natural gas to fire the lime kiln at any time.

Specific Conditions

86. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-03. Compliance with these emission rates will be demonstrated through compliance with fuel usage limits, the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this lime kiln, and the required testing.

Pollutant	lb/hr	tpy
PM_{10}	34.9	152.9
SO_2	17.4	76.3
VOC	5.1	22.3
CO	35.0	153.3
NO_x	44.8	196.0
Pb	1.1	4.5

87. Pursuant to §19.501 et seq and §19.804 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-03. Compliance with these emission rates will be demonstrated through compliance with fuel usage limits, the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this lime kiln, and the required CEMS. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	7.4	19.1

88. Pursuant to §19.804 of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions from source SN-03 shall not exceed 40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 10% oxygen by volume.

89. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-03 as measured by EPA Reference Method 9 except that emissions greater than 20% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 90.

90. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-03 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

91. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-03. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with fuel usage limits, the limit on the amount of lime that may be processed at this facility, and proper operation of the control equipment associated with this lime kiln.

Pollutant	lb/hr	tpy
PM	70.0	306.6
Acetaldehyde	0.39	1.71
Acetone	0.51	2.23
Acrolein	0.02	0.08
Antimony Compounds	0.001	0.001
Arsenic Compounds	0.001	0.002
Benzene	0.03	0.12
Beryllium Compounds	0.001	0.002
Cadmium Compounds	0.006	0.023
Carbon Disulfide	0.05	0.19
Chromium Compounds	0.020	0.050
Cobalt Compounds	0.003	0.014
Dimethyl Disulfide*	0.15	0.65
Dimethyl Sulfide*	1.45	6.34
Formaldehyde	0.04	0.14
Hydrogen Chloride**	0.56	2.45
Hydrogen Fluoride**	0.03	0.12
H_2S*	1.9	8.3

Pollutant	lb/hr	tpy
Lead Compounds	0.019	0.082
Manganese Compounds	0.164	0.72
Mercury Compounds	0.002	0.008
Methanol	3.46	15.13
Methyl Ethyl Ketone	0.04	0.14
Methyl Isobutyl Ketone	0.01	0.04
Nickel Compounds	0.013	0.055
POM	0.01	0.01
Selenium Compounds	0.001	0.001
Styrene	0.02	0.06
Toluene	0.09	0.39
Xylene	0.07	0.29

*Component of TRS.
**Non-VOC, non-HAP, non-criteria pollutant.

92. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall only burn #6 fuel oil and pipeline quality natural gas at source SN-03.

93. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not burn in excess of 4.38 million gallons of #6 fuel oil in any consecutive twelve month period at source SN-03.

94. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of fuel oil fired at SN-03 in order to demonstrate compliance with Specific Condition 93 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

95. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing for particulate matter emissions from source SN-03 using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and take place no less than 9 months and no more than 15 months apart.

96. Pursuant to §19.703 and §19.804 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a Continuous Emissions Monitoring System (CEMS) at source SN-03 for TRS. The CEM standards which the permittee is required to comply with may be found in Appendix A.

97. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.443(d)(4), if the lime kiln is used as a HAP control device, the permittee shall introduce the HAP emission stream from the from the closed vent system into the flame zone of the lime kiln or with the primary fuel.

98. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.443(e)(1), if the lime kiln is used as a HAP control device, periods of excess emissions reported under §63.455 shall not be a violation of §63.443(d)(4) provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed one percent for the lime kiln.

SN-31
Lime Handling Source Group

Source Description

The lime handling source group consists of a hot lime chain, a lime bucket elevator, a lime crusher, reburn lime silo, and associated equipment. A baghouse was installed in late 1997 or early 1998 to control the emissions from the lime handling operations.

Specific Conditions

99. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-31. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this source, and the testing requirements for this source.

Pollutant	lb/hr	tpy
PM_{10}	1.0	4.4

100. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-31. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this source, and the testing requirements for this source.

Pollutant	lb/hr	tpy
PM	1.0	4.4

101. Pursuant to §18.503 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed 5% opacity from source SN-31 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 102.

102. Pursuant to§18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall conduct weekly observations of the opacity from source SN-31 and keep a record of these observations. If visible emissions are detected, the permittee shall take immediate action to identify and to correct the cause of the visible emissions. After any necessary corrective action has taken place, the permittee shall conduct another observation of the opacity from source SN-31 to confirm that no visible emissions are present. If corrective action was needed, the permittee shall record the cause of the visible emissions, the corrective action taken, and if visible emissions were observed afterwards. These records shall be kept on site and made available to Department personnel upon request.

SN-02
Slaker

Source Description

The slaker was installed or last modified in 1980. Clarified green liquor, fresh lime, and reburned lime are reacted in the slaker to form sodium hydroxide and calcium carbonate. A wet scrubber is used to control the emissions from the slaker.

Specific Conditions

103. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-02. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this source, and the testing requirements.

Pollutant	lb/hr	tpy
PM_{10}	5.0	21.9
VOC	3.3	14.2
TRS	0.1	0.2

104. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-02 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 105.

105. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-02 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

106. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-02. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be shown through compliance with the limit on the amount of lime that may be processed at this facility as well as proper operation of the control equipment associated with this source.

Pollutant	lb/hr	tpy
PM	5.0	21.9
Acetaldehyde	0.26	1.11
Ammonia**	67.87	297.24
Dimethyl Disulfide*	0.05	0.20
Methanol	2.90	12.71
Methyl Ethyl Ketone	0.02	0.09
Styrene	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS.
**Non-VOC, non-HAP, non-criteria pollutant.

NCG SYSTEM

SN-12 and SN-14
NCG Incinerator and Back-Up Flare

Source Description

The NCG Incinerator was installed or last modified in 1988. This natural gas fired source incinerates the non-condensible gases from the multiple effect evaporator and the turpentine recovery system. (NOTE: The NCGs from the digesters are routed through the turpentine recovery system.) Source SN-14 was installed or last modified in 1992. The back-up flare is maintained in the event of primary incinerator failure.

There are two special requirements for this source because source SN-27 is subject to 40 CFR Part 60, Subpart BB. These requirements are outlined in Specific Conditions 137 and 138. The increase in VOC emissions from this source is due to the method of calculation. Due to discrepancy in testing methods, the total of HAPs which are also VOCs is often higher than the VOC tested rate.

Source SN-14 meets the definition of an enclosed combuster contained in 40 CFR §60.751 and therefore is not subject to the provisions for an open flame type flare contained in 40 CFR §63.11.

Sources SN-12 and SN-14 are subject to the applicable requirements of 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry.*

Specific Conditions

107. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the combined emission rates set forth in the following table at SN-12 and SN-14 when firing natural gas. Compliance with these emission rates will be determined through compliance with fuel usage limits as well as maintaining the temperature and the residence time required by 40 CFR Part 60, Subpart BB.

International Paper Company
CSN: 52-0013 Permit #:725-AOP-R~~1~~2

SN	Pollutant	lb/hr	tpy
12	PM_{10}	0.2	0.9
	SO_2	10.9	15.2
	VOC	4.0	17.3
	CO	9.4	41.1
	NO_x	7.3	32.1
	TRS	1.8	4.3

SN	Pollutant	lb/hr	tpy
14	PM_{10}	0.2	0.2
	SO_2	544.8	74.3
	VOC	3.0	3.1
	CO	9.4	5.7
	NO_x	7.3	4.4
	TRS	7.6	2.3

108. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from sources SN-12 and SN-14 as measured by EPA Reference Method 9 except that emissions greater than 20% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 111.

109. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at sources SN-12 and SN-14 when firing natural gas. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be shown through compliance with fuel usage limits and maintaining the temperature and the residence time required by 40 CFR Part 60, Subpart BB.

SN	Pollutant	lb/hr	tpy
12	PM	0.2	0.9
	Acetone	1.42	6.22
	Benzene	0.08	0.19
	Cumene	0.04	0.14
	Formaldehyde	0.80	2.04
	Methanol	1.96	8.58
	Methyl Ethyl Ketone	0.01	0.02
	Styrene	0.01	0.02
	Xylene	0.01	0.01
14	PM	0.2	0.2
	Acetone	1.42	0.85
	Benzene	0.08	0.03
	Cumene	0.04	0.01
	Formaldehyde	0.80	0.24
	Methanol	1.96	1.89
	Methyl Ethyl Ketone	0.01	0.01
	Styrene	0.01	0.01
	Xylene	0.01	0.01

110. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, pipeline quality natural gas shall be the only fuel fired at source SN-12.

111. Pursuant to §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, daily observations of the opacity from sources SN-12 and SN-14 (when operating) shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the excess visible emissions. After corrective action has been taken, another observation of the opacity from source SN-12 shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emissions observations, the cause of any excess visible emissions, the corrective action taken, and if excess visible emissions were present after corrective action was taken. These records shall be kept on site and made available to Department personnel upon request.

112. Pursuant to 40 CFR §60.283(a)(1)(iii) and §19.304 and §19.804 of Regulation 19, the permittee shall combust all gases from source SN-27 at source SN-12 or as allowed at source SN-14 at a minimum temperature of 1200°F for a minimum of 0.5 seconds.

113. Pursuant to 40 CFR §60.284(b)(1) and §19.304 and §19.804 of Regulation 19, the permittee shall install, calibrate, maintain, and operate a monitoring device which measures and records the combustion temperature of the gases at SN-12 or SN-14. The monitoring device is to be certified by the manufacturer to be accurate within ± 1% of the temperature being measured.

114. Pursuant to §19.705 of Regulation 19, 40 CFR 70.6, and/or A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and §18.1004 of Regulation 18, the NCG Back-Up Flare shall not be operated in excess of 1200 hours in any consecutive twelve month period.

115. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, or §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain records of the hours of operation of source SN-14 in order to demonstrate compliance with Specific Condition 114 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request.

116. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.443(d), the NCG Incinerator (SN-12) shall meet one of the following requirements in order to achieve the overall HAP emission reductions.

    1. Reduce total HAP emissions by 98% or more by weight;
    2. Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 ppm or less by volume, corrected to 10% oxygen on a dry basis; or
    3. Reduce total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 1600°F and a minimum residence time of 0.75 seconds.

117. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.443(d)(3), the NCG Back-Up Flare (SN-14) shall meet a minimum temperature requirement of 1600°F and a minimum residence time of 0.75 seconds in order to achieve the overall HAP emissions reductions.

118. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.443(e)(1), periods of excess emissions shall not be a violation provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed one percent.

119. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.11(b)(1), the permittee shall monitor the NCG Back-Up Flare (SN-14) to assure that the flare is operated and maintained in conformance with its design.

120. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.11(b)(3), the NCG Back-Up Flare shall be operated at all times when emissions are vented to it except for periods of startup, shutdown, and malfunction.

121. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(b), the permittee shall install, calibrate, certify, and maintain (according to manufacturer's specifications) a continuous monitoring system (CMS) on the NCG Incinerator and the NCG Back-Up Flare. The CMS shall be operated to measure the temperature in the firebox in order to ensure the efficient incineration of the non-condensible gases.

122. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(n), during the performance test on the NCG Incinerator, the permittee shall establish a minimum temperature value or range in order to demonstrate continuous compliance with the destruction requirement or outlet HAP (as methanol) concentration requirement.

123. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(o), the permittee shall operate the NCG Incinerator and the NCG Back-Up Flare consistent with the minimum operating temperatures as established. Operation of either control device below the minimum temperature value (caused by events other than those in the facility's startup, shutdown, and malfunction plan) shall constitute a violation of the applicable emission standard and be reported as a period of excess emissions except as provided for in Specific Condition 118.

124. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457(a), the permittee shall perform an initial performance test by October 15, 2001, on the NCG Incinerator (SN-12) to ensure that the control device meets one of the requirements listed in Specific Condition 117. If compliance with the minimum temperature and residence time standard cannot be demonstrated through calculations, an initial performance test shall be conducted in order to demonstrate compliance with either the 98% reduction requirement or the 20 ppmv corrected to 10% O_2 outlet HAP (as methanol) concentration requirement.

125. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457, the permittee shall comply with the following requirements if the NCG Incinerator (SN-12) can not meet the minimum temperature and residence time requirements as specified in Specific Condition 117.

A. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457(f), the permittee shall measure methanol concentration at the outlet of the NCG Incinerator (SN-12) in order to demonstrate compliance with the total HAP emission reduction or outlet concentration requirements during the initial performance test.

B. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457(i), the permittee shall sample the vent gas stream out of the NCG Incinerator (SN-12) during the initial performance test using Reference Method 308 as identified in 40 CFR Part 63, Subpart S in order to demonstrate compliance with the percent reduction requirement.

C. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457(k), the permittee shall correct the methanol concentration measured at the outlet of the NCG Incinerator (SN-12) to 10% O_2 using the following equation in order to demonstrate compliance with the 20 ppmv concentration requirement.

$$\text{Methanol ppm (10\% } O_2) = \frac{\text{Methanol ppm (dry basis, actual measured } O_2\%) * 10.9\%}{(20.9\% - \text{Actual measured } O_2\%\text{, dry basis})}$$

POWER BOILERS

SN-13
Cogeneration Unit

Source Description

The cogeneration unit (rated at 27 MW) was installed or last modified in 1990. The cogeneration unit consists of a natural gas fired turbine and a natural gas fired duct burner. The cogeneration unit is used to produce power for use throughout the facility.

This source underwent PSD review for emissions of NO_x and CO in permit #725-AR-2. Steam injection and low NO_x burners are used to reduce the NO_x emissions from this unit.

The cogeneration unit is subject to the provisions of 40 CFR Part 60, Subpart GG. The initial testing required by this NSPS subpart has been performed.

Specific Conditions

126. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-13 when firing natural gas. Compliance with these emission rates will be shown through compliance with the fuel usage limitations.

Pollutant	lb/hr	tpy
PM_{10}	5.6	24.6
SO_2	0.4	1.5
VOC	2.8	12.1

127. Pursuant to §19.501 et seq and §19.901 et seq of Regulation 19, and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at source SN-11. Compliance with these emission rates will be shown through compliance with fuel usage limitations and the use of steam injection at this source.

Pollutant	lb/hr	tpy
CO	51.6	226.2
NO_x	93.3	408.8

128. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-13. Compliance with these emission rates will be shown through compliance with the fuel usage limitations.

Pollutant	lb/hr	tpy
PM	5.6	24.6

129. Pursuant to §18.503 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed 5% opacity from source SN-13 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 130.

130. Pursuant to §19.705 and §19.901 et seq of Regulation 19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, pipeline quality natural gas shall be the only fuel used to fire this source.

131. Pursuant to §19.705 and §19.901 et seq of Regulation 19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, natural gas usage at the gas turbine shall not exceed 351 Mscf/hr.

132. Pursuant to §19.705 and §19.901 et seq of Regulation 19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, natural gas usage at the duct burner shall not exceed 238 Mscf/hr.

133. Pursuant to §19.705 and §19.901 et seq of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall continue to maintain a separate strip chart recorder to measure the gas used by the gas turbine and the duct burner. The recorders shall be inspected and adjusted once every twelve hours. The strip chart shall also measure the date and the time in addition to the gas flow. The strip charts shall be maintained on site for at least two years and shall be made available to Department personnel upon request.

134. Pursuant to §19.703 and §19.901 et seq of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a continuous emissions monitoring systems for CO and NO_x at source SN-13. The standards for the CEMS may be found in Appendix A.

135. Source SN-13 is subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart GG, *Standards of Performance for Stationary Gas Turbines* due to an installation date of 1990 and a heat input at peak load greater than 10.7 gigajoules per hour. A copy of Subpart GG has been placed in Appendix B of this permit. The important requirements of this subpart are outlined in Specific Conditions 136 through 141.

136. Pursuant to 40 CFR 60.332(a)(2) and §19.304 of Regulation 19, the permittee shall not cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of 150 ppm (at 15% oxygen and on a dry basis).

137. Pursuant to 40 CFR 60.332(f) and §19.304 of Regulation 19, the limit set forth in Specific Condition 136 may be exceeded when ice fog is deemed to be a traffic hazard by the owner or operator of the gas turbine.

138. Pursuant to 40 CFR 60.333(a) and §19.304 of Regulation 19, the permittee shall not cause from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015% by volume at 15% oxygen and on a dry basis. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 139.

139. Pursuant to 40 CFR 60.333(b) and §19.304 of Regulation 19, the permittee shall not burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8% by weight.

140. Pursuant to 40 CFR 60.334(b) and §19.304 of Regulation 19, the owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine as outlined in the following custom schedule:

    A. Monitoring of fuel nitrogen content shall not be required while natural gas is the only fuel fired in the gas turbine.
    B. Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The approved reference methods are: ASTM D1072-80, ASTM D3031-81, ASTM D3246-81, and ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2). The Gas Processors Association (GPA) test method entitled "Test for Hydrogen Sulfide and Carbon Dioxide in Natural Gas Using Length of Stain Tubes" (GPA Standard 2377-86) is an approved alternative method.
    C. The fuel supply shall be initially sampled daily for a period of two weeks to establish that the pipeline quality natural gas fuel supply is low in sulfur content. This requirement has already been fulfilled by the permittee.

D. After the monitoring required in Item C above, sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted once per quarter for six quarters. This requirement will be fulfilled in January 2000.

E. If after the monitoring required in Item D above, or herein, the sulfur content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.

F. Should any sulfur analysis as required in Items D or E above indicated noncompliance with 40 CFR 60.333, IP Camden shall notify the ADEQ of such excess emissions and the custom schedule shall be re-examined. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.

G If there is a change in fuel supply (supplier), the fuel shall be sampled daily for a period of two weeks to re-establish for the record that the fuel supply is low in sulfur content. If the fuel supply's low sulfur content is re-established, then the custom fuel monitoring schedule can be resumed.

H. Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for a period of three years, and be available for inspection by EPA or ADEQ personnel.

141. Pursuant to 40 CFR 60.334(c)(2) and §19.304 of Regulation 19, for the purpose of reports required under §60.7(c), periods of excess emissions are defined as follows for sulfur dioxide: any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8%.

SN-01
Bark/Gas Boiler

Source Description

Source SN-01 is a 225 MMBTU/hr boiler which was installed in 1947. The main fuels for this boiler are natural gas, tire derived fuel (TDF), bark, and wood waste (sawdust, billet ends, and hardwood pallets). The facility is permitted to burn a limited amount of #6 fuel oil in the event of natural gas curtailment or to test the fuel burning capability of the equipment. The permittee is also allowed to fire sawdust containing small amounts of fuel oil from cleanups, small amounts of waste paper, and small amounts of lubricating oil incidentally burned from contact with the conveyor systems. Emissions from this source are controlled with a wet scrubber. While the source is burning natural gas and/or mill wood waste, water is used as a scrubbing liquor. When #6 fuel oil is being fired, a caustic scrubbing liquid is used.

Annual testing is required for carbon monoxide and particulate matter emissions.

Specific Conditions

142. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-01 when firing natural gas, wood waste, box plant clippings, shredded corrugated cardboard containers, and/or TDF. Compliance with these emission rates will be determined through compliance with the fuel usage and steam production limits, proper operation of the control equipment associated with this boiler, and the testing requirements for this boiler.

Pollutant	lb/hr	tpy
PM_{10}	62.5	273.8
SO_2	3.8	16.6
VOC	28.0	122.6
CO	619.0	2711.0
NO_x	110.0	482.0

143. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-01 when firing #6 fuel oil. Compliance with these emission rates will be determined through proper operation of the control equipment associated with this boiler and the testing requirements for this boiler.

Pollutant	lb/hr	tpy
PM_{10}	54.5	*
SO_2	706.5	*
VOC	1.2	*
CO	7.5	*
NO_x	100.5	*
Pb	0.05	*

*Annual emissions have been bubbled with sources SN-04/05 and SN-06 and may be found in the plantwide conditions.

144. Pursuant to§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-01 as measured by EPA Reference Method 9 except that emissions greater than 40% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided that such emissions will not be permitted more than three (3) times during any 24-hour period. Compliance with this opacity limit will be shown through compliance with Specific Condition 145.

145. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-01 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the excess visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if excess visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

146. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-01 when firing natural gas, wood waste, box plant clippings, shredded corrugated cardboard containers, and/or TDF. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the fuel usage and steam production limits and proper operation of the control equipment associated with this boiler.

Pollutant	lb/hr	tpy
PM	75.0	328.5
Acetaldehyde	0.08	0.34
Acrolein	0.01	0.01
Arsenic Compounds	0.007	0.030
Benzene	0.09	0.40
Cadmium Compounds	0.001	0.003
Carbon Disulfide	0.03	0.13
Chloroform	0.01	0.01
Chromium Compounds	0.002	0.006
Cobalt Compounds	0.014	0.060
Cumene	0.01	0.01
Dibenzofurans	0.01	0.01
Formaldehyde	0.17	0.73
Hydrogen Chloride	0.08	0.34
Lead Compounds	0.020	0.086
Manganese Compounds	0.927	4.06
Mercury Compounds	0.001	0.002
Methanol	0.32	1.38

Pollutant	lb/hr	tpy
Methyl Ethyl Ketone	0.01	0.01
Methyl Isobutyl Ketone	0.05	0.21
Methylene Chloride*	0.21	0.92
Napthalene	0.06	0.26
Nickel Compounds	0.018	0.079
n-Hexane	0.13	0.55
Phenols	0.01	0.05
POM	0.07	0.31
Selenium Compounds	0.001	0.004
Styrene	0.01	0.02
Toluene	0.01	0.01
1,1,1-Trichloroethane	0.01	0.01
Trichloroethylene	0.01	0.01
Xylene	0.01	0.01
Zinc	25.67	112.49

*Non-VOC HAP.

147. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at SN-01 when firing #6 fuel oil. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through proper operation of the control equipment associated with this source.

Pollutant	lb/hr	tpy
PM	76.7	**
Antimony Compounds	0.035	**
Arsenic Compounds	0.007	**
Beryllium Compounds	0.001	**
Cadmium Compounds	0.001	**
Chromium Compounds	0.004	**
Cobalt Compounds	0.024	**
Formaldehyde	0.10	**
Hydrogen Chloride*	1.67	**
Hydrogen Fluoride*	0.09	**
Lead Compounds	0.006	**
Manganese Compounds	0.019	**
Mercury Compounds	0.001	**
Nickel Compounds	0.161	**
POM	0.01	**
Selenium Compounds	0.002	**

*Non-VOC, non-criteria pollutant
**Annual emissions have been bubbled with sources SN-04/05 and SN-06 and may be found in the plantwide conditions.

148. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall only fire pipeline quality natural gas, bark, wood waste (sawdust, billet ends, and hardwood pallets), TDF, sawdust containing small amounts of fuel oil from cleanups, small amounts of waste paper, small amounts of lubricating oil incidentally burned from contact with the conveyor systems, box plant clippings, shredded corrugated cardboard containers, and#6 fuel oil at source SN-01. The permittee may also use diesel fuel for starting bark fires.

149. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, steam production shall not exceed 1,314,000,000 pounds in any consecutive twelve month period.

150. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the steam production at source SN-01 in order to demonstrate compliance with Specific Condition 149 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual total shall be submitted to the Department in accordance with General Provision 7.

151. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-31,1 and 40 CFR 70.6, the permittee shall not fire in excess of 210 tons of TDF at source SN-01 per week.

152. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of TDF fired at source SN-01 in order to demonstrate compliance with Specific Condition 151 and which may be used by the Department for enforcement purposes. These records shall be updated weekly, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual total shall be submitted to the Department in accordance with General Provision 7.

153. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing for carbon monoxide emissions from source SN-01 using EPA Reference Method 10. These tests shall be conducted in accordance with Plantwide Condition #3 and take place no less than 9 months and no more than 15 months apart.

154. Pursuant to §19.702 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing for particulate matter emissions from source SN-01 using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and take place no less than 9 months and no more than 15 months apart.

SN-47
Package Boiler

Source Description

Source SN-47 is a package boiler which will be used to provide supplemental steam to various parts of the plant whenever another boiler is out of service for maintenance, etc. This source will only be on site whenever it is needed. The permittee will be required to comply with any applicable NSPS subpart (This will be dependent upon the size of the boiler being used.).

Natural gas will be the only fuel that this source will be permitted to fire. As this source will only be used when another boiler is out of service, there will be no net increase in emissions. Also, restrictions on the amount of fuel that may be fired in this boiler are being taken in order to stay below the PSD significant increase levels.

Specific Conditions

155. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-47. Compliance with these emission rates will be determined through compliance with Specific Condition 159.

Pollutant	lb/hr	tpy
PM_{10}	5.5	6.6
SO_2	0.2	0.2
VOC	0.4	0.4
CO	50.0	60.0
NO_x	25.0	30.0

156. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-47. Compliance with these emission rates will be determined through compliance with Specific Condition 159.

Pollutant	lb/hr	tpy
PM	5.5	6.6

157. Pursuant to §18.503 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed 5% opacity from source SN-47 as measured by EPA Reference Method 9. Compliance with this opacity limit will be demonstrated by compliance with Specific Condition 158.

158. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, pipeline quality natural gas shall be the only fuel used to fire the package boiler.

159. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, natural gas usage shall not exceed 575 MMSCF at source SN-47 in any consecutive twelve month period.

160. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of natural gas fired at source SN-47 in order to demonstrate compliance with Specific Condition 159 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

161. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the heat input capacity of source SN-47 shall not exceed 250 MMBTU/hr.

162. Source SN-47 is potentially subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart Dc - *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*. Source SN-47 will only be subject to this subpart if the facility chooses to install a boiler which has a heat input capacity between 10 MMBTU/hr and 100 MMBTU/hr. The important requirements of this subpart are outlined in Specific Conditions 163 and 164. A copy of Subpart Dc has been included in Appendix C.

163. Pursuant to 40 CFR 60.48c(g) and §19.304 of Regulation 19, the permittee shall record and maintain records of the amount of natural gas combusted during each day.

164. Pursuant to 40 CFR 60.48c(i) and §19.304 of Regulation 19, the permittee shall maintain the records required by Specific Condition 163 for a period of two years following the date of such record.

165. Source SN-47 is potentially subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart Db, *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units*. This source will be subject to this subpart if the facility chooses to install a boiler which has a heat input capacity greater than 100 MMBTU/hr. The important requirements of this subpart are outlined in Specific Conditions 166 through 183. A copy of subpart Db has been included in Appendix D.

166. Pursuant to 40 CFR 60.44b(a) and §19.304 of Regulation 19, the permittee shall not cause to be discharged to the atmosphere any gases that contain oxides of nitrogen in excess of 0.10 lb/MMBTU (expressed as NO_2).

167. Pursuant to 40 CFR 60.44b(a) and §19.304 of Regulation 19, the heat release rate shall not exceed 70,000 BTU/hr ft^3.

168. Pursuant to 40 CFR 60.46b(h) and §19.304 of Regulation 19, the oxides of nitrogen standards set forth in Specific Condition 166 shall apply at all times including periods of startup, shutdown, or malfunction.

169. Pursuant to 40 CFR 60.46b(e) and §19.304 of Regulation 19, to determine compliance with the emission limits for nitrogen oxides required under §60.44b, the owner or operator of an affected facility shall conduct the performance test as required under §60.8 using the continuous system for monitoring nitrogen oxides under §60.48b (Specific Condition 172).

170. Pursuant to 40 CFR 60.46b(e)(1), §19.304 and §19.702 of Regulation 19, and 40 CFR Part 52, Subpart E, for the initial compliance test, nitrogen oxides from the steam generating unit are monitored for 30 successive steam generating operating days and the 30-day average emission rate is used to determine compliance with the nitrogen oxides emission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

171. Pursuant to 40 CFR 60.46b(e)(4), following the date on which the initial performance test is completed or required to be completed under §60.8 of this subpart, whichever date comes first, the owner or operator of an affected facility which has a heat input capacity of 73 MW (250 million BTU/hr) or less and which combusts natural gas shall upon request determine compliance with the nitrogen oxide standards under §60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, nitrogen oxides emission data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports but will not be used to determine compliance with the nitrogen oxides emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

172. Pursuant to 40 CFR 60.48b(b), §19.304 and §19.703 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall install, calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system.

173. Pursuant to 40 CFR 60.48b(c) and §19.304 of Regulation 19, the continuous monitoring system required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

174. Pursuant to 40 CFR 60.48b(c) and §19.304 of Regulation 19, the 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor required by paragraph (b) of this section shall be expressed in ng/J or lb/million BTU heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(b). At least 2 data points must be used to calculate each 1-hour average.

175. Pursuant to 40 CFR 60.48b(e) and §19.304 of Regulation 19, the procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring system.

176. Pursuant to 40 CFR 60.48b(e)(2) and §19.304 of Regulation 19, the span value for the nitrogen oxides emission monitor shall be 500 ppm.

177. Pursuant to 40 CFR 60.49b(a) and §19.304 of Regulation 19, the permittee shall submit notification of initial startup as provided by §60.7. This notification shall include the following:

    a. The heat design input capacity of the affected facility and identification of the fuels to be combusted in the affected facility.

    b. If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§60.44b.

    c. The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired.

178. Pursuant to 40 CFR 60.49b(d) and §19.304 of Regulation 19, the owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for each calendar quarter. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

179. Pursuant to 40 CFR 60.49b(g) and §19.304 of Regulation 19, except as provided for under paragraph (p) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under §60.44b shall maintain records of the following information for each steam generating unit operating day.

    a. Calendar date

    b. The average hourly nitrogen oxides emission rates (expressed as NO_2) (ng/J or lb/million BTU heat input) measured or predicted

    c. The 30-day average nitrogen oxides emission rates (ng/J or lb/million BTU heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.

    d. Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken.

e. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective action taken.

f. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

g. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

h. Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

i. Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.

j. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

180. Pursuant to 40 CFR 60.49b(h)(2) and §19.304 of Regulation 19, the owner or operator of any affected facility that is subject to the nitrogen oxides standards of §60.44b, combusts natural gas, has a heat input capacity less than 73 MW (250 million BTU/hr), and is required to monitor nitrogen oxides emissions on a continuous basis under §60.48b(g)(1) or steam generating unit operating conditions under §60.48b(g)(2), shall submit excess emission reports for any calendar quarter during which there are excess emissions from the affected facility. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period.

181. Pursuant to 40 CFR 60.49b(h)(4) and §19.304 of Regulation 19, for purposes of §60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average nitrogen oxides emission rate, as determined under §60.46b(e), which exceeds the applicable emission limits in §60.44b.

182. Pursuant to 40 CFR 60.49b(i) and §19.304 of Regulation 19, the owner or operator of any affected facility subject to the continuous monitoring requirements for nitrogen oxides under §60.48b shall submit a quarterly report containing the information recorded under paragraph (g) of this section. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

183. Pursuant to 40 CFR 60.49b(o) and §19.304 of Regulation 19, all records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

184. Pursuant to§19.705 of Regulation 19, and 40 CFR 70.6, the permittee shall maintain records of the dates which the package boiler was brought on site, when operation of the boiler began, when operation of the boiler ceased, and when the boiler was removed from this facility. The permittee shall also maintain records of the heat input capacity of the boiler and compliance date with any applicable NSPS requirements. These records shall be updated within one week of the boiler being brought in or taken out, kept on site for a minimum of two years following the date of such record, and shall be made available to Department personnel upon request.

185. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall only operate source SN-47 when another boiler is out of operation. However, if a boiler is subject to 40 CFR Part 60, Subpart Dc or is not subject to any NSPS subpart, the permittee may startup SN-47 a maximum of 72 hours prior to the boiler it is temporarily replacing is off line and the permittee may also operate SN-47 for a maximum of 48 hours after the permanent boiler is brought back on line. The permittee may maintain a warming fire in the boiler whenever it is on site in the event that the ambient temperature falls below freezing.

186. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which will demonstrate compliance with Specific Condition 185 and which may be used by the Department for enforcement purposes. These records shall be kept on site and made available to Department personnel upon request.

PAPER MILL

SN-35
Paper Mill Source Group

Source Description

The paper mill source group consists of the pulp and whitewater storage tanks and chests in the stock preparation area and all sections of the paper machine from the headbox to the reel for all three paper machines. It is in the paper mill source group where the pulp is converted to paper on one of the three machines. No control equipment is associated with the paper mill source group.

Specific Conditions

187. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-35. Compliance with these emission rates will be determined through compliance with the limit on the amount of paper that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	161.6	707.6

188. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-35. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be determined through compliance with the amount of paper that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	2.05	8.98
Acrolein	0.27	1.18
Benzene	0.02	0.09
Chlorobenzene	0.04	0.17
Ethylene Glycol	0.44	1.92
Formaldehyde	1.23	5.37
Methanol	75.12	329.00
Methyl Ethyl Ketone	0.46	1.99
Methyl Isobutyl Ketone	0.04	0.16
Methylene Chloride*	0.24	1.03
Napthalene	0.14	0.62
n-Hexane	0.02	0.09
Styrene	0.10	0.42
Tetrachloroethylene*	0.31	1.34
Toluene	0.02	0.09
1,2,4-Trichlorobenzene	0.56	2.41
1,1,1-Trichloroethane	0.09	0.40
1,1,2-Trichloroethane	0.11	0.46
Xylenes	0.07	0.28

*Non-VOC non-criteria pollutant

189. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not produce more than 438,000 tons of paper at the paper mill in any consecutive twelve month period.

190. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of paper produced at source SN-35 in order to demonstrate compliance with Specific Condition 189 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

WASTEWATER COLLECTION & TREATMENT AERATION STABILIZATION BASIN
PROCESS SEWER NON-POINT SOURCES

SN-16
Aeration Stabilization Basin & Process Sewer Non-Point Sources

Source Description

The waste water treatment process at the Camden mill consists of a wetlands area, collection, screening, clarification, neutralization, aeration, settling, sludge dewatering, and disposal.

All process water is collected from the various process area sumps and pumped through the process sewer mains. The sewer mains also receive landfill leachate and surface drainage from culverts in various areas of the site.

The emissions from source SN-16 are related to the amount of pulp that is produced. Therefore, compliance with the emission rates will be demonstrated through compliance with the limit on the amount of ADTP that can be produced.

Source SN-16 is subject to the provisions of 40 CFR Part 63, Subpart S. The pulping condensate streams from some but not necessarily all of the following equipment will be collected in a hard piping system and routed to SN-16 for biological treatment.

A. Evaporator Hot Well
B. Evaporator Surface Condenser
C. Turpentine Decanter Underflow
D. Turpentine Storage Underflow
E. Blow Tank Condenser Condensate
F. NCG Drains

Specific Conditions

191. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-16. Compliance with these emission rates will be demonstrated through compliance with the amount of ADTP that may be produced.

Pollutant	lb/hr	tpy
VOC	9.1	39.9
TRS	1.2	4.1

192. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-16. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with the amount of ADTP that may be produced.

Pollutant	lb/hr	tpy
Acetaldehyde	1.36	5.96
Carbon Disulfide	0.11	0.45
Dimethyl Disulfide*	0.06	0.23
Dimethyl Sulfide*	0.85	3.70
H_2S*	0.1	0.1
Methanol	0.68	2.96
Methyl Ethyl Ketone	0.03	0.11
Methyl Isobutyl Ketone	0.01	0.03
Methyl Mercaptan*	0.02	0.05

*Component of TRS.

193. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.446(b), the permittee shall collect the pulping condensate streams from some but not necessarily all of the following equipment in a hard piping system and deliver the condensate streams to the ASB for biological treatment.

A. Evaporator Hot Well
B. Evaporator Surface Condenser
C. Turpentine Decanter Underflow
D. Turpentine Storage Underflow
E. Blow Tank Condenser Condensate
F. NCG Drains

194. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.446(e)(2), the permittee shall discharge the collected pulping process condensate streams below the liquid surface of the Aerated Stabilization Basin (SN-16).

195. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.446(e)(3), the permittee shall demonstrate one of the following removal efficiencies in order to demonstrate compliance with the total HAP treatment requirement. Compliance shall be met by removing at least 6.6 lb/ODTP of HAPs as measured as methanol, methyl ethyl ketone, acetaldehyde, and propionaldehyde.

A. 92% destruction of total HAPs (with methanol as a surrogate)
B. (6.6 + 7.2R) lb/ODTP of total HAPs destroyed
where: $R = \frac{\text{(sum of non methanol HAPs, concentration)}}{\text{(sum of total HAPs, concentration)}}$

Note: EPA has verbally agreed in meetings with industry representatives to allow a lb/ODTP removal standard as an alternative to the 92% destruction requirement. For non-bleach mills, this alternative removal requirement is (6.6 + 7.2R) lb/ODTP, where R = (sum of non-methanol HAPs, concentration)/(sum of total HAPs, concentration)

196. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(j)(1) and (m), the permittee shall monitor the following parameters on a daily basis from source SN-16, ASB. The permittee may install and operated a CMS to monitor other appropriate operating parameters that demonstrate continuous compliance with the control requirements.

A. Composite daily sample of outlet soluble BOD_5 concentration to monitor for maximum daily and maximum monthly average;
B. Mixed liquor volatile suspended solids;
C. Horsepower of aerator unit(s);
D. Inlet liquid flow; and
E. Liquid temperature.

Note: The industry and EPA are working to finalize a procedure which would permit the use of the lb/ODTP option for demonstrating compliance with the HAP removal requirement for open biological treatment systems, allow flexibility in defining alternate operating parameters to monitor, such as COD, to demonstrate continuous compliance, and provide guidance on acceptable averaging periods. In accordance with the ongoing discussions with EPA, the mill will perform a baseline characterization of the waste treatment system to establish thoroughly mixed zones and other appropriate emissions modeling system parameters. Mill-specific procedures for initial performance and

continuous compliance demonstrations will be submitted to the department after the industries discussions with EPA are complete. A rule change is expected.

197. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(j)(2), the permittee shall obtain daily inlet and outlet grab samples from the ASB (SN-16) in order to have the HAP data available to perform the quarterly percent reduction tests and the compliance percent reduction tests. The following procedures shall be followed with the liquid samples.

A. Store the samples for 5 days. The 5 day storage is required since the soluble BOD_5 test requires 5 days to obtain results. If the results of the soluble BOD_5 test are outside of the range established during the initial performance test, then archive sample shall be used to perform the percent reduction test.

B. Perform the percent reduction test procedures within 45 days after the beginning of each quarter as follows.

i. The percent reduction test performed in the first quarter (annually) shall be performed for HAPs and methanol and the percent reduction obtained from the test shall be at least as great as the total HAP reduction specified in Specific Condition 195.

ii. The remaining quarterly percent reduction tests shall be performed for methanol and the percent reduction obtained shall be at least as great as the methanol reduction determined in the previous first quarter test.

iii. The parameter values used to calculate the percent reductions shall be parameter values measured per Specific Condition 196.

Note: The industry and EPA are working to finalize a procedure which would permit the use of the lb/ODTP option for demonstrating compliance with the HAP removal requirement for open biological treatment systems, allow flexibility in defining alternate operating parameters to monitor, such as COD, to demonstrate continuous compliance, and provide guidance on acceptable averaging periods. In accordance with the ongoing discussions with EPA, the mill will perform a baseline characterization of the waste treatment system to establish thoroughly mixed zones and other appropriate emissions modeling system parameters. Mill-specific procedures for initial performance and continuous compliance demonstrations will be submitted to the department after the industries discussions with EPA are complete. A rule change is expected.

198. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(n), the permittee shall submit the following information to the Department prior to the initial compliance testing in order to demonstrate compliance with the condensate treatment requirements.

A. The methodology to be used,
B. The parameters to be monitored, and
C. The rationale for using those parameters.

199. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(n), the permittee shall submit the results of the initial performance tests, along with an analysis identifying acceptable parameter ranges for the parameters required to be monitored to the Department upon completion of the required performance tests.

200. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(o), the permittee shall submit to the Department after the initial performance test the methodology to be used to assess periods of excess emissions from the condensate treatment system if the monitored parameters are out-of-range. Instances where emissions are in excess of the appropriate standard, but are caused by events identified in the mill's startup, shutdown, and malfunction plan (required by 40 CFR §63.6) will not be considered in the calculation of periods of excess emissions.

201. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(p), the permittee shall perform all the following requirements when the monitoring parameters specified in Specific Condition 196 are below or above the minimum and maximum operating values as established.

A. Determine the compliance removal efficiency using the percent reduction test procedures specified in 40 CFR §63.457(l) and the monitoring data specified in 40 CFR §63.457(j)(1) that coincide with the time period of the parameter excursion;
B. Steps shall be taken to repair or adjust the operation of the process to end the parameter excursion period; and
C. Steps shall be taken to minimize total HAP emissions to the atmosphere during the parameter excursion period.

202. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457(c)(1), liquid samples shall be collected using the sampling procedures specified in Method 305 of Part 60, appendix A, including the following:

A. Where feasible, samples shall be taken from an enclosed pipe prior to the liquid stream being exposed to the atmosphere; and
B. When sampling from an enclosed pipe is not feasible, samples shall be collected in a manner to minimize exposure of the sample to the atmosphere and loss of HAP compounds prior to sampling.

203. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457 (c)(2), the volumetric flow rate of the entering and exiting liquid streams shall be determined using inlet and outlet flow meters or other methods demonstrated to the Administrator's satisfaction. The volumetric flow rate measurements to determine actual mass removal shall be taken at the same time as the concentration measurements.

204. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.457(c)(3), when gathering liquid samples for HAP analysis purposes, the permittee shall conduct a minimum of three test runs that are representative of normal conditions and average the resulting pollutant concentrations. The minimum sampling time for each test run shall be 1 hour and the grab or composite samples shall be taken at approximately equally spaced intervals over the 1 hour test run period. The owner or operator shall use one of the following procedures to determine total HAP or methanol concentration:

    A. Method 305 in Appendix A of this part, adjusted using equation contained in 40 CFR 457(c)(3)(i); or
    B. NCASI Method DI/MEOH-94.02, Methanol in Process Liquids by GC/FID, August 1998, Methods Manual, NCASI, Research Triangle Park, NC, for determining methanol concentrations.

205. Pursuant to §19.304 of Regulation 19 and 40 CFR 457(c)(4), the permittee shall use Method 405.1 of Part 136 to determine soluble BOD_5 in the effluent stream from a biological treatment unit with the modifications contained in §63.457(c)(i) and (ii).

ACTIVE LANDFILLS

SN-36
East Landfill

Source Description

The east landfill is the only active landfill located at this facility. At this time, there are two other landfills which have been closed and no longer accept any plant refuse.

The emissions from this source are limited by the amount of plant refuse that can be accepted by this landfill.

Specific Conditions

206. Pursuant to §19.501 et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-36. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of mill waste that may be placed in the landfill.

Pollutant	lb/hr	tpy
VOC	0.8	3.3
CO	0.1	0.3
TRS	0.1	0.3

207. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of mill waste that may be placed in the landfill.

Pollutant	lb/hr	tpy
Acrylonitrile	0.01	0.02
Benzene	0.01	0.01

Pollutant	lb/hr	tpy
Carbon Disulfide	0.01	0.01
Carbonyl Sulfide	0.02	0.05
Chlorobenzene	0.01	0.01
Chloroform	0.01	0.01
Dimethyl Sulfide*	0.04	0.16
Ethyl Benzene	0.01	0.02
H_2S*	0.1	0.1
Methyl Ethyl Ketone	0.01	0.02
Methyl Isobutyl Ketone	0.01	0.01
Methylene Chloride**	0.01	0.04
Methyl Carpatan*	0.01	0.02
n-Hexane	0.01	0.02
1,1,2,2-Tetrachloroethane	0.01	0.01
Tetrachlorethylene	0.01	0.02
Toluene	0.01	0.03
1,1,1-Trichloroethane**	0.01	0.01
Trichloroethylene	0.01	0.01
Vinyl Chloride	0.01	0.02
Xylene	0.01	0.05

*Includes TRS components which are also considered to be VOCs.
**Component of TRS. Included in the TRS total.

208. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall use source SN-36 for plant refuse only.

209. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, source SN-36 shall not accept in excess of 113,200 cubic yards of plant refuse in any consecutive twelve month period. For the purposes of this permit, 1 uncompacted cubic yard shall equal 300 pounds.

210. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of plant refuse accepted at source SN-36 in order to demonstrate compliance with Specific Condition 209 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

FUEL STORAGE

SN-37
Gasoline Storage Tank

Source Description

Source SN-37 is a horizontal fixed roof tank with a capacity of approximately 1763 gallons. The facility is permitted to store only gasoline at this source. This tank is used to store fuel for the vehicles used around the facility.

Specific Conditions

211. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-37. Compliance with these emission rates will be determined by compliance with Specific Conditions 212 and 213.

Pollutant	lb/hr	tpy
VOC	22.8	0.5

212. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall store only gasoline at source SN-37.

213. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, throughput of gasoline at source SN-37 shall not exceed 39,900 gallons of gasoline in any consecutive twelve month period.

214. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the gasoline throughput at source SN-37 in order to demonstrate compliance with Specific Condition 213 and which may be used by the Department for enforcement purposes. The records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

MILL SHUTDOWN EQUIPMENT

SN-48
Air Compressors

Source Description

The air compressors will be used when one or more of the electrical air compressors is out of service. These air compressors do not include the smaller units which may be found in Group B of the Insignificant Activities List.

Specific Conditions

215. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-48. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 217 and 218.

Pollutant	lb/hr	tpy
PM_{10}	2.0	2.5
SO_2	1.8	2.3
VOC	2.3	2.9
CO	5.9	7.4
NO_X	27.2	34.3

216. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-48. The non-criteria pollutant emission rates listed below, excluding PM, were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 217 and 218.

Pollutant	lb/hr	tpy
PM	2.0	2.5
Acetaldehyde	0.05	0.01

Pollutant	lb/hr	tpy
Acrolein	0.01	0.01
Aldehydes	0.06	0.01
Benzene	0.06	0.01
Formaldehyde	0.07	0.01
Napthalene	0.01	0.01
PAH	0.01	0.01
Toluene	0.01	0.01
Xylenes	0.02	0.01

217. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, diesel fuel with a sulfur content not to exceed 3% by weight shall be the only fuel used to fire the air compressors.

218. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not use in excess of 113,400 gallons of diesel fuel at the air compressors in any consecutive twelve month period.

219. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the diesel fuel usage at source SN-48 and the sulfur content of the fuel in order to demonstrate compliance with Specific Conditions 217 and 218 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

220. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall only operate source SN-48 when the electrical air compressors are out of service.

221. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which will demonstrate compliance with Specific Condition 220 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

SN-49
Shutdown Equipment

Source Description

The shutdown equipment will consist mainly of generators which will supply some power to the facility when the mill is in a shutdown mode.

Specific Conditions

222. Pursuant to §19.501et seq of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-49. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 224, 225, and 227.

Pollutant	lb/hr	tpy
PM_{10}	18.4	0.5
SO_2	17.2	0.5
VOC	27.5	0.7
CO	187.4	4.6
NO_X	261.8	6.3

223. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at source SN-49. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 224, 225, and 227.

Pollutant	lb/hr	tpy
PM	18.4	0.5

224. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, diesel fuel with a sulfur content not to exceed 3% by weight and gasoline shall be the only fuels used to fire source SN-49.

225. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not use in excess of 20,520 gallons of diesel fuel at source SN-49 in any consecutive twelve month period.

226. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the diesel fuel usage at source SN-49 and the sulfur content in order to demonstrate compliance with Specific Conditions 224 and 225 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

227. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not use in excess of 805 gallons of gasoline at the source SN-49 in any consecutive twelve month period.

228. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the gasoline usage at source SN-49 in order to demonstrate compliance with Specific Condition 227 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

229. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall only operate source SN-49 during full or partial mill shutdowns. The permittee is allowed to operate this source for up to 48 hours prior to mill shut down and up to 48 after mill operations begin.

230. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which will demonstrate compliance with Specific Condition 229 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

40 CFR Part 63, Subpart S Requirements for the LVHC Source Group
and the Condensate Collection System Source Group

LVHC Source Group

Source Description

Non-condensible gases from the following sources are routed through the closed vent system and sent to efficient incineration in either the Lime Kiln (SN-03), the NCG Incinerator (SN-12), or the NCG Back-Up Flare (SN-13). #1 through #7 are associated with other source groups at this facility. Most of the applicable requirements of 40 CFR Part 63, Subpart S, for sources SN-20, SN-21, and SN-27 are under this source group for clarity.

1. Evaporator Hotwell (SN-27)
2. Turpentine Condensers (SN-21)
3. Turpentine Decanter (SN-21)
4. #1 and #2 Low Pressure Feeders (SN-20)
5. Blow Tank (SN-20)
6. After Blow Tank Condenser (SN-20)
7. Turpentine Decanter Foul Condensate Tank (SN-21)
8. Foul Condensate Collection Tank
9. NCG Drain Points

Specific Conditions

231. Pursuant to §19.705 of Regulation 19, 40 CFR 70.6, and/or A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and §18.1004 of Regulation 18, the NCG Pre-Scrubber shall be operated at all times when LVHC gases are being collected and treated in sources SN-03, SN-12, or SN-14. The permittee may bypass this scrubber for 400 hours in any consecutive twelve month period. Fifty hours of this down time may occur when emissions are being vented to source SN-14.

232. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, or §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain records of the hours in which the NCG Pre-Scrubber is bypassed and whether those hours occur when emissions are being vented to source SN-14 in order to demonstrate compliance with Specific Condition 231 and which may be used by the Department for enforcement purposes. These records shall be updated by the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

233. Pursuant to 40 CFR §63.443(a)(1)(i), §19.304 and §19.705 of Regulation 19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the owner or operator of each pulping system using the kraft process subject to the requirements of this subpart shall control the total HAP emissions from each LVHC system.

234. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.450(b), the permittee shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures specified in §63.457(e). (Specific Condition 238) Each enclosure or hood opening closed during the initial performance test specified in §63.457(a) (Specific Condition 241) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs.

235. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.450(c), the permittee shall maintain the portion of the closed vent system that is operated at positive pressure and located prior to a control device with no detectable leaks as indicated by an instrument reading of less than 500 ppmv above background as measured by the procedures in §63.457(d). This portion includes the LVHC system segments downstream of the ejectors and the NCG Scrubber.

236. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.450(d)(1), the permittee shall install, calibrate, maintain, and operate (according to manufacturer's specifications) a computer controlled valve position flow indicator on each of the following bypass lines that provides a record of the presence of a gas stream flow in the line at least once every 15 minutes.

Turpentine Decanter Bypass Line
#1 and #2 Low Pressure Feeders Bypass Line
Blow Tank Bypass Line
After Blow Tank Condenser Bypass Line
Foul Condensate Collection Tank Bypass Line
NCG Drain Points Bypass Line

237. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.450(d)(2), the permittee shall maintain the valves on the following bypass lines in the closed position and equipped with a seal.

Evaporator Hotwell Bypass Line
Turpentine Condensers Bypass Line

238. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(k)(1), the permittee shall perform a visual inspection of each enclosure opening at least every 30 days to ensure the opening is maintained in the same closed and sealed position as during the performance test except when necessary to use the opening for sampling, inspection, maintenance, or repairs.

239. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(k)(2), the permittee shall conduct a visual inspection of each closed vent system at least every 30 days. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.

240. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(k)(3), the permittee shall perform initial and subsequent annual tests to demonstrate that no detectable leaks are present in each component of the closed-vent system operated at positive pressure. This includes the LVHC system segments downstream of the ejectors and the NCG Scrubber. The tests shall be conducted using the procedure outlined in 40 CFR Part 63.457(d) and:

Method 21, of 40 CFR Part 60, Appendix A; and
The instrument specified in Method 21 shall be calibrated before use according to the procedures specified in Method 21 on each day that leak checks are performed. The following calibration gases shall be used:
Zero air (less than 10 parts per million by volume of hydrocarbon in air); and
A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 parts per million by volume methane or n-hexane.

241. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(k)(4), the permittee shall perform initial and subsequent annual tests to demonstrate that each enclosure opening of the closed-vent system is maintained at negative pressure. The tests shall be conducted using one of the following procedures.

An anemometer to demonstrate flow in the enclosure opening.
Measure the static pressure across the opening.
Smoke tubes to demonstrate flow into the enclosure opening.
Any other industrial ventilation test method demonstrated to the Department's satisfaction.

242. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(k)(5), the permittee shall inspect the valve and seal on the following bypass lines at least once every 30 days to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line.

Evaporator Hotwell Bypass Line
Turpentine Condensers Bypass Line

243. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(k)(6), the permittee shall undertake the following corrective actions as soon as practicable if an inspection required by paragraphs (k)(1) through (k)(5) of this section(Specific Conditions 238 thru 242) identifies any visible defects in the ductwork, piping, enclosures, or connections to covers, or if an instrument reading of 500 ppm by volume or greater above background is measured, or if any enclosure openings are not maintained at negative pressure.

    A. A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.
    B. The repair or corrective action shall be completed no later than 15 days after the problem is identified. Delay of repair or corrective action is allowed if the repair or corrective action is technically infeasible without a process unit shutdown or if the permittee determines that the emissions resulting from immediate repair would be greater than the emissions likely to result from the delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

244. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.454(b), the permittee shall prepare and maintain a site-specific inspection plan for each applicable enclosure opening and closed-vent system including drawings or schematics of the components of the affected equipment. The following information shall be recorded for each inspection.

    A. Date of inspection;
    B. The equipment type and identification;
    C. Results of the negative pressure tests for enclosures;
    D. Results of leak detection tests;
    E. The nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);
    F. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;
    G. Repair methods applied in each attempt to repair the defect or leak;

H. The reason for the delay if the defect or leak is not repaired within 15 days after discovery;
I. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;
J. The date of successful repair of the defect or leak;
K. The position and duration of opening of bypass line valves and the condition of any valve seals; and
L. The duration of the use of bypass valves on computer controlled valves.

Condensate Collection System Source Group

Source Description

The pulping condensates from some, but not necessarily all, of the following equipment will be collected in hard piping system and routed to the Aerated Stabilization Basin (ASB, source SN-16) for biological treatment.

1. Evaporator Hot Well
2. Evaporator Surface Condenser
3. Turpentine Decanter Underflow
4. Turpentine Storage Underflow
5. Blow Tank Condenser Condensate
6. NCG Drains

Specific Conditions

245. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.446(b) and (c)(3), the permittee shall collect some, but not necessarily all, of the pulping condensate streams from the following equipment in a hard piping system in order to achieve a total HAP (as methanol) mass collected of 7.2 lb/ODTP. (The averaging period for demonstrating compliance with the total HAP mass collected requirement shall be demonstrated to the Department's satisfaction prior to the effective date of the subpart.) ~~on a 15-day rolling average basis.~~

    A. Evaporator Hot Well
    B. Evaporator Surface Condenser
    C. Turpentine Decanter Underflow
    D. Turpentine Storage Underflow
    E. Blow Tank Condenser Condensate
    F. NCG Drains

246. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.446(d)(1), the collected pulping process condensates shall be conveyed in a closed collection system that is designed and operated to meet the individual drain system requirements specified in 40 CFR 63.960, 63.961, and 63.962 of subpart RR of this part, except closed vent systems and control devices shall be designed and operated in accordance with 40 CFR 63.443(d) and 63.450, instead of in accordance with 40 CFR §63.962(a)(3)(ii), (b)(3)(ii)(A), and (b)(3)(ii)(B)(5)(iii). The closed collection system will meet the specified requirements by being a hard-piped individual drain system per 40 CFR §63.962(a)(2). The Main Foul

Condensate Collection Tank and Turpentine Decanter Underflow Collection Tank will be equipped with a water seal per 40 CFR §63.962(b)(2)(i)(A).

247. Pursuant to §19.304 of Regulation 19 and 40 CFR Part §63.446(d)(2), the permittee shall design and operate the Main Foul Condensate Collection Tank and the Turpentine Foul Condensate Collection Tank per the following requirements.

   A. The fixed roof and all openings shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 ppm above background, vented into the LVHC Collection System, and routed to either the Lime Kiln (SN-03), the NCG Incinerator (SN-12), or the NCG Back-Up Flare (SN-14) for incineration.
   B. Each opening shall be maintained in a closed, sealed position at all times when the tank contains pulping process condensates or any HAP removed from a pulping process condensate stream except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.

248. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(a) and (i), the permittee shall install, calibrate, certify, operate, and maintain (according to manufacturer's specifications) a continuous monitoring system (CMS) on the Main Foul Condensate Collection Tank to measure the appropriate parameters that shall be submitted to the Department prior to the initial performance test.

249. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(k)(3), the permittee shall perform initial and subsequent annual tests to demonstrate that no detectable leaks are present in each condensate tank of the closed collection system. The tests shall be conducted using the procedure outlined in 40 CFR Part 63.457(d).

250. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(l)(1), the permittee shall conduct a visual inspection of each condensate closed collection system at least every 30 days. The visual inspections shall verify that appropriate liquid levels in the water seals in the Main Foul Condensate Collection Tank and Turpentine Foul Condensate Collection Tank are being maintained and identify any other defects that could reduce water seal control effectiveness. In addition, the permittee shall visually inspect the unburied portion of the collection system piping to verify that no defects are present.

251. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(l)(2), the Main Foul Condensate Collection Tank and the Turpentine Foul Condensate Collection Tank collection system shall be operated with no detectable leaks as specified in §63.446 (d)(2)(i) (see Specific Condition 246) measured initially and annually by the procedures specified in §63.457(d).

252. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(l)(3), if an inspection required by 40 CFR §63.453(l)(1) (see Specific Condition 250) identifies visible defects in the closed collection system, or if an instrument reading of 500 parts per million or greater above background is measured, the first efforts at repair of the defect will be no later than 5 calendar days after detection and repair will be completed as soon as possible but no later than 15 calendar days after detection unless the repair of the defect requires emptying or temporary removal from service of the collection system. The defect will be repaired the next time the process generating the wastewater stops operation. The repair of the defect will be completed before the process resumes operation.

253. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(n), the permittee shall submit the following information to the Department prior to the initial compliance testing in order to demonstrate compliance with the condensate collection requirements.

    A. The methodology to be used,
    B. The parameters to be monitored, and
    C. The rationale for using those parameters.

254. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(n), the permittee shall submit the results of the initial performance tests, along with an analysis identifying acceptable parameter ranges for the parameters required to be monitored to the Department upon completion of the required performance tests.

255. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.453(o), the permittee shall submit to the Department the methodology to be used to assess periods of excess emissions from the condensate collection system if the monitored parameters are out-of-range. Instances where emissions are in excess of the appropriate standard, but are caused by events identified in the mill's startup, shutdown, and malfunction plan (required by 40 CFR Part 63.6) will not be considered in the calculation of periods of excess emissions.

256. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.454, the permittee shall prepare and maintain a site-specific inspection plan for each applicable closed collection system including drawings or schematics of the components of the affected equipment. The following information shall be recorded for each inspection.

    A. Date of inspection;
    B. The equipment type and identification;
    C. Results of the negative pressure tests for enclosures;
    D. Results of leak detection tests;
    E. The nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);

F. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;
G. Repair methods applied in each attempt to repair the defect or leak;
H The reason for the delay if the defect or leak is not repaired within 15 days after discovery;
I. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;
J. The date of successful repair of the defect or leak;
K. The position and duration of opening of bypass line valves and the condition of any valve seals; and
L. The duration of the use of bypass valves on computer controlled valves.

SECTION V: COMPLIANCE PLAN AND SCHEDULE

International Paper Company is in compliance with the applicable regulations cited in the permit application. International Paper Company will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: INSIGNIFICANT ACTIVITIES

Pursuant to §26.3(d) of Regulation 26, the following sources are insignificant activities. Insignificant and trivial activities will be allowable after approval and federal register notice publication of a final list as part of the operating air permit program. Any activity for which a state or federal applicable requirement applies is not insignificant even if this activity meets the criteria of §3(d) of Regulation 26 or is listed below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated August 23, 1996.

Mill Area	Description	Reason
Woodyard	Mobile Hydraulic Tank	Group A, #3
Woodyard	Lube Oil Storage Tank	Group A, #3
Pulp Mill	2 Oil Storage Tanks	Group A, #3
Pulp Mill	2 Hydrogen Chloride Tanks	Group A, #13
Paper Mill	Caustic Soda Tank	Group A, #4
Paper Mill	Paper Mill Bulk Lube Oil Storage Tank	Group A, #3
Paper Mill	3 Paper Machine Lube Oil Tanks	Group A, #3
Black Liquor Recovery Area	2 Diesel Fuel Tanks	Group A, #3
Black Liquor Recovery Area	Used Oil Tank	Group A, #3
Power Generation	3 Caustic Tanks	Group A, #4
Power Generation	Bark Boiler Reservoir	Group A, #3
Power Generation	Lube Oil Reservoir	Group A, #3
Causticizing Area	Caustic Storage Tank	Group A, #4
Causticizing Area	Caustic Soda Day Tank	Group A, #4
Causticizing Area	Quaker "3540" Flocculant Tank	Group A, #3
Causticizing Area	Caustic Plant Laboratory Plant	Group A, #5
Causticizing Area	OTE-25 Oil Tank	Group A, #3
Causticizing Area	600-W Oil Tank	Group A, #3

Mill Area	Description	Reason
Causticizing Area	630 Oil Tank	Group A, #3
Water Supply System	Caustic Soda Tank	Group A, #4
Mill Ancillary Services	4 Diesel Fuel Storage Tanks in the Clarifiers Area	Group A, #2
Mill Ancillary Services	2 Fuel Oil Storage Tanks	Group A, #2
Mill Ancillary Services	Diesel Fuel Storage Tank in the Causticizing Area	Group A, #2
Mill Ancillary Services	Lubrication Oil Storage Tank	Group A, #2
Mill Ancillary Services	Lubricating Oil and Hydraulic Fluid Storage	Group A, #2

Pursuant to §26.3(d) of Regulation 26, the following emission units, operations, or activities have been determined by the Department to be insignificant activities. Activities included in this list are allowable under this permit and need not be specifically identified.

1. Combustion emissions from propulsion of mobile sources and emissions from refueling these sources unless regulated by Title II and required to obtain a permit under Title V of the federal Clean Air Act, as amended. This does not include emissions from any transportable units, such as temporary compressors or boilers. This does not include emissions from loading racks or fueling operations covered under any applicable federal requirements.

2. Air conditioning and heating units used for comfort that do not have applicable requirements under Title VI of the Act.

3. Ventilating units used for human comfort that do not exhaust air pollutants into the ambient air from any manufacturing/industrial or commercial process.

4. Non-commercial food preparation or food preparation at restaurants, cafeterias, or caterers, etc.

5. Consumer use of office equipment and products, not including commercial printers or business primarily involved in photographic reproduction.

6. Janitorial services and consumer use of janitorial products.

7. Internal combustion engines used for landscaping purposes.

8. Laundry activities, except for dry-cleaning and steam boilers.

9. Bathroom/toilet emissions.

10. Emergency (backup) electrical generators at residential locations.

11. Tobacco smoking rooms and areas.

12. Blacksmith forges.

13. Maintenance of grounds or buildings, including: lawn care, weed control, pest control, and water washing activities.

14. Repair, up-keep, maintenance, or construction activities not related to the sources' primary business activity, and not otherwise triggering a permit modification. This may include, but is not limited to such activities as general repairs, cleaning, painting, welding, woodworking, plumbing, re-tarring roofs, installing insulation, paved/paving parking lots, miscellaneous solvent use, application of refractory, or insulation, brazing, soldering, the use of adhesives, grinding, and cutting.[1]

15. Surface-coating equipment during miscellaneous maintenance and construction activities. This activity specifically does not include any facility whose primary business activity is surface-coating or includes surface-coating or products.

16. Portable electrical generators that can be "moved by hand" from one location to another.[2]

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[1] Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must get a permit.

[2] "Moved by hand" means that it can be moved by one person without assistance of any motorized or non-motorized vehicle, conveyance, or device.

17. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning, or machining wood, metal, or plastic.

18. Brazing or soldering equipment related to manufacturing activities that do not result in emission of HAPs.[3]

19. Air compressors and pneumatically operated equipment, including hand tools.

20. Batteries and battery charging stations, except at battery manufacturing plants.

21. Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOCs or HAPs.[4]

22. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and no volatile aqueous salt solutions, provided appropriate lids and covers are used and appropriate odor control is achieved.

23. Equipment used to mix and package soaps, vegetable oil, grease, animal fat, and non-volatile aqueous salt solutions, provided appropriate lids and covers are used and appropriate odor control is achieved.

24. Drop hammers or presses for forging or metalworking.

25. Equipment used exclusively to slaughter animals, but not including other equipment at slaughter-houses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.

26. Vents from continuous emissions monitors and other analyzers.

27. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.

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[3] Brazing, soldering, and welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals are more appropriate for treatment as insignificant activities based on size or production thresholds. Brazing, soldering, and welding equipment, and cutting torches related directly to plant maintenance and upkeep and repair or maintenance shop activities that emit HAP metals are treated as trivial and listed separately in this appendix.

[4] Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids are based on size and limits including storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.

28. Hand-held applicator equipment for hot melt adhesives with no VOCs in the adhesive.

29. Lasers used only on metals and other materials which do not emit HAPs in the process.

30. Consumer use of paper trimmers/binders.

31. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.

32. Salt baths using non-volatile salts that do not result in emissions of any air pollutant covered by this regulation.

33. Laser trimmers using dust collection to prevent fugitive emissions.

34. Bench-scale laboratory equipment used for physical or chemical analysis not including lab fume hoods or vents.

35. Routine calibration and maintenance of laboratory equipment or other analytical instruments.

36. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.

37. Hydraulic and hydrostatic testing equipment.

38. Environmental chambers not using hazardous air pollutant gases.

39. Shock chambers, humidity chambers, and solar simulators.

40. Fugitive emissions related to movement of passenger vehicles, provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.

41. Process water filtration systems and demineralizers.

42. Demineralized water tanks and demineralizer vents.

43. Boiler water treatment operations, not including cooling towers.

44. Emissions from storage or use of water treatment chemicals, except for hazardous air pollutants or pollutants listed under regulations promulgated pursuant to Section 112(r) of the Act, for use in cooling towers, drinking water systems, and boiler water/feed systems.

45. Oxygen scavenging (de-aeration) of water.

46. Ozone generators.

47. Fire suppression systems.

48. Emergency road flares.

49. Steam vents and safety relief valves.

50. Steam leaks.

51. Steam cleaning operations.

52. Steam and microwave sterilizers.

53. Site assessment work to characterize waste disposal or remediation sites.

54. Miscellaneous additions or upgrades of instrumentation.

55. Emissions from combustion controllers or combustion shutoff devices but not combustion units itself.

56. Use of products for the purpose of maintaining motor vehicles operated by the facility, not including air cleaning units of such vehicles (i.e. antifreeze, fuel additives).

57. Stacks or vents to prevent escape of sanitary sewer gases through the plumbing traps.

58. Emissions from equipment lubricating systems (i.e. oil mist), not including storage tanks, unless otherwise exempt.

59. Residential wood heaters, cookstoves, or fireplaces.

60. Barbecue equipment or outdoor fireplaces used in connection with any residence or recreation.

61. Log wetting areas and log flumes.

62. Periodic use of pressurized air for cleanup.

63. Solid waste dumpsters.

64. Emissions of wet lime from lime mud tanks, lime mud washers, lime mud piles, lime mud filter and filtrate tanks, and lime mud slurry tanks.

65. Natural gas odoring activities unless the Department determines that emissions constitute air pollution.

66. Emissions from engine crankcase vents.

67. Storage tanks used for the temporary containment of materials resulting from an emergency reporting to an unanticipated release.

68. Equipment used exclusively to mill or grind coatings in roll grinding rebuilding, and molding compounds where all materials charged are in paste form.

69. Mixers, blenders, roll mills, or calendars for rubber or plastic for which no materials in powder form are added and in which no organic solvents, diluents, or thinners are used.

70. The storage , handling, and handling equipment for bark and wood residues not subject to fugitive dispersion offsite (this applies to the equipment only).

71. Maintenance dredging of pulp and paper mill surface impoundments and ditches containing cellulosic and cellulosic derived biosolids and inorganic materials such as lime, ash, or sand.

72. Tall oil soap storage, skimming, and loading.

73. Water heaters used strictly for domestic (non-process) purposes.

74. Facility roads and parking areas, unless necessary to control offsite fugitive emissions.

75. Agricultural operations, including onsite grain storage, not including IC engines or grain elevators.

76. The following natural gas and oil exploration production site equipment: separators, dehydration units, natural gas fired compressors, and pumping units. This does not include compressors located on natural gas transmission pipelines.

SECTION VII: PLANTWIDE CONDITIONS

1. Pursuant to §19.704 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the Director shall be notified in writing within thirty (30) days after construction has commenced, construction is complete, the equipment and/or facility is first placed in operation, and the equipment and/or facility first reaches the target production rate.

2. Pursuant to §19.410(B) of Regulation 19, and 40 CFR Part 52, Subpart E, the Director may cancel all or part of this permit if the construction or modification authorized herein is not begun within 18 months from the date of the permit issuance or if the work involved in the construction or modification is suspended for a total of 18 months or more.

3. Pursuant to §19.702(E) of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, each emission point for which an emission test method is specified in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. Compliance test results shall be submitted to the Department within thirty (30) days after the completed testing. The permittee shall provide:

   (1) Sampling ports adequate for applicable test methods
   (2) Safe sampling platforms
   (3) Safe access to sampling platforms
   (4) Utilities for sampling and testing equipment

4. Pursuant to Regulation 19.303 of Regulation 19 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the equipment, control apparatus and emission monitoring equipment shall be operated within their design limitations and maintained in good condition at all times.

5. Pursuant to Regulation 26 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit subsumes and incorporates all previously issued air permits for this facility.

6. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the sulfur content of the #6 fuel oil shall not exceed 3.0% by weight.

7. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall either obtain a manufacturer's certification of the sulfur content of the fuel oil or test each shipment of fuel oil received for the sulfur content. The manufacturer's certification or the test results shall be kept on site and shall be made available to Department personnel upon request.

8. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, natural gas usage at this facility shall not exceed 9.857 billion standard cubic feet of natural gas in any consecutive twelve month period. This includes the amount of natural gas that may be fired at the package boiler, source SN-47.

9. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records in order to demonstrate compliance with Plantwide Condition 8 and which may be used by the Department for enforcement purposes. These records shall include the amount of natural gas used at each natural gas burning source, shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

10. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not produce in excess of 324,850 air dried tons of pulp in any consecutive twelve month period.

11. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of air dried pulp produced in order to demonstrate compliance with Plantwide Condition 10 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

12. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not process more than 73,000 tons of lime in any consecutive twelve month period.

13. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of lime processed in order to demonstrate compliance with Plantwide Condition 12 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

14. International Paper Company is subject to the provisions of 40 CFR Part 63, Subpart A - *General Provisions* and 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry*. A copy of this subpart has been included in Appendix F of this permit. International Paper Company is required to comply with all applicable provisions of this subpart within the time frames specified. This includes notifications to the Department of applicability and options which have been chosen to demonstrate compliance with this regulation. General requirements for the entire facility are listed, but not limited to the items found, in Plantwide Conditions 15 through 18.

15. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 63.6, the permittee shall develop a startup, shutdown, and malfunction (SSM) plan containing operation and maintenance requirements. This plan shall be maintained on site, provided to Department personnel upon request, and submitted to the Department upon completion.

16. Pursuant to 40 CFR 63.9, the permittee shall comply with all notification requirements including initial notifications, notification of performance tests, continuous monitoring system performance evaluations, and source compliance status.

17. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 63.10, the permittee shall maintain the following records in order to demonstrate compliance with the applicable provisions of 40 CFR Part 63, Subpart S. These records shall be maintained on site and provided to Department personnel upon request.

    A. Startup, Shutdown, Malfunction, and Maintenance Records
    B. Continuous Monitoring System Records

18. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 63.10, the permittee shall submit the following reports on a semi-annual basis to the Department in order to demonstrate compliance with the applicable provisions of 40 CFR Part 63, Subpart S.

    A. Excess Emission Reports
    B. Monitoring System Performance Reports
    C. Startup, Shutdown, and Malfunction Reports

19. Pursuant to §18.801 of Regulation 18, the permittee shall not cause or permit the emission of air contaminants, including odors or water vapor and including an air contaminant whose emission is not otherwise prohibited by Regulation #18, if the emission of the air contaminant constitutes air pollution within the meaning of A.C.A. §8-4-303.

20. Pursuant to §18.901 of Regulation 18, the permittee shall not conduct operations in such a manner as to unnecessarily cause air contaminants and other pollutants from becoming airborne.

21. Pursuant to §19.601 of Regulation 19, the Department may forego enforcement action for exceedances of federally regulated air pollutant emissions given that the person responsible for the source of the excess emissions does the following. The reporting of upset conditions is outlined in General Provision 8.

    A. Demonstrates to the Department that the emissions resulted from:

        1. Equipment malfunction or upset and are not the result of negligence or improper maintenance; or

        2. Physical constraints on the ability of a source to comply with the emission standard, limitation, or rate during startup or shutdown; and

        3. That all reasonable measures have been taken to immediately minimize or eliminate the excess emissions.

22. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, or §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the criteria pollutant and the PM emission rates listed in this permit were developed using estimates or published emission factors. A change in the published emission factors or development of other emissions data (including site specific test data) which could affect the estimated emission rates shall not be considered a violation of the permit limits. This condition does not apply to pollutants for which test data is already available, pollutants with an NSPS or NESHAP standard, or limits which have been set through a PSD permitting action (those pollutants which have undergone a BACT analysis or which "netted out" of a PSD review).

23. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee may maintain hand written records for those sources which do not have electronic data keeping systems. The permittee may maintain hand written records for those sources which have electronic record keeping systems with a data storage of one year for a period to not exceed one year from the date of permit issuance. The data storage shall be increased to five years for those sources during that period. Any records shall be made available to Department personnel upon request.

24. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the following combined emission rates at sources SN-01, SN-04/05, and SN-06 when burning #6 fuel oil. Compliance with these emission rates will be demonstrated through the fuel oil usage limit and proper operation of control equipment.

Pollutant	tpy
PM_{10}	1.1
SO_2	28.4
VOC	1.3
CO	6.9
NO_X	4.6
Pb	0.04

25. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permitteee shall not exceed the following combined emission rates at sources SN-01, SN-04/05, and SN-06 when firing #6 fuel oil. Compliance with these emission rates will be demonstrated through the fuel oil usage limits and proper operation of the control equipment.

Pollutant	tpy
PM	1.4
Antimony Compounds	0.003
Arsenic Compounds	0.003
Beryllium Compounds	0.003
Cadmium Compounds	0.003
Chromium Compounds	0.003
Cobalt Compounds	0.003
Formaldehyde	0.03
Hydrogen Chloride*	0.08
Hydrogen Fluoride*	0.03
Lead Compounds	0.003
Manganese Compounds	0.003
Mercury Compounds	0.003
Nickel Compounds	0.008
POM	0.03
Selenium Compounds	0.003

*Non-VOC, non-PM non-criteria pollutant.

26. Pursuant to §19.705 of Regulation 19, 40 CFR 70.6, and/or A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and §18.1004 of Regulation 18, the permittee shall not fire in excess of a total of 120,000 gallons of #6 fuel oil in any consecutive twelve month period at sources SN-01, SN-04/05, and SN-06.

27. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, or §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain records of the amount of #6 fuel oil fired at sources SN-01, SN-04/05, and SN-06 in order to demonstrate compliance with Plantwide Condition 27 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7.

28. Pursuant to §19.304 of Regulation 19 and 40 CFR §63.441(d), the permittee shall be in compliance with the requirements of 40 CFR Part 63, Subpart S listed in this permit no later than April 16, 2001, except as outlined in paragraphs (d)(1) through (d)(3) of this section. The permittee is not required to be in compliance with 40 CFR Part 63, Subpart S upon issuance of this permit. (Paragraphs (d)(1) through (d)(3) may be found in the copy of Subpart S in Appendix F of this permit.)

Permit Shield.

29. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in item A of this condition:

    A. The following have been specifically identified as applicable requirements based upon information submitted by the permittee in an application dated August 23, 1996.

Source No.	Regulation	Description
Facility	19	SIP
Facility	26	Arkansas Title V regulations
13	40 CFR Part 60, Subpart GG	Standards of Performance for Stationary Gas Turbines
12, 14, and 27	40 CFR Part 60, Subpart BB	Standards of Performance for Kraft Pulp Mills

    B. The following requirements have been specifically identified as not applicable, based upon information submitted by the permittee in an application dated August 23, 1996.

Description of Regulation	Regulatory Citation	Affected Source	Basis for Determination
NESHAP Subpart for Halogenated Solvent Cleaning	40 CFR Part 63, Subpart T	Facility	This facility does not use halogenated solvents in the parts cleaning operations.
Relaxed Compliance Orders	40 CFR Part 65	Facility	This part includes specific EPA orders allowing designated sources to delay compliance with an otherwise applicable SIP requirement until a specific date. This facility is not included among the Arkansas sources listed in this part.
Assessment and Collection of Noncompliance Penalties by EPA	40 CFR Part 66	Facility	This part imposes requirements only on sources of air pollution which have received notices of noncompliance. This facility has received no such notices.
EPA Approval of State Noncompliance Penalty Programs	40 CFR Part 67	Facility	This part does not impose requirements of sources.
Acid Rain Program	40 CFR Parts 72 -78	Facility	This facility is not currently subject to any acid rain requirements.

C. Nothing shall alter or affect the following:

Provisions of Section 303 of the Clean Air Act;

The liability of an owner or operator for any violation of applicable requirements prior to or at the time of permit issuance;

The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; or

The ability of the EPA to obtain information under Section 114 of the Clean Air Act.

Title VI Provisions

30. The permittee shall comply with the standards for labeling of products using ozone depleting substances pursuant to 40 CFR Part 82, Subpart E:

A. All containers containing a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.

B. The placement of the required warning statement must comply with the requirements pursuant to §82.108.

C. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.

D. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

31. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:

A. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.

B. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.

C. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.

D. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like appliance" as defined at §82.152.)

E. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.

F. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

32. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.

33. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

    The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or systems used on passenger busses using HCFC-22 refrigerant.

34. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, Significant New Alternatives Policy Program.

SECTION VII: GENERAL PROVISIONS

1. Pursuant to 40 C.F.R. 70.6(b)(2), any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute.

2. Pursuant to 40 C.F.R. 70.6(a)(2) and §26.7 of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26), this permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later.

3. Pursuant to §26.4 of Regulation #26, it is the duty of the permittee to submit a complete application for permit renewal at least six (6) months prior to the date of permit expiration. Permit expiration terminates the permittee's right to operate unless a complete renewal application was submitted at least six (6) months prior to permit expiration, in which case the existing permit shall remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due.

4. Pursuant to 40 C.F.R. 70.6(a)(1)(ii) and §26.7 of Regulation #26, where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq* (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions are incorporated into the permit and shall be enforceable by the Director or Administrator.

5. Pursuant to 40 C.F.R. 70.6(a)(3)(ii)(A) and §26.7 of Regulation #26, records of monitoring information required by this permit shall include the following:

   a. The date, place as defined in this permit, and time of sampling or measurements;
   b. The date(s) analyses were performed;
   c. The company or entity that performed the analyses;
   d. The analytical techniques or methods used;
   e. The results of such analyses; and
   f. The operating conditions existing at the time of sampling or measurement.

6. Pursuant to 40 C.F.R. 70.6(a)(3)(ii)(B) and §26.7 of Regulation #26, records of all required monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

7. Pursuant to 40 C.F.R. 70.6(a)(3)(iii)(A) and §26.7 of Regulation #26, the permittee shall submit reports of all required monitoring every 6 months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official as defined in §26.2 of Regulation #26 and must be sent to the address below.

   Arkansas Department of Environmental Quality
   Air Division
   ATTN: Compliance Inspector Supervisor
   Post Office Box 8913
   Little Rock, AR 72219-8913

8. Pursuant to 40 C.F.R. 70.6(a)(3)(iii)(B), §26.7 of Regulation #26, and §19.601 and §19.602 of Regulation #19, all deviations from permit requirements, including those attributable to upset conditions as defined in the permit shall be reported to the Department. An initial report shall be made to the Department by the next business day after discovery of the occurrence. The initial report may be made by telephone and shall include:

   a. The facility name and location,
   b. The process unit or emission source which is deviating from the permit limit,
   c. The permit limit, including the identification of pollutants, from which deviation occurs,
   d. The date and time the deviation started,
   e. The duration of the deviation,
   f. The average emissions during the deviation,
   g. The probable cause of such deviations,
   h. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and
   i. The name of the person submitting the report.

   A full report shall be made in writing to the Department within five (5) business days of discovery of the occurrence and shall include in addition to the information required by the initial report a schedule of actions to be taken to eliminate future occurrences and/or

to minimize the amount by which the permit's limits are exceeded and to reduce the length of time for which said limits are exceeded. If the permittee wishes, they may submit a full report in writing (by facsimile, overnight courier, or other means) the next business day after discovery of the occurrence and such report will serve as both the initial report and full report.

9. Pursuant to 40 C.F.R. 70.6(a)(5), §26.7 of Regulation #26, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, if any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable.

10. Pursuant to 40 C.F.R. 70.6(a)(6)(i) and §26.7 of Regulation #26, the permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation #26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.* and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Any permit noncompliance with a state requirement constitutes a violation of the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) and is also grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

11. Pursuant to 40 C.F.R. 70.6(a)(6)(ii) and §26.7 of Regulation #26, it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

12. Pursuant to 40 C.F.R. 70.6(a)(6)(iii) and §26.7 of Regulation #26, this permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

13. Pursuant to 40 C.F.R. 70.6(a)(6)(iv) and §26.7 of Regulation #26, this permit does not convey any property rights of any sort, or any exclusive privilege.

14. Pursuant to 40 C.F.R. 70.6(a)(6)(v) and §26.7 of Regulation #26, the permittee shall furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the

permit. Upon request, the permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the permittee may be required to furnish such records directly to the Administrator along with a claim of confidentiality.

15. Pursuant to 40 C.F.R. 70.6(a)(7) and §26.7 of Regulation #26, the permittee shall pay all permit fees in accordance with the procedures established in Regulation #9.

16. Pursuant to 40 C.F.R. 70.6(a)(8) and §26.7 of Regulation #26, no permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for elsewhere in this permit.

17. Pursuant to 40 C.F.R. 70.6(a)(9)(i) and §26.7 of Regulation #26, if the permittee is allowed to operate under different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the scenario under which the facility or source is operating.

18. Pursuant to 40 C.F.R. 70.6(b) and §26.7 of Regulation #26, all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Act unless the Department has specifically designated as not being federally enforceable under the Act any terms and conditions included in the permit that are not required under the Act or under any of its applicable requirements.

19. Pursuant to 40 C.F.R. 70.6(c)(1) and §26.7 of Regulation #26, any document (including reports) required by this permit shall contain a certification by a responsible official as defined in §26.2 of Regulation #26.

20. Pursuant to 40 C.F.R. 70.6(c)(2) and §26.7 of Regulation #26, the permittee shall allow an authorized representative of the Department, upon presentation of credentials, to perform the following:

    a. Enter upon the permittee's premises where the permitted source is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements.

21. Pursuant to 40 C.F.R. 70.6(c)(5) and §26.7 of Regulation #26, the permittee shall submit a compliance certification with terms and conditions contained in the permit, including emission limitations, standards, or work practices. This compliance certification shall be submitted annually and shall be submitted to the Administrator as well as to the Department. The first report shall be due 30 days following the one-year anniversary of the issuance of this permit. All compliance certifications required by this permit shall include the following:

a. The identification of each term or condition of the permit that is the basis of the certification;
b. The compliance status;
c. Whether compliance was continuous or intermittent;
d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
e. Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and 504(b) of the Act.

22. Pursuant to §26.7 of Regulation #26, nothing in this permit shall alter or affect the following:

a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
b. The liability the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act; or
d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.

23. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit authorizes only those pollutant emitting activities addressed herein.

Public Notice

Pursuant to the Arkansas Operating Air Permit Program (Regulation #26) Section 6(b), the Air Division of the Arkansas Department of Environmental Quality gives the following notice:

Permit #725-AOP-R2 is the third operating permit issued to International Paper Company - Camden Mill (located at 1944 Adams Avenue in Camden, CSN: 52-0013) under Regulation 26.
This modified permit is being issued to allow for the installation of a roundwood slasher at the woodyard. Permitted emissions will be increasing by 0.1 tons per year. An averaging time will not be specified in this permit for demonstrating compliance with the HAP emissions from the pulping process condensates. The permittee will now be required to demonstrate an appropriate averaging period prior to the effective date of the Cluster Rule.

The application has been reviewed by the staff of the Department and has received the Department's tentative approval subject to the terms of this notice.

Citizens wishing to examine the permit application and staff findings and recommendations may do so by contacting Suzanne Carswell, Information Officer. Citizens desiring technical information concerning the application or permit should contact Loretta Reiber, Engineer. Both Suzanne Carswell and Loretta Reiber can be reached at the Department's central office, 8001 National Drive, Little Rock, (501) 682-0744.

Copies of the draft permit and permit application have been placed at the Public Library of Camden and Ouachita County, 120 Harrison Avenue SW, Camden, Arkansas 71701. This information may be reviewed during the Department's normal business hours.

Interested or affected persons may also submit written comments on the proposal to the Department at the above address - Attention: Rhonda Sharp. In order to be considered, the comments must be submitted within thirty (30) days of publication of this notice. Although the Department is not proposing to conduct a public hearing, one will be scheduled if significant comments on the permit provisions are received. If a hearing is scheduled, adequate public notice will be given in the newspaper of largest circulation in the county in which the facility in question is, or will be, located.

The Director shall make a final decision to issue or deny this application or to impose special conditions in accordance with Section 2.1 of the Arkansas Pollution Control and Ecology Commission's Administrative Procedures (Regulation #8).

Dated this

Randall Mathis
Director

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MAILING LIST

The *Arkansas Democrat-Gazette*
P.O. Box 2221
Little Rock, Arkansas 72203-2221
Attn: Legal Ad

Camden-News
P.O. Box 798
Camden, Arkansas 71701-0798
Attn: Legal Ad

Honorable Chris Claybaker
Mayor, City of Camden
P.O. Box 278
Camden, Arkansas 71701

Honorable Mike Hesterly
Ouachita County Judge
Ouachita County Courthouse
Town Square
Camden, Arkansas 71701

Public Library of Camden and Ouachita County
120 Harrison Ave SW
Camden, Arkansas 71701

Ms. Jole Luehrs (6PD-R)
U.S. Environmental Protection Agency
Region VI
1445 Ross Avenue
Dallas, Texas 75202-2733

Gustave A. Von Bodungen, Assistant Secretary
Louisiana Department of Environmental Quality
Office of Air Quality
P.O. Box 82135
Baton Rouge, Louisiana 70884-2135

Russell Delezen
Superintendent of Environmental Services
International Paper Company Camden Mill
1944 Adams Avenue
Camden, Arkansas 71701

OPERATING PERMIT APPLICATION FORM
GENERAL INFORMATION

CSN: 52-0013

Date: January 14, 2000

1. FACILITY PHYSICAL INFORMATION	
Facility Name:	International Paper Company
Physical Address or Location:	1944 Adams Avenue
City, County, State, Zip:	Camden, Ouachita, Arkansas 71701
Contact Name and Position:	Russell Delezen, Superintendent of Environmental Services
Phone and Fax Numbers:	870-231-2251 870-231-2396

2. FACILITY MAILING INFORMATION	
Organization Name:	Same as above
Mailing Address:	
City, State, Zip:	
Contact Name and Position:	
Phone and Fax Numbers:	

3. INVOICE MAILING INFORMATION	
Organization Name:	Same as above
Mailing Address:	
City, State, Zip:	
Contact Name and Position:	
Phone and Fax Numbers:	

4. PERMIT APPLICATION CONTACT INFORMATION	
Organization Name:	Same as above
Mailing Address:	
City, State, Zip:	
Contact Name and Position:	
Phone and Fax Numbers:	

RECEIVED
JAN 20 2000

CSN: 52-0013 Date: January 14, 2000

GENERAL INFORMATION (CONT'D)

5. SIC Code (if known): 2611, 2621

6. Type of Facility: Pulp and Paper Mill
(Example: kraft paper mill, wood furniture mfg., asphalt plant)

7. Type Of Permit Application (check one):

☐	Initial Permit for New Facility	If the CSN is not known, list the County location: _____
☐	Initial Permit for Existing Facility	List permit # for any current air permits: _____
☐	Significant Modification	List current permit #: _____
☒	Minor Modification	List current permit #: 725-AOP-R0
☐	Renewal of Existing Permit	List current permit # and expiration date: _____
☐	Administrative Amendment	List current permit #: _____

8. Expected Date of Commencement of Construction or Reconstruction: April 2000
Expected Date of Completion of Construction or Reconstruction: April 2001
Anticipated Date of Operation: April 2001

9. Neighboring States Within 50 Miles of the permitted facility
(check all that apply):

☐	Texas	☐	Tennessee	☐	Kentucky
☐	Oklahoma	☐	Mississippi	☐	Kansas
☐	Missouri	☒	Louisiana		

	Yes	No
10. Will the facility engage in construction, reconstruction, or modification that will require a PSD application?	☐	☒
11. Will the facility engage in construction or reconstruction that will require a 112(g) application?	☐	☒
12. Does the facility have any air conditioners or refrigeration equipment that uses CFCs, HCFs or other ozone depleting substances?	☒	☐
13. Does the air conditioner or refrigeration equipment contain a refrigeration charge greater than 50 pounds per unit?	☒	☐
14. Do facility personnel maintain, service, repair or dispose of any motor vehicle air conditioners or appliances (as defined in 40 CFR 82.152)?	☐	☒
15. Is the facility subject to the Accidental Release Prevention requirements of §112(r)? (If yes, please contact the Department to receive a copy of the 112(r) Supplement.)	☐	☒

ORGANIZATIONAL STATUS OF APPLICANT

Please check the box which appropriately describes the legal organization of the applicant.

Solely Owned Proprietorship	☐	Corporation	☒
General Partnership	☐	Joint Venture	☐
Limited Partnership	☐	Government Entity	☐
OTHER	☐	Please Specify:	

If the applicant is corporation, indicate if it is a domestic (Arkansas) corporation or a foreign (chartered outside of Arkansas) corporation.

Domestic ☐ Foreign ☒

If the applicant is a corporation is it currently registered to do business with the Arkansas Secretary of State?

YES ☒ NO ☐

(Please note, no permit will be issued to a corporation until the proper documents have been filed with the Secretary of State. Also, note that the name of the applicant must be identical to the name of the registered corporation.)

If the applicant is organized as a partnership then list the names and addresses of all partners involved.

_____

_____

_____

_____

Attach an additional sheet if necessary

If the applicant is organized as a joint venture list the names and addresses of all of the principals involved:

_____

_____

_____

Attach an additional sheet if necessary

CERTIFICATION OF APPLICATION

"Responsible official" means one of the following:

1) For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

   (i) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

   (ii) the delegation of authority to such representative is approved in advance by the permitting authority;

(2) For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

(3) For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA).

I certify under penalty of law that this application and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Brett Mosley	Mill Manager
typed/printed name of responsible official	title
Brett Mosley	1/14/00
signature of responsible official	date

Jennifer Landes	GBM^c & Associates
typed/printed name of person preparing application	firm or company
219 Brown Lane	501-847-7077
address of preparer's firm	telephone number (including area code)

CERTIFICATION OF COMPLIANCE

"Responsible official" means one of the following:

1) For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

   (i) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

   (ii) the delegation of authority to such representative is approved in advance by the permitting authority;

(2) For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

(3) For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA).

I certify that this facility is in compliance with all applicable requirements of the Act or the compliance schedule submitted with this application, including any applicable enhanced monitoring and compliance certification requirements. The methods used for determining compliance, including a description of monitoring, recordkeeping, and reporting requirements and test methods, are attached to this form. A schedule for submission of compliance certifications during the permit term (no less frequently than annually) is attached. These attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Brett Mosley	Mill Manager
typed/printed name of responsible official	title
Brett Mosley	1/14/00
signature of responsible official	date

ARD 047338454

OP

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 8913
LITTLE ROCK, ARKANSAS 72219-8913
PHONE: (501) 682-0744
FAX: (501) 682-0753

December 17, 1998

Ms. Jole Luehrs (6PD-R)
U.S. Environmental Protection Agency
Region VI
1445 Ross Avenue
Dallas, Texas 75202-2733

RE: Proposed Operating Permit
International Paper Company
Permit No.: *725-AOP-R0*
CSN: 52-0013

Dear Ms. Luehrs:

Please find enclosed a copy of the proposed operating permit and request for public comment for the referenced facility. A copy of the complete permit application will be provided upon request.

Written comments on the proposed permit should be submitted to the Arkansas Department of Pollution Control and Ecology, Air Division, Post Office Box 8913, Little Rock, Arkansas 72219-8913. If you have any questions please feel free to contact me at (501) 682-0730.

Sincerely,

for Keith A. Michaels
Chief, Air Division

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DEC 21 1998
NSR SECTION
6PAR

Enclosures Draft Permit
Application
Public Notice

Public Notice

Pursuant to the Arkansas Operating Air Permit Program (Regulation #26) Section 6(b), the Air Division of the Arkansas Department of Pollution Control and Ecology gives the following notice:

Permit #725-AOP-R0 is the first operating permit issued to International Paper Company - Camden Mill (located at 1944 Adams Avenue) under Regulation 26. Several sources are being deleted in this permit due to the removal of the bag plant. One source is being added to the permit. This is a package boiler which will be brought on site whenever another boiler will be down for an extended period of time for maintenance. Several sources which were not previously permitted will now be permitted. HAP emissions from several sources will now be permitted. Also, permitted emissions from several sources permitted under 725-AR-2 are increasing due to a change in the method of calculating the emissions.

The application has been reviewed by the staff of the Department and has received the Department's tentative approval subject to the terms of this notice.

Citizens wishing to examine the permit application and staff findings and recommendations may do so by contacting Rhonda Sharp, Information Officer. Citizens desiring technical information concerning the application or permit should contact Loretta Reiber, Engineer. Both Rhonda Sharp and Loretta Reiber can be reached at the Department's central office, 8001 National Drive, Little Rock, (501) 682-0744.

Copies of the draft permit and permit application have been placed at the Public Library of Camden and Ouachita County, 120 Harrison Avenue SW, Camden, Arkansas 71701. This information may be reviewed during the Department's normal business hours.

Interested or affected persons may also submit written comments on the proposal to the Department at the above address - Attention: Rhonda Sharp. In order to be considered, the comments must be submitted within thirty (30) days of publication of this notice. Although the Department is not proposing to conduct a public hearing, one will be scheduled if significant comments on the permit provisions are received. If a hearing is scheduled, adequate public notice will be given in the newspaper of largest circulation in the county in which the facility in question is, or will be, located.

The Director shall make a final decision to issue or deny this application or to impose special conditions in accordance with Section 2.1 of the Arkansas Pollution Control and Ecology Commission's Administrative Procedures (Regulation #8).

Dated this

Randall Mathis
Director

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NSR SECTION
6T-AN

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MAILING LIST

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DEC 21 1998
NSR SECTION
61-AN

The *Arkansas Democrat-Gazette*
P.O. Box 2221
Little Rock, Arkansas 72203-2221
Attn: Legal Ad

Camden News
P.O. Box 798
Camden, Arkansas 71701-0798
Attn: Legal Ad

Honorable Chris Claybaker
Mayor, City of Camden
P.O. Box 278
Camden, Arkansas 71701

Honorable Mike Hesterly
Ouachita County Judge
Ouachita County Courthouse
Camden, Arkansas 71701

Public Library of Camden and Ouachita County
120 Harrison Avenue
Camden, Arkansas 71701

Ms. Jole Luehrs (6PD-R)
U.S. Environmental Protection Agency
Region VI
1445 Ross Avenue
Dallas, Texas 75202-2733

Gus Bon Dodungen, Assistant Secretary
Louisiana Department of Environmental Quality
Office of Air Quality
P.O. Box 82135
Baton Rouge, Louisiana 70884-2135

Russell Delezen
International Paper Company
1944 Adams Avenue
Camden, Arkansas 71701

ARD 047338454 ✓

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NSR SECTION

OPERATING PERMIT APPLICATION FORM
GENERAL INFOMATION

CSN: 520013

Date: August 22, 1996

1. FACILITY PHYSICAL INFORMATION	
Facility Name:	International Paper Company
Physical Address or Location:	1944 Adams Avenue
City, County, State, Zip:	Camden, Ouachita, Arkansas 71701
Contact Name and Phone #:	Russell Delezen (501) 231-4321

2. FACILITY MAILING INFORMATION	
Organization Name:	International Paper Company
Mailing Address or P.O. Box:	1944 Adams Avenue
City, State, Zip:	Camden, Arkansas 71701
Contact Name and Phone #:	Russell Delezen (501) 231-4321

3. INVOICE MAILING INFORMATION	
Organization Name:	International Paper Company
Mailing Address or P.O. Box:	1944 Adams Avenue
City, State, Zip:	Camden, Arkansas 71701
Contact Name and Phone #:	Russell Delezen (501) 231-4321

4. PERMIT APPLICATION CONTACT INFORMATION	
Organization Name:	International Paper Company
Mailing Address or P.O. Box:	1944 Adams Avenue
City, State, Zip:	Camden, Arkansas 71701
Contact Name and Phone #:	Russell Delezen (501) 231-4321

CSN: 520013 Date: August 22, 1996

GENERAL INFORMATION (CONT'D)

5. SIC Code (if known): 2611 & 2621

6. Type of Facility: Kraft Pulp and Paper Mill
(Example: kraft paper mill/wood furniture mfg., asphalt plant)

7. Type Of Permit Application (check one):

	Initial Permit for New Facility	If the CSN is not known, list the County location: _____
X	Initial Permit for Existing Facility	List permit # for any current air permits: 725-AR-2
	Significant Modification	List current permit #: _____
	Minor Modification	List current permit #: _____
	Renewal of Existing Permit	List current permit # and expiration date: _____
	Administrative Amendment	List current permit #: _____

8. Proposed Construction Date: NA
Proposed Operation Date: NA

9. Neighboring States Within 50 Miles of the permitted facility (check all that apply):

	Texas		Tennessee
	Oklahoma		Mississippi
	Missouri	X	Louisiana

		Yes	No
10.	Does the facility have any air conditioners or refrigeration equipment that uses CFCs, HCFs or other ozone depleting substances?	X	
11.	Does the air conditioner or refrigeration equipment contain a refrigeration charge greater than 50 pounds per unit?	X	
12.	Do facility personnel maintain, service, repair or dispose of any motor vehicle air conditioners or appliances (as defined in 40 CFR 82.152)?		X
13.	Is the facility subject to the Accidental Release Prevention requirements of §112(r)?		X

ORGANIZATIONAL STATUS OF APPLICANT

Please check the box which appropriately describes the legal organization of the applicant.

Solely Owned Proprietorship		Corporation	X
General Partnership		Joint Venture	
Limited Partnership		Government Entity	
OTHER		Please Specify:	

If the applicant is corporation, indicate if it is a domestic (Arkansas) corporation or a foreign (chartered outside of Arkansas) corporation.

Domestic [ ] Foreign [X]

If the applicant is a corporation is it currently registered to do business with the Arkansas Secretary of State?

YES [X] NO [ ]

(Please note, no permit will be issued to a corporation until the proper documents have been filed with the Secretary of State. Also, note that the name of the applicant must be identical to the name of the registered corporation.)

If the applicant is organized as a partnership then list the names and addresses of all partners involved.

_____

_____

_____

_____

Attach an additional sheet if necessary

If the applicant is organized as a joint venture list the names and addresses of all of the principals involved:

_____

_____

_____

_____

Attach an additional sheet if necessary

CERTIFICATION OF APPLICATION

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   (i) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

   (ii) the delegation of authority to such representative is approved in advance by the permitting authority;

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I certify under penalty of law that this application and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Jeffery Grierson	Packaging Plant Manager
typed/printed name of responsible official	title
J.J. Grierson	8-23-94
signature of responsible official	date

Arthur D. Schatz	Parsons Engineering Science, Inc.
typed/printed name of person preparing application	firm or company
Prudential Center, Boston, MA 02199-7697	(617) 859-2497
address of preparer's firm	telephone number (including area code)

PLEASE REFER TO COVER LETTER

CERTIFICATION OF COMPLIANCE

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I certify under penalty of law that this facility is in compliance with all applicable requirements of the Act, including any applicable enhanced monitoring and compliance certification requirements. The methods used for determining compliance, including a description of monitoring, recordkeeping, and reporting requirements and test methods, are attached to this form. A schedule for submission of compliance certifications during the permit term (no less frequently than annually) is attached. These attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Jeffery Grierson	Packaging Plant Manager
typed/printed name of responsible official	title
R.J. Grierson	8-23-96
signature of responsible official	date

PLEASE REFER TO COVER LETTER

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   (i) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

   (ii) the delegation of authority to such representative is approved in advance by the permitting authority;

(2) For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

(3) For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA).

I certify under penalty of law that this facility is in compliance with all applicable requirements of the Act, including any applicable enhanced monitoring and compliance certification requirements. The methods used for determining compliance, including a description of monitoring, recordkeeping, and reporting requirements and test methods, are attached to this form. A schedule for submission of compliance certifications during the permit term (no less frequently than annually) is attached. These attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Calvin Staudt	Mill Manager
typed/printed name of responsible official	title
Cal C Staudt	23 August 1996
signature of responsible official	date

PLEASE REFER TO COVER LETTER

CERTIFICATION OF APPLICATION

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   (i) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

   (ii) the delegation of authority to such representative is approved in advance by the permitting authority;

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Calvin Staudt	Mill Manager
typed/printed name of responsible official	title
Cal C Staudt Jr	23 August 1996
signature of responsible official	date

Arthur D. Schatz	Parsons Engineering Science, Inc.
typed/printed name of person preparing application	firm or company
Prudential Center, Boston, MA 02199-7697	(617) 859-2497
address of preparer's firm	telephone number (including area code)

PLEASE REFER TO COVER LETTER

STATE OF ARKANSAS

DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913
LITTLE ROCK, ARKANSAS 72219-8913

FEDERAL E.I.N. 71-0388878

PHONE: (501) 682-0744

INVOICE

ENV SERVICES
IP CAMDEN
PO BOX 1944
CAMDEN, AR 71701-0009

Primary No. 99-07333

Secondary No. PDS-50692

Date Billed: December 15, 1998 Date Due: January 15, 1999

INITIAL FEE FOR TITLE V AIR PERMIT 0725-AOP-R0 1778[illegible]

If you have any questions, please contact LORETTA REIBER 501-682-0744

CSN: 52-0013 Total due this invoice: $1,77[illegible]

PLEASE: Make check or money order payable to ADPC&E. Return yellow copy with payment (mark any changes on the yellow copy). Write Primary Invoice Number (shown at right of address box) on your check. Make your check for the amount of this invoice only. DO NOT combine this payment with any other fees or payments due to ADPC&E. Mail to ADPC&E at above address, marked "ATTN: BUSINESS OFFICE".

ARD047338454

DRAFT OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation #26:

Permit #: 725-AOP-R0

IS ISSUED TO:

International Paper Company
1944 Adams Avenue
Camden, AR 71701
Ouachita County
CSN:52-0013

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

and

AND IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Keith A. Michaels

RECEIVED
DEC 21 1998
NSR SECTION
6T-AN

Date

SECTION I: FACILITY INFORMATION

PERMITTEE:	International Paper Company
CSN:	52-0013
PERMIT NUMBER:	725-AOP-R0
FACILITY MAILING ADDRESS:	1944 Adams Avenue Camden, AR 71701
PHYSICAL LOCATION:	1944 Adams Avenue Camden, AR 71701
COUNTY:	Ouachita
CONTACT POSITION:	Russell Delezen
TELEPHONE NUMBER:	870-231-2251
REVIEWING ENGINEER:	Loretta Reiber
UTM North-South (X):	3711.5
UTM East-West (Y):	516.5

SECTION II: INTRODUCTION

International Paper Company owns and operates a facility in Camden which produces a variety of unbleached papers and linerboard. The primary Standard Industrial Classification Code (SIC) for this facility is 2631. This permit will continue to classify this facility as a major source of criteria pollutant emissions (with the exception of lead) with respect to Title V and 40 CFR 52.21.

Wood is accepted in either chip or log form. Logs are debarked, chipped, and screened prior to storage in the chip silos. Chips are conveyed to the pulp mill, cooked in a continuous digester, washed, stored, and transferred to the paper mill where they are refined. Recycled fiber is also produced from a post consumer recycle plant. Recycled fiber, virgin fiber, chemicals, and dyes form the feedstock for the three paper machines. The final paper product is trimmed, wound onto rolls, and prepared for shipment off site.

Weak black liquor from the pulp mill is concentrated in an evaporation system prior to combustion in one of the three recovery boilers. These boilers recover the spent cooking chemicals as green liquor. Energy from liquor combustion is captured to generate steam for mill use.

The green liquor is reacted with lime in the caustic and lime recovery area and clarified to produce white liquor. The lime mud from the clarifier is recovered, calcined in a lime kiln, and reused. Ancillary systems include the bark boiler and the two power boilers which provide supplemental plant-wide steam, two steam turbines, a gas turbine generator equipped with a heat recovery steam generator (HRSG), a wastewater treatment system, an electrical distribution system, maintenance areas, and laboratories.

Permit #725-AOP-R0 is the first operating permit issued to International Paper Company - Camden Mill under Regulation 26. Several sources are being deleted in this permit due to the removal of the bag plant. Several sources which have been in operation at this facility for some time will be permitted for the first time. Two new sources are also being added. The two new sources are a package boiler which will be brought on site whenever another boiler will be down for an extended period of time and a baghouse to control the particulate matter emissions from the lime handling operations. In addition to several additional sources now being permitted, non-criteria pollutants will also be quantified. Permitted emissions from several sources are increasing. This is due to a change in the method of calculation and not a change in the method of operation.

All of the hourly emission rates for this facility were based upon the maximum capacity of the equipment. CEMs as required by §19.8 of Regulation 19 will show compliance with the permitted emission rates for total reduced sulfur from several pieces of equipment. There are no additional requirements for demonstrating compliance with the short term emission rates in this permit. Compliance with the annual emission rates will be demonstrated through several record keeping requirements. These specific conditions are specified for each set of emission rates in this permit. All of the records are to be kept on a twelve month rolling average so that compliance may be demonstrated for any twelve month period.

Following are a table of the facility wide emissions of federally regulated pollutants and a table of the facility wide non-criteria pollutant emissions. Specific unit information may be located using the indicated cross reference pages in the first table.

EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
Total Allowable Emissions		PM	547.2	2068.2	N/A
		PM_{10}	284.5	1143.7	
		SO_2	3629.7	2601.3	
		VOC	1137.9	4743.9	
		CO	1834.4	7046.7	
		NO_x	1035.2	2433.6	
		Pb	1.21	4.60	
		TRS	160.9	657.4	
		H_2S	13.6	58.0	

International Paper Company
CSN: 52-0013 Permit #:725-AOP-R0

EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
01	Bark Boiler	PM	76.7	329.2	98
		PM_{10}	62.5	274.3	
		SO_2	706.5	22.3	
		VOC	28.0	122.7	
		CO	619.0	2711.1	
		NO_x	110.0	482.8	
		Pb	0.05	0.01	
02	Slaker Vent Scrubber	PM	5.0	21.9	81
		PM_{10}	5.0	21.9	
		VOC	3.3	14.4	
		TRS	0.1	0.2	
03	Lime Kiln	PM	70.0	306.6	76
		PM_{10}	34.9	152.9	
		SO_2	17.4	76.3	
		VOC	11.2	49.0	
		CO	35.0	153.3	
		NO_x	44.8	196.0	
		Pb	1.10	4.50	
		TRS	7.4	32.6	
		H_2S	1.9	8.3	

International Paper Company
CSN: 52-0013 Permit #:725-AOP-R0

EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
04/05	Recovery Boiler #1	PM	200.0	876.3	47
		PM_{10}	77.6	340.2	
		SO_2	1318.8	1160.6	
		VOC	73.2	320.6	
		CO	412.6	1810.0	
		NO_x	192.0	401.6	
		Pb	0.02	0.04	
		TRS	31.8	140.6	
06	Recovery Boiler #2 and #3	PM	75.0	307.0	54
		PM_{10}	29.1	127.5	
		SO_2	1507.2	1066.1	
		VOC	167.8	735.8	
		CO	454.0	1991.6	
		NO_x	242.0	701.9	
		Pb	0.01	0.02	
		TRS	37.2	163.9	

International Paper Company
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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
07	Smelt Dissolving Tank #1	PM	25.0	110.0	61
		PM_{10}	25.0	110.0	
		SO_2	7.5	32.9	
		VOC	28.0	122.3	
		NO_x	12.9	56.7	
		Pb	0.01	0.01	
		TRS	1.5	6.6	
08	Smelt Dissolving Tank #2	PM	8.4	76.3*	65
		PM_{10}	8.4	76.3*	
		SO_2	3.6	29.5*	
		VOC	13.6	115.5*	
		NO_x	6.1	51.0*	
		Pb	0.01	0.02*	
		TRS	0.7	5.8*	
09	Smelt Dissolving Tank #3	PM	9.0	76.3*	65
		PM_{10}	9.0	76.3*	
		SO_2	3.2	29.5*	
		VOC	12.2	115.5*	
		NO_x	5.5	51.0*	
		Pb	0.01	0.02*	
		TRS	0.6	5.8*	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
10	Auxiliary Power Boiler #1	This source is no longer in service.			
11	Auxiliary Power Boiler #2	This source is no longer in service.			
12	NCG Incinerator	PM	0.2	0.9	90
		PM_{10}	0.2	0.9	
		SO_2	0.9	4.1	
		VOC	4.0	17.3	
		CO	9.4	41.1	
		NO_x	7.3	32.1	
		TRS	0.1	0.1	
13	Cogeneration Unit	PM	5.6	24.6	94
		PM_{10}	5.6	24.6	
		SO_2	0.4	1.5	
		VOC	2.8	12.1	
		CO	51.6	226.2	
		NO_x	93.3	408.8	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
14	NCG Back-Up Flare	PM	0.2	0.9	90
		PM_{10}	0.2	0.9	
		SO_2	45.0	205.0	
		VOC	0.7	3.1	
		CO	9.4	41.1	
		NO_x	7.3	32.1	
		TRS	0.1	0.1	
15	Brown Stock Washers	VOC	266.1	1165.3	29
		TRS	45.7	200.3	
		H_2S	0.8	3.3	
16	Aeration Stabilization Basin and Process Sewers	VOC	10.0	43.8	115
		TRS	1.1	4.1	
		H_2S	0.1	0.1	
17	The printing presses are no longer in service.				
18	Black Liquor Oxidation Tank Vent	VOC	125.4	548.4	44
		TRS	25.0	62.2	
		H_2S	10.3	44.9	
19	Woodyard Source Group	PM	0.7	3.0	21
		PM_{10}	0.6	2.7	
		VOC	36.9	161.5	

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
20	Digester and Blow Tanks Source Group	PM	0.1	0.1	24
		PM_{10}	0.1	0.1	
		VOC	2.4	10.1	
		TRS	0.9	3.8	
		H_2S	0.1	0.4	
21	Turpentine Recovery Source Group	VOC	0.2	0.9	26
22	Knotter System Source Group	VOC	20.4	88.7	27
		TRS	1.7	7.5	
23	High Density Storage Source Group	VOC	50.7	222.0	32
		TRS	2.9	12.8	
		H_2S	0.1	0.3	
24	Pine Stock Chest	VOC	50.7	222.0	34
		TRS	2.9	12.8	
		H_2S	0.1	0.3	
25	Weak Black Liquor Storage Source Group	VOC	6.8	20.2	37
		TRS	0.6	2.5	
26	Strong Black Liquor Storage Source Group	VOC	0.4	0.9	41
		TRS	0.2	0.6	
		H_2S	0.1	0.3	
27	Multiple Effect Evaporators	Emissions from this source are routed to sources SN-12 and/or SN-14.			39

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
28	Green Liquor Storage Source Group	VOC	1.4	5.9	70
		TRS	0.1	0.2	
29	Green Liquor Clarification Source Group	VOC	1.5	5.9	72
		TRS	0.1	0.2	
30	Dregs Washer	VOC	0.5	1.8	74
31	Lime Handling Source Group	PM	0.4	1.8	80
		PM_{10}	0.4	1.8	
32	Causticizer Source Group	VOC	3.3	14.4	83
		TRS	0.1	0.2	
33	White Liquor Storage Source Group	VOC	0.5	1.9	85
34	White Liquor Clarification Source Group	VOC	0.5	1.9	87
35	Paper Mill Source Group	VOC	161.6	707.6	111
36	Active East Landfill	VOC	0.8	3.4	118
		CO	0.1	0.3	
		TRS	0.1	0.3	
		H_2S	0.1	0.1	
37	Gasoline Storage Tank	VOC	22.8	0.5	122
38	Maintenance Parts Cleaners	This is an insignificant activity under Group B.			

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EMISSION SUMMARY FOR CRITERIA POLLUTANTS					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
39 - 46	These sources were all part of the bag plant which has been removed from service.				
47	Package Boiler	PM	5.5	6.6	104
		PM_{10}	5.5	6.6	
		SO_2	0.2	0.2	
		VOC	0.4	0.4	
		CO	50.0	60.0	
		NO_x	25.0	30.0	
48	Air Compressors	PM	2.0	2.5	124
		PM_{10}	2.0	2.5	
		SO_2	1.8	2.3	
		VOC	2.3	2.9	
		CO	5.9	7.4	
		NO_x	27.2	34.3	
49	Shutdown Equipment	PM	18.4	0.5	126
		PM_{10}	18.4	0.5	
		SO_2	17.2	0.5	
		VOC	27.5	0.7	
		CO	187.4	4.6	
		NO_x	261.8	6.3	

*These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

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EMISSION SUMMARY FOR NON-CRITERIA POLLUTANTS		
Pollutant	lb/hr	tpy
Acetaldehyde	13.57	58.95
Acetone**	1.00	3.00
Acetophenone	0.03	0.11
Acrolein	0.39	1.40
Acrylonitrile	0.01	0.02
Aldehydes	0.06	0.01
Ammonia**	167.67	734.31
Antimony Compounds	0.200	0.115
Arsenic Compounds	0.070	0.146
Benzene	0.50	1.45
Beryllium Compounds	0.010	0.007
Cadmium Compounds	0.04	0.123
Carbon Disulfide	0.76	3.20
Carbon Tetrachloride	0.03	0.08
Carbonyl Sulfide	0.02	0.05
Chlorobenzene	0.09	0.27
Chloroform	0.10	0.31
Chromium Compounds	0.85	3.60
Cobalt Compounds	0.160	0.154
Cresols & Hexachloroethane	0.06	0.27
Cumene	0.05	0.15
Dibenzofurans	0.01	0.01
Dimethyl Disulfide*	5.95	25.87

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EMISSION SUMMARY FOR NON-CRITERIA POLLUTANTS		
Pollutant	lb/hr	tpy
Dimethyl Sulfide*	50.81	222.65
Ethyl Benzene	0.01	0.02
Ethylene Glycol	0.44	1.92
Formaldehyde	3.89	14.52
Hydrogen Chloride**	32.52	105.92
Hydrogen Fluoride**	0.46	0.15
Lead Compounds	0.09	0.269
Manganese Compounds	2.41	10.132
Mercury Compounds	0.01	0.015
Methanol	393.98	1726.1
Methyl Ethyl Ketone	4.40	18.67
Methyl Isobutyl Ketone	0.38	1.25
Methylene Chloride**	0.51	2.21
Methyl Mercaptan*	12.79	55.78
n-Hexane	0.22	0.80
Napthalene	0.21	0.89
Nickel Compounds	1.000	0.785
Phenols	3.32	14.49
POM & PAH	0.11	0.36
Propionaldehyde	0.11	0.45
Selenium Compounds	0.020	0.021
Styrene	0.69	2.40
1,1,2,2-Tetrachloroethane	0.01	0.01

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EMISSION SUMMARY FOR NON-CRITERIA POLLUTANTS		
Pollutant	lb/hr	tpy
Tetrachloroethylene**	0.41	1.72
Toluene	0.36	1.01
1,2,4-Trichlorobenzene	0.78	3.27
1,1,1-Trichloroethane**	0.13	0.44
1,1,2-Trichloroethane	0.12	0.49
Trichloroethylene	0.07	0.19
Vinyl Chloride	0.01	0.02
Xylene	0.32	0.76
Zinc	25.67	112.49

*Components of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

SECTION III: PERMIT HISTORY

Operations at the facility now known as International Paper Company - Camden Mill began in early 1928. With the exception of the frames of the paper machines, all of the original equipment has been replaced.

Permit #725-A was issued to International Paper Company on March 23, 1984. This permit allowed for the rebuilding of the electrostatic precipitator controlling emissions from the #2 and #3 recovery boilers.

Permit #990-A was issued to International Paper Company on January 10, 1990. This permit allowed for the installation of the cogeneration unit at this facility. At this time, the facility took severe restrictions on the two auxilary power boilers to net out of a PSD review.

Permit #1239-A was issued to International Paper Company on December 13, 1991. This permit allowed for the installation of a new multiple effect evaporator. Limits were taken on the amount of black liquor solids that could be burned in the recovery boilers in order to avoid a PSD review.

Permit #725-AR-1 was issued to International Paper Company on May 15, 1992. This permit consolidated permits #725-A, #990-A, and 1239-A. Annual emissions were quantified for the first time in this permit.

Permit #1458-A was issued to International Paper Company on June 2, 1993. At this time, the Department and International Paper were working on a PSD permit for the cogeneration facility. The facility wished to install a scrubber on source SN-01, the bark boiler, prior to the issuance of the draft permit. Therefore, the Department issued this temporary permit to allow for the installation of the scrubber.

Permit #725-AR-2 was issued to International Paper Company on November 1, 1996. This permit consolidated permits #725-AR-1 and #1458-A. Restrictions on the operation of the auxilary power boilers (which have since been taken out of service) were changed which resulted in the need for a retroactive PSD review of the emissions from the cogeneration unit. Although the increase in particulate matter emissions from the cogeneration unit were above the PSD significant increase level, the permittee was able to net out of PSD review for particulate matter. Emissions of sulfur dioxide and volatile organic compounds were below significant increase levels without any corresponding offsets. A PSD review for the emissions of oxides of nitrogen and carbon monoxide from the cogeneration unit was conducted due to net emissions increases of 241.79 tpy of carbon monoxide and 240.01 tpy of oxides of nitrogen. As such, a Best Available Control Technology (BACT) analysis for oxides of nitrogen and carbon monoxide is required.

BACT is defined as an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation which the environmental authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts, determined is achievable. The BACT assessment identifies alternative control methods, considers the technical feasibility of each method, ranks the technically feasible alternatives in terms of control effectiveness, evaluates the economic, energy, and environmental aspects of technically feasible alternatives, and identifies the control method considered BACT for each pollutant and source combination.

NO_X Control Technologies

NO_X formation is a function of three main variables: fuel bound nitrogen in the fuel burned in the combustion chamber, combustion chamber flame temperature, and combustion chamber residence time. Conceptually, several types of NO_X control technologies exist to control the formation of NO_X at its source of formation. This can involve limiting the fuel bound nitrogen, lowering the flame temperture of the combustion chamber through wet injection, chamber design, and/or fuel to air ratios (combustion control), and decreasing the residence time of the fuel in the combustion chamber, usually through the design of the combustion device.

The other type of control technology involves reducing the NO_X content of the combustion exhaust gases (post-combustion control). This can involve selective catalytic reduction, nonselective catalytic reduction, and selective noncatalytic reduction. These control technologies can also be used in combination with the technologies that control NO_X at its source formation.

The permittee's cogeneration unit currently controls the amout of NO_X formed from fuel bound nitrogen by limit the fuel for this unit to only natural gas. The flame temperature of the gas turbine combustion chamber is lowered by steam injection, thereby reducing the amount of NO_X formed. Water injection is not used in the cogeneration unit. Also, the flame temperature of the downstream duct burner is controlled through the use of low NO_X burners. The control options of wet injection for NO_X reduction in the gas turbine, and the combustion control technologies built into the designs of the gas turbine and duct burner, represent the best control technology for this unit. Since these controls already exist for the cogeneration unit, no additional controls are proposed.

CO Control Technologies

Carbon monoxide emissions in gas turbines arise from inefficient or incomplete combustion of fuel. Three major factors which influence carbon monoxide formation in gas turbines are firing temperture, combustion chamber residence time, and combustion mixing characteristics. By increasing the combustion chamber temperature and residence time, the rate of CO conversion to CO_2 increases, thereby reducing CO emissions. However, increasing the combustion chamber temperature and residence time, NO_X emissions increase. Therefore, a dichotomy exists between

CO and NO_X at their source of formation. By reducing the rate of formation of one, the rate of formation of the other increases. Since NO_X is of greater concern from the point of ambient air quality and ozone formation, it is not considered environmentally acceptable to lower the CO emissions at the expense of additional NO_X emissions.

The control of CO emissions from the cogeneration unit involves oxidizing the CO to CO_2. The options currently available to reduce the CO emissions are thermal oxidation and catalytic oxidation. International Paper considers the duct burner to act as a thermal oxidizer to control or minimize CO emissions. The temperature of the exhaust gas is raised to 1560°F, which is near the range of thermal oxidation of CO and CO_2. No additional CO controls are proposed.

Ambient Air Quality Analysis

As required by the PSD Regulations, the increases in emissions were modeled to determine their impact. The results of this modeling may be found in the following table. As the ambient impacts caused by the increases in emissions were below the Modeling Significance Levels, the full impact analysis, which includes NAAQS modeling and an increment analysis, nor any ambient monitoring was required.

Pollutant	Averaging Period	Impact	Modeling Significance Level
CO	1-hour	37.20	2000
	8-hour	11.69	500
NO_X	Annual	0.54	1.0

Additional impact analyses indicated that there will be no construction and growth impacts associated with the scope of the proposed modification. Nor are any adverse impacts on soil or vegetation anticipated due to the cogeneration unit. It is unlikely that there would be any measurable impact on the nearest Class I area which is well over 250 km from this facility.

SECTION IV: EMISSION UNIT INFORMATION

WOODYARD

SN-19
Woodyard Source Group

Source Description

The woodyard source group includes emissions from roundwood chipping and screening, purchased chips unloading and storage, chip silo loading, debarking drums, roundwood chips rechipping, sawdust storage, purchased chips rechipping, and other associated equipment.

Due to the nature of the emissions from this source, an opacity limit would not be practical because of the difficulty in determining compliance with it. Instead, Plantwide Conditions 16 and 17 will require that the facility be operated in a manner that will not cause unnecessary visible emissions.

Specific Conditions

1. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at source SN-19. Compliance with these emission rates will be shown through compliance with the limit of wood chips that may be processed at this source.

Pollutant	lb/hr	tpy
PM	0.7	3.0
PM_{10}	0.6	2.7
VOC	36.9	161.5

2. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not process more than 4.1 million tons of chips at source SN-19 in any consecutive twelve month period.

3. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of chips processed at source SN-19 in order to demonstrate compliance with Specific Condition 2 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 to December 1999.

PULP MILL

SN-20
Digester and Blow Tank Source Group

Source Description

Source SN-20, which was installed or last modified in 1947, covers the emissions from the digester, vented either from the loading of chips or from the blow tanks following the digesters. The digesters are used to pressure cook the wood chips. The blow tanks are used to blow the pulp from the digesters to atmospheric pressure. The particulate matter emissions result from loading the chips into the different digesters. No control equipment is associated with SN-20.

The emissions which occur at the digesters while the chips are being cooked are routed to the turpentine recovery source group (SN-21). The emissions from source SN-21 are then routed to the NCG Incinerator (SN-12) as required by §19.8 of Regulation 19.

No opacity limit has been assigned for this source group. The emissions are intermitent and occur only when loading chips into the digester and unloading and therefore it would be difficult in determining compliance with an opacity limit. Instead Plantwide Conditions 16 and 17 will require that this source group be operated in a manner that will not cause unnecessary visible emissions.

Specific Conditions

4. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-20. Compliance with these emission rates will be determined through compliance with the limit of air dried tons of pulp (ADTP) that may be processed at this facility and proper incineration of the gases which result from cooking the chips.

Pollutant	lb/hr	tpy
PM	0.1	0.1
PM_{10}	0.1	0.1
VOC*	2.4	10.1
TRS	0.9	3.8
H_2S**	0.1	0.4

*Includes the TRS compounds also considered to be VOCs. **Component of TRS. Included in the TRS total.

5. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-20. Compliance with these emission rates will be determined through compliance with the limit of ADTP and proper incineration of the gases which result from cooking the chips.

Pollutant	lb/hr	tpy
Acetaldehyde	0.02	0.09
Cresols & Hexachloroethane	0.06	0.27
Dimethyl Disulfide*	0.06	0.22
Dimethyl Sulfide*	0.71	3.11
Methanol	0.36	1.56
Methyl Ethyl Ketone	0.01	0.03

*Component of TRS.

6. Pursuant to §19.8 of Regulation 19, the exhaust gases from the digesters shall be incinerated at 1200°F for a minimum of 0.5 seconds. (Currently, the facility is routing the gases through the turpentine recovery source group prior to incineration at source SN-12 which meets this requirement.)

SN-21
Turpentine Recovery Source Group

Source Description

Source SN-21, which was installed or last modified in 1978, consists of four turpentine condensers, a decanter, a storage tank, and other associated equiopment. Turpentine is recovered from the digester (see source SN-20), and flash tanks, decanted, and stored prior to being shipped off site. Emissions are routed to the NCG Incinerator (source SN-12). No control equipment is associated with this source group.

Specific Conditions

7. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-21. Compliance with these emission rates will be determined through compliance with the limit on the amount of turpentine which may be processed at this source.

Pollutant	lb/hr	tpy
VOC	0.2	0.9

8. Pursuant to A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not process more than 120,200 gallons of turpentine at source SN-21 in any consecutive twelve month period.

9. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of turpentine processed at source SN-21 in order to demonstrate compliance with Specific Condition 8 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

SN-22
Knotter System Source Group

Source Description

This source, which was not previously permitted, was installed or last modified in 1982. This source group consists of the screens, the reject refiners, the reject chests, and other equipment associated with the deknotting system. The knotter system removes the knots and other undissolved material from the wood pulp before it is sent to the brown stock washers. No control equipment is associated with this source group.

Specific Conditions

10. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-22. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC*	20.4	88.7
TRS	1.7	7.5

*Includes TRS compounds also considered to be VOCs.

11. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-22. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.16	0.67
Benzene	0.01	0.01
Dimethyl Disulfide*	0.19	0.83
Dimethyl Sulfide*	1.50	6.55
Formaldehyde	0.01	0.01
Methanol	17.2	75.2
Methyl Ethyl Ketone	0.05	0.21
Methyl Isobutyl Ketone	0.01	0.01
Methyl Mercaptan*	0.02	0.08
Styrene	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

SN-15
Brown Stock Washers Source Group

Source Description

Source SN-15, which was installed or last modified in 1968, consists of six brown stock washers (3 stages, 2 lines), their associated equipment, and the foam tank. In the brown stock washers, the pulp is washed with clean water and is separated from the digester chemicals. No control equipment is associated with this source group.

All emissions from this source are based upon NCASI factors. Previously, the VOC emissions were calculated using an emission factor from AP-42. The large increase in emissions from this source is due to the difference in the emission factors. This source was installed or last modified in 1968 and no physical modification or change in the method of operation is occurring at this source with the issuance of this permit. Therefore, this source was not required to undergo PSD review for the increase in VOC and TRS emissions.

Specific Conditions

12. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-15. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility as well as the testing requirements for this source.

Pollutant	lb/hr	tpy
VOC*	266.1	1165.3
TRS	45.7	200.3
H_2S**	0.8	3.3

*Includes the TRS compounds also considered to be VOCs.
**Component of TRS. Included in the TRS total.

13. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-15. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility as well as the testing requirements for this source.

Pollutant	lb/hr	tpy
Acetaldehyde	0.47	2.02
Acrolein	0.01	0.05
Benzene	0.01	0.02
Carbon Disulfide	0.01	0.01
Carbon Tetrachloride	0.02	0.06
Chlorobenzene	0.01	0.01
Chloroform	0.07	0.28
Dimethyl Disulfide*	2.61	11.42
Dimethyl Sulfide*	41.8	183.00
Formaldehyde	0.17	0.75
Methanol	23.0	101.00
Methyl Ethyl Ketone	0.34	1.45
Methyl Isobutyl Ketone	0.02	0.09
Methylene Chloride**	0.05	0.22
Methyl Mercaptan*	0.59	2.56
n-Hexane	0.01	0.05
Styrene	0.12	0.49
Tetrachloroethylene**	0.01	0.02
Toluene	0.02	0.07
1,2,4-Trichlorobenzene	0.01	0.01
1,1,1-Trichloroethane**	0.01	0.01

Pollutant	lb/hr	tpy
1,1,2-Trichloroethane	0.01	0.03
Trichloroethylene	0.01	0.02
Xylene	0.01	0.05

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

14. Pursuant to §18.8 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall test source SN-15 for methanol using EPA Reference Method 308 within 180 days of permit issuance. This test shall take place in accordance with Plantwide Condition #3.

15. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall test source SN-15 for TRS using EPA Reference Method 16 within 180 days of permit issuance. This test shall take place in accordance with Plantwide Condition #3.

16. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall test source SN-15 for VOC using EPA Reference Method 25A within 180 days of permit issuance. This test shall take place in accordance with Plantwide Condition #3.

SN-23
High Density Storage Source Group

Source Description

Source SN-23, which was installed or last modified in 1947, consists of three parallel pulp storage tanks and associated equipment. Stock which has been washed and screened to remove the knots is stored in these tanks. No control equipment is associated with the high density storage source group.

Specific Conditions

17. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-23. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC*	50.7	222.0
TRS	2.9	12.8
H_2S**	0.1	0.3

*Includes the TRS compounds also considered to be VOCs.
**Component of TRS. Included in the TRS total.

18. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-23. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	1.07	4.67
Acrolein	0.01	0.01
Benzene	0.01	0.01
Dimethyl Disulfide*	1.16	5.06
Dimethyl Sulfide*	1.60	7.01
Methanol	33.10	145.00
Methyl Ethyl Ketone	0.07	0.30
Methyl Isobutyl Ketone	0.01	0.03
Methyl Mercaptan*	0.09	0.36
n-Hexane	0.01	0.03
Styrene	0.01	0.05
Toluene	0.01	0.01
1,2,4-Trichlorobenzene	0.10	0.42
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

SN-24
Pine Stock Chest

Source Description

The pine stock chest, which was installed or last modified in 1963, provides intermediate storage for pulp stock before being pumped to the paper mill. No control equipment is associated with the pine stock chest.

Specific Conditions

19. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-24. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC*	50.7	222.0
TRS	2.9	12.8
H_2S**	0.1	0.3

*Includes the TRS compounds also considered to be VOCs.
**Component of TRS. Included in the TRS total.

20. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-24. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	1.07	4.67
Acrolein	0.01	0.01
Benzene	0.01	0.01
Dimethyl Disulfide*	1.16	5.06
Dimethyl Sulfide*	1.60	7.01
Methanol	33.08	145.00
Methyl Ethyl Ketone	0.07	0.30
Methyl Isobutyl Ketone	0.01	0.03
Methyl Mercaptan*	0.09	0.36
n-Hexane	0.01	0.03
Styrene	0.01	0.05
Toluene	0.01	0.01
1,2,4-Trichlorobenzene	0.10	0.42
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

BLACK LIQUOR RECOVERY AREA

SN-25
Weak Black Liquor Storage Source Groups

Source Description

Source SN-47, which was installed or last modified in 1997, consists of five weak liquor storage tanks and associated equipment that store liquor either continuously or intermittently. This source also consists of the combination tank and the blow heat recovery tank, which store both weak and strong black liquor periodically. This source stores the weak black liquor from the pulp mill prior to sending it through a multiple effect evaporator which will concentrate the liquor. No control equipment is associated with this source group.

Specific Conditions

21. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-25. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC*	6.8	29.0
TRS	0.6	2.5

*Includes the TRS compounds also considered to be VOCs.

22. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-25. Compliance with these emission rates will be determined through compliance with the limit on the amount of ADTP that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.01	0.05
Acrolein	0.01	0.01
Benzene	0.01	0.01
Carbon Tetrachloride	0.01	0.02

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Pollutant	lb/hr	tpy
Dimethyl Disulfide*	0.13	0.56
Dimethyl Sulfide*	0.44	1.91
Formaldehyde	0.01	0.02
Methanol	2.30	10.10
Methyl Ethyl Ketone	0.04	0.17
Methyl Isobutyl Ketone	0.01	0.01
Methyl Mercaptan*	0.01	0.03
n-Hexane	0.01	0.01
Phenols	0.31	1.33
Styrene	0.01	0.01
Tetrachloroethylene**	0.08	0.34
Toluene	0.01	0.02
1,1,1-Trichloroethane**	0.01	0.01
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

SN-27
Multiple Effect Evaporator

Source Description

The multiple effect evaporator (MEE) is used to concentrate the weak black liquor. The concentrated black liquor is sent through a tall oil recovery system. The desaponified black liquor is then returned to the evaporator before being transferred to the strong black liquor storage group.

The non condensible gases from the evaporator are incinerated at source SN-12. No emissions are vented at the evaporator.

Specific Conditions

23. Source SN-27 is subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart BB, *Standards of Performance for Kraft Pulp Mills*, due to an installation date after September 24, 1976. A copy of Subpart BB has been placed in Appendix E of this permit. The important requirements of this subpart are outlined in Specific Conditions 24 through 27.

24. Pursuant to 40 CFR §60.283(a)(1)(iii) and §19.8 of Regulation 19, the permittee shall combust all gases from source SN-27 at source SN-12 or as allowed at source SN-14 at a minimum temperature of 1200°F for a minimum of 0.5 seconds.

25. Pursuant to 40 CFR §60.284(b)(1) and §19.8 of Regulation 19, the permittee shall install, calibrate, maintain, and operate a monitoring device which measures and records the combustion temperature of the gases at SN-12 or SN-14. The monitoring device is to be certified by the manufacturer to be accurate within ± 1% of the temperature being measured.

26. Pursuant to 40 CFR §60.284d(3)(ii) and §19.8 of Regulation 19, for the purposes of reports required under §60.7(c), the permittee shall report semiannually periods of excess emissions from source SN-27. Excess emissions are defined as all periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 1200°F.

27. Pursuant to 40 CFR §60.284(e) and §19.8 of Regulation 19, the Administrator will not consider periods of excess emissions reported under paragraph (d) of this section to be indicative of a violation of §60.11(d) provided that the Administrator determines that the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions.

SN-26
Strong Black Liquor Storage Source Group

Source Description

Source SN-26, which was installed or last modified in 1996, consists of three black liquor storage tanks and associated equipment which store liquor either continuously or intermittently. It also consists of the combination tank and blow heat recovery tank and associated equipment which store both weak and strong black liquor periodically. The maximum throughput of the unit is limited by the firing rate of the recovery boilers of 390 gal/min of black liquor at the burner nozzles. The strong black liquor storage group stores the liquor from the MEE prior to sending it through the black liquor oxidation source group. No control equipment is associated with this source group.

Specific Conditions

28. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-26. Compliance with these emission rates will be determined through compliance with Specific Condition 30.

Pollutant	lb/hr	tpy
VOC*	0.4	0.9
TRS	0.2	0.6
H_2S**	0.1	0.3

*Includes the TRS compounds also considered to be VOCs.
**Component of TRS. Included in the TRS total.

29. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table. Compliance with these emission rates will be demonstrated through compliance with Specific Condition 30.

Pollutant	lb/hr	tpy
Acetaldehyde	0.02	0.06
Benzene	0.01	0.01
Chloroform	0.01	0.01
Dimethyl Disulfide*	0.02	0.05
Dimethyl Sulfide*	0.08	0.23
Formaldehyde	0.01	0.01
Methanol	0.12	0.34
Methyl Ethyl Ketone	0.03	0.06
Methyl Isobutyl Ketone	0.01	0.01
Methyl Mercaptan*	0.01	0.01
n-Hexane	0.01	0.01
Styrene	0.01	0.01
Toluene	0.01	0.01
1,2,4-Trichlorobenzene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS. Included in the TRS total.

30. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not fire in excess of 496,382 tons of black liquor solids at source SN-26 in any consecutive twelve month period.

31. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of black liquor solids processed at source SN-26 in order to demonstrate compliance with Specific Condition 30 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 to December 1999.

SN-18
Black Liquor Oxidation Source Group

Source Description

Source SN-18, which was installed or last modified in 1974, consists of a black liquor oxidation tank with its associated cyclone separator. The cyclone separator is not currently in service and is only serving as a vent for the black liquor tank. At this source, air is blown into the tank where it will contact the strong black liquor and raise the solids content. The black liquor is then sent to one of the recovery boilers. No control equipment in operation is associated with this source group.

Specific Conditions

32. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-18. Compliance with these emission rates will be determined through compliance with Specific Condition 30 and the testing requirements for this source.

Pollutant	lb/hr	tpy
VOC*	125.4	548.4
TRS	25.0	62.2
H_2S**	10.3	44.9

*Includes the TRS compounds also considered to be VOCs.
**Component of TRS. Included in the TRS total.

33. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-18. Compliance with these emission rates will be determined through compliance with Specific Condition 30 and the testing requirements for this source.

Pollutant	lb/hr	tpy
Acetone**	1.00	3.00
Acetophenone	0.03	0.11
Acrolein	0.01	0.01
Carbon Disulfide	0.55	2.41
Dimethyl Disulfide*	0.26	1.13
Dimethyl Sulfide*	0.82	3.57
Formaldehyde	0.07	0.31
Methanol	80.00	350.31
Methyl Ethyl Ketone	2.19	9.57
Methyl Isobutyl Ketone	0.02	0.09
Methyl Mercaptan	2.89	12.65
n-Hexane	0.01	0.01
Propionaldehyde	0.11	0.45
Styrene	0.02	0.09

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

34. Pursuant to §18.8 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall test source SN-18 for acrolein within 180 days of permit issuance using EPA Reference Method 18. This test shall take place in accordance with Plantwide Condition #3.

35. Pursuant to §18.8 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall test source SN-18 for methanol using EPA Reference Method 308 within 180 days of permit issuance. This test shall take place in accordance with Plantwide Condition #3.

36. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall test source SN-18 for VOC using EPA Reference Method 25A within 180 days of permit issuance. This test shall take place in accordance with Plantwide Condition #3.

SN-04/SN-05
Recovery Boiler #1

Source Description

Source SN-04/SN-05 is a 480 MMBTU/hr boiler which was installed or last modified in 1967. This boiler has not been modified since and is therefore not subject to any NSPS subpart. Recovery Boiler #1 vents through 2 separate stacks. Because of the difficulty involved in determining exactly what is being emitted through each stack, emissions for the two stacks have been "bubbled." The main fuels for this boiler are black liquor solids and natural gas. The facility is permitted to fire a limited amount of #6 fuel oil in the event of natural gas curtailment and to test the oil burning capabilities of the equipment. Particulate matter emissions from this source are controlled with an electrostatic precipitator.

This source has a CEM to monitor the emissions of TRS. Annual testing is required for the emissions of carbon monoxide, particulate matter, and sulfur dioxide.

Specific Conditions

37. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table when burning BLS. Compliance with these rates will be determined through compliance with Specific Condition 46, proper operation of the control equipment, and the required testing for this recovery boiler.

Pollutant	lb/hr	tpy
PM	200.0	876.0
PM_{10}	77.6	339.9
SO_2	262.6	1150.0
VOC*	73.2	320.2
CO	412.6	1806.8
NO_x	192.0	400.0
Pb	0.02	0.02

*Includes the TRS compounds also considered to be VOCs.

38. Pursuant to §19.5 and §19.8 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table when burning BLS. Compliance with these rates will be determined thru compliance with Specific Condition 46, proper operation of the control equipment and the CEMS required for this recovery boiler (Specific Condition 50). This TRS emission rate is based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	31.8	139.8

39. Pursuant to §19.8(d)(1) of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 8% oxygen by volume at source SN-04/SN-05. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 50.

40. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-04/05 when burning #6 fuel oil. Compliance with these emission rates will be determined through compliance with Specific Condition 48 and proper operation of the control equipment.

Pollutant	lb/hr	tpy
PM	35.8	0.3
PM_{10}	25.5	0.3
SO_2	1318.8	10.6
VOC*	73.2	0.4
CO	412.6	3.2
NO_x	192.0	1.9
Pb	0.01	0.01

*Includes the TRS compounds also considered to be VOCs.

41. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-04/05 when burning #6 fuel oil. Compliance with these emission rates will be determined through compliance with Specific Condition 48, proper operation of the control equipment, and the required CEMS for this recovery boiler. These emission rates are based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	31.8	0.8

42. Pursuant to §18.5 of Regulation 18 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 40% opacity from source SN-04/SN-05 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 43.

43. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct daily readings of the opacity from source SN-04/SN-05 in accordance with EPA Reference Method 9 and keep a record of these readings. These records shall be kept on site and shall be made available to Department personnel upon request.

44. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-04/SN-05 when burning black liquor solids. Compliance with these emission rates will be determined through compliance with Specific Condition 46 and proper operation of the control equipment for this recovery boiler.

Pollutant	lb/hr	tpy
Acetaldehyde	3.19	13.97
Antimony Compounds	0.013	0.053
Arsenic Compounds	0.013	0.056
Benzene	0.03	0.11
Cadmium Compounds	0.011	0.048
Chromium Compounds	0.419	1.834
Cobalt Compounds	0.010	0.040
Formaldehyde	0.43	1.88
Hydrogen Chloride**	12.27	53.75
Lead Compounds	0.011	0.047
Manganese Compounds	0.629	2.76
Methanol	34.05	149.20
Methyl Ethyl Ketone	0.38	1.63
Methyl Mercaptan*	6.06	26.60
Nickel Compounds	0.075	0.329
Phenols	1.56	6.84
Selenium Compounds	0.001	0.001
Styrene	0.13	0.53

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

45. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at SN-04 when burning #6 fuel oil. Compliance with these emission rates will be determined through compliance with Specific Condition 48 and proper operation of the control equipment associated with this recovery boiler.

Pollutant	lb/hr	tpy
Antimony Compounds	0.065	0.001
Arsenic Compounds	0.012	0.001
Beryllium Compounds	0.001	0.001
Cadmium Compounds	0.002	0.001
Chromium Compounds	0.007	0.001
Cobalt Compounds	0.045	0.001
Formaldehyde	0.18	0.01
Hydrogen Chloride*	3.12	0.03
Hydrogen Fluoride*	0.16	0.01
Lead Compounds	0.010	0.001
Manganese Compounds	0.036	0.001
Mercury Compounds	0.001	0.001
Nickel Compounds	0.31	0.003
POM	0.01	0.01
Selenium Compounds	0.004	0.001

*Non-VOC, non-PM non-criteria pollutant.

46. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not process in excess of 392,886 tons of black liquor solids at source SN-04/SN-05 in any consecutive twelve month period.

47. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of black liquor solids processed at source SN-04/SN-05 in order to demonstrate compliance with Specific Condition 46 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

48. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not fire in excess of 44,800 gallons of #6 fuel oil at source SN-04/SN-05 in any consecutive twelve month period.

49. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of #6 fuel oil fired at source SN-04/SN-05 in order to demonstrate compliance with Specific Condition 48 and which may be used by the Department for enforcement purposes. These records shall be updated each day that fuel oil is used, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

50. Pursuant to §19.7 and §19.8(d)(3) of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a CEMS at source SN-04/SN-05 for TRS. The CEMS requirements which the permittee must comply with may be found in Appendix A.

51. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-04/SN-05 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no more than 12 months apart.

52. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-04/SN-05 for sulfur dioxide using EPA Reference Method 6C. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no more than 12 months apart.

53. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-04/SN-05 for carbon monoxide using EPA Reference Method 10. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no more than 12 months apart.

54. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not bypass the ESP at this source during required maintenance. In the event that a boiler is not shut down during ESP maintenance, one side of the ESP shall be isolated. During such times, the operation of source SN-04/SN-05 shall be limited to 50% of the full service load rating. (NOTE: If the maintenance does not affect operation of the ESP at this source, the permittee is not restricted by the Department on the service load rating.)

55. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall notify the Department within 24 hours of any maintenance which requires one side of the ESP being removed from service.

56. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee may use natural gas to fire this source during periods of start-up and shutdown.

SN-06
Recovery Boilers #2 and #3

Source Description

Source SN-06 consists of two recovery boilers which were installed or last modified in 1947. These boilers have a combined heat input capacity of 632 MMBTU/hr. The main fuels for these boilers are black liquor solids and natural gas. The facility is permitted to fire a limited amount of #6 fuel oil in the event of natural gas curtailment and to test the oil burning capabilities of the equipment. Particulate matter emissions from this source are controlled with an electrostatic precipitator.

This source has a CEM to monitor the emissions of TRS. Annual testing is required for the emissions of carbon monoxide, particulate matter, and sulfur dioxide.

Specific Conditions

57. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning black liquor solids. Compliance with these emission rates will be determined through compliance with Specific Condition 66, proper operation of the control equipment, and the required testing for these recovery boilers.

Pollutant	lb/hr	tpy
PM	75.0	306.6
PM_{10}	13.2	57.9
SO_2	240.6	1054.0
VOC*	167.8	735.0
CO	454.0	1988.0
NO_x	242.0	700.0
Pb	0.01	0.01

*Includes the TRS compounds also considered to be VOCs.

58. Pursuant to §19.5 and §19.8 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning black liquor solids. Compliance with these emission rates will be determined through compliance with Specific Condition 66, proper operation of the control equipment, and the CEMS for these recovery boilers. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	37.2	163.0

59. Pursuant to §19.8(d)(1) of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 8% oxygen by volume at source SN-06. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 70.

60. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning #6 fuel oil. Compliance with these emission rates will be determined through compliance with Specific Condition 68 and proper operation of the control equipment.

Pollutant	lb/hr	tpy
PM	40.9	0.4
PM_{10}	29.1	0.3
SO_2	1507.2	12.1
VOC	2.4	0.8
CO	16.0	3.6
NO_x	214.0	1.9
Pb	0.01	0.01

*Includes the TRS compounds also considered to be VOCs.

61. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning #6 fuel oil. Compliance with these emission rates will be determined through compliance with Specific Condition 68, proper operation of the control equipment, and the CEMS required for these recovery boilers. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	37.2	0.9

62. Pursuant to §18.5 of Regulation 18 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 40% opacity from source SN-06 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 63.

63. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct daily readings of the opacity from source SN-06 in accordance with EPA Reference Method 9 and keep a record of these readings. These records shall be kept on site and shall be made available to Department personnel upon request.

64. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-06 when burning black liquor solids. Compliance with these emission rates will be determined through compliance with Specific Condition 66 and proper operation of the control equipment for these recovery boilers.

Pollutant	lb/hr	tpy
Acetaldehyde	3.03	13.27
Antimony Compounds	0.012	0.048
Arsenic Compounds	0.012	0.051
Benzene	0.03	0.10
Cadmium Compounds	0.010	0.044
Chromium Compounds	0.390	1.690
Cobalt Compounds	0.009	0.037
Formaldehyde	0.41	1.79
Hydrogen Chloride**	11.25	49.27
Lead Compounds	0.010	0.043
Manganese Compounds	0.580	2.530
Methanol	32.34	141.65
Methyl Ethyl Ketone	0.36	1.55
Methyl Mercaptan*	5.56	24.4
Nickel Compounds	0.069	0.310
Phenols	1.43	6.27
Selenium Compounds	0.001	0.001
Styrene	0.12	0.51
Toluene	0.08	0.34

*Component of TRS. Included in the TRS total.
**Non-VOC non-criteria pollutant.

65. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at SN-06 when burning #6 fuel oil. Compliance with these emission rates will be determined through compliance with Specific Condition 68 and proper operation of the control equipment associated with these recovery boilers.

Pollutant	lb/hr	tpy
Antimony Compounds	0.074	0.001
Arsenic Compounds	0.014	0.001
Beryllium Compounds	0.001	0.001
Cadmium Compounds	0.002	0.001
Chromium Compounds	0.008	0.001
Cobalt Compounds	0.051	0.001
Formaldehyde	0.20	0.01
Hydrogen Chloride*	3.57	0.03
Hydrogen Fluoride*	0.18	0.01
Lead Compounds	0.011	0.001
Manganese Compounds	0.041	0.001
Mercury Compounds	0.001	0.001
Nickel Compounds	0.35	0.003
POM	0.01	0.01
Selenium Compounds	0.004	0.001

*Non-VOC, non-PM non-criteria pollutant.

66. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not process in excess of 361,757 tons of black liquor solids at source SN-06 in any consecutive twelve month period.

67. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of black liquor solids processed at source SN-06 in order to demonstrate compliance with Specific Condition 66 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

68. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not fire in excess of 51,200 gallons of #6 fuel oil at source SN-04 in any consecutive twelve month period.

69. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of #6 fuel oil fired at source SN-06 in order to demonstrate compliance with Specific Condition 68 and which may be used by the Department for enforcement purposes. These records shall be updated each day that fuel oil is used, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

70. Pursuant to §19.7 and §19.8(d)(3) of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a CEMS at source SN-06 for TRS. The CEMS requirements which the permittee must comply with may be found in Appendix A.

71. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-06 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no more than 12 months apart.

72. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-06 for sulfur dioxide using EPA Reference Method 6C. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no more than 12 months apart.

73. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-06 for carbon monoxide using EPA Reference Method 10. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no more than 12 months apart.

74. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, when an ESP is shut down for maintenance, the permittee shall not operate the boiler associated with that ESP. The service load rating is not affected if any maintenance is being performed which does not affect either of the ESPs located at SN-06. (NOTE: SN-06 is actually two boilers which both have an ESP.)

75. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee may use natural gas to fire this source during periods of start-up and shutdown.

SN-07
Smelt Tank #1

Source Description

This source was installed or last modified in 1967. A wet scrubber is used to control the particulate matter and TRS emissions. The scrubbing liquids used for this piece of control equipment are weak wash, alkaline solution, or water.

Annual testing for particulate matter and TRS emissions was required in permit #725-AR-2 and is being carried forth in this permit. Additional testing is being required for VOC and methanol emissions.

Specific Conditions

76. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-07. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-04/05, proper operation of the control equipment, and the required testing for this smelt dissolving tank.

Pollutant	lb/hr	tpy
PM	25.0	110.0
PM_{10}	25.0	110.0
SO_2	7.5	32.9
VOC*	26.1	115.0
NO_x	12.9	56.7
Pb	0.01	0.01

*Includes the TRS compounds also considered to be VOCs.

77. Pursuant to §19.5 and §19.8 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-07. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-04/05, proper operation of the control equipment, and the required testing for this smelt dissolving tank. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	1.5	6.6

78. Pursuant to §19.8(d)(1) of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 0.0168 grams of H_2S per kilogram of black liquor solids on a 12 hour average from source SN-07. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 83.

79. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-07. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-04/05, proper operation of the control equipment, and the required testing for this smelt dissolving tank.

Pollutant	lb/hr	tpy
Ammonia*	16.80	73.60
Antimony Compounds	0.002	0.005
Arsenic Compounds	0.001	0.002
Benzene	0.02	0.09
Beryllium Compounds	0.001	0.001
Cadmium Compounds	0.001	0.001
Chlorobenzene	0.01	0.04
Chromium Compounds	0.002	0.009
Lead Compounds	0.001	0.004
Manganese Compounds	0.008	0.032

Pollutant	lb/hr	tpy
Mercury Compounds	0.001	0.001
Methanol	26.15	115.00
Methyl Ethyl Ketone	0.11	0.45
Methyl Isobutyl Ketone	0.06	0.25
Nickel Compounds	0.001	0.002
Selenium Compounds	0.001	0.001
Styrene	0.01	0.03
Toluene	0.04	0.15
Trichloroethylene	0.02	0.08
Xylene	0.03	0.11

*Non-HAP, non-VOC, non-criteria pollutant.

80. Pursuant to §18.5 of Regulation 18 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-07 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 81.

81. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-07 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

82. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-07 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no more than 12 months apart.

83. Pursuant to §19.7 and §19.8(d)(2) of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at source SN-07 for TRS using EPA Reference Method 16. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no more than 12 months apart.

84. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall test source SN-07 for VOC emissions within 180 days of permit issuance using EPA Reference Method 25A. This test shall be conducted in accordance with Plantwide Condition #3.

85. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall test source SN-07 for methanol emissions within 180 days of permit issuance using EPA Reference Method 308. This test shall be conducted in accordance with Plantwide Condition #3.

86. Pursuant to §19.8 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain the following at source SN-07:

    a. A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within a gage pressure of $\pm$500 pascals (ca. $\pm$ 2 inches water gage pressure).

    b. A monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to accurate within $\pm$ 15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point. The Administrator may be consulted for approval of alternative locations.

SN-08 and SN-09
Smelt Tanks #2 and #3

Source Description

Sources SN-08 and SN-09 were installed or last modified in 1947. Wet scrubbers are used to control the particulate matter and TRS emissions. The scrubbing liquids used are weak wash, alkaline solution, or water.

Annual testing for particulate matter and TRS emissions was required in permit #725-AR-2 and is being carried forth in this permit. Additional testing is being required for VOC and methanol emissions.

Specific Conditions

87. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-06, proper operation of the control equipment, and the required testing for these two smelt dissolving tanks.

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy**
PM	8.4	9.0	76.3
PM_{10}	8.4	9.0	76.3
SO_2	3.6	3.2	29.5
VOC*	13.6	12.2	115.5
NO_x	6.1	5.5	51.0
Pb	0.01	0.01	0.02

*Includes the TRS compounds considered to be VOCs.
**These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

88. Pursuant to §19.5 and §19.8 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-06, proper operation of the control equipment, and the required testing for these two smelt dissolving tanks. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy*
TRS	0.7	0.6	5.8

*These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

89. Pursuant to §19.8(d)(1) of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions shall not exceed 0.0168 grams of H_2S per kilogram of black liquor solids on a 12 hour average from sources SN-08 and SN-09. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 94.

90. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at the designated sources. Compliance with these emission rates will be determined through compliance with the BLS firing limit for source SN-06, proper operation of the control equipment, and the required testing for these two smelt dissolving tanks.

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy**
Ammonia*	7.96	7.17	66.23
Antimony Compounds	0.001	0.001	0.005
Arsenic Compounds	0.001	0.001	0.002
Benzene	0.01	0.01	0.08
Beryllium Compounds	0.001	0.001	0.001
Cadmium Compounds	0.001	0.001	0.001
Chlorobenzene	0.01	0.01	0.04
Chromium Compounds	0.001	0.001	0.008
Lead Compounds	0.001	0.001	0.004

Pollutant	lb/hr at SN-08	lb/hr at SN-09	tpy**
Manganese Compounds	0.004	0.004	0.030
Mercury Compounds	0.001	0.001	0.001
Methanol	12.70	11.41	105.50
Methyl Ethyl Ketone	0.05	0.05	0.42
Methyl Isobutyl Ketone	0.03	0.03	0.23
Nickel Compounds	0.001	0.001	0.002
Selenium Compounds	0.001	0.001	0.001
Styrene	0.01	0.01	0.03
Toluene	0.02	0.02	0.13
Trichloroethylene	0.01	0.01	0.07
Xylene	0.02	0.01	0.10

*Non-HAP, non-VOC, non-criteria pollutant.
**These are the combined totals for sources SN-08 and SN-09 and not individual limits for each source.

91. Pursuant to §18.5 of Regulation 18 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from sources SN-08 and SN-09 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 92.

92. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from sources SN-08 and SN-09 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

93. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at sources SN-08 and SN-09 for particulate matter using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no more than 12 months apart.

94. Pursuant to §19.7 and §19.8(d)(2) of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing at sources SN-08 and SN-09 for TRS using EPA Reference Method 16. These tests shall be conducted in accordance with Plantwide Condition #3 and shall take place no more than 12 months apart.

95. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall test sources SN-08 and SN-09 for VOC emissions within 180 days of permit issuance using EPA Reference Method 25A. This test shall be conducted in accordance with Plantwide Condition #3.

96. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall test sources SN-08 and SN-09 for methanol emissions within 180 days of permit issuance using EPA Reference Method 308. This test shall be conducted in accordance with Plantwide Condition #3.

97. Pursuant to §19.8(d)(3) of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain the following at sources SN-08 and SN-09:

    a. A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within a gage pressure of $\pm$500 pascals (ca. $\pm$ 2 inches water gage pressure).

    b. A monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to accurate within $\pm$ 15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point. The Administrator may be consulted for approval of alternative locations.

CAUSTICIZING AREA

SN-28
Green Liquor Storage Source Group

Source Description

Source SN-28 is used to store the green liquor prior to it being reacted with calcium oxide (lime) to form white liquor. This source group, which was installed or last modified in 1975, consists of two green liquor storage tanks and associated equipment. No control equipment is associated with this source group.

Specific Conditions

98. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-28. Compliance with these emission rates will be determined through compliance with the limit on the amount of lime that may be processed at this facility.

Pollutant	lb/hr	tpy
VOC*	1.4	5.9
TRS	0.1	0.3

*Includes TRS components which are also considered to be VOCs.

99. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-28. Compliance with these emission rates will be determined through compliance with the limit on the amount of lime that may be processed at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.01	0.01
Benzene	0.01	0.01
Dimethyl Disulfide*	0.03	0.13
Dimethyl Sulfide*	0.01	0.03
Methanol	1.12	4.90
Methyl Ethyl Ketone	0.01	0.01
Methyl Isobutyl Ketone	0.01	0.01
Methyl Mercaptan*	0.02	0.05
Styrene	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS.

SN-29
Green Liquor Clarification Source Group

Source Description

Source SN-29, which was installed or last modified in 1947, consists of the green liquor clarifier and associated equipment. The clarifier removes contaminants from the green liquid prior to it being sent to the slaker. No control equipment is associated with this source group.

Specific Conditions

100. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-29. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility.

Pollutant	lb/hr	tpy
VOC*	1.5	5.9
TRS	0.1	0.3

*Includes TRS components also considered to be VOCs.

101. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-29. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.01	0.01
Benzene	0.01	0.01
Dimethyl Disulfide*	0.03	0.13
Dimethyl Sulfide*	0.01	0.03
Methanol	1.12	4.90
Methyl Ethyl Ketone	0.01	0.01
Methyl Isobutyl Ketone	0.01	0.01
Methyl Mercaptan*	0.02	0.05
Styrene	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS.

SN-30
Dregs Washer

Source Description

The contaminants removed at sources SN-28 and SN-29 are washed prior to being discarded. No control equipment is associated with this source.

Specific Conditions

102. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-30. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility.

Pollutant	lb/hr	tpy
VOC	0.5	1.8

103. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-30. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.02	0.07
Acrolein	0.01	0.01
Benzene	0.01	0.01
Methanol	0.28	1.20
Methyl Ethyl Ketone	0.01	0.01
Methyl Isobutyl Ketone	0.01	0.01
Styrene	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

SN-03
Lime Kiln

Source Description

The lime kiln was installed or last modified in 1967. The lime kiln is used to regenerate the calcium oxide used in the slaker from the lime mud which is separated from the white liquor.

A wet scrubber is used to control the emissions of sulfur dioxide and particulate matter from the lime kiln. A CEM is used to track the emissions of TRS from the lime kiln. Annual testing for particulate matter is also required for the lime kiln.

The facility is permitted to fire #6 fuel oil at any time at this source. The facility is also allowed to use natural gas to fire the lime kiln at any time.

Specific Conditions

104. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-03. Compliance with these emission rates will be demonstrated through compliance with fuel usage limits, the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this lime kiln, and the required testing.

Pollutant	lb/hr	tpy
PM	70.0	306.6
PM_{10}	34.9	152.9
SO_2	17.4	76.3
VOC*	11.2	49.0
CO	35.0	153.3
NO_x	44.8	196.0
Pb	1.1	4.5

*Includes the TRS compounds also considered to be VOCs.

105. Pursuant to §19.5 and §19.8 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-03. Compliance with these emission rates will be demonstrated through compliance with fuel usage limits, the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this lime kiln, and the required CEMS. These emission rates were based upon a 12-hour average.

Pollutant	lb/hr	tpy
TRS	7.4	32.6
H_2S*	1.9	8.3

*Component of TRS. Included in the TRS total.

106. Pursuant to §19.8(d)(1) of Regulation 19 and 40 CFR Part 52, Subpart E, TRS emissions from source SN-03 shall not exceed 40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 10% oxygen by volume.

107. Pursuant to §18.5 of Regulation 18 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-03 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 108.

108. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-03 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

109. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-03. Compliance with these emission rates will be demonstrated through compliance with fuel usage limits, the limit on the amount of lime that may be processed at this facility, and proper operation of the control equipment associated with this lime kiln.

Pollutant	lb/hr	tpy
Acetaldehyde	0.39	1.71
Acrolein	0.02	0.08
Antimony Compounds	0.001	0.001
Arsenic Compounds	0.001	0.002
Benzene	0.03	0.12
Beryllium Compounds	0.001	0.002
Cadmium Compounds	0.006	0.023
Carbon Disulfide	0.05	0.19
Chromium Compounds	0.020	0.050
Cobalt Compounds	0.003	0.014
Dimethyl Disulfide*	0.15	0.65
Dimethyl Sulfide*	1.45	6.34
Formaldehyde	0.04	0.14
Hydrogen Chloride**	0.56	2.45
Hydrogen Fluoride**	0.03	0.12
Lead Compounds	0.019	0.082
Manganese Compounds	0.164	0.72
Mercury Compounds	0.002	0.008
Methanol	2.50	10.92
Methyl Ethyl Ketone	0.04	0.14
Methyl Isobutyl Ketone	0.01	0.04

Pollutant	lb/hr	tpy
Nickel Compounds	0.013	0.055
POM	0.01	0.01
Selenium Compounds	0.001	0.001
Styrene	0.02	0.06
Toluene	0.09	0.39
Xylene	0.07	0.29

*Component of TRS.
**Non-VOC, non-HAP, non-criteria pollutant.

110. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall only burn #6 fuel oil and pipeline quality natural gas at source SN-03.

111. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not burn in excess of 4.38 million gallons of #6 fuel oil in any consecutive twelve month period at source SN-03.

112. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of fuel oil fired at SN-03 in order to demonstrate compliance with Specific Condition 111 and which may be used by the Department for enforcement purposes. These records shall be updated each day that fuel oil is used, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

113. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing for particulate matter emissions from source SN-03 using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and take place no more than 12 months apart.

114. Pursuant to §19.7 and §19.8(d)(3) of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a Continuous Emissions Monitoring System (CEMS) at source SN-03 for TRS. The CEM standards which the permittee is required to comply with may be found in Appendix A.

SN-31
Lime Handling Source Group

Source Description

The lime handling source group consists of a hot lime chain, a lime bucket elevator, a lime crusher, reburn lime silo, and associated equipment. A baghouse was installed in late 1997 or early 1998 to control the emissions from the lime handling operations.

Specific Conditions

115. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-31. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this source, and the testing requirements for this source.

Pollutant	lb/hr	tpy
PM	0.4	1.8
PM_{10}	0.4	1.8

116. Pursuant to §18.5 of Regulation 18 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 5% opacity from source SN-31 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 117.

117. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct weekly observations of the opacity from source SN-31 and keep a record of these observations. If visible emissions are detected, the permittee shall take immediate action to identify and to correct the cause of the visible emissions. After any necessary corrective action has taken place, the permittee shall conduct another observation of the opacity from source SN-31 to confirm that no visible emissions are present. If corrective action was needed, the permittee shall record the cause of the visible emissions, the corrective action taken, and if visible emissions were observed afterwards. These records shall be kept on site and made available to Department personnel upon request.

118. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall test the exhaust from the baghouse at source SN-31 for particulate matter using EPA Reference Method 5 within 180 days of permit issuance.

SN-02
Slaker

Source Description

The slaker was installed or last modified in 1980. Clarified green liquor, fresh lime, and reburned lime are reacted in the slaker to form sodium hydroxide and calcium carbonate. A wet scrubber is used to control the emissions from the slaker.

Specific Conditions

119. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-02. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility, proper operation of the control equipment associated with this source, and the testing requirements.

Pollutant	lb/hr	tpy
PM	5.0	21.9
PM_{10}	5.0	21.9
VOC*	3.3	14.4
TRS	0.1	0.2

*Includes TRS components also considered to be VOCs.

120. Pursuant to §18.5 of Regulation 18 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-02 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 121.

121. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-02 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

122. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-02. Compliance with these emission rates will be shown through compliance with the limit on the amount of lime that may be processed at this facility as well as proper operation of the control equipment associated with this source.

Pollutant	lb/hr	tpy
Acetaldehyde	0.26	1.11
Ammonia**	67.87	297.24
Dimethyl Disulfide*	0.05	0.20
Methanol	2.90	12.71
Methyl Ethyl Ketone	0.02	0.09
Styrene	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS.
**Non-VOC, non-HAP, non-criteria pollutant.

123. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing for particulate matter emissions from source SN-02 using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and take place no more than 12 months apart.

SN-32
Causticizing Source Group

Source Description

Source SN-32, which was installed or last modified in 1981, consists of five causticizers and their associated equipment. White liquor from the slaker passes through the causticizer prior to being sent to storage. No control equipment is associated with this source group.

Specific Conditions

124. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-32. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility.

Pollutant	lb/hr	tpy
VOC*	3.3	14.4
TRS	0.1	0.2

*Includes TRS components also considered to be VOCs.

125. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-32. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.26	1.11
Ammonia**	67.87	297.24
Dimethyl Disulfide*	0.05	0.20
Methanol	2.90	12.71
Methyl Ethyl Ketone	0.02	0.09
Styrene	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

*Component of TRS.
**Non-criteria, non-VOC pollutant.

SN-33
White Liquor Storage Source Group

Source Description

Source SN-33, which was installed or last modified in 1947, consists of four white liquor storage tanks and their associated equipment. After the white liquor is clarified, it may be stored prior to usage in the mill. No control equipment is associated with this source group.

Specific Conditions

126. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-33. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility.

Pollutant	lb/hr	tpy
VOC	0.5	1.9

127. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-33. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.02	0.07
Acrolein	0.01	0.01
Benzene	0.01	0.01
Methanol	0.28	1.20
Methyl Ethyl Ketone	0.01	0.01
Methyl Isobutyl Ketone	0.01	0.01
Styrene	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

SN-34
White Liquor Clarification Source Group

Source Description

Source SN-34, which was installed or last modified in 1983, consists of two white liquor clarifiers and associated equipment. The lime mud which was formed in the slaker and the causticizer is removed from the white liquor in one of the two clarifiers. The lime mud is sent to storage and washing (considered to be a source of de minimis emissions). The white liquor is then sent to storage. No control equipment is associated with this source group.

Specific Conditions

128. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-34. Compliance with these emission rates will be demonstrated through compliance with the the limit on the amount of lime that may be processed at this facility.

Pollutant	lb/hr	tpy
VOC	0.5	1.9

129. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-34. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of lime that may be processed at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	0.02	0.07
Acrolein	0.01	0.01
Benzene	0.01	0.01
Methanol	0.28	1.20
Methyl Ethyl Ketone	0.01	0.01
Methyl Isobutyl Ketone	0.01	0.01
Styrene	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

NCG SYSTEM

SN-12 and SN-14
NCG Incinerator and Back-Up Flare

Source Description

The NCG Incinerator was installed or last modified in 1988. This natural gas fired source incinerates the non-condensible gases from the multiple effect evaporator and the turpentine recovery system. (NOTE: The NCGs from the digesters are routed through the turpentine recovery system.) Source SN-14 was installed or last modified in 1992. The back-up flare is maintained in the event of primary incinerator failure.

There are two special requirements for this source because source SN-27 is subject to 40 CFR Part 60, Subpart BB. These requirements are outlined in Specific Conditions 137 and 138. The increase in VOC emissions from this source is due to the method of calculation. Due to discrepancy in testing methods, the total of HAPs which are also VOCs is often higher than the VOC tested rate.

Specific Conditions

130. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the combined emission rates set forth in the following table at SN-12 and SN-14 when firing natural gas. Compliance with these emission rates will be determined through compliance with fuel usage limits as well as maintaining the temperature and the residence time required by 40 CFR Part 60, Subpart BB.

SN	Pollutant	lb/hr	tpy
12	PM	0.2	0.9
	PM_{10}	0.2	0.9
	SO_2	0.9	4.1
	VOC*	18.4	80.3
	CO	9.4	41.1
	NO_x	7.3	32.1
	TRS	0.1	0.1

SN	Pollutant	lb/hr	tpy
14	PM	0.2	0.9
	PM_{10}	0.2	0.9
	SO_2	45.0	205.0
	VOC*	18.4	80.3
	CO	9.4	41.1
	NO_x	7.3	32.1
	TRS	0.1	0.1

*Includes TRS components which are also considered VOCs.

131. Pursuant to §18.5 of Regulation 18 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 5% opacity from sources SN-12 and SN-14 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 134.

132. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the combined emission rates set forth in the following table at sources SN-12 and SN-14 when firing natural gas. Compliance with these emission rates will be shown through compliance with fuel usage limits and maintaining the temperature and the residence time required by 40 CFR Part 60, Subpart BB.

SN	Pollutant	lb/hr	tpy
12	Benzene	0.08	0.19
	Cumene	0.04	0.14
	Formaldehyde	0.80	2.04
	Methanol	0.74	1.89
	Methyl Ethyl Ketone	0.01	0.02
	Styrene	0.01	0.02
	Xylene	0.01	0.01

SN	Pollutant	lb/hr	tpy
14	Benzene	0.08	0.19
	Cumene	0.04	0.14
	Formaldehyde	0.80	2.04
	Methanol	0.74	1.89
	Methyl Ethyl Ketone	0.01	0.02
	Styrene	0.01	0.02
	Xylene	0.01	0.01

133. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, pipeline quality natural gas shall be the only fuel fired at source SN-12.

134. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct weekly observations of the opacity from source SN-12. If any visible emissions are detected, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, the permittee shall conduct another observation of the opacity from source SN-12 in order to confirm that visible emissions are no longer present. The permittee shall maintain records of all visible emissions observations and any corrective action taken. These records shall be kept on site and made available to Department personnel upon request.

135. Pursuant to 40 CFR §60.283(a)(1)(iii) and §19.8 of Regulation 19, the permittee shall combust all gases from source SN-27 at source SN-12 or as allowed at source SN-14 at a minimum temperature of 1200°F for a minimum of 0.5 seconds.

136. Pursuant to 40 CFR §60.284(b)(1) and §19.8 of Regulation 19, the permittee shall install, calibrate, maintain, and operate a monitoring device which measures and records the combustion temperature of the gases at SN-12 or SN-14. The monitoring device is to be certified by the manufacturer to be accurate within ± 1% of the temperature being measured.

POWER BOILERS

SN-13
Cogeneration Unit

Source Description

The cogeneration unit was installed or last modified in 1990. The cogeneration unit consists of a natural gas fired turbine and a natural gas fired duct burner. The cogeneration unit is used to produce power for use throughout the facility.

This source underwent PSD review for emissions of NO_x and CO in permit #725-AR-2. Steam injection and low NO_x burners are used to reduce the NO_x emissions from this unit.

The cogeneration unit is subject to the provisions of 40 CFR Part 60, Subpart GG. The initial testing required by this NSPS subpart has been performed.

Specific Conditions

137. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-13 when firing natural gas. Compliance with these emission rates will be shown through compliance with the fuel usage limitations.

Pollutant	lb/hr	tpy
PM	5.6	24.6
PM_{10}	5.6	24.6
SO_2	0.4	1.5
VOC	2.8	12.1

138. Pursuant to §19.5 and §19.9 of Regulation 19, and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at source SN-11. Compliance with these emission rates will be shown through compliance with fuel usage limitations and the use of steam injection at this source.

Pollutant	lb/hr	tpy
CO	51.6	226.2
NO_x	93.3	408.8

139. Pursuant to §18.5 of Regulation 18 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 5% opacity from source SN-13 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 140.

140. Pursuant to §19.9 of Regulation 19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, pipeline quality natural gas shall be the only fuel used to fire this source.

141. Pursuant to §19.9 of Regulation 19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, natural gas usage at the gas turbine shall not exceed 351 Mscf/hr.

142. Pursuant to §19.9 of Regulation 19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, natural gas usage at the duct burner shall not exceed 238 Mscf/hr.

143. Pursuant to §19.7 and §19.9 of Regulation 19, 40 CFR Subpart E, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall continue to maintain a separate strip chart recorder to measure the gas used by the gas turbine and the duct burner. The recorders shall be inspected and adjusted once every twelve hours. The strip chart shall also measure the date and the time in addition to the gas flow. The strip charts shall be maintained on site for at least two years and shall be made available to Department personnel upon request.

144. Pursuant to §19.7 and §19.9 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain a continuous emissions monitoring systems for CO and NO_x at source SN-13. The standards for the CEMS may be found in Appendix A.

145. Source SN-13 is subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart GG, *Standards of Performance for Stationary Gas Turbines* due to an installation date of 1990 and a heat input at peak load greater than 10.7 gigajoules per hour. A copy of Subpart GG has been placed in Appendix B of this permit. The important requirements of this subpart are outlined in Specific Conditions 146 through 151.

146. Pursuant to 40 CFR 60.332(a)(2), the permittee shall not cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of 150 ppm (at 15% oxygen and on a dry basis).

147. Pursuant to 40 CFR 60.332(f), the limit set forth in Specific Condition 146 may be exceeded when ice fog is deemed to be a traffic hazard by the owner of operator of the gas turbine.

148. Pursuant to 40 CFR 60.333(a), the permittee shall not cause from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015% by volume at 15% oxygen and on a dry basis. Compliance with this specific condition will be demonstrated through compliance with Specific Condition 149.

149. Pursuant to 40 CFR 60.333(b), the permittee shall not burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8% by weight.

150. Pursuant to 40 CFR 60.334(b), the owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination shall be as follows:

    a. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.

    b. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators, or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this seciton.

151. Pursuant to 40 CFR 60.334(c)(2), for the purpose of reports required under §60.7(c), periods of excess emissions are defined as follows for sulfur dioxide: any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8%.

SN-01
Bark/Gas Boiler

Source Description

Source SN-01 is a 225 MMBTU/hr boiler which was installed in 1947. The main fuels for this boiler are natural gas, tire derived fuel (TDF) and mill wood waste. The facility is permitted to burn a limited amount of #6 fuel oil in the event of natural gas curtailment or to test the fuel burning capability of the equipment. Emissions from this source are controlled with a wet scrubber. While the source is burning natural gas and/or mill wood waste, water is used as a scrubbing liquor. When #6 fuel oil is being fired, a caustic scrubbing liquid is used.

Annual testing is required for carbon monoxide and particulate matter emissions.

Specific Conditions

152. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-01 when firing natural gas, wood waste, and/or TDF. Compliance with these emission rates will be determined through compliance with the fuel usage and steam production limits, proper operation of the control equipment associated with this boiler, and the testing requirements for this boiler.

Pollutant	lb/hr	tpy
PM	75.0	328.5
PM_{10}	62.5	273.8
SO_2	3.8	16.6
VOC	28.0	122.6
CO	619.0	2711.0
NO_x	110.0	482.0

153. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-01 when firing #6 fuel oil. Compliance with these emission rates will be determined through compliance with the fuel oil usage limits, proper operation of the control equipment associated with this boiler, and the testing requirements for this boiler.

Pollutant	lb/hr	tpy
PM	76.7	0.7
PM_{10}	54.5	0.5
SO_2	706.5	5.7
VOC	1.2	0.1
CO	7.5	0.1
NO_x	100.5	0.8
Pb	0.05	0.01

154. Pursuant to §18.5 of Regulation 18 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-01 as measured by EPA Reference Method 9. Compliance with this opacity limit will be shown through compliance with Specific Condition 155.

155. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-01 shall be conducted by a person trained (but not necessarily certified) in EPA Reference Method 9. If emissions which appear to be in excess of 20% are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, another observation of the opacity from the source in question shall be conducted in order to either confirm that no excess visible emissions are present or that the source is out of compliance with the permitted opacity limit. The permittee shall maintain records of all visible emission observations, the cause of any excessive visible emissions, the corrective action taken, and if visible emissions were present after corrective action was taken. These records shall be kept on site and shall be made available to Department personnel upon request.

156. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-01 when firing natural gas, wood waste, and/or TDF. Compliance with these emission rates will be determined through compliance with the fuel usage and steam production limits and proper operation of the control equipment associated with this boiler.

Pollutant	lb/hr	tpy
Acetaldehyde	0.08	0.34
Acrolein	0.01	0.01
Arsenic Compounds	0.007	0.030
Benzene	0.09	0.40
Cadmium Compounds	0.001	0.003
Carbon Disulfide	0.03	0.13
Chloroform	0.01	0.01
Chromium Compounds	0.002	0.006
Cobalt Compounds	0.014	0.060
Cumene	0.01	0.01
Dibenzofurans	0.01	0.01
Formaldehyde	0.17	0.73
Hydrogen Chloride	0.08	0.34
Lead Compounds	0.020	0.086
Manganese Compounds	0.927	4.06
Mercury Compounds	0.001	0.002
Methanol	0.32	1.38
Methyl Ethyl Ketone	0.01	0.01
Methyl Isobutyl Ketone	0.05	0.21
Methylene Chloride*	0.21	0.92
Napthalene	0.06	0.26

Pollutant	lb/hr	tpy
Nickel Compounds	0.018	0.079
n-Hexane	0.13	0.55
Phenols	0.01	0.05
POM	0.07	0.31
Selenium Compounds	0.001	0.004
Styrene	0.01	0.02
Toluene	0.01	0.01
1,1,1-Trichloroethane	0.01	0.01
Trichloroethylene	0.01	0.01
Xylene	0.01	0.01
Zinc	25.67	112.49

*Non-VOC HAP.

157. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at SN-01 when firing #6 fuel oil. Compliance with these emission rates will be determined through compliance with the fuel oil usage limit and proper operation of the control equipment associated with this source.

Pollutant	lb/hr	tpy
Antimony Compounds	0.035	0.001
Arsenic Compounds	0.007	0.001
Beryllium Compounds	0.001	0.001
Cadmium Compounds	0.001	0.001
Chromium Compounds	0.004	0.001
Cobalt Compounds	0.024	0.001
Formaldehyde	0.10	0.01
Hydrogen Chloride*	1.67	0.02

Pollutant	lb/hr	tpy
Hydrogen Fluoride*	0.09	0.01
Lead Compounds	0.006	0.001
Manganese Compounds	0.019	0.001
Mercury Compounds	0.001	0.001
Nickel Compounds	0.161	0.002
POM	0.01	0.01
Selenium Compounds	0.002	0.001

*Non-VOC, non-criteria pollutant

158. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall only fire pipeline quality natural gas, mill wood waste, TDF, or #6 fuel oil at source SN-01.

159. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, steam production shall not exceed 1,314,000,000 pounds in any consecutive twelve month period.

160. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the the steam production at source SN-01 in order to demonstrate compliance with Specific Condition 159 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual total shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

161. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not fire in excess of 24,0030 gallons of #6 fuel oil at source SN-01 in any consecutive twelve month period.

162. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of fuel oil fired at source SN-01 in order to demonstrate compliance with Specific Condition 161 and which may be used by the Department for enforcement purposes. These records shall be updated each day that fuel oil is used, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual total shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

163. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not fire in excess of 210 tons of TDF at source SN-01 per week.

164. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of TDF fired at source SN-01 in order to demonstrate compliance with Specific Condition 163 and which may be used by the Department for enforcement purposes. These records shall be updated weekly, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual total shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

165. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing for carbon monoxide emissions from source SN-01 using EPA Reference Method 10. These tests shall be conducted in accordance with Plantwide Condition #3 and take place no more than 12 months apart.

166. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall conduct annual testing for particulate matter emissions from source SN-01 using EPA Reference Method 5. These tests shall be conducted in accordance with Plantwide Condition #3 and take place no more than 12 months apart.

167. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, soot blowing shall not exceed 30 minutes during the mechanical cleaning of the grates. Such operations shall not take place more than three (3) times per day.

168. Pursuant to §19.7 of Regulation 19 and 40 CFR 70.6, the permittee shall maintain records of the soot blowing operations in order to demonstrate compliance with Specific Condition 167 and which may be used by the Department for enforcement purposes. These records shall be updated after every grate cleaning, shall be kept on site, and shall be made available to Department personnel upon request.

SN-47
Package Boiler

Source Description

Source SN-47 is a package boiler which will be used to provide supplemental steam to various parts of the plant whenever another boiler is out of service for maintenance, etc. This source will only be on site whenever it is needed. The permittee will be required to comply with any applicable NSPS subpart (This will be dependent upon the size of the boiler being used.).

Natural gas will be the only fuel that this source will be permitted to fire. As this source will only be used when another boiler is out of service, there will be no net increase in emissions. Also, restrictions on the amount of fuel that may be fired in this boiler are being taken in order to stay below the PSD significant increase levels.

Specific Conditions

169. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-47. Compliance with these emission rates will be determined through compliance with Specific Condition 172.

Pollutant	lb/hr	tpy
PM	5.5	6.6
PM_{10}	5.5	6.6
SO_2	0.2	0.2
VOC	0.4	0.4
CO	50.0	60.0
NO_x	25.0	30.0

170. Pursuant to §18.5 of Regulation 18 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 5% opacity from source SN-47 as measured by EPA Reference Method 9. Compliance with this opacity limit will be demonstrated by compliance with Specific Condition 171.

171. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, pipeline quality natural gas shall be the only fuel used to fire the package boiler.

172. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, natural gas usage shall not exceed 575 MMSCF at source SN-47 in any consecutive twelve month period.

173. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of natural gas fired at source SN-47 in order to demonstrate compliance with Specific Condition 172 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

174. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the heat input capacity of source SN-47 shall not exceed 250 MMBTU/hr.

175. Source SN-47 is potentially subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart Dc - *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*. Source SN-47 will only be subject to this subpart if the facility chooses to install a boiler which has a heat input capacity between 10 MMBTU/hr and 100 MMBTU/hr. The important requirements of this subpart are outlined in Specific Conditions 176 and 177. A copy of Subpart Dc has been included in Appendix C.

176. Pursuant to 40 CFR 60.48c(g), the permittee shall record and maintain records of the amount of natural gas combusted during each day.

177. Pursuant to 40 CFR 60.48c(i), the permittee shall maintain the records required by Specific Condition 176 for a period of two years following the date of such record.

178. Source SN-47 is potentially subject to 40 CFR Part 60, Subpart A, *General Provisions*, and 40 CFR Part 60, Subpart Db, *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units*. This source will be subject to this subpart if the facility chooses to install a boiler which has a heat input capacity greater than 100 MMBTU/hr. The important requirements of this subpart are outlined in Specific Conditions 179 through 196. A copy of subpart Db has been included in Appendix D.

179. Pursuant to 40 CFR 60.44b(a), the permittee shall not cause to be discharged to the atmosphere any gases that contain oxides of nitrogen in excess of 0.10 lb/MMBTU (expressed as NO_2).

180. Pursuant to 40 CFR 60.44b(a), the heat release rate shall not exceed 70,000 BTU/hr ft^3.

181. Pursuant to 40 CFR 60.46b(h), the oxides of nitrogen standards set forth in Specific Condition 179 shall apply at all times including periods of startup, shutdown, or malfunction.

182. Pursuant to 40 CFR 60.46b(e), to determine compliance with the emission limits for nitrogen oxides required under §60.44b, the owner or operator of an affected facility shall conduct the performance test as required under §60.8 using the continuous system for monitoring nitrogen oxides under §60.48b (Specific Condition 185).

183. Pursuant to 40 CFR 60.46b(e)(1), §19.7 of Regulation 19, and 40 CFR Part 52, Subpart E, for the initial compliance test, nitrogen oxides from the steam generating unit are monitored for 30 successive steam generating operating days and the 30-day average emission rate is used to determine compliance with the nitrogen oxides emission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

184. Pursuant to 40 CFR 60.46b(e)(4), following the date on which the initial performance test is completed or required to be completed under §60.8 of this subpart, whichever date comes first, the owner or operator of an affected facility which has a heat input capacity of 73 MW (250 million BTU/hr) or less and which combusts natural gas shall upon request determine compliance with the nitrogen oxide standards under §60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, nitrogen oxides emission data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports but will not be used to determine compliance with the nitrogen oxides emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

185. Pursuant to 40 CFR 60.48b(b),§ 19.7 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall install, calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system.

186. Pursuant to 40 CFR 60.48b(c), the continuous monitoring system required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

187. Pursuant to 40 CFR 60.48b(c), the 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor required by paragraph (b) of this section shall be expressed in ng/J or lb/million BTU heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(b). At least 2 data points must be used to calculate each 1-hour average.

188. Pursuant to 40 CFR 60.48b(e), the procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring system.

189. Pursuant to 40 CFR 60.48b(e)(2), the span value for the nitrogen oxides emission monitor shall be 500 ppm.

190. Pursuant to 40 CFR 60.49b(a), the permittee shall submit notification of initial startup as provided by §60.7. This notification shall include the following:

    a. The heat design input capacity of the affected facility and identification of the fuels to be combusted in the affected facility.

    b. If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§60.44b.

    c. The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired.

191. Pursuant to 40 CFR 60.49b(d), the owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for each calendar quarter. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

192. Pursuant to 40 CFR 60.49b(g), except as provided for under paragraph (p) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under §60.44b shall maintain records of the following information for each steam generating unit operating day.

    a. Calendar date

    b. The average hourly nitrogen oxides emission rates (expressed as NO_2) (ng/J or lb/million BTU heat input) measured or predicted

c. The 30-day average nitrogen oxides emission rates (ng/J or lb/million BTU heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.

d. Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken.

e. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective action taken.

f. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

g. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

h. Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

i. Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.

j. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

193. Pursuant to 40 CFR 60.49b(h)(2), the owner or operator of any affected facility that is subject to the nitrogen oxides standards of §60.44b, combusts natural gas, has a heat input capacity less than 73 MW (250 million BTU/hr), and is required to monitor nitrogen oxides emissions on a continuous basis under §60.48b(g)(1) or steam generating unit operating conditions under §60.48b(g)(2), shall submit excess emission reports for any calendar quarter during which there are excess emissions from the affected facility. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period.

194. Pursuant to 40 CFR 60.49b(h)(4), for purposes of §60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average nitrogen oxides emission rate, as determined under §60.46b(e), which exceeds the applicable emission limits in §60.44b.

195. Pursuant to 40 CFR 60.49b(i), the owner or operator of any affected facility subject to the continuous monitoring requirements for nitrogen oxides under §60.48b shall submit a quarterly report containing the information recorded under paragraph (g) of this section. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

196. Pursuant to 40 CFR 60.49b(o), all records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

197. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall maintain records of the dates which the package boiler was brought on site, when operation of the boiler began, when operation of the boiler ceased, and when the boiler was removed from this facility. The permittee shall also maintain records of the heat input capacity of the boiler and compliance date with any applicable NSPS requirements. These records shall be updated within one week of the boiler being brought in or taken out, kept on site for a minimum of two years following the date of such record, and shall be made available to Department personnel upon request.

198. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall only operate source SN-47 when another boiler is out of operation. However, if a boiler is subject to 40 CFR Part 60, Subpart Dc or is not subject to any NSPS subpart, the permittee may startup SN-47 a maximum of 72 hours prior to the bioler it is temporarily replacing is off line and the permittee may also operate SN-47 for a maximum of 48 hours after the permanent boiler is brought back on line. The permittee may maintain a warming fire in the boiler whenever it is on site in the event that the ambient temperature falls below freezing.

199. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which will demonstrate compliance with Specific Condition 198 and which may be used by the Department for enforcement purposes. These records shall be kept on site and made available to Department personnel upon request.

PAPER MILL

SN-35
Paper Mill Source Group

Source Description

The paper mill source group consists of the pulp and whitewater storage tanks and chests in the stock preparation area and all sections of the paper machine from the headbox to the reel for all three paper machines. It is in the paper mill source group where the pulp is converted to paper on one of the three machines. No control equipment is associated with the paper mill source group.

Specific Conditions

200. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-35. Compliance with these emission rates will be determined through compliance with the limit on the amount of paper that may be produced at this facility.

Pollutant	lb/hr	tpy
VOC	161.6	707.6

201. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-35. Compliance with these emission rates will be determined through compliance with the amount of paper that may be produced at this facility.

Pollutant	lb/hr	tpy
Acetaldehyde	2.05	8.98
Acrolein	0.27	1.18
Benzene	0.02	0.09
Chlorobenzene	0.04	0.17
Ethylene Glycol	0.44	1.92
Formaldehyde	1.23	5.37
Methanol	75.12	329.00
Methyl Ethyl Ketone	0.46	1.99
Methyl Isobutyl Ketone	0.04	0.16
Methylene Chloride*	0.24	1.03
Napthalene	0.14	0.62
n-Hexane	0.02	0.09
Styrene	0.10	0.42
Tetrachloroethylene*	0.31	1.34
Toluene	0.02	0.09
1,2,4-Trichlorobenzene	0.54	2.37
1,1,1-Trichloroethane	0.09	0.40
1,1,2-Trichloroethane	0.11	0.46
Xylenes	0.07	0.28

*Non-VOC non-criteria pollutant

202. Pursuant to A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not produce more than 438,000 tons of paper at the paper mill in any consecutive twelve month period.

203. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of paper produced at source SN-35 in order to demonstrate compliance with Specific Condition 202 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

WASTEWATER COLLECTION & TREATMENT AERATION STABILIZATION BASINS
PROCESS SEWER NON-POINT SOURCES

SN-16
Aeration Stabilization Basin & Process Sewer Non-Point Sources

Source Description

The waste water treatment process at the Camden mill consists of collection, screening, clarification, neutralization, aeration, settling, sludge dewatering, and disposal.

All process water is collected from the various process area sumps and pumped through the process sewer mains. The sewer mains also receive landfill leachate and surface drainage from culverts in various areas of the site.

The emissions from source SN-16 are related to the amount of pulp that is produced. Therefore, compliance with the emission rates will be demonstrated through compliance with the limit on the amount of ADTP that can be produced.

Specific Conditions

204. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-16. Compliance with these emission rates will be demonstrated through compliance with the amount of ADTP that may be produced.

Pollutant	lb/hr	tpy
VOC*	10.0	43.8
TRS	1.1	4.1
H_2S**	0.1	0.1

*Includes TRS components which are also considered to be VOCs.
**Component of TRS. Included in the TRS total.

205. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-16. Compliance with these emission rates will be demonstrated through compliance with the amount of ADTP that may be produced.

Pollutant	lb/hr	tpy
Acetaldehyde	1.36	5.96
Carbon Disulfide	0.11	0.45
Dimethyl Disulfide*	0.06	0.23
Dimethyl Sulfide*	0.85	3.70
Methanol	0.68	2.96
Methyl Ethyl Ketone	0.03	0.11
Methyl Isobutyl Ketone	0.01	0.03
Methyl Mercaptan*	0.02	0.05

*Component of TRS.

ACTIVE LANDFILLS

SN-36
East Landfill

Source Description

The east landfill is the only active landfill located at this facility. At this time, there are two other landfills which have been closed and no longer accept any plant refuse.

The emissions from this source are limited by the amount of plant refuse that can be accepted by this landfill.

Specific Conditions

206. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-36. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of mill waste that may be placed in the landfill.

Pollutant	lb/hr	tpy
VOC*	0.8	3.4
CO	0.1	0.3
TRS	0.1	0.3
H_2S**	0.1	0.1

*Includes TRS components which are also considered to be VOCs.
**Component of TRS. Included in the TRS total.

207. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table. Compliance with these emission rates will be demonstrated through compliance with the limit on the amount of mill waste that may be placed in the landfill.

Pollutant	lb/hr	tpy
Acrylonitrile	0.01	0.02
Benzene	0.01	0.01
Carbon Disulfide	0.01	0.01

Pollutant	lb/hr	tpy
Carbonyl Sulfide	0.02	0.05
Chlorobenzene	0.01	0.01
Chloroform	0.01	0.01
Dimethyl Sulfide*	0.04	0.16
Ethyl Benzene	0.01	0.02
Methyl Ethyl Ketone	0.01	0.02
Methyl Isobutyl Ketone	0.01	0.01
Methylene Chloride**	0.01	0.04
Methyl Carpatan*	0.01	0.02
n-Hexane	0.01	0.02
1,1,2,2-Tetrachloroethane	0.01	0.01
Tetrachlorethylene	0.01	0.02
Toluene	0.01	0.03
1,1,1-Trichloroethane**	0.01	0.01
Trichloroethylene	0.01	0.01
Vinyl Chloride	0.01	0.02
Xylene	0.01	0.05

*Includes TRS components which are also considered to be VOCs.
**Component of TRS. Included in the TRS total.

208. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall use source SN-36 for plant refuse only.

209. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, source SN-36 shall not accept in excess of 113,200 cubic yards of plant refuse in any consecutive twelve month period. For the purposes of this permit, 1 uncompacted cubic yard shall equal 300 pounds.

210. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of plant refuse accepted at source SN-36 in order to demonstrate compliance with Specific Condition 209 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

FUEL STORAGE

SN-37
Gasoline Storage Tank

Source Description

Source SN-37 is a vertical fixed roof tank with a capacity of approximately 1763 gallons. The facility is permitted to store only gasoline at this source. This tank is used to store fuel for the vehicles used around the facility.

Specific Conditions

211. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-37. Compliance with these emission rates will be determined by compliance with Specific Conditions 212 and 213.

Pollutant	lb/hr	tpy
VOC	22.8	0.5

212. Pursuant to A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall store only gasoline at source SN-37.

213. Pursuant to A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, throughput of gasoline at source SN-37 shall not exceed 39,900 gallons of gasoline in any consecutive twelve month period.

214. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the gasoline throughput at source SN-37 in order to demonstrate compliance with Specific Condition 213 and which may be used by the Department for enforcement purposes. The records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999..

MILL SHUTDOWN EQUIPMENT

SN-48
Air Compressors

Source Description

The air compressors will be used when the mill is in a shutdown mode.

Specific Conditions

215. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-48. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 217 and 218.

Pollutant	lb/hr	tpy
PM	2.0	2.5
PM_{10}	2.0	2.5
SO_2	1.8	2.3
VOC	2.3	2.9
CO	5.9	7.4
NO_X	27.2	34.3

216. Pursuant to §18.8 of Regulation 18, the permittee shall not exceed the emission rates set forth in the following table at source SN-48. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 217 and 218.

Pollutant	lb/hr	tpy
Acetaldehyde	0.05	0.01
Acrolein	0.01	0.01
Aldehydes	0.06	0.01
Benzene	0.06	0.01
Formaldehyde	0.07	0.01
Napthalene	0.01	0.01
PAH	0.01	0.01

Pollutant	lb/hr	tpy
Toluene	0.01	0.01
Xylenes	0.02	0.01

217. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, diesel fuel with a sulfur content not to exceed 3% by weight shall be the only fuel used to fire the air compressors.

218. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not use in excess of 113,400 gallons of diesel fuel at the air compressors in any consecutive twelve month period.

219. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the diesel fuel usage at source SN-48 and the sulfur content of the fuel in order to demonstrate compliance with Specific Conditions 217 and 218 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

220. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall only operate source SN-48 during mill shutdowns. The permittee is allowed to operate this source for up to 48 hours prior to mill shut down and up to 48 after mill operations begin.

221. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which will demonstrate compliance with Specific Condition 220 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

SN-49
Shutdown Equipment

Source Description

The shutdown equipment will consist mainly of generators which will supply some power to the facility when the mill is in a shutdown mode.

Specific Conditions

222. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-49. Compliance with these emission rates will be demonstrated through compliance with Specific Conditions 223, 224, and 226.

Pollutant	lb/hr	tpy
PM	18.4	0.5
PM_{10}	18.4	0.5
SO_2	17.2	0.5
VOC	27.5	0.7
CO	187.4	4.6
NO_X	261.8	6.3

223. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, diesel fuel with a sulfur content not to exceed 3% by weight and gasoline shall be the only fuels used to fire source SN-49.

224. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not use in excess of 20,520 gallons of diesel fuel at source SN-49 in any consecutive twelve month period.

225. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the diesel fuel usage at source SN-49 and the sulfur content in order to demonstrate compliance with Specific Conditions 223 and 224 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

226. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not use in excess of 805 gallons of gasoline at the source SN-49 n any consecutive twelve month period.

227. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the gasoline usage at source SN-49 in order to demonstrate compliance with Specific Condition 226 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

228. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall only operate source SN-49 during mill shutdowns. The permittee is allowed to operate this source for up to 48 hours prior to mill shut down and up to 48 after mill operations begin.

229. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which will demonstrate compliance with Specific Condition and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

SECTION V: DEMINIMIS EMISSION SOURCES

Pursuant to §26.3(d) of Regulation 26, the following sources are below the deminimis emission levels. Insignificant and trivial activities will be allowable after approval and federal register notice of a final list as part of the operating air permit program. Deminimis emission determinations rely upon the information submitted by the permittee in an application dated August 23, 1996.

Mill Area	Description	Reason
Woodyard	Mobile Hydraulic Tank	Group A, #3
Woodyard	Lube Oil Storage Tank	Group A, #3
Pulp Mill	2 Oil Storage Tanks	Group A, #3
Pulp Mill	Sulfuric Acid Tank	Group C, #5
Pulp Mill	2 Hydrogen Chloride Tanks	Group C, #5
Paper Mill	Caustic Soda Tank	Group A, #4
Paper Mill	Paper Mill Bulk Lube Oil Storage Tank	Group A, #3
Paper Mill	3 Paper Machine Lube Oil Tanks	Group A, #3
Black Liquor Recovery Area	2 Diesel Fuel Tanks	Group A, #3
Black Liquor Recovery Area	Used Oil Tank	Group A, #3
Power Generation	3 Caustic Tanks	Group A, #4
Power Generation	Bark Boiler Reservoir	Group A, #3
Power Generation	Lube Oil Reservoir	Group A, #3
Causticizing Area	Caustic Storage Tank	Group A, #4
Causticizing Area	Caustic Soda Day Tank	Group A, #4
Causticizing Area	Quaker "3540" Flocculant Tank	Group A, #3
Causticizing Area	Caustic Plant Laboratory Plant	Group A, #6
Causticizing Area	OTE-25 Oil Tank	Group A, #3

Mill Area	Description	Reason
Causticizing Area	600-W Oil Tank	Group A, #3
Causticizing Area	630 Oil Tank	Group A, #3
Water Supply System	Caustic Soda Tank	Group A, #4
Mill Ancillary Services	4 Diesel Fuel Storage Tanks in the Clarifiers Area	Group A, #2
Mill Ancillary Services	2 Fuel Oil Storage Tanks	Group A, #2
Mill Ancillary Services	Diesel Fuel Storage Tank in the Causticizing Area	Group A, #2
Mill Ancillary Services	Lubrication Oil Storage Tank	Group A, #2
Mill Ancillary Services	Lubricating Oil and Hydraulic Fluid Storage	Group A, #2

Pursuant to §26.3(d) of Regulation 26, the following emission units, operations, or activities have been determined by the Department to be below the deminimis emission levels. Activities included in this list are allowable under this permit and need not be specifically identified.

1. Natural gas-burning equipment with a design rate less than 1 million BTU per hour.

2. Combustion emissions from propulsion of mobile sources and emissions from refueling these sources unless regulated by Title II and required to obtain a permit under Title V of the federal Clean Air Act, as amended. This does not include emissions from any transportable units, such as temporary compressors or boilers. This does not include emission from loading racks or fueling operations covered under any applicable federal requirements.

3. Air conditioning and heating units used for comfort that do not have applicable requirements under Title VI of the Act.

4. Ventilating units used for human comfort that do not exhaust air pollutants into the ambient air from any manufacturing/industrial or commercial process.

5. Non-commercial food preparation or food preparation at restaurants, cafeterias, or caterers, etc.

6. Consumer use of office equipment and products, not including commercial printers or businesses primarily involved in photographic reproduction.

7. Janitorial services and consumer use of janitorial products.

8. Internal combustion engines used for landscaping purposes.

9. Laundry activities, except for dry-cleaning and steam boilers.

10. Bathroom/toilet emissions.

11. Emergency (backup) electrical generators at residential locations.

12. Tobacco smoking rooms and areas.

13. Blacksmith forges.

14. Maintenance of grounds or buildings, including: lawn care, weed control, pest control, and water washing activities.

15. Repair, up-keep, maintenance, or construction activities not related to the sources' primary business activity, and not otherwise triggering a permit modification. This may include, but is not limited to such activities as general repairs, cleaning, painting, welding, woodworking, plumbing, re-tarring roofs, installing insulation, paved/paving parking lots, miscellaneous solvent use, application of refractory, or insulation, brazing, soldering, the use of adhesives, grinding, and cutting.[1]

16. Surface-coating equipment during miscellaneous maintenance and construction activities. This activity specifically does not include any facility whose primary business activity is surface-coating or includes surface coating or products.

17. Portable electrical generators that can be "moved by hand" from one location to another.[2]

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[1] Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must get a permit.

[2] "Moved by hand" means that it can be moved by one person without assistance of any motorized or non-motorized vehicle, conveyance, or device.

18. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning, or machining wood, metal, or plastic.

19. Brazing or soldering equipment related to manufacturing activities that do not result in emission of HAPs.[3]

20. Air Compressors and pneumatically operated equipment, including hand tools.

21. Batteries and battery charging stations, except at battery manufacturing plants.

22. Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOCs or HAPs.[4]

23. Containers of less than or equal to 5 gallons in capacity that do not emit any detectable VOCs or HAPs when closed. This includes filling, blending, or mixing of the contents of such containers by a retailer.

24. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetables oil, grease, animal fat, and non-volatile aqueous salt solutions, provided appropriate lids and covers are used and appropriate odor control is achieved.

25. Equipment used to mix and package soaps, vegetable oil, grease, animal fat, and non-volatile aqueous salt solution, provided appropriate lids and covers are used and appropriate odor control is achieved.

26. Drop hammers or presses for forging or metalworking.

27. Equipment used exclusively to slaughter animals, but not including other equipment at slaughter-houses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.

28. Vents from continuous emission monitors and other analyzers.

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[3]Brazing, soldering, and welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals are more appropriate for treatment as insignificant activities based on size or production thresholds. Brazing , soldering, and welding equipment, and cutting torches related directly to plant maintenance and upkeep and repair or maintenance shop activities that emit HAP metals are treated as trivial and listed separately.

[4]Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids are based on size and limits including storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.

29. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.

30. Hand-held applicator equipment for hot melt adhesives with no VOCs in the adhesive.

31. Equipment used for surface coating, painting, dipping, or spraying operations, containing less than 0.4 lb/gal VOCs, any hexavalent chromium, or that emit no more than 0.1 tpy of all other HAPs.

32. Lasers used only on metals and other materials which do not emit HAPs in the process.

33. Consumer use of paper trimmers/binders.

34. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boiler used to deliver the steam.

35. Salt baths using non-volatile salts that do not result in emissions of any air pollutant covered by this regulation.

36. Laser trimmers using dust collection to prevent fugitive emissions.

37. Bench-scale laboratory equipment used for physical or chemical analysis.

38. Routine calibration and maintenance of laboratory equipment or other analytical instruments.

39. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.

40. Hydraulic and hydrostatic testing equipment.

41. Environmental chambers not using hazardous air pollutant gases.

42. Shock chambers, humidity chambers and solar simulators.

43. Fugitive emissions related to movement of passenger vehicles, provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.

44. Process water filtration systems and demineralizers.

45. Demineralized water tanks and demineralizer vents.

46. Boiler water treatment operations, not including cooling towers.

47. Emissions from storage or use of water treatment chemicals, except for hazardous air pollutants or pollutants listed under regulations promulgated pursuant to Section 112(r) of the Act, for use in cooling towers, drinking water systems, and boiler water/feed systems.

48. Oxygen scavenging (de-aeration) of water.

49. Ozone generators.

50. Fire suppression systems.

51. Emergency road flares.

52. Steam vents and safety relief valves.

53. Steam leaks.

54. Steam cleaning operations.

55. Steam and microwave sterilizers.

56. Site assessment work to characterize waste disposal or remediation sites.

57. Miscellaneous additions or upgrades of instrumentation.

58. Emissions from combustion controllers or combustion shutoff devices.

59. Use of products for the purpose of maintaining motor vehicles operated by the facility, not including air cleaning units or such vehicles (i.e. antifreeze, fuel additives).

60. Stacks or vents to prevent escape of sanitary sewer gases through the plumbing traps.

61. Emissions from equipment lubricating systems (i.e. oil mist), not including storage tanks, unless otherwise exempt.

62. Residential wood heaters, cookstoves, or fireplaces.

63. Barbecue equipment or outdoor fireplaces used in conjunction with any residence or recreation.

64. Log wetting areas and log fumes.

65. Periodic use of pressurized air for cleanup.

66. Solid waste dumpsters.

67. Emissions of wet lime from lime mud tanks, lime mud washers, lime mud piles, lime mud filter and filtrate tanks, and lime mud slurry tanks.

68. Natural gas odoring activities unless the Department determines that a nuisance may occur.

69. Emissions from engine crankcase vents.

70. Storage tanks used for the temporary containment of materials resulting from an emergency reporting to an unanticipated release.

71. Equipment used exclusively to mill or grind coatings in roll grinding rebuilding, and molding compounds where all materials charged are in paste form.

72. Mixers, blenders, roll mills, or calendars for rubber or plastic for which no materials in powder form are added and in which no organic solvents, diluents, or thinners are used.

73. The storage, handling, and handling equipment for bark and wood residues not subject to fugitive dispersion offsite (this applies to equipment only).

74. Maintenance dredging of pulp and paper mill surface impoundments and ditches containing cellulosic and cellulosic derived biosolids and inorganic materials such as lime, ash, or sand.

75. Tall oil soap storage, skimming, and loading.

76. Water heaters used strictly for domestic (non-process) purposes.

77. Facility roads and parking areas, unless necessary to control offsite fugitive emissions.

78. Agricultural operations, including onsite grain storage.

SECTION V: PLANTWIDE CONDITIONS

1. Pursuant to §19.4(o) of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the Director shall be notified in writing within thirty (30) days after construction has commenced, construction is complete, the equipment and/or facility is first placed in operation, and the equipment and/or facility first reaches the target production rate.

2. Pursuant to §19.4(q) of Regulation 19, and 40 CFR Part 52, Subpart E, the Director may cancel all or part of this permit if the construction or modification authorized herein is not begun within 18 months from the date of the permit issuance or if the work involved in the construction or modification is suspended for a total of 18 months or more.

3. Pursuant to §19.7 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, each emission point for which an emission test method is specified in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. Compliance test results shall be submitted to the Department within thirty (30) days after the completed testing. The permittee shall provide:

   (1) Sampling ports adequate for applicable test methods
   (2) Safe sampling platforms
   (3) Safe access to sampling platforms
   (4) Utilities for sampling and testing equipment

4. Pursuant to Regulation 19.3 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the equipment, control apparatus and emission monitoring equipment shall be operated within their design limitations and maintained in good condition at all times.

5. Pursuant to Regulation 26 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit subsumes and incorporates all previously issued air permits for this facility.

6. Pursuant to A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the sulfur content of the #6 fuel oil shall not exceed 3.0% by weight.

7. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall either obtain a manufacturer's certification of the sulfur content of the fuel oil or test each shipment of fuel oil received for the sulfur content. The manufacturer's certification or the test results shall be kept on site and shall be made available to Department personnel upon request.

8. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall notify the Department prior to the usage of any fuel oil at any source with the exception of SN-03. This notification shall include the approximate startup time and the length of time fuel oil will be burned.

9. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, natural gas usage at this facility shall not exceed 985.7 million standard cubic feet of natural gas in any consecutive twelve month period. This includes the amount of natural gas that may be fired at the package boiler, source SN-47.

10. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records in order to demonstrate compliance with Plantwide Condition 9 and which may be used by the Department for enforcement purposes. These records shall include the amount of natural gas used at each natural gas burning source, shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

11. Pursuant to A.C.A. §8-4-204 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not produce in excess of 324,850 air dried tons of pulp in any consecutive twelve month period.

12. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of air dried pulp produced in order to demonstrate compliance with Plantwide Condition 11 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

13. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not process more than 73,000 tons of lime in any consecutive twelve month period.

14. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records of the amount of lime processed in order to demonstrate compliance with Plantwide Condition 13 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. The first submittal shall be due January 31, 2000, and shall include data from the months January 1999 through December 1999.

15. International Paper Company is subject to the provisions of 40 CFR Part 63, Subpart A - *General Provisions* and 40 CFR Part 63, Subpart S - *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry*. A copy of this subpart has been included in Appendix F of this permit. International Paper Company is required to comply with all applicable provisions of this subpart within the time frames specified. This includes notifications to the Department of applicability and options which have been chosen to demonstrate compliance with this regulation.

16. Pursuant to §18.8 of Regulation 18, the permittee shall not cause or permit the emission of air contaminants, including odors or water vapor and including an air contaminant whose emission is not otherwise prohibited by Regulation #18, if the emission of the air contaminant constitutes air pollution within the meaning of A.C.A. §8-4-303.

17. Pursuant to §18.9 of Regulation 18, the permittee shall not conduct operations in such a manner as to unnecessarily cause air contaminants and other pollutants from becoming airborne.

Permit Shield.

18. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in item A of this condition:

    A. The following have been specifically identified as applicable requirements based upon information submitted by the permittee in an application dated August 23, 1996.

Source No.	Regulation	Description
Facility	19	SIP
Facility	26	Arkansas Title V regulations
13	40 CFR Part 60, Subpart GG	Standards of Performance for Stationary Gas Turbines
12, 14, and 27	40 CFR Part 60, Subpart BB	Standards of Performance for Kraft Pulp Mills

B. The following requirements have been specifically identified as not applicable, based upon information submitted by the permittee in an application dated August 23, 1996.

Description of Regulation	Regulatory Citation	Affected Source	Basis for Determination
NESHAP Subpart for Halogenated Solvent Cleaning	40 CFR Part 63, Subpart T	Facility	This facility does not use halogenated solvents in the parts cleaning operations.
Relaxed Compliance Orders	40 CFR Part 65	Facility	This part includes specific EPA orders allowing designated sources to delay compliance with an otherwise applicable SIP requirement until a specific date. This facility is not included among the Arkansas sources listed in this part.
Assessment and Collection of Noncompliance Penalties by EPA	40 CFR Part 66	Facility	This part imposes requirements only on sources of air pollution which have received notices of noncompliance. This facility has received no such notices.
EPA Approval of State Noncompliance Penalty Programs	40 CFR Part 67	Facility	This part does not impose requirements of sources.
Acid Rain Program	40 CFR Parts 72 -78	Facility	This facility is not currently subject to any acid rain requirements.

C. Nothing shall alter or affect the following:

Provisions of Section 303 of the Clean Air Act;

The liability of an owner or operator for any violation of applicable requirements prior to or at the time of permit issuance;

The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; or

The ability of the EPA to obtain information under Section 114 of the Clean Air Act.

Title VI Provisions

19. The permittee shall comply with the standards for labeling of products using ozone depleting substances pursuant to 40 CFR Part 82, Subpart E:

    A. All containers containing a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.

    B. The placement of the required warning statement must comply with the requirements pursuant to §82.108.

    C. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.

    D. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

20. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:

    A. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.

    B. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.

    C. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.

    D. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like appliance" as defined at §82.152.)

    E. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.

F. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

21. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.

22. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

    The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or systems used on passenger busses using HCFC-22 refrigerant.

23. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, Significant New Alternatives Policy Program.

SECTION VII: GENERAL PROVISIONS

1. Pursuant to 40 C.F.R. 70.6(b)(2), any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute.

2. Pursuant to 40 C.F.R. 70.6(a)(2) and §26.7 of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26), this permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later.

3. Pursuant to §26.4 of Regulation #26, it is the duty of the permittee to submit a complete application for permit renewal at least six (6) months prior to the date of permit expiration. Permit expiration terminates the permittee's right to operate unless a complete renewal application was submitted at least six (6) months prior to permit expiration, in which case the existing permit shall remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due.

4. Pursuant to 40 C.F.R. 70.6(a)(1)(ii) and §26.7 of Regulation #26, where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq* (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions are incorporated into the permit and shall be enforceable by the Director or Administrator.

5. Pursuant to 40 C.F.R. 70.6(a)(3)(ii)(A) and §26.7 of Regulation #26, records of monitoring information required by this permit shall include the following:

   a. The date, place as defined in this permit, and time of sampling or measurements;
   b. The date(s) analyses were performed;
   c. The company or entity that performed the analyses;
   d. The analytical techniques or methods used;
   e. The results of such analyses; and
   f. The operating conditions existing at the time of sampling or measurement.

6. Pursuant to 40 C.F.R. 70.6(a)(3)(ii)(B) and §26.7 of Regulation #26, records of all required monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

7. Pursuant to 40 C.F.R. 70.6(a)(3)(iii)(A) and §26.7 of Regulation #26, the permittee shall submit reports of all required monitoring every 6 months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official as defined in §26.2 of Regulation #26 and must be sent to the address below.

   Arkansas Department of Pollution Control and Ecology
   Air Division
   ATTN: Air Enforcement Branch
   Post Office Box 8913
   Little Rock, AR 72219-8913

8. Pursuant to 40 C.F.R. 70.6(a)(3)(iii)(B), §26.7 of Regulation #26, and §19.6 of Regulation #19, all deviations from permit requirements, including those attributable to upset conditions as defined in the permit shall be reported to the Department. An initial report shall be made to the Department within 24 hours of discovery of the occurrence. The initial report may be made by telephone and shall include:

   a. The facility name and location,
   b. The process unit or emission source which is deviating from the permit limit,
   c. The permit limit, including the identification of pollutants, from which deviation occurs,
   d. The date and time the deviation started,
   e. The duration of the deviation,
   f. The average emissions during the deviation,
   g. The probable cause of such deviations,
   h. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and
   i. The name of the person submitting the report.

   A full report shall be made in writing to the Department within five (5) business days of discovery of the occurrence and shall include in addition to the information required by the initial report a schedule of actions to be taken to eliminate future occurrences and/or to minimize the amount by which the permit's limits are exceeded and to reduce the

length of time for which said limits are exceeded. If the permittee wishes, they may submit a full report in writing (by facsimile, overnight courier, or other means) within 24 hours of discovery of the occurrence and such report will serve as both the initial report and full report.

9. Pursuant to 40 C.F.R. 70.6(a)(5), §26.7 of Regulation #26, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, if any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable.

10. Pursuant to 40 C.F.R. 70.6(a)(6)(i) and §26.7 of Regulation #26, the permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation #26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.* and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Any permit noncompliance with a state requirement constitutes a violation of the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) and is also grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

11. Pursuant to 40 C.F.R. 70.6(a)(6)(ii) and §26.7 of Regulation #26, it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

12. Pursuant to 40 C.F.R. 70.6(a)(6)(iii) and §26.7 of Regulation #26, this permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

13. Pursuant to 40 C.F.R. 70.6(a)(6)(iv) and §26.7 of Regulation #26, this permit does not convey any property rights of any sort, or any exclusive privilege.

14. Pursuant to 40 C.F.R. 70.6(a)(6)(v) and §26.7 of Regulation #26, the permittee shall furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Director copies of records

required to be kept by the permit. For information claimed to be confidential, the permittee may be required to furnish such records directly to the Administrator along with a claim of confidentiality.

15. Pursuant to 40 C.F.R. 70.6(a)(7) and §26.7 of Regulation #26, the permittee shall pay all permit fees in accordance with the procedures established in Regulation #9.

16. Pursuant to 40 C.F.R. 70.6(a)(8) and §26.7 of Regulation #26, no permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for elsewhere in this permit.

17. Pursuant to 40 C.F.R. 70.6(a)(9)(i) and §26.7 of Regulation #26, if the permittee is allowed to operate under different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the scenario under which the facility or source is operating.

18. Pursuant to 40 C.F.R. 70.6(b) and §26.7 of Regulation #26, all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Act unless the Department has specifically designated as not being federally enforceable under the Act any terms and conditions included in the permit that are not required under the Act or under any of its applicable requirements.

19. Pursuant to 40 C.F.R. 70.6(c)(1) and §26.7 of Regulation #26, any document (including reports) required by this permit shall contain a certification by a responsible official as defined in §26.2 of Regulation #26.

20. Pursuant to 40 C.F.R. 70.6(c)(2) and §26.7 of Regulation #26, the permittee shall allow an authorized representative of the Department, upon presentation of credentials, to perform the following:

    a. Enter upon the permittee's premises where the permitted source is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and

d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements.

21. Pursuant to 40 C.F.R. 70.6(c)(5) and §26.7 of Regulation #26, the permittee shall submit a compliance certification with terms and conditions contained in the permit, including emission limitations, standards, or work practices. This compliance certification shall be submitted annually and shall be submitted to the Administrator as well as to the Department. All compliance certifications required by this permit shall include the following:

    a. The identification of each term or condition of the permit that is the basis of the certification;
    b. The compliance status;
    c. Whether compliance was continuous or intermittent;
    d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
    e. Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and 504(b) of the Act.

22. Pursuant to §26.7 of Regulation #26, nothing in this permit shall alter or affect the following:

    a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
    b. The liability the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
    c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act; or
    d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.

23. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit authorizes only those pollutant emitting activities addressed herein.

APPENDIX A

Arkansas Department of Pollution Control & Ecology

CONTINUOUS EMISSION MONITORING SYSTEMS CONDITIONS

Revised October 1996

SECTION I

DEFINITIONS

Continuous Emission Monitoring System (CEMS) - The total equipment required for the determination of a gas concentration and/or emission rate so as to include sampling, analysis and recording of emission data. [1]

Calibration Drift (CD) - The difference in the CEMS output reading from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustments took place. [2]

Primary CEMS - The main reporting CEMS with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate.

Back-up CEM (Secondary CEM) - A CEM with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate. This CEM is to serve as a back-up to the primary CEMS to minimize monitor downtime.

Out-of-Control Period - Begins with the hour corresponding to the completion of a daily calibration error, linearity check, or quality assurance audit that indicates that the instrument is not measuring and recording within the applicable performance specifications. Out-of-Control Period ends with the hour corresponding to the completion of an additional calibration error, linearity check, or quality assurance audit following corrective action that demonstrates that the instrument is measuring and recording within the applicable performance specifications. [3]

Monitor Downtime - Any period during which the CEMS is unable to sample, analyze and record a minimum of four evenly spaced data points over an hour, except during one daily zero-span check during which two data points per hour are sufficient.

Excess Emissions - Any period in which the emissions exceed the permit limits.

SECTION II

MONITORING REQUIREMENTS

A. For new sources, the installation date for the CEMS shall be no later than thirty (30) days from the date of start-up of the source. [4]

B. For existing sources, the installation date for the CEMS shall be no later than sixty (60) days from the issuance of the permit unless a specific date is required by the permit. [4]

C. Within sixty (60) days of installation of a CEMS, a performance specification test (PST) must be completed. PST's are defined in 40 CFR, Part 60, Appendix B, PS 1-9. The Department may accept alternate PSTs for pollutants not covered by Appendix B on a case-by-case basis. Alternate PST's shall be approved, in writing, by the Compliance Inspector Supervisor prior to testing. [5]

D. Each CEMS shall have, as a minimum, a daily zero-span check. The zero-span shall be adjusted whenever the 24-hour zero or 24-hour span drift exceeds two times the limits in the applicable performance specification in 40 CFR, Part 60, Appendix B. Before any adjustments are made to either the zero or span drifts measured at the 24-hour interval the excess zero and span drifts measured must be quantified and recorded. [6]

E. All CEMS shall be in continuous operation and shall meet minimum frequency of operation requirements of 95% up-time for each quarter for each pollutant measured. Failure to maintain operation time shall constitute a violation of the CEMS conditions. [18]

F. All sources with a CEMS shall meet 95% compliance per quarter for each pollutant. Failure to maintain compliance shall constitute a violation of the CEMS conditions. [18]

G. All CEMS measuring emissions shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive fifteen minute period unless more cycles are required by the permit. For each CEMS, one-hour averages shall be computed from four or more data points equally spaced over each one hour period unless more data points are required by the permit. [7]

H. When the pollutant from a single affected facility is released through more than one point, a CEMS shall be installed on each point unless installation of fewer systems is approved, in writing, by the Compliance Inspector Supervisor. When more than one CEMS is used to monitor emissions from one affected facility (e.g. multiple breaching or multiple exhaust) the owner or operator shall report the results as required from each CEMS. [8]

SECTION III

NOTIFICATION AND RECORD KEEPING

A. When requested to do so by an owner or operator, the Compliance Inspector Supervisor will review plans for installation or modification for the purpose of providing technical advice to the owner or operator. [9]

B. Each facility which operates a CEMS shall notify the Compliance Inspector Supervisor of the date for which the demonstration of the CEMS performance will commence (ie. PST, RATA, RAA, CGA). Notification shall be received in writing no less than 15 days prior to testing. [10]

C. Each facility which operates a CEMS shall maintain records of the occurrence and duration of start up/shut down, cleaning/soot blowing, process problems, fuel problems, or other malfunction in the operation of the affected facility which causes excess emissions. This includes any malfunction of the air pollution control equipment or any period during which a continuous monitoring device/system is inoperative. [11]

D. Each facility required to install a CEMS shall submit an excess emission and monitoring system performance report to the Department (Attention: Air Division, Compliance Inspector Supervisor) at least quarterly, unless more frequent submittals are warranted to assess the compliance status of the facility. Quarterly reports shall be postmarked no later than the 30th day of the month following the end of each calendar quarter. [12]

E. All excess emissions shall be reported in terms of the applicable standard. Each report shall be submitted on ADPC&E Quarterly Excess Emission Report Forms. These forms may be obtained from the Air Division of the Little Rock office of ADPC&E. Alternate forms may be used with the prior written approval from the Department. [13]

F. Each facility which operates a CEMS must maintain on site a file of CEMS data including all raw data, corrected and adjusted, repair logs, calibration checks, adjustments, and test audits. This file must be retained for two years, and is required to be maintained in such a condition that it can easily be audited by an inspector. [14]

G. Quarterly reports shall be used by the Department to determine compliance with the permit. Violations of the CEMS Conditions may result in penalties and/or other enforcement action. [18]

SECTION IV

QUALITY ASSURANCE/QUALITY CONTROL

A. For each CEMS a Quality Assurance/Quality Control (QA/QC) plan shall be submitted to the Department (Attn.: Air Division, Compliance Inspector Supervisor). Quality assurance procedures are defined in 40 CFR, Part 60, Appendix F. This plan shall be submitted within 180 days of the CEMS installation. A QA/QC plan shall consist of procedure and practices which assures acceptable level of monitor data accuracy, precision, representativeness, and availability.

B. The submitted QA/QC plan for each CEMS shall not be considered as accepted until the facility receives a written notification of acceptance from the Department.

C. Facilities responsible for one, or more, CEMS used for compliance monitoring shall meet these minimum requirements and are encouraged to develop and implement a more extensive QA/QC program, or to continue such programs where they already exist. Each QA/QC program must include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities: [15]

1. Calibration of CEMS
   a. Daily calibrations (including the approximate time(s) that the daily zero and span drifts will be checked and the time required to perform these checks and return to stable operation)
2. Calibration drift determination and adjustment of CEMS
   a. Out-of-control period determination
   b. Steps of corrective action
3. Preventive maintenance of CEMS
   a. CEMS information
      1) Manufacture
      2) Model number
      3) Serial number
   b. Scheduled activities (check list)
   c. Spare part inventory
4. Data recording, calculations, and reporting
5. Accuracy audit procedures including sampling and analysis methods
6. Program of corrective action for malfunctioning CEMS

D. As part of the QA/QC plan for each CEMS, a Relative Accuracy Test Audit (RATA), shall be conducted at least once every four calendar quarters. A Relative Accuracy Audit (RAA), or a Cylinder Gas Audit (CGA), may be conducted in the other three quarters but in no more than three quarters in succession. The RATA, RAA, and CGA test procedures shall be included in the QA/QC plan submitted for approval. Additionally, the justification and methodology for any alternate tests shall be submitted with the QA/QC plan. [16]

E. If either the zero or span drift results exceed two times the applicable drift specification in 40 CFR, Part 60, Appendix B for five consecutive, daily periods, the CEMS is out-of-control. If either the zero or span drift results exceed four times the applicable drift specification in Appendix B during a calibration drift check, the CEMS is out-of-control. [17]

1. Out-of-control begins with the hour corresponding to the completion of a daily calibration error, linearity check, or quality assurance audit that indicates that the instrument is not measuring and recording within the applicable performance specifications.

2. Out-of-control ends with the hour corresponding to the completion of an additional calibration error, linearity check, or quality assurance audit following corrective action that demonstrates that the instrument is measuring and recording within the applicable performance specifications.

3. If a CEMS is out-of-control, the data from that out-of-control period is not counted towards meeting the minimum data availability as required and described in the applicable subpart.

F. A back-up monitor may be placed on an emission source to minimize monitor downtime. This back-up CEM is subject to the same QA/QC procedure and practices as the primary CEMS. The back-up CEM shall be certified by a PST. Daily zero-span checks must be performed and recorded in accordance with standard practices. When the primary CEMS goes down, the back-up CEMS may then be engaged to sample, analyze and record the emission source pollutant until repairs are made and the primary unit is placed back in service. Records must be maintained on site when the back-up CEMS is placed in service, these records shall include at a minium the reason the primary CEMS is out of service, the date and time the primary CEMS was out of service and the date and time the primary CEMS was placed back in service.

1 40 CFR, Part 60, Appendix F 2.1
2 40 CFR, Part 60, Appendix F 2.5
3 40 CFR, Part 60, Appendix F 4.3.1 & 5.2.1
4 40 CFR 60.13(b)
5 40 CFR 60.3(j)
6 40 CFR 60.13(d)(1), Part 60, Appendix F 4
7 40 CFR 60.13(e)(2)
8 40 CFR 60.13(g)
9 40 CFR 60.6(a)
10 40 CFR 60.7(5)
11 40 CFR 60.7(c)(2)
12 40 CFR 60.7(c)
13 40 CFR 60.7(d)
14 40 CFR 60.7(e)
15 40 CFR, Part 60, Appendix F 3
16 40 CFR, Part 60, Appendix F 5
17 40 CFR, Part 60, Appendix F 4.3
18 USEPA Guidance on the "Timely and Appropriate Enforcement Response to Significant Air Pollution Violators" (2/7/92)

APPENDIX B

Subpart GG—Standards of Performance for Stationary Gas Turbines

§ 60.330 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour, based on the lower heating value of the fuel fired.

(b) Any facility under paragraph (a) of this section which commences construction, modification, or reconstruction after October 3, 1977, is subject to the requirements of this part except as provided in paragraphs (e) and (j) of § 60.332.

[44 FR 52798, Sept. 10, 1979, as amended at 52 FR 42434, Nov. 5, 1987]

§ 60.331 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Stationary gas turbine* means any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self propelled. It may, however, be mounted on a vehicle for portability.

(b) *Simple cycle gas turbine* means any stationary gas turbine which does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or which does not recover heat from the gas turbine exhaust gases to heat water or generate steam.

(c) *Regenerative cycle gas turbine* means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine.

(d) *Combined cycle gas turbine* means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to heat water or generate steam.

(e) *Emergency gas turbine* means any stationary gas turbine which operates as a mechanical or electrical power source only when the primary power source for a facility has been rendered inoperable by an emergency situation.

(f) *Ice fog* means an atmospheric suspension of highly reflective ice crystals.

(g) *ISO standard day conditions* means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

(h) *Efficiency* means the gas turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output based on the lower heating value of the fuel.

(i) *Peak load* means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.

(j) *Base load* means the load level at which a gas turbine is normally operated.

(k) *Fire-fighting turbine* means any stationary gas turbine that is used solely to pump water for extinguishing fires.

(l) *Turbines employed in oil/gas production or oil/gas transportation* means any stationary gas turbine used to provide power to extract crude oil/natural gas from the earth or to move crude oil/natural gas, or products refined from these substances through pipelines.

(m) A *Metropolitan Statistical Area* or *MSA* as defined by the Department of Commerce.

(n) *Offshore platform gas turbines* means any stationary gas turbine located on a platform in an ocean.

(o) *Garrison facility* means any permanent military installation.

(p) *Gas turbine model* means a group of gas turbines having the same nominal air flow, combuster inlet pressure, combuster inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

(q) *Electric utility stationary gas turbine* means any stationary gas turbine constructed for the purpose of supplying more than one-third of its potential electric output capacity to any utility power distribution system for sale.

(r) *Emergency fuel* is a fuel fired by a gas turbine only during circumstances, such as natural gas supply curtailment or breakdown of delivery system, that make it impossible to fire natural gas in the gas turbine.

(s) *Regenerative cycle gas turbine* means any stationary gas turbine that recovers thermal energy from the exhaust gases and utilizes the thermal energy to preheat air prior to entering the combustor.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982]

§ 60.332 Standard for nitrogen oxides.

(a) On and after the date of the performance test required by § 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (b), (c), and (d) of this section shall comply with one of the following, except as provided in paragraphs (e), (f), (g), (h), (i), (j), (k), and (l) of this section.

(1) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0075 \frac{(14.4)}{Y} + F$$

where:

STD=allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y=manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F=NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

(2) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0150 \frac{(14.4)}{Y} + F$$

where:

STD=allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y=manufacturer's rated heat rate at manufacturer's rated peak load (kilojoules per watt hour), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F=NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

(3) F shall be defined according to the nitrogen content of the fuel as follows:

Fuel-bound nitrogen (percent by weight)	F (NO_x percent by volume)
N≤0.015	0
0.015<N≤0.1	0.04(N)
0.1<N≤0.25	0.004+0.0067(N−0.1)
N>0.25	0.005

where:

N=the nitrogen content of the fuel (percent by weight).

or:

Manufacturers may develop custom fuel-bound nitrogen allowances for each gas turbine model they manufacture. These fuel-bound nitrogen allowances shall be substantiated with data and must be approved for use by the Administrator before the initial performance test required by § 60.8. Notices of approval of custom fuel-bound nitrogen allowances will be published in the FEDERAL REGISTER.

(b) Electric utility stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.

(c) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired, shall comply with the provisions of paragraph (a)(2) of this section.

(d) Stationary gas turbines with a manufacturer's rated base load at ISO conditions of 30 megawatts or less except as provided in § 60.332(b) shall comply with paragraph (a)(2) of this section.

(e) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired and that have commenced construction prior to October 3, 1982 are exempt from paragraph (a) of this section.

(f) Stationary gas turbines using water or steam injection for control of NO_x emissions are exempt from paragraph (a) when ice fog is deemed a traffic hazard by the owner or operator of the gas turbine.

(g) Emergency gas turbines, military gas turbines for use in other than a garrison facility, military gas turbines installed for use as military training facilities, and fire fighting gas turbines are exempt from paragraph (a) of this section.

(h) Stationary gas turbines engaged by manufacturers in research and development of equipment for both gas turbine emission control techniques and gas turbine efficiency improvements are exempt from paragraph (a) on a case-by-case basis as determined by the Administrator.

(i) Exemptions from the requirements of paragraph (a) of this section will be granted on a case-by-case basis as determined by the Administrator in specific geographical areas where mandatory water restrictions are required by governmental agencies because of drought conditions. These exemptions will be allowed only while the mandatory water restrictions are in effect.

(j) Stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour that commenced construction, modification, or reconstruction between the dates of October 3, 1977, and January 27, 1982, and were required in the September 10, 1979, FEDERAL REGISTER (44 FR 52792) to comply with paragraph (a)(1) of this section, except electric utility stationary gas turbines, are exempt from paragraph (a) of this section.

(k) Stationary gas turbines with a heat input greater than or equal to 10.7 gigajoules per hour (10 million Btu/hour) when fired with natural gas are exempt from paragraph (a)(2) of this section when being fired with an emergency fuel.

(l) Regenerative cycle gas turbines with a heat input less than or equal to 107.2 gigajoules per

hour (100 million Btu/hour) are exempt from paragraph (a) of this section.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982]

§ 60.333 Standard for sulfur dioxide.

On and after the date on which the performance test required to be conducted by § 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with one or the other of the following conditions:

(a) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

[44 FR 52798, Sept. 10, 1979]

§ 60.334 Monitoring of operations.

(a) The owner or operator of any stationary gas turbine subject to the provisions of this subpart and using water injection to control NO_x emissions shall install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within ±5.0 percent and shall be approved by the Administrator.

(b) The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

(1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.

(2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.

(c) For the purpose of reports required under § 60.7(c), periods of excess emissions that shall be reported are defined as follows:

(1) *Nitrogen oxides.* Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with § 60.332 by the performance test required in § 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in § 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under § 60.335(a).

(2) *Sulfur dioxide.* Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.

(3) *Ice fog.* Each period during which an exemption provided in § 60.332(g) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

(4) *Emergency fuel.* Each period during which an exemption provided in § 60.332(k) is in effect shall be included in the report required in § 60.7(c). For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982]

§ 60.335 Test methods and procedures.

(a) To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.

(b) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided for in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.

(c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in §§ 60.332 and 60.333(a) as follows:

(1) The nitrogen oxides emission rate (NO_x) shall be computed for each run using the following equation:

$$NO_x=(NO_{xo})\ (P_r/P_o)^{0.5}\ e^{19(Ho-0.00633)}\ (288°K/T_a)^{1.53}$$

where:

NO_x=emission rate of NO_x at 15 percent O_2 and ISO standard ambient conditions, volume percent.
NO_{xo}=observed NO_x concentration, ppm by volume.
P_r=reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.
P_o=observed combustor inlet absolute pressure at test, mm Hg.
H_o=observed humidity of ambient air, g H_2O/g air.
e=transcendental constant, 2.718.
T_a=ambient temperature, °K.

(2) The monitoring device of § 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with § 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.

(3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NO_x emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.

(d) The owner or operator shall determine compliance with the sulfur content standard in § 60.333(b) as follows: ASTM D 2880–71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072–80, D 3031–81, D 4084–82, or D 3246–81 shall be used for the sulfur content of gaseous fuels (incorporated by reference—see § 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.

(e) To meet the requirements of § 60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

(f) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) Instead of using the equation in paragraph (b)(1) of this section, manufacturers may develop ambient condition correction factors to adjust the nitrogen oxides emission level measured by the performance test as provided in § 60.8. to ISO standard day conditions. These factors are developed for each gas turbine model they manufacture in terms of combustion inlet pressure, ambient air pressure, ambient air humidity, and ambient air temperature. They shall be substantiated with data and must be approved for use by the Administrator before the initial performance test required by § 60.8. Notices of approval of custom ambient condition correction factors will be published in the FEDERAL REGISTER.

[54 FR 6675, Feb. 14, 1989, as amended at 54 FR 27016, June 27, 1989]

APPENDIX C

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

SOURCE: 55 FR 37683, Sept. 12, 1990, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/hr).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, § 60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units which meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§ 60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in § 60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under § 60.14.

[55 FR 37683, Sept. 12, 1990, as amended at 61 FR 20736, May 8, 1996]

§ 60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society for Testing and Materials in ASTM D388–77, "Standard Specification for Classification of Coals by Rank" (incorporated by reference—see § 60.17); coal refuse; and petroleum coke. Synthetic fuels derived from coal for the purpose of creating useful heat, including but not limited to solvent-refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Cogeneration steam generating unit means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (i.e., the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396–78, "Standard Specification for Fuel Oils" (incorporated by reference—see § 60.17).

Dry flue gas desulfurization technology means a sulfur dioxide (SO_2) control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2 control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under § 60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR Parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means (1) a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane, or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835–86, "Standard Specification for Liquefied Petroleum Gases" (incorporated by reference—see § 60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO_2 emissions (nanograms per joule [ng/J], or pounds per million Btu [lb/million Btu] heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396–78, "Standard Specification for Fuel Oils" (incorporated by reference—see § 60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Wet flue gas desulfurization technology means an SO_2 control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of particulate matter (PM) or SO_2.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[55 FR 37683, Sept. 12, 1990, as amended at 61 FR 20736, May 8, 1996]

§ 60.42c Standard for sulfur dioxide.

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, the owner the operator of an affected facility that combusts only coal shall neither: (1) cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction); nor (2) cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/million Btu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 90 percent SO_2 reduction requirement specified in this paragraph and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 20 percent (0.20) of the potential SO_2 emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/million Btu) heat input. If coal is fired with coal refuse, the affected facility is subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 90 percent SO_2 reduction requirement specified in paragraph (a) of this section and the emission limit determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO_2 emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 50 percent (0.50) of the potential SO_2 emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 260 ng/J (0.60 lb/million Btu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO_2 reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under this paragraph.

(1) Affected facilities that have a heat input capacity of 22 MW (75 million Btu/hr) or less.

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a Federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area.

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam gen erating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 215 ng/J (0.50 lb/million Btu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the following:

(1) The percent of potential SO_2 emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel,

(ii) Has a heat input capacity greater than 22 MW (75 million Btu/hr), and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s=(K_aH_a+K_bH_b+K_cH_c)/H_a+H_b+H_c)$$

where:

E_s is the SO_2 emission limit, expressed in ng/J or lb/million Btu heat input,

K_a is 520 ng/J (1.2 lb/million Btu),

K_b is 260 ng/J (0.60 lb/million Btu),

K_c is 215 ng/J (0.50 lb/million Btu),

H_a is the heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [million Btu]

H_b is the heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (million Btu)

H_c is the heat input from the combustion of oil, in J (million Btu).

(f) Reduction in the potential SO_2 emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO_2 emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO_2 control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), or (3) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under § 60.48c(f)(1), (2), or (3), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 million Btu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 million Btu/hr).

(3) Coal-fired facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 million Btu/hr).

(i) The SO_2 emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

§ 60.43c Standard for particulate matter.

(a) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.05 lb/million Btu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/million Btu) heat imput if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/million Btu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/million Btu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever

date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and in § 60.8(b), performance tests required under § 60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in § 60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under § 60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO_2 emission limits under § 60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) and § 60.8, compliance with the percent reduction requirements and SO_2 emission limits under § 60.42c is based on the average percent reduction and the average SO_2 emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO_2 emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 are used to determine the hourly SO_2 emission rate (E_{ho}) and the 30-day average SO_2 emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the continuous emission monitoring system (CEMS). Method 19 shall be used to calculate E_{ao} when using daily fuel sampling or Method 6B.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E_{ho} ($E_{ho}°$) is used in Equation 19–19 of Method 19 to compute the adjusted E_{ao} ($E_{ao}°$). The $E_{ho}°$ is computed using the following formula:

$$E_{ho}° = [E_{ho} - E_w(1 - X_k)]/X_k$$

where:

$E_{ho}°$ is the adjusted E_{ho}, ng/J (lb/million Btu)

E_{ho} is the hourly SO_2 emission rate, ng/J (lb/million Btu)

E_w is the SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9, ng/J (lb/million Btu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume E_w=0.

X_k is the fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19.

(2) The owner or operator of an affected facility that qualifies under the provisions of § 60.42c(c) or (d) [where percent reduction is not required] does not have to measure the parameters E_w or X_k if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19.

(f) Affected facilities subject to the percent reduction requirements under § 60.42c(a) or (b) shall determine compliance with the SO_2 emission limits under § 60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO_2 emission rate is computed using the following formula:

$$\%P_s = 100(1 - \%R_g/100)(1 - \%R_f/100)$$

where

$\%P_s$ is the percent of potential SO_2 emission rate, in percent

$\%R_g$ is the SO_2 removal efficiency of the control device as determined by Method 19, in percent

$\%R_f$ is the SO_2 removal efficiency of fuel pretreatment as determined by Method 19, in percent

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g$ ($\%R_g°$) is computed from $E_{ao}°$ from paragraph (e)(1) of this section and an adjusted average SO_2 inlet rate ($E_{ai}°$) using the following formula:

$$\%R_g° = 100\ [1.0 - E_{ao}°/E_{ai}°)]$$

where:

$\%R_g^o$ is the adjusted $\%R_g$, in percent
E_{ao}^o is the adjusted E_{ao}, ng/J (lb/million Btu)
E_{ai}^o is the adjusted average SO_2 inlet rate, ng/J (lb/million Btu)

(ii) To compute E_{ai}^o, an adjusted hourly SO_2 inlet rate (E_{hi}^o) is used. The E_{hi}^o is computed using the following formula:

$$E_{hi}^o=\{E_{hi} - E_w (1 - X_k)\}/X_k$$

where:

E_{hi}^o is the adjusted E_{hi}, ng/J (lb/million Btu)
E_{hi} is the hourly SO_2 inlet rate, ng/J (lb/million Btu)
E_w is the SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19, ng/J (lb/million Btu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume $E_w = O$.
X_k is the fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under § 60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under § 60.46c(d)(2).

(h) For affected facilities subject to § 60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under § 60.48c(f)(1), (2), or (3), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2 standards under § 60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour averaged firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under § 60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or E_{ho} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under § 60.43c shall conduct an initial performance test as required under § 60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods.

(1) Method 1 shall be used to select the sampling site and the number of traverse sampling points. The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry square cubic meters (dscm) [60 dry square cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(2) Method 3 shall be used for gas analysis when applying Method 5, Method 5B, of Method 17.

(3) Method 5, Method 5B, or Method 17 shall be used to measure the concentration of PM as follows:

(i) Method 5 may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 2.1 and 2.3 of Method 5B may be used in Method 17 only if Method 17 is used in conjuction with a wet scrubber system. Method 17 shall not be used in conjuction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B may be used in conjunction with a wet scrubber system.

(4) For Method 5 or Method 5B, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 °C (320 °F).

(5) For determination of PM emissions, an oxygen or carbon dioxide measurement shall be obtained simultaneously with each run of Method 5,

Method 5B, or Method 17 by traversing the duct at the same sampling location.

(6) For each run using Method 5, Method 5B, or Method 17, the emission rates expressed in ng/J (lb/million Btu) heat input shall be determined using:

(i) The oxygen or carbon dioxide measurements and PM measurements obtained under this section,

(ii) The dry basis F-factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 (appendix A).

(7) Method 9 (6-minute average of 24 observations) shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under § 60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

§ 60.46c Emission monitoring for sulfur dioxide

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO_2 emission limits under § 60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO_2 concentrations and either oxygen or carbon dioxide concentrations at the outlet of the SO_2 control device (or the outlet of the steam generating unit if no SO_2 control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under § 60.42c shall measure SO_2 concentrations and either oxygen or carbon dioxide concentrations at both the inlet and outlet of the SO_2 control device.

(b) The 1-hour average SO_2 emission rates measured by a CEM shall be expressed in ng/J or lb/million Btu heat input and shall be used to calculate the average emission rates under § 60.42c. Each 1-hour average SO_2 emission rate must be based on at least 30 minutes of operation and include at least 2 data points representing two 15-minute periods. Hourly SO_2 emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 (appendix B).

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 (appendix F).

(3) For affected facilities subject to the percent reduction requirements under § 60.42c, the span value of the SO_2 CEMS at the inlet to the SO_2 control device shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted, and the span value of the SO_2 CEMS at the outlet from the SO_2 control device shall be 50 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of § 60.42c, the span value of the SO_2 CEMS at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEM at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by using Method 6B. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19. Method 19 provides procedures for converting these measurements into the format to be used in calculating the average SO_2 input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fule tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur con-

tent of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B may be used in lieu of CEMS to measure SO_2 at the inlet or outlet of the SO_2 control system. An initial stratification test is required to verify the adequacy of the Method 6B sampling location. The stratification test shall consist of three paired runs of a suitable SO_2 and carbon dioxide measurement train operated at the candidate location and a second similar train operated according to the procedures in § 3.2 and the applicable procedures in section 7 of Performance Specification 2 (appendix B). Method 6B, Method 6A, or a combination of Methods 6 and 3 or Methods 6C and 3A are suitable measurement techniques. If Method 6B is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to § 60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, as described under § 60.48c(f) (1), (2), or (3), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§ 60.47c Emission monitoring for particulate matter.

(a) The owner or operator of an affected facility combusting coal, residual oil, or wood that is subject to the opacity standards under § 60.43c shall install, calibrate, maintain, and operate a CEMS for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system.

(b) All CEMS for measuring opacity shall be operated in accordance with the applicable procedures under Performance Specification 1 (appendix B). The span value of the opacity CEMS shall be between 60 and 80 percent.

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by § 60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under § 60.42c, or § 60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO_2 emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of § 60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2 emission limits of § 60.42c, or the PM or opacity limits of § 60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS using the applicable performance specifications in appendix B.

(c) The owner or operator of each coal-fired, residual oil-fired, or wood-fired affected facility subject to the opacity limits under § 60.43c(c) shall submit excess emission reports for any calendar

quarter for which there are excess emissions from the affected facility. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report semiannually stating that no excess emissioins occurred during the semiannual reporting period. The initial quarterly report shall be postmarked by the 30th day of the third month following the completion of the initial performance test, unless no excess emissions occur during that quarter. The initial semiannual report shall be postmarked by the 30th day of the sixth month following the completion of the initial performance test, or following the date of the previous quarterly report, as applicable. Each subsequent quarterly or semiannual report shall be postmarked by the 30th day following the end of the reporting period.

(d) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall submit quarterly reports to the Administrator. The initial quarterly report shall be postmarked by the 30th day of the third month following the completion of the initial performance test. Each subsequenty quarterly report shall be postmarked by the 30th day following the end of the reporting period.

(e) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.43c shall keep records and submit quarterly reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO_2 emission rate (ng/J or lb/million Btu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period in the quarter; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO_2 emission rate calculated during the reporting period, ending with the last 30-day period in the quarter; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO_2 or diluent (oxygen or carbon dioxide) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 (appendix B).

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), or (3) of this section, as applicable. In addition to records of fuel supplier certifications, the quarterly report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the quarter.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier; and

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in § 60.41c.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another lo-

cation. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(g) The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day.

(h) The owner or operator of each affected facility subject to a Federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under § 60.42c or § 60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

APPENDIX D

Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

SOURCE: 52 FR 47842, Dec. 16, 1987, unless otherwise noted.

§ 60.40b Applicability and delegation of authority.

(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu/hour).

(b) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1984, but on or before June 19, 1986, is subject to the following standards:

(1) Coal-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 million Btu/hour), inclusive, are subject to the particulate matter and nitrogen oxides standards under this subpart.

(2) Coal-fired affected facilities having a heat input capacity greater than 73 MW (250 million Btu/hour) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; § 60.40) are subject to the particulate matter and nitrogen oxides standards under this subpart and to the sulfur dioxide standards under subpart D (§ 60.43).

(3) Oil-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 million Btu/hour), inclusive, are subject to the nitrogen oxides standards under this subpart.

(4) Oil-fired affected facilities having a heat input capacity greater than 73 MW (250 million Btu/hour) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; § 60.40) are also subject to the nitrogen oxides standards under this subpart and the particulate matter and sulfur dioxide standards under subpart D (§ 60.42 and § 60.43).

(c) Affected facilities which also meet the applicability requirements under subpart J (Standards of performance for petroleum refineries; § 60.104) are subject to the particulate matter and nitrogen oxides standards under this subpart and the sulfur dioxide standards under subpart J (§ 60.104).

(d) Affected facilities which also meet the applicability requirements under subpart E (Standards of performance for incinerators; § 60.50) are subject to the nitrogen oxides and particulate matter standards under this subpart.

(e) Steam generating units meeting the applicability requirements under subpart Da (Standards of performance for electric utility steam generating units; § 60.40a) are not subject to this subpart.

(f) Any change to an existing steam generating unit for the sole purpose of combusting gases containing TRS as defined under § 60.281 is not considered a modification under § 60.14 and the steam generating unit is not subject to this subpart.

(g) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the following authorities shall be retained by the Administrator and not transferred to a State.

(1) Section 60.44b(f).

(2) Section 60.44b(g).

(3) Section 60.49b(a)(4).

§ 60.41b Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from the fuels listed in § 60.42b(a), § 60.43b(a), or § 60.44b(a), as applicable, during a calendar year and the potential heat input to the steam generating unit had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility in a calendar year.

Byproduct/waste means any liquid or gaseous substance produced at chemical manufacturing plants or petroleum refineries (except natural gas, distillate oil, or residual oil) and combusted in a steam generating unit for heat recovery or for disposal. Gaseous substances with carbon dioxide levels greater than 50 percent or carbon monoxide levels greater than 10 percent are not byproduct/waste for the purposes of this subpart.

Chemical manufacturing plants means industrial plants which are classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 28.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388–77, Standard Specification for Classification of Coals by Rank (IBR—see § 60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any byproduct of coal mining or coal cleaning operations with an ash content greater than 50 percent, by weight, and a heating value less than 13,900 kJ/kg (6,000 Btu/lb) on a dry basis.

Combined cycle system means a system in which a separate source, such as a gas turbine, internal combustion engine, kiln, etc., provides exhaust gas to a heat recovery steam generating unit.

Conventional technology means wet flue gas desulfurization (FGD) technology, dry FGD technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396–78, Standard Specifications for Fuel Oils (incorporated by reference—see § 60.17).

Dry flue gas desulfurization technology means a sulfur dioxide control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline slurries or solutions used in dry flue gas desulfurization technology include but are not limited to lime and sodium.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary gas turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.

Emerging technology means any sulfur dioxide control system that is not defined as a conventional technology under this section, and for which the owner or operator of the facility has applied to the Administrator and received approval to operate as an emerging technology under § 60.49b(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State Implementation Plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed combustion technology means combustion of fuel in a bed or series of beds (including but not limited to bubbling bed units and circulating bed units) of limestone aggregate (or other sorbent materials) in which these materials are forced upward by the flow of combustion air and the gaseous products of combustion.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Full capacity means operation of the steam generating unit at 90 percent or more of the maximum steady-state design heat input capacity.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat input from preheated combustion air, recirculated flue gases, or exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

Heat release rate means the steam generating unit design heat input capacity (in MW or Btu/hour) divided by the furnace volume (in cubic meters or cubic feet); the furnace volume is that volume bounded by the front furnace wall where the burner is located, the furnace side waterwall, and extending to the level just below or in front of the first row of convection pass tubes.

Heat transfer medium means any material that is used to transfer heat from one point to another point.

High heat release rate means a heat release rate greater than 730,000 J/sec-m^3 (70,000 Btu/hour-ft^3).

Lignite means a type of coal classified as lignite A or lignite B by the American Society of Testing and Materials in ASTM D388–77, Standard Specification for Classification of Coals by Rank (IBR—see § 60.17).

Low heat release rate means a heat release rate of 730,000 J/sec-m^3 (70,000 Btu/hour-ft^3) or less.

Mass-feed stoker steam generating unit means a steam generating unit where solid fuel is introduced directly into a retort or is fed directly onto a grate where it is combusted.

Maximum heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel on a steady state basis, as determined by the physical design and characteristics of the steam generating unit.

Municipal-type solid waste means refuse, more than 50 percent of which is waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible materials such as glass and rock.

Natural gas means (1) a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or (2) liquid petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835–82, "Standard Specification for Liquid Petroleum Gases" (IBR—see § 60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil.

Petroleum refinery means industrial plants as classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 29.

Potential sulfur dioxide emission rate means the theoretical sulfur dioxide emissions (ng/J, lb/million Btu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Pulverized coal-fired steam generating unit means a steam generating unit in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the steam generating unit where it is fired in suspension. This includes both conventional pulverized coal-fired and micropulverized coal-fired steam generating units.

Residual oil means crude oil, fuel oil numbers 1 and 2 that have a nitrogen content greater than 0.05 weight percent, and all fuel oil numbers 4, 5 and 6, as defined by the American Society of Testing and Materials in ASTM D396–78, Standard Specifications for Fuel Oils (IBR—see § 60.17).

Spreader stoker steam generating unit means a steam generating unit in which solid fuel is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

Steam generating unit means a device that combusts any fuel or byproduct/waste to produce steam or to heat water or any other heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters as they are defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Very low sulfur oil means an oil that contains no more than 0.5 weight percent sulfur or that, when combusted without sulfur dioxide emission control, has a sulfur dioxide emission rate equal to or less than 215 ng/J (0.5 lb/million Btu) heat input.

Wet flue gas desulfurization technology means a sulfur dioxide control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gas with an alkaline slurry or solution and forming a liquid material. This definition applies to devices where the aqueous liquid material product of this contact is subsequently converted to other forms. Alkaline reagents used in wet flue gas desulfurization technology include, but are not limited to, lime, limestone, and sodium.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of particulate matter or sulfur dioxide.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including, but not limited to, sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51819, Dec. 18, 1989]

§ 60.42b Standard for sulfur dioxide.

(a) Except as provided in paragraphs (b), (c), (d), or (j) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal or oil shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 10 percent (0.10) of the potential sulfur dioxide emission rate (90 percent reduction) and that contain sulfur dioxide in excess of the emission limit determined according to the following formula:

$$E_s=(K_aH_a+K_bH_b)/(H_a+H_b)$$

where:

E_s is the sulfur dioxide emission limit, in ng/J or lb/million Btu heat input,

K_a is 520 ng/J (or 1.2 lb/million Btu),

K_b is 340 ng/J (or 0.80 lb/million Btu),

H_a is the heat input from the combustion of coal, in J (million Btu),

H_b is the heat input from the combustion of oil, in J (million Btu).

Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat input to the affected facility from exhaust gases from another source,

such as gas turbines, internal combustion engines, kilns, etc.

(b) On and after the date on which the performance test is completed or required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility that combusts coal refuse alone in a fluidized bed combustion steam generating unit shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 20 percent of the potential sulfur dioxide emission rate (80 percent reduction) and that contain sulfur dioxide in excess of 520 ng/J (1.2 lb/million Btu) heat input. If coal or oil is fired with coal refuse, the affected facility is subject to paragraph (a) or (d) of this section, as applicable.

(c) On and after the date on which the performance test is completed or is required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility that combusts coal or oil, either alone or in combination with any other fuel, and that uses an emerging technology for the control of sulfur dioxide emissions, shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 50 percent of the potential sulfur dioxide emission rate (50 percent reduction) and that contain sulfur dioxide in excess of the emission limit determined according to the following formula:

$$E_s=(K_cH_c+K_dH_d)/H_c+H_d)$$

where:

E_s is the sulfur dioxide emission limit, expressed in ng/J (lb/million Btu) heat input,

K_c is 260 ng/J (0.60 lb/million Btu),

K_d is 170 ng/J (0.40 lb/million Btu),

H_c is the heat input from the combustion of coal, J (million Btu),

H_d is the heat input from the combustion of oil, J (million Btu).

Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels, or from the heat input to the affected facility from exhaust gases from another source, such as gas turbines, internal combustion engines, kilns, etc.

(d) On and after the date on which the performance test is completed or required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility listed in paragraphs (d) (1), (2), or (3) of this section shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 520 ng/J (1.2 lb/million Btu) heat input if the affected facility combusts coal, or 215 ng/J (0.5 lb/million Btu) heat input if the affected facility combusts oil other than very low sulfur oil. Percent reduction requirements are not applicable to affected facilities under this paragraph.

(1) Affected facilities that have an annual capacity factor for coal and oil of 30 percent (0.30) or less and are subject to a Federally enforceable permit limiting the operation of the affected facility to an annual capacity factor for coal and oil of 30 percent (0.30) or less;

(2) Affected facilities located in a noncontinental area; or

(3) Affected facilities combusting coal or oil, alone or in combination with any other fuel, in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat input to the steam generating unit is from combustion of coal and oil in the duct burner and 70 percent (0.70) or more of the heat input to the steam generating unit is from the exhaust gases entering the duct burner.

(e) Except as provided in paragraph (f) of this section, compliance with the emission limits, fuel oil sulfur limits, and/or percent reduction requirements under this section are determined on a 30-day rolling average basis.

(f) Except as provided in paragraph (j)(2) of this section, compliance with the emission limits or fuel oil sulfur limits under this section is determined on a 24-hour average basis for affected facilities that (1) have a Federally enforceable permit limiting the annual capacity factor for oil to 10 percent or less, (2) combust only very low sulfur oil, and (3) do not combust any other fuel.

(g) Except as provided in paragraph (i) of this section, the sulfur dioxide emission limits and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(h) Reductions in the potential sulfur dioxide emission rate through fuel pretreatment are not credited toward the percent reduction requirement under paragraph (c) of this section unless:

(1) Fuel pretreatment results in a 50 percent or greater reduction in potential sulfur dioxide emissions and

(2) Emissions from the pretreated fuel (without combustion or post combustion sulfur dioxide control) are equal to or less than the emission limits specified in paragraph (c) of this section.

(i) An affected facility subject to paragraph (a), (b), or (c) of this section may combust very low sulfur oil or natural gas when the sulfur dioxide control system is not being operated because of malfunction or maintenance of the sulfur dioxide control system.

(j) Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall

demonstrate that the oil meets the definition of very low sulfur oil by: (1) Following the performance testing procedures as described in § 60.45b(c) or § 60.45b(d), and following the monitoring procedures as described in § 60.47b(a) or § 60.47b(b) to determine sulfur dioxide emission rate or fuel oil sulfur content; or (2) maintaining fuel receipts as described in § 60.49b(r).

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51819, Dec. 18, 1989]

§ 60.43b Standard for particulate matter.

(a) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility which combusts coal or combusts mixtures of coal with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of the following emission limits:

(1) 22 ng/J (0.05 lb/million Btu) heat input,

(i) If the affected facility combusts only coal, or

(ii) If the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/million Btu) heat input if the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels greater than 10 percent (0.10) and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(3) 86 ng/J (0.20 lb/million Btu) heat input if the affected facility combusts coal or coal and other fuels and

(i) Has an annual capacity factor for coal or coal and other fuels of 30 percent (0.30) or less,

(ii) Has a maximum heat input capacity of 73 MW (250 million Btu/hour) or less,

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for coal or coal and other solid fuels, and

(iv) Construction of the affected facility commenced after June 19, 1984, and before November 25, 1986.

(b) On and after the date on which the performance test is completed or required to be completed under 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts oil (or mixtures of oil with other fuels) and uses a conventional or emerging technology to reduce sulfur dioxide emissions shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of 43 ng/J (0.10 lb/million Btu) heat input.

(c) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts wood, or wood with other fuels, except coal, shall cause to be discharged from that affected facility any gases that contain particulate matter in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/million Btu) heat input if the affected facility has an annual capacity factor greater than 30 percent (0.30) for wood.

(2) 86 ng/J (0.20 lb/million Btu) heat input if

(i) The affected facility has an annual capacity factor of 30 percent (0.30) or less for wood,

(ii) Is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for wood, and

(iii) Has a maximum heat input capacity of 73 MW (250 million Btu/hour) or less.

(d) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts municipal-type solid waste or mixtures of municipal-type solid waste with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/million Btu) heat input,

(i) If the affected facility combusts only municipal-type solid waste, or

(ii) If the affected facility combusts municipal-type solid waste and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 86 ng/J (0.20 lb/million Btu) heat input if the affected facility combusts municipal-type solid waste or municipal-type solid waste and other fuels; and

(i) Has an annual capacity factor for municipal-type solid waste and other fuels of 30 percent (0.30) or less,

(ii) Has a maximum heat input capacity of 73 MW (250 million Btu/hour) or less,

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) for municipal-type solid waste, or municipal-type solid waste and other fuels, and

(iv) Construction of the affected facility commenced after June 19, 1984, but before November 25, 1986.

(e) For the purposes of this section, the annual capacity factor is determined by dividing the actual heat input to the steam generating unit during the calendar year from the combustion of coal,

wood, or municipal-type solid waste, and other fuels, as applicable, by the potential heat input to the steam generating unit if the steam generating unit had been operated for 8,760 hours at the maximum design heat input capacity.

(f) On and after the date on which the initial performance test is completed or is required to be completed under 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(g) The particulate matter and opacity standards apply at all times, except during periods of startup, shutdown or malfunction.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51819, Dec. 18, 1989]

§ 60.44b Standard for nitrogen oxides.

(a) Except as provided under paragraph (k) of this section, on and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides (expressed as NO_2) in excess of the following emission limits:

Fuel/Steam generating unit type	Nitrogen oxide emission limits ng/J (lb/million Btu) (expressed as NO_2) heat input
(1) Natural gas and distillate oil, except (4):	
(i) Low heat release rate	43 (0.10)
(ii) High heat release rate	86 (0.20)
(2) Residual oil:	
(i) Low heat release rate	130 (0.30)
(ii) High heat release rate	170 (0.40)
(3) Coal:	
(i) Mass-feed stoker	210 (0.50)
(ii) Spreader stoker and fluidized bed combustion	260 (0.60)
(iii) Pulverized coal	300 (0.70)
(iv) Lignite, except (v)	260 (0.60)
(v) Lignite mined in North Dakota, South Dakota, or Montana and combusted in a slag tap furnace	340 (0.80)
(vi) Coal-derived synthetic fuels	210 (0.50)
(4) Duct burner used in a combined cycle system:	
(i) Natural gas and distillate oil	86 (0.20)
(ii) Residual oil	170 (0.40)

(b) Except as provided under paragraph (k) of this section, on and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts mixtures of coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of a limit determined by use of the following formula:

$$E_n=[(EL_{go}\ H_{go})+(EL_{ro}\ H_{ro})+(EL_c\ H_c)]/(H_{go}+H_{ro}+H_c)$$

where:

E_n is the nitrogen oxides emission limit (expressed as NO_2), ng/J (lb/million Btu)

EL_{go} is the appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/million Btu)

H_{go} is the heat input from combustion of natural gas or distillate oil,

EL_{ro} is the appropriate emission limit from paragraph (a)(2) for combustion of residual oil,

H_{ro} is the heat input from combustion of residual oil,

EL_c is the appropriate emission limit from paragraph (a)(3) for combustion of coal, and

H_c is the heat input from combustion of coal.

(c) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever comes first, no owner or operator of an affected facility that simultaneously combusts coal or oil, or a mixture of these fuels with natural gas, and wood, municipal-type solid waste, or any other fuel shall cause to be discharged into the atmosphere any gases that contain nitrogen oxides in excess of the emission limit for the coal or oil, or mixture of these fuels with natural gas combusted in the affected facility, as determined pursuant to paragraph (a) or (b) of this section, unless the affected facility has an annual capacity factor for coal or oil, or mixture of these fuels with natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, or a mixture of these fuels with natural gas.

(d) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts natural gas with wood, municipal-type solid waste, or other solid fuel, except coal, shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of 130 ng/J (0.30 lb/million Btu) heat input unless the affected facility has an annual capacity factor for natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for natural gas.

(e) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal, oil, or natural gas with byproduct/waste shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of an emission limit determined by the following formula unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement which limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less:

$$E_n=[(EL_{go}\ H_{go})+(EL_{ro}\ H_{ro})+(EL_c\ H_c)]/(H_{go}+H_{ro}+H_c)$$

where:

E_n is the nitrogen oxides emission limit (expressed as NO_2), ng/J (lb/million Btu)

EL_{go} is the appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/million Btu).

H_{go} is the heat input from combustion of natural gas, distillate oil and gaseous byproduct/waste, ng/J (lb/million Btu).

EL_{ro} is the appropriate emission limit from paragraph (a)(2) for combustion of residual oil, ng/J (lb/million Btu)

H_{ro} is the heat input from combustion of residual oil and/or liquid byproduct/waste.

EL_c is the appropriate emission limit from paragraph (a)(3) for combustion of coal, and

H_c is the heat input from combustion of coal.

(f) Any owner or operator of an affected facility that combusts byproduct/waste with either natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility to establish a nitrogen oxides emission limit which shall apply specifically to that affected facility when the byproduct/waste is combusted. The petition shall include sufficient and appropriate data, as determined by the Administrator, such as nitrogen oxides emissions from the affected facility, waste composition (including nitrogen content), and combustion conditions to allow the Administrator to confirm that the affected facility is unable to comply with the emission limits in paragraph (e) of this section and to determine the appropriate emission limit for the affected facility.

(1) Any owner or operator of an affected facility petitioning for a facility-specific nitrogen oxides emission limit under this section shall:

(i) Demonstrate compliance with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, by conducting a 30-day performance test as provided in § 60.46b(e). During the performance test only natural gas, distillate oil, or residual oil shall be combusted in the affected facility; and

(ii) Demonstrate that the affected facility is unable to comply with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, when gaseous or liquid byproduct/waste is combusted in the affected facility under the same conditions and using the same technological system of emission reduction applied when demonstrating compliance under paragraph (f)(1)(i) of this section.

(2) The nitrogen oxides emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, shall be applicable to the affected facility until and unless the petition is approved by the Administrator. If the petition is approved by the Administrator, a facility-specific nitrogen oxides emission limit will be established at the nitrogen oxides emission level achievable when the affected facility is combusting oil or natural gas and byproduct/waste in a manner that the Administrator determines to be consistent with minimizing nitrogen oxides emissions.

(g) Any owner or operator of an affected facility that combusts hazardous waste (as defined by 40 CFR part 261 or 40 CFR part 761) with natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility for a waiver from compliance with the nitrogen oxides emission limit which applies specifically to that affected facility. The petition must include sufficient and appropriate data, as determined by the Administrator, on nitrogen oxides emissions from the affected facility, waste destruction efficiencies, waste composition (including nitrogen content), the quantity of specific wastes to be combusted and combustion conditions to allow the Administrator to determine if the affected facility is able to comply with the nitrogen oxides emission limits required by this section. The owner or operator of the affected facility shall demonstrate that when hazardous waste is combusted in the affected facility, thermal destruction efficiency requirements for hazardous waste specified in an applicable federally enforceable requirement preclude compliance with the nitrogen oxides emission limits of this section. The nitrogen oxides emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, are applicable to the affected facility until and unless the petition is approved by the Administrator. (See 40 CFR 761.70 for regulations applicable to the incineration of materials containing polychlorinated biphenyls (PCB's).)

(h) For purposes of paragraph (i) of this section, the nitrogen oxide standards under this section

apply at all times including periods of startup, shutdown, or malfunction.

(i) Except as provided under paragraph (j) of this section, compliance with the emission limits under this section is determined on a 30-day rolling average basis.

(j) Compliance with the emission limits under this section is determined on a 24-hour average basis for the initial performance test and on a 3-hour average basis for subsequent performance tests for any affected facilities that:

(1) Combust, alone or in combination, only natural gas, distillate oil, or residual oil with a nitrogen content of 0.30 weight percent or less;

(2) Have a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less; and

(3) Are subject to a Federally enforceable requirement limiting operation of the affected facility to the firing of natural gas, distillate oil, and/or residual oil with a nitrogen content of 0.30 weight percent or less and limiting operation of the affected facility to a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil and a nitrogen content of 0.30 weight percent or less.

(k) Affected facilities that meet the criteria described in paragraphs (j) (1), (2), and (3) of this section, and that have a heat input capacity of 73 MW (250 million Btu/hour) or less, are not subject to the nitrogen oxides emission limits under this section.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51825, Dec. 18, 1989]

§ 60.45b Compliance and performance test methods and procedures for sulfur dioxide.

(a) The sulfur dioxide emission standards under § 60.42b apply at all times.

(b) In conducting the performance tests required under § 60.8, the owner or operator shall use the methods and procedures in appendix A of this part or the methods and procedures as specified in this section, except as provided in § 60.8(b). Section 60.8(f) does not apply to this section. The 30-day notice required in § 60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(c) The owner or operator of an affected facility shall conduct performance tests to determine compliance with the percent of potential sulfur dioxide emission rate (% P_s) and the sulfur dioxide emission rate (E_s) pursuant to § 60.42b following the procedures listed below, except as provided under paragraph (d) of this section.

(1) The initial performance test shall be conducted over the first 30 consecutive operating days of the steam generating unit. Compliance with the sulfur dioxide standards shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility.

(2) If only coal or only oil is combusted, the following procedures are used:

(i) The procedures in Method 19 are used to determine the hourly sulfur dioxide emission rate (E_{ho}) and the 30-day average emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the continuous emission monitoring system of § 60.47b (a) or (b).

(ii) The percent of potential sulfur dioxide emission rate (% P_s) emitted to the atmosphere is computed using the following formula:

$$\% P_s = 100\ (1 - \% R_g/100)(1 - \% R_f/100)$$

where:

% R_g is the sulfur dioxide removal efficiency of the control device as determined by Method 19, in percent.

% R_f is the sulfur dioxide removal efficiency of fuel pretreatment as determined by Method 19, in percent.

(3) If coal or oil is combusted with other fuels, the same procedures required in paragraph (c)(2) of this section are used, except as provided in the following:

(i) An adjusted hourly sulfur dioxide emission rate (E_{ho}^o) is used in Equation 19–19 of Method 19 to compute an adjusted 30-day average emission rate (E_{ao}^o). The E_{ho} is computed using the following formula:

$$E_{ho}^o = [E_{ho} - E_w(1 - X_k)]/X_k$$

where:

E_{ho}^o is the adjusted hourly sulfur dioxide emission rate, ng/J (lb/million Btu).

E_{ho} is the hourly sulfur dioxide emission rate, ng/J (lb/million Btu).

E_w is the sulfur dioxide concentration in fuels other than coal and oil combusted in the affected facility, as determined by the fuel sampling and analysis procedures in Method 19, ng/J (lb/million Btu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted.

X_k is the fraction of total heat input from fuel combustion derived from coal, oil, or coal and oil, as determined by applicable procedures in Method 19.

(ii) To compute the percent of potential sulfur dioxide emission rate (% P_s), an adjusted % R_g (% R_g^o) is computed from the adjusted E_{ao}^o from paragraph (b)(3)(i) of this section and an adjusted average sulfur dioxide inlet rate (E_{ai}^o) using the following formula:

$$\% R_g^o = 100\ (1.0 - E_{ao}^o/E_{ai}^o)$$

To compute E_{ai}^{o}, an adjusted hourly sulfur dioxide inlet rate (E_{hi}^{o}) is used. The E_{hi}^{o} is computed using the following formula:

$$E_{hi}^{o}=[E_{hi} \cdot E_{w}(1 \cdot X_{k})]/X_{k}$$

where:

E_{hi}^{o} is the adjusted hourly sulfur dioxide inlet rate, ng/J (lb/million Btu).

E_{hi} is the hourly sulfur dioxide inlet rate, ng/J (lb/million Btu).

(4) The owner or operator of an affected facility subject to paragraph (b)(3) of this section does not have to measure parameters E_w or X_k if the owner or operator elects to assume that X_k=1.0. Owners or operators of affected facilities who assume X_k=1.0 shall

(i) Determine % P_s following the procedures in paragraph (c)(2) of this section, and

(ii) Sulfur dioxide emissions (E_s) are considered to be in compliance with sulfur dioxide emission limits under § 60.42b.

(5) The owner or operator of an affected facility that qualifies under the provisions of § 60.42b(d) does not have to measure parameters E_w or X_k under paragraph (b)(3) of this section if the owner or operator of the affected facility elects to measure sulfur dioxide emission rates of the coal or oil following the fuel sampling and analysis procedures under Method 19.

(d) Except as provided in paragraph (j), the owner or operator of an affected facility that combusts only very low sulfur oil, has an annual capacity factor for oil of 10 percent (0.10) or less, and is subject to a Federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for oil of 10 percent (0.10) or less shall:

(1) Conduct the initial performance test over 24 consecutive steam generating unit operating hours at full load;

(2) Determine compliance with the standards after the initial performance test based on the arithmetic average of the hourly emissions data during each steam generating unit operating day if a continuous emission measurement system (CEMS) is used, or based on a daily average if Method 6B or fuel sampling and analysis procedures under Method 19 are used.

(e) The owner or operator of an affected facility subject to § 60.42b(d)(1) shall demonstrate the maximum design capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. This demonstration will be made during the initial performance test and a subsequent demonstration may be requested at any other time. If the 24-hour average firing rate for the affected facility is less than the maximum design capacity provided by the manufacturer of the affected facility, the 24-hour average firing rate shall be used to determine the capacity utilization rate for the affected facility, otherwise the maximum design capacity provided by the manufacturer is used.

(f) For the initial performance test required under § 60.8, compliance with the sulfur dioxide emission limits and percent reduction requirements under § 60.42b is based on the average emission rates and the average percent reduction for sulfur dioxide for the first 30 consecutive steam generating unit operating days, except as provided under paragraph (d) of this section. The initial performance test is the only test for which at least 30 days prior notice is required unless otherwise specified by the Administrator. The initial performance test is to be scheduled so that the first steam generating unit operating day of the 30 successive steam generating unit operating days is completed within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility. The boiler load during the 30-day period does not have to be the maximum design load, but must be representative of future operating conditions and include at least one 24-hour period at full load.

(g) After the initial performance test required under § 60.8, compliance with the sulfur dioxide emission limits and percent reduction requirements under § 60.42b is based on the average emission rates and the average percent reduction for sulfur dioxide for 30 successive steam generating unit operating days, except as provided under paragraph (d). A separate performance test is completed at the end of each steam generating unit operating day after the initial performance test, and a new 30-day average emission rate and percent reduction for sulfur dioxide are calculated to show compliance with the standard.

(h) Except as provided under paragraph (i) of this section, the owner or operator of an affected facility shall use all valid sulfur dioxide emissions data in calculating % P_s and E_{ho} under paragraph (c), of this section whether or not the minimum emissions data requirements under § 60.46b are achieved. All valid emissions data, including valid sulfur dioxides emission data collected during periods of startup, shutdown and malfunction, shall be used in calculating % P_s and E_{ho} pursuant to paragraph (c) of this section.

(i) During periods of malfunction or maintenance of the sulfur dioxide control systems when oil is combusted as provided under § 60.42b(i), emission data are not used to calculate % P_s or E_s under § 60.42b (a), (b) or (c), however, the emissions data are used to determine compliance with the emission limit under § 60.42b(i).

(j) The owner or operator of an affected facility that combusts very low sulfur oil is not subject to the compliance and performance testing require-

ments of this section if the owner or operator obtains fuel receipts as described in § 60.49b(r).

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51820, 51825, Dec. 18, 1989]

§ 60.46b Compliance and performance test methods and procedures for particulate matter and nitrogen oxides.

(a) The particulate matter emission standards and opacity limits under § 60.43b apply at all times except during periods of startup, shutdown, or malfunction. The nitrogen oxides emission standards under § 60.44b apply at all times.

(b) Compliance with the particulate matter emission standards under § 60.43b shall be determined through performance testing as described in paragraph (d) of this section.

(c) Compliance with the nitrogen oxides emission standards under § 60.44b shall be determined through performance testing under paragraph (e) or (f), or under paragraphs (g) and (h) of this section, as applicable.

(d) To determine compliance with the particulate matter emission limits and opacity limits under § 60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under § 60.8 using the following procedures and reference methods:

(1) Method 3B is used for gas analysis when applying Method 5 or Method 17.

(2) Method 5, Method 5B, or Method 17 shall be used to measure the concentration of particulate matter as follows:

(i) Method 5 shall be used at affected facilities without wet flue gas desulfurization (FGD) systems; and

(ii) Method 17 may be used at facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of sections 2.1 and 2.3 of Method 5B may be used in Method 17 only if it is used after a wet FGD system. Do not use Method 17 after wet FGD systems if the effluent is saturated or laden with water droplets.

(iii) Method 5B is to be used only after wet FGD systems.

(3) Method 1 is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf) except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(4) For Method 5, the temperature of the sample gas in the probe and filter holder is monitored and is maintained at 160 °C (320 °F).

(5) For determination of particulate matter emissions, the oxygen or carbon dioxide sample is obtained simultaneously with each run of Method 5, Method 5B or Method 17 by traversing the duct at the same sampling location.

(6) For each run using Method 5, Method 5B or Method 17, the emission rate expressed in nanograms per joule heat input is determined using:

(i) The oxygen or carbon dioxide measurements and particulate matter measurements obtained under this section,

(ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 (appendix A).

(7) Method 9 is used for determining the opacity of stack emissions.

(e) To determine compliance with the emission limits for nitrogen oxides required under § 60.44b, the owner or operator of an affected facility shall conduct the performance test as required under § 60.8 using the continuous system for monitoring nitrogen oxides under § 60.48(b).

(1) For the initial compliance test, nitrogen oxides from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the nitrogen oxides emission standards under § 60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

(2) Following the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, the owner or operator of an affected facility which combusts coal or which combusts residual oil having a nitrogen content greater than 0.30 weight percent shall determine compliance with the nitrogen oxides emission standards under § 60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

(3) Following the date on which the initial performance test is completed or is required to be completed under § 60.8 of this part, whichever date comes first, the owner or operator of an affected facility which has a heat input capacity greater than 73 MW (250 million Btu/hour) and which combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall determine compliance with the nitrogen oxides standards under § 60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling

average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

(4) Following the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, the owner or operator of an affected facility which has a heat input capacity of 73 MW (250 million Btu/hour) or less and which combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the nitrogen oxides standards under § 60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, nitrogen oxides emissions data collected pursuant to § 60.48b(g)(1) or § 60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the nitrogen oxides emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

(5) If the owner or operator of an affected facility which combusts residual oil does not sample and analyze the residual oil for nitrogen content, as specified in § 60.49b(e), the requirements of paragraph (iii) of this section apply and the provisions of paragraph (iv) of this section are inapplicable.

(f) To determine compliance with the emission limit for nitrogen oxides required by § 60.44b(a)(4) for duct burners used in combined cycle systems, the owner or operator of an affected facility shall conduct the performance test required under § 60.8 using the nitrogen oxides and oxygen measurement procedures in 40 CFR part 60 appendix A, Method 20. During the performance test, one sampling site shall be located as close as practicable to the exhaust of the turbine, as provided by section 6.1.1 of Method 20. A second sampling site shall be located at the outlet to the steam generating unit. Measurements of nitrogen oxides and oxygen shall be taken at both sampling sites during the performance test. The nitrogen oxides emission rate from the combined cycle system shall be calculated by subtracting the nitrogen oxides emission rate measured at the sampling site at the outlet from the turbine from the nitrogen oxides emission rate measured at the sampling site at the outlet from the steam generating unit.

(g) The owner or operator of an affected facility described in § 60.44b(j) or § 60.44b(k) shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. The owner or operator of an affected facility shall determine the maximum heat input capacity using the heat loss method described in sections 5 and 7.3 of the ASME *Power Test Codes* 4.1 (see IBR § 60.17(h)). This demonstration of maximum heat input capacity shall be made during the initial performance test for affected facilities that meet the criteria of § 60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of § 60.44b(k). Subsequent demonstrations may be required by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used.

(h) The owner or operator of an affected facility described in § 60.44b(j) that has a heat input capacity greater than 73 MW (250 million Btu/hour) shall:

(1) Conduct an initial performance test as required under § 60.8 over a minimum of 24 consecutive steam generating unit operating hours at maximum heat input capacity to demonstrate compliance with the nitrogen oxides emission standards under § 60.44b using Method 7, 7A, 7E, or other approved reference methods; and

(2) Conduct subsequent performance tests once per calendar year or every 400 hours of operation (whichever comes first) to demonstrate compliance with the nitrogen oxides emission standards under § 60.44b over a minimum of 3 consecutive steam generating unit operating hours at maximum heat input capacity using Method 7, 7A, 7E, or other approved reference methods.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51820, 51825, Dec. 18, 1989; 55 FR 18876, May 7, 1990]

§ 60.47b Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (b) and (f) of this section, the owner or operator of an affected facility subject to the sulfur dioxide standards under § 60.42b shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) for measuring sulfur dioxide concentrations and either oxygen (O_2) or carbon dioxide (CO_2) concentrations and shall record the output of the systems. The sulfur dioxide and either oxygen or carbon dioxide concentrations shall both

be monitored at the inlet and outlet of the sulfur dioxide control device.

(b) As an alternative to operating CEMS as required under paragraph (a) of this section, an owner or operator may elect to determine the average sulfur dioxide emissions and percent reduction by:

(1) Collecting coal or oil samples in an as-fired condition at the inlet to the steam generating unit and analyzing them for sulfur and heat content according to Method 19. Method 19 provides procedures for converting these measurements into the format to be used in calculating the average sulfur dioxide input rate, or

(2) Measuring sulfur dioxide according to Method 6B at the inlet or outlet to the sulfur dioxide control system. An initial stratification test is required to verify the adequacy of the Method 6B sampling location. The stratification test shall consist of three paired runs of a suitable sulfur dioxide and carbon dioxide measurement train operated at the candidate location and a second similar train operated according to the procedures in section 3.2 and the applicable procedures in section 7 of Performance Specification 2. Method 6B, Method 6A, or a combination of Methods 6 and 3 or 3B or Methods 6C and 3A are suitable measurement techniques. If Method 6B is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent.

(3) A daily sulfur dioxide emission rate, E_D, shall be determined using the procedure described in Method 6A, section 7.6.2 (Equation 6A–8) and stated in ng/J (lb/million Btu) heat input.

(4) The mean 30-day emission rate is calculated using the daily measured values in ng/J (lb/million Btu) for 30 successive steam generating unit operating days using equation 19–20 of Method 19.

(c) The owner or operator of an affected facility shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive boiler operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator or the reference methods and procedures as described in paragraph (b) of this section.

(d) The 1-hour average sulfur dioxide emission rates measured by the CEMS required by paragraph (a) of this section and required under § 60.13(h) is expressed in ng/J or lb/million Btu heat input and is used to calculate the average emission rates under § 60.42b. Each 1-hour average sulfur dioxide emission rate must be based on more than 30 minutes of steam generating unit operation and include at least 2 data points with each representing a 15-minute period. Hourly sulfur dioxide emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(e) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 (appendix B).

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 (appendix F).

(3) For affected facilities combusting coal or oil, alone or in combination with other fuels, the span value of the sulfur dioxide CEMS at the inlet to the sulfur dioxide control device is 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the fuel combusted, and the span value of the CEMS at the outlet to the sulfur dioxide control device is 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the fuel combusted.

(f) The owner or operator of an affected facility that combusts very low sulfur oil is not subject to the emission monitoring requirements of this section if the owner or operator obtains fuel receipts as described in § 60.49b(r).

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51820, Dec. 18, 1989; 55 FR 5212, Feb. 14, 1990; 55 FR 18876, May 7, 1990]

§ 60.48b Emission monitoring for particulate matter and nitrogen oxides.

(a) The owner or operator of an affected facility subject to the opacity standard under § 60.43b shall install, calibrate, maintain, and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere and record the output of the system.

(b) Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under § 60.44b shall install, calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system.

(c) The continuous monitoring systems required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is

recorded during calibration checks, and zero and span adjustments.

(d) The 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor required by paragraph (b) of this section and required under § 60.13(h) shall be expressed in ng/J or lb/million Btu heat input and shall be used to calculate the average emission rates under § 60.44b. The 1-hour averages shall be calculated using the data points required under § 60.13(b). At least 2 data points must be used to calculate each 1-hour average.

(e) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

(1) For affected facilities combusting coal, wood or municipal-type solid waste, the span value for a continuous monitoring system for measuring opacity shall be between 60 and 80 percent.

(2) For affected facilities combusting coal, oil, or natural gas, the span value for nitrogen oxides is determined as follows:

Fuel	Span values for nitrogen oxides (PPM)
Natural gas	500
Oil	500
Coal	1,000
Mixtures	500(x+y)+1,000z

where:

x is the fraction of total heat input derived from natural gas,

y is the fraction of total heat input derived from oil, and

z is the fraction of total heat input derived from coal.

(3) All span values computed under paragraph (e)(2) of this section for combusting mixtures of regulated fuels are rounded to the nearest 500 ppm.

(f) When nitrogen oxides emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7, Method 7A, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

(g) The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 million Btu/hour) or less, and which has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, or any mixture of these fuels, greater than 10 percent (0.10) shall:

(1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section, or

(2) Monitor steam generating unit operating conditions and predict nitrogen oxides emission rates as specified in a plan submitted pursuant to § 60.49b(c).

(h) The owner or operator of an affected facility which is subject to the nitrogen oxides standards of § 60.44b(a)(4) is not required to install or operate a continuous monitoring system to measure nitrogen oxides emissions.

(i) The owner or operator of an affected facility described in § 60.44b(j) or § 60.44b(k) is not required to install or operate a continuous monitoring system for measuring nitrogen oxides emissions.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51825, Dec. 18, 1989]

§ 60.49b Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by § 60.7. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility,

(2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§ 60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii), (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i), (j), (k), 60.45b(d), (g), 60.46b(h), or 60.48b(i),

(3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired, and,

(4) Notification that an emerging technology will be used for controlling emissions of sulfur dioxide. The Administrator will examine the description of the emerging technology and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of § 60.42b(a) unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the sulfur dioxide, particulate matter, and/or nitrogen oxides emission limits under §§ 60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B. The owner or operator of each affected facility described in § 60.44b(j) or § 60.44b(k) shall submit to the Administrator the maximum heat input capacity data

from the demonstration of the maximum heat input capacity of the affected facility.

(c) The owner or operator of each affected facility subject to the nitrogen oxides standard of § 60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions under the provisions of § 60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored under § 60.48b(g)(2) and the records to be maintained under § 60.49b(j). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. The plan shall:

(1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and nitrogen oxides emission rates (i.e., ng/J or lbs/million Btu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (i.e., the ratio of primary air to secondary and/or tertiary air) and the level of excess air (i.e., flue gas oxygen level);

(2) Include the data and information that the owner or operator used to identify the relationship between nitrogen oxides emission rates and these operating conditions;

(3) Identify how these operating conditions, including steam generating unit load, will be monitored under § 60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under § 60.49b(j).

If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan.

(d) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for each calendar quarter. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

(e) For an affected facility that combusts residual oil and meets the criteria under §§ 60.46b(e)(4), 60.44b(j), or (k), the owner or operator shall maintain records of the nitrogen content of the residual oil combusted in the affected facility and calculate the average fuel nitrogen content on a per calendar quarter basis. The nitrogen content shall be determined using ASTM Method D3431–80, Test Method for Trace Nitrogen in Liquid Petroleum Hydrocarbons (IBR-see § 60.17), or fuel suppliers. If residual oil blends are being combusted, fuel nitrogen specifications may be prorated based on the ratio of residual oils of different nitrogen content in the fuel blend.

(f) For facilities subject to the opacity standard under § 60.43b, the owner or operator shall maintain records of opacity.

(g) Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under § 60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date.

(2) The average hourly nitrogen oxides emission rates (expressed as NO_2) (ng/J or lb/million Btu heat input) measured or predicted.

(3) The 30-day average nitrogen oxides emission rates (ng/J or lb/million Btu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.

(4) Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under § 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken.

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

(7) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(8) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

(9) Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(h) The owner or operator of any affected facility in any category listed in paragraphs (h)(1) or (2) of this section is required to submit excess emission reports for any calendar quarter during which there are excess emissions from the affected facility. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period.

(1) Any affected facility subject to the opacity standards under § 60.43b(e) or to the operating parameter monitoring requirements under § 60.13(i)(1).

(2) Any affected facility that is subject to the nitrogen oxides standard of § 60.44b, and that

(i) Combusts natural gas, distillate oil, or residual oil with a nitrogen content of 0.3 weight percent or less, or

(ii) Has a heat input capacity of 73 MW (250 million Btu/hour) or less and is required to monitor nitrogen oxides emissions on a continuous basis under § 60.48b(g)(1) or steam generating unit operating conditions under § 60.48b(g)(2).

(3) For the purpose of § 60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under § 60.43b(f).

(4) For purposes of § 60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average nitrogen oxides emission rate, as determined under § 60.46b(e), which exceeds the applicable emission limits in § 60.44b.

(i) The owner or operator of any affected facility subject to the continuous monitoring requirements for nitrogen oxides under § 60.48(b) shall submit a quarterly report containing the information recorded under paragraph (g) of this section. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

(j) The owner or operator of any affected facility subject to the sulfur dioxide standards under § 60.42b shall submit written reports to the Administrator for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

(k) For each affected facility subject to the compliance and performance testing requirements of § 60.45b and the reporting requirement in paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average sulfur dioxide emission rate (ng/J or lb/million Btu heat input) measured during the reporting period, ending with the last 30-day period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent reduction in sulfur dioxide emissions calculated during the reporting period, ending with the last 30-day period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken.

(4) Identification of the steam generating unit operating days that coal or oil was combusted and for which sulfur dioxide or diluent (oxygen or carbon dioxide) data have not been obtained by an approved method for at least 75 percent of the operating hours in the steam generating unit operating day; justification for not obtaining sufficient data; and description of corrective action taken.

(5) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(7) Identification of times when hourly averages have been obtained based on manual sampling methods.

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS.

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3.

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(11) The annual capacity factor of each fired as provided under paragraph (d) of this section.

(l) For each affected facility subject to the compliance and performance testing requirements of § 60.45b(d) and the reporting requirements of paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates when the facility was in operation during the reporting period;

(2) The 24-hour average sulfur dioxide emission rate measured for each steam generating unit operating day during the reporting period that coal or oil was combusted, ending in the last 24-hour period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(3) Identification of the steam generating unit operating days that coal or oil was combusted for which sulfur dioxide or diluent (oxygen or carbon dioxide) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining suffi-

cient data; and description of corrective action taken.

(4) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(5) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(6) Identification of times when hourly averages have been obtained based on manual sampling methods.

(7) Identification of the times when the pollutant concentration exceeded full span of the CEMS.

(8) Description of any modifications to the CEMS which could affect the ability of the CEMS to comply with Performance Specification 2 or 3.

(9) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(m) For each affected facility subject to the sulfur dioxide standards under § 60.42b for which the minimum amount of data required under § 60.47b(f) were not obtained during a calendar quarter, the following information is reported to the Administrator in addition to that required under paragraph (k) of this section:

(1) The number of hourly averages available for outlet emission rates and inlet emission rates.

(2) The standard deviation of hourly averages for outlet emission rates and inlet emission rates, as determined in Method 19, section 7.

(3) The lower confidence limit for the mean outlet emission rate and the upper confidence limit for the mean inlet emission rate, as calculated in Method 19, section 7.

(4) The ratio of the lower confidence limit for the mean outlet emission rate and the allowable emission rate, as determined in Method 19, section 7.

(n) If a percent removal efficiency by fuel pretreatment (i.e., % R_f) is used to determine the overall percent reduction (i.e., % R_o) under § 60.45b, the owner or operator of the affected facility shall submit a signed statement with the quarterly report:

(1) Indicating what removal efficiency by fuel pretreatment (i.e., % R_f) was credited for the calendar quarter;

(2) Listing the quantity, heat content, and date each pretreated fuel shipment was received during the previous calendar quarter; the name and location of the fuel pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the previous calendar quarter;

(3) Documenting the transport of the fuel from the fuel pretreatment facility to the steam generating unit.

(4) Including a signed statement from the owner or operator of the fuel pretreatment facility certifying that the percent removal efficiency achieved by fuel pretreatment was determined in accordance with the provisions of Method 19 (appendix A) and listing the heat content and sulfur content of each fuel before and after fuel pretreatment.

(o) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

(p) The owner or operator of an affected facility described in § 60.44b(j) or (k) shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date,

(2) The number of hours of operation, and

(3) A record of the hourly steam load.

(q) The owner or operator of an affected facility described in § 60.44b(j) or § 60.44b(k) shall submit to the Administrator on a quarterly basis:

(1) The annual capacity factor over the previous 12 months;

(2) The average fuel nitrogen content during the quarter, if residual oil was fired; and

(3) If the affected facility meets the criteria described in § 60.44b(j), the results of any nitrogen oxides emission tests required during the quarter, the hours of operation during the quarter, and the hours of operation since the last nitrogen oxides emission test.

(r) The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil under § 60.42b(j)(2) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier which certify that the oil meets the definition of distillate oil as defined in § 60.41b. For the purposes of this section, the oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Quarterly reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition was combusted in the affected facility during the preceding quarter.

(s) [Reserved]

(t) Facility-specific nitrogen oxides standard for Rohm and Haas Kentucky Incorporated's Boiler No. 100 located in Louisville, Kentucky:

(1) *Definitions.*

Air ratio control damper is defined as the part of the low nitrogen oxides burner that is adjusted to control the split of total combustion air delivered to the reducing and oxidation portions of the combustion flame.

Flue gas recirculation line is defined as the part of Boiler No. 100 that recirculates a portion of the boiler flue gas back into the combustion air.

(2) *Standard for nitrogen oxides.* (i) When fossil fuel alone is combusted, the nitrogen oxides emission limit for fossil fuel in § 60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the nitrogen oxides emission limit is 473 ng/J (1.1 lb/million Btu), and the air ratio control damper tee handle shall be at a minimum of 5 inches (12.7 centimeters) out of the boiler, and the flue gas recirculation line shall be operated at a minimum of 10 percent open as indicated by its valve opening position indicator.

(3) *Emission monitoring for nitrogen oxides.* (i) The air ratio control damper tee handle setting and the flue gas recirculation line valve opening position indicator setting shall be recorded during each 8-hour operating shift.

(ii) The nitrogen oxides emission limit shall be determined by the compliance and performance test methods and procedures for nitrogen oxides in § 60.46b.

(iii) The monitoring of the nitrogen oxides emission limit shall be performed in accordance with § 60.48b.

(4) *Reporting and recordkeeping requirements.* (i) The owner or operator of Boiler No. 100 shall submit a report on any excursions from the limits required by paragraph (b)(2) of this section to the Administrator with the quarterly report required by § 60.49b(i).

(ii) The owner or operator of Boiler No. 100 shall keep records of the monitoring required by paragraph (b)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of Boiler No. 100 shall perform all the applicable reporting and recordkeeping requirements of § 60.49b.

[52 FR 47842, Dec. 16, 1987, as amended at 54 FR 51820, 51825, Dec. 18, 1989; 60 FR 28062, May 30, 1995]

APPENDIX E

Subpart BB—Standards of Performance for Kraft Pulp Mills

§ 60.280 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities in kraft pulp mills: Digester system, brown stock washer system, multiple-effect evaporator system, recovery furnace, smelt dissolving tank, lime kiln, and condensate stripper system. In pulp mills where kraft pulping is combined with neutral sulfite semichemical pulping, the provisions of this subpart are applicable when any portion of the material charged to an affected facility is produced by the kraft pulping operation.

(b) Except as noted in § 60.283(a)(1)(iv), any facility under paragraph (a) of this section that commences construction or modification after September 24, 1976, is subject to the requirements of this subpart.

[51 FR 18544, May 20, 1986]

§ 60.281 Definitions.

As used in this subpart, all terms not defined herein shall have the same meaning given them in the Act and in subpart A.

(a) *Kraft pulp mill* means any stationary source which produces pulp from wood by cooking (digesting) wood chips in a water solution of sodium hydroxide and sodium sulfide (white liquor) at high temperature and pressure. Regeneration of the cooking chemicals through a recovery process is also considered part of the kraft pulp mill.

(b) *Neutral sulfite semichemical pulping operation* means any operation in which pulp is produced from wood by cooking (digesting) wood chips in a solution of sodium sulfite and sodium bicarbonate, followed by mechanical defibrating (grinding).

(c) *Total reduced sulfur (TRS)* means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide, that are released during the kraft pulping operation and measured by Reference Method 16.

(d) *Digester system* means each continuous digester or each batch digester used for the cooking of wood in white liquor, and associated flash tank(s), below tank(s), chip steamer(s), and condenser(s).

(e) *Brown stock washer system* means brown stock washers and associated knotters, vacuum pumps, and filtrate tanks used to wash the pulp following the digestion system. Diffusion washers are excluded from this definition.

(f) *Multiple-effect evaporator system* means the multiple-effect evaporators and associated condenser(s) and hotwell(s) used to concentrate the spent cooking liquid that is separated from the pulp (black liquor).

(g) *Black liquor oxidation system* means the vessels used to oxidize, with air or oxygen, the black liquor, and associated storage tank(s).

(h) *Recovery furnace* means either a straight kraft recovery furnace or a cross recovery furnace, and includes the direct-contact evaporator for a direct-contact furnace.

(i) *Straight kraft recovery furnace* means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains 7 weight percent or less of the total pulp solids from the neutral sulfite semichemical process or has green liquor sulfidity of 28 percent or less.

(j) *Cross recovery furnace* means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains more than 7 weight percent of the total pulp solids from the neutral sulfite semichemical process and has a green liquor sulfidity of more than 28 percent.

(k) *Black liquor solids* means the dry weight of the solids which enter the recovery furnace in the black liquor.

(l) *Green liquor sulfidity* means the sulfidity of the liquor which leaves the smelt dissolving tank.

(m) *Smelt dissolving tank* means a vessel used for dissolving the smelt collected from the recovery furnace.

(n) *Lime kiln* means a unit used to calcine lime mud, which consists primarily of calcium carbonate, into quicklime, which is calcium oxide.

(o) *Condensate stripper system* means a column, and associated condensers, used to strip, with air or steam, TRS compounds from condensate streams from various processes within a kraft pulp mill.

[43 FR 7572, Feb. 23, 1978, as amended at 51 FR 18544, May 20, 1986]

§ 60.282 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) From any recovery furnace any gases which:

(i) Contain particulate matter in excess of 0.10 g/dscm (0.044 gr/dscf) corrected to 8 percent oxygen.

(ii) Exhibit 35 percent opacity or greater.

(2) From any smelt dissolving tank any gases which contain particulate matter in excess of 0.1 g/kg black liquor solids (dry weight)[0.2 lb/ton black liquor solids (dry weight)].

(3) From any lime kiln any gases which contain particulate matter in excess of:

(i) 0.15 g/dscm (0.067 gr/dscf) corrected to 10 percent oxygen, when gaseous fossil fuel is burned.

(ii) 0.30 g/dscm (0.13 gr/dscf) corrected to 10 percent oxygen, when liquid fossil fuel is burned.

[43 FR 7572, Feb. 23, 1978]

§ 60.283 Standard for total reduced sulfur (TRS).

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) From any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen, unless the following conditions are met:

(i) The gases are combusted in a lime kiln subject to the provisions of paragraph (a)(5) of this section; or

(ii) The gases are combusted in a recovery furnace subject to the provisions of paragraphs (a)(2) or (a)(3) of this section; or

(iii) The gases are combusted with other waste gases in an incinerator or other device, or combusted in a lime kiln or recovery furnace not subject to the provisions of this subpart, and are subjected to a minimum temperature of 1200° F. for at least 0.5 second; or

(iv) It has been demonstrated to the Administrator's satisfaction by the owner or operator that incinerating the exhaust gases from a new, modified, or reconstructed brown stock washer system is technologically or economically unfeasible. Any exempt system will become subject to the provisions of this subpart if the facility is changed so that the gases can be incinerated.

(v) The gases from the digester system, brown stock washer system, or condensate stripper system are controlled by a means other than combustion. In this case, this system shall not discharge any gases to the atmosphere which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to the actual oxygen content of the untreated gas stream.

(vi) The uncontrolled exhaust gases from a new, modified, or reconstructed digester system contain TRS less than 0.005 g/kg ADP (0.01 lb/ton ADP).

(2) From any straight kraft recovery furnace any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 8 percent oxygen.

(3) From any cross recovery furnace any gases which contain TRS in excess of 25 ppm by volume on a dry basis, corrected to 8 percent oxygen.

(4) From any smelt dissolving tank any gases which contain TRS in excess of 0.016 g/kg black liquor solids as H_2S (0.033 lb/ton black liquor solids as H_2S).

(5) From any lime kiln any gases which contain TRS in excess of 8 ppm by volume on a dry basis, corrected to 10 percent oxygen.

[43 FR 7572, Feb. 23, 1978, as amended at 50 FR 6317, Feb. 14, 1985; 51 FR 18544, May 20, 1986]

§ 60.284 Monitoring of emissions and operations.

(a) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring systems:

(1) A continuous monitoring system to monitor and record the opacity of the gases discharged into the atmos- phere from any recovery furnace. The span of this system shall be set at 70 percent opacity.

(2) Continuous monitoring systems to monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the atmosphere from any lime kiln, recovery furnace, digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system, except where the provisions of § 60.283(a)(1) (iii) or (iv) apply. These systems shall be located downstream of the control device(s) and the spans of these continuous monitoring system(s) shall be set:

(i) At a TRS concentration of 30 ppm for the TRS continuous monitoring system, except that for any cross recovery furnace the span shall be set at 50 ppm.

(ii) At 20 percent oxygen for the continuous oxygen monitoring system.

(b) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring devices:

(1) For any incinerator, a monitoring device which measures and records the combustion temperature at the point of incineration of effluent gases which are emitted from any digester system, brown stock washer system, multiple-effect evaporator system, black liquor oxidation system, or condensate stripper system where the provisions of § 60.283(a)(1)(iii) apply. The monitoring device is to be certified by the manufacturer to be accurate within ±1 percent of the temperature being measured.

(2) For any lime kiln or smelt dissolving tank using a scrubber emission control device:

(i) A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate to within a gage pressure of ±500 pascals (ca. ±2 inches water gage pressure).

(ii) A monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ±15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point. The Administrator may be consulted for approval of alternative locations.

(c) Any owner or operator subject to the provisions of this subpart shall, except where the provisions of § 60.283 (a)(1)(iv) or (a)(4) apply.

(1) Calculate and record on a daily basis 12-hour average TRS concentrations for the two consecutive periods of each operating day. Each 12-hour average shall be determined as the arithmetic mean of the appropriate 12 contiguous 1-hour average total reduced sulfur concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section.

(2) Calculate and record on a daily basis 12-hour average oxygen concentrations for the two consecutive periods of each operating day for the recovery furnace and lime kiln. These 12-hour averages shall correspond to the 12-hour average TRS concentrations under paragraph (c)(1) of this section and shall be determined as an arithmetic mean of the appropriate 12 contiguous 1-hour average oxygen concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section.

(3) Correct all 12-hour average TRS concentrations to 10 volume percent oxygen, except that all 12-hour average TRS concentration from a recovery furnace shall be corrected to 8 volume percent using the following equation:

$$C_{corr}=C_{meas}\times(21-X/21-Y)$$

where:

C_{corr}=the concentration corrected for oxygen.

C_{meas}=the concentration uncorrected for oxygen.

X=the volumetric oxygen concentration in percentage to be corrected to (8 percent for recovery furnaces and 10 percent for lime kilns, incinerators, or other devices).

Y=the measured 12-hour average volumetric oxygen concentration.

(4) Record once per shift measurements obtained from the continuous monitoring devices installed under paragraph (b)(2) of this section.

(d) For the purpose of reports required under § 60.7(c), any owner or operator subject to the provisions of this subpart shall report semiannually periods of excess emissions as follows:

(1) For emissions from any recovery furnace periods of excess emissions are:

(i) All 12-hour averages of TRS concentrations above 5 ppm by volume for straight kraft recovery furnaces and above 25 ppm by volume for cross recovery furnaces.

(ii) All 6-minute average opacities that exceed 35 percent.

(2) For emissions from any lime kiln, periods of excess emissions are all 12-hour average TRS concentration above 8 ppm by volume.

(3) For emissions from any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system periods of excess emissions are:

(i) All 12-hour average TRS concentrations above 5 ppm by volume unless the provisions of § 60.283(a)(1) (i), (ii), or (iv) apply; or

(ii) All periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 1200 °F, where the provisions of § 60.283(a)(1)(iii) apply.

(e) The Administrator will not consider periods of excess emissions reported under paragraph (d) of this section to be indicative of a violation of § 60.11(d) provided that:

(1) The percent of the total number of possible contiguous periods of excess emissions in a quarter (excluding periods of startup, shutdown, or malfunction and periods when the facility is not operating) during which excess emissions occur does not exceed:

(i) One percent for TRS emissions from recovery furnaces.

(ii) Six percent for average opacities from recovery furnaces.

(2) The Administrator determines that the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions.

[43 FR 7572, Feb. 23, 1978, as amended at 51 FR 18545, May 20, 1986]

§ 60.285 Test methods and procedures.

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures in this section, except as provided in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.

(b) The owner or operator shall determine compliance with the particulate matter standards in § 60.282(a) (1) and (3) as follows:

(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at

least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. The particulate concentration shall be corrected to the appropriate oxygen concentration according to § 60.284(c)(3).

(2) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The gas sample shall be taken at the same time and at the same traverse points as the particulate sample.

(3) Method 9 and the procedures in § 60.11 shall be used to determine opacity.

(c) The owner or operator shall determine compliance with the particular matter standard in § 60.282(a)(2) as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$E = c_s Q_{sd}/BLS$

where:

E=emission rate of particulate matter, g/kg (lb/ton) of BLS.

c_s=concentration of particulate matter, g/dsm (lb/dscf).

Q_{sd}=volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

BLS=black liquor solids (dry weight) feed rate, kg/hr (ton/hr).

(2) Method 5 shall be used to determine the particulate matter concentration (c_s) and the volumetric flow rate (Q_{sd}) of the effluent gas. The sampling time and sample volume shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used instead of acetone in the sample recovery.

(3) Process data shall be used to determine the black liquor solids (BLS) feed rate on a dry weight basis.

(d) The owner or operator shall determine compliance with the TRS standards in § 60.283, except § 60.283(a)(1)(vi) and (4), as follows:

(1) Method 16 shall be used to determine the TRS concentration. The TRS concentration shall be corrected to the appropriate oxygen concentration using the procedure in § 60.284(c)(3). The sampling time shall be at least 3 hours, but no longer than 6 hours.

(2) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The sample shall be taken over the same time period as the TRS samples.

(3) When determining whether a furnace is a straight kraft recovery furnace or a cross recovery furnace, TAPPI Method T.624 (incorporated by reference—see § 60.17) shall be used to determine sodium sulfide, sodium hydroxide, and sodium carbonate. These determinations shall be made 3 times daily from the green liquor, and the daily average values shall be converted to sodium oxide (Na_2O) and substituted into the following equation to determine the green liquor sulfidity:

$GLS = 100\ C_{Na2S}/(C_{NA2S}+C_{Na2H}+C_{Na2CO3})$

Where:

GLS=green liquor sulfidity, percent.

C_{Na2S}=concentration of Na_2S as Na_2O, mg/liter (gr/gal).

C_{NaOH}=concentration of NaOH as Na_2O, mg/liter (gr/gal).

C_{Na2CO3}=concentration of Na_2CO_3 as Na_2O, mg/liter (gr/gal).

(e) The owner or operator shall determine compliance with the TRS standards in § 60.283(a)(1)(vi) and (4) as follows:

(1) The emission rate (E) of TRS shall be computed for each run using the following equation:

$E = C_{TRS}\ F\ Q_{sd}/P$

where:

E=emission rate of TRS, g/kg (lb/ton) of BLS or ADP.

C_{TRS}=average combined concentration of TRS, ppm.

F=conversion factor, 0.001417 g H_2S/m^3 ppm (0.08844×10^{-6} lb H_2S/ft^3 ppm).

Q_{sd}=volumetric flow rate of stack gas, dscm/hr (dscf/hr).

P=black liquor solids feed or pulp production rate, kg/hr (ton/hr).

(2) Method 16 shall be used to determine the TRS concentration (C_{TRS}).

(3) Method 2 shall be used to determine the volumetric flow rate (Q_{sd}) of the effluent gas.

(4) Process data shall be used to determine the black liquor feed rate or the pulp production rate (P).

(f) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For Method 5, Method 17 may be used if a constant value of 0.009 g/dscm (0.004 gr/dscf) is added to the results of Method 17 and the stack temperature is no greater than 205 °C (400 °F).

(2) For Method 16, Method 16A or 16B may be used if the sampling time is 60 minutes.

[54 FR 6673, Feb. 14, 1989; 54 FR 21344, May 17, 1989, as amended at 55 FR 5212, Feb. 14, 1990]

APPENDIX F

APPENDIX F

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401, et seq.

2. Part 63 is amended by adding subpart S to read as follows:

Subpart S--National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry

Sec.

63.440 Applicability.

63.441 Definitions.

63.442 [Reserved]

63.443 Standards for the pulping system at kraft, soda, and semi-chemical processes.

63.444 Standards for the pulping system at sulfite processes.

63.445 Standards for the bleaching system.

63.446 Standards for kraft pulping process condensates.

63.447 Clean condensate alternative.

63.448-63.449 [Reserved]

63.450 Standards for enclosures and closed-vent systems.

63.451-63.452 [Reserved]

63.453 Monitoring requirements.

63.454 Recordkeeping requirements.

63.455 Reporting requirements.

63.456 [Reserved]

63.457 Test methods and procedures.

63.458 Delegation of authority.

63.459 [Reserved]

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Table 1 to Subpart S.--General Provisions Applicability to Subpart S

Subpart S--National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry

Sec. 63.440 Applicability.

(a) The provisions of this subpart apply to the owner or operator of processes that produce pulp, paper, or paperboard; that are located at a plant site that is a major source as defined in Sec. 63.2 of subpart A of this part; and that use the following processes and materials:

(1) Kraft, soda, sulfite, or semi-chemical pulping processes using wood; or

(2) Mechanical pulping processes using wood; or

(3) Any process using secondary or non-wood fibers.

(b) The affected source to which the existing source provisions of this subpart apply is as follows:

(1) For the processes specified in paragraph (a)(1) of this section, the affected source is the total of all HAP emission points in the pulping and bleaching systems; or

(2) For the processes specified in paragraphs (a)(2) or (a)(3) of this section, the affected source is the total of all HAP emission points in the bleaching system.

(c) The new source provisions of this subpart apply to the total of all HAP emission points at new or existing sources as follows:

(1) Each affected source defined in paragraph (b)(1) of this section that commences construction or reconstruction after December 17, 1993;

(2) Each pulping system or bleaching system for the processes specified in paragraph (a)(1) of this section that commences construction or reconstruction after December 17, 1993;

(3) Each additional pulping or bleaching line at the processes specified in paragraph (a)(1) of this section, that commences construction after December 17, 1993;

(4) Each affected source defined in paragraph (b)(2) of this section that commences construction or reconstruction after March 8,

1996; or

(5) Each additional bleaching line at the processes specified in paragraphs (a)(2) or (a)(3) of this section, that commences construction after March 8, 1996.

(d) Each existing source shall achieve compliance no later than April 16, 2001, except as provided in paragraphs (d)(1) through (d)(3) of this section.

(1) Each kraft pulping system shall achieve compliance with the pulping system provisions of Sec. 63.443 for the equipment listed in Sec. 63.443(a)(1)(ii) through (a)(1)(v) as expeditiously as practicable, but in no event later than April 17, 2006 and the owners and operators shall establish dates, update dates, and report the dates for the milestones specified in Sec. 63.455(b).

(2) Each dissolving-grade bleaching system at either kraft or sulfite pulping mills shall achieve compliance with the bleach plant provisions of Sec. 63.445 of this subpart as expeditiously as practicable, but in no event later than 3 years after the promulgation of the revised effluent limitation guidelines and standards under 40 CFR 430.14 through 430.17 and 40 CFR 430.44 through 430.47.

(3) Each bleaching system complying with the Voluntary Advanced Technology Incentives Program for Effluent Limitation Guidelines in 40 CFR 430.24, shall comply with the requirements specified in either paragraph (d)(3)(i) or (d)(3)(ii) of this section for the effluent limitation guidelines and standards in 40 CFR 430.24.

(i) Comply with the bleach plant provisions of Sec. 63.445 of this subpart as expeditiously as practicable, but in no event later than April 16, 2001.

(ii) Comply with all of the following:

(A) The owner or operator of a bleaching system shall comply with the bleach plant provisions of Sec. 63.445 of this subpart as expeditiously as practicable, but in no event later than April 15, 2004.

(B) The owner or operator of a bleaching system shall not increase the application rate of chlorine or hypochlorite in kg of bleaching agent per megagram of ODP, in the bleaching system above the average

daily rates used over the three months prior to June 15, 1998 until the requirements of paragraph (d)(3)(ii)(A) of this section are met and record application rates as specified in Sec. 63.454(c).

(C) Owners and operators shall establish dates, update dates, and report the dates for the milestones specified in Sec. 63.455(b).

(e) Each new source, specified as the total of all HAP emission points for the sources specified in paragraph (c) of this section, shall achieve compliance upon start-up or June 15, 1998, whichever is later, as provided in Sec. 63.6(b) of subpart A of this part.

(f) Each owner or operator of an affected source with affected process equipment shared by more than one type of pulping process, shall comply with the applicable requirement in this subpart that achieves the maximum degree of reduction in HAP emissions.

(g) Each owner or operator of an affected source specified in paragraphs (a) through (c) of this section must comply with the requirements of subpart A--General Provisions of this part, as indicated in table 1 to this subpart.

Sec. 63.441 Definitions.

All terms used in this subpart shall have the meaning given them in the CAA, in subpart A of this part, and in this section as follows:

Acid condensate storage tank means any storage tank containing cooking acid following the sulfur dioxide gas fortification process.

Black liquor means spent cooking liquor that has been separated from the pulp produced by the kraft, soda, or semi-chemical pulping process.

Bleaching means brightening of pulp by the addition of oxidizing chemicals or reducing chemicals.

Bleaching line means a group of bleaching stages arranged in series such that bleaching of the pulp progresses as the pulp moves from one stage to the next.

Bleaching stage means all process equipment associated with a

discrete step of chemical application and removal in the bleaching process including chemical and steam mixers, bleaching towers, washers, seal (filtrate) tanks, vacuum pumps, and any other equipment serving the same function as those previously listed.

Bleaching system means all process equipment after high-density pulp storage prior to the first application of oxidizing chemicals or reducing chemicals following the pulping system, up to and including the final bleaching stage.

Boiler means any enclosed combustion device that extracts useful energy in the form of steam. A boiler is not considered a thermal oxidizer.

Chip steamer means a vessel used for the purpose of preheating or pretreating wood chips prior to the digester, using flash steam from the digester or live steam.

Closed-vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapor from an emission point to a control device.

Combustion device means an individual unit of equipment, including but not limited to, a thermal oxidizer, lime kiln, recovery furnace, process heater, or boiler, used for the thermal oxidation of organic hazardous air pollutant vapors.

Decker system means all equipment used to thicken the pulp slurry or reduce its liquid content after the pulp washing system and prior to high-density pulp storage. The decker system includes decker vents, filtrate tanks, associated vacuum pumps, and any other equipment serving the same function as those previously listed.

Digester system means each continuous digester or each batch digester used for the chemical treatment of wood or non-wood fibers. The digester system equipment includes associated flash tank(s), blow tank(s), chip steamer(s) not using fresh steam, blow heat recovery

accumulator(s), relief gas condenser(s), prehydrolysis unit(s) preceding the pulp washing system, and any other equipment serving the same function as those previously listed. The digester system includes any of the liquid streams or condensates associated with batch or continuous digester relief, blow, or flash steam processes.

Emission point means any part of a stationary source that emits hazardous air pollutants regulated under this subpart, including emissions from individual process vents, stacks, open pieces of process equipment, equipment leaks, wastewater and condensate collection and treatment system units, and those emissions that could reasonably be conveyed through a stack, chimney, or duct where such emissions first reach the environment.

Evaporator system means all equipment associated with increasing the solids content and/or concentrating spent cooking liquor from the pulp washing system including pre-evaporators, multi-effect evaporators, concentrators, and vacuum systems, as well as associated condensers, hotwells, and condensate streams, and any other equipment serving the same function as those previously listed.

Flow indicator means any device that indicates gas or liquid flow in an enclosed system.

HAP means a hazardous air pollutant as defined in Sec. 63.2 of subpart A of this part.

High volume, low concentration or HVLC collection system means the gas collection and transport system used to convey gases from the HVLC system to a control device.

High volume, low concentration or HVLC system means the collection of equipment including the pulp washing, knotter, screen, decker, and oxygen delignification systems, weak liquor storage tanks, and any other equipment serving the same function as those previously listed.

Knotter system means equipment where knots, oversized material, or pieces of uncooked wood are removed from the pulp slurry after the digester system and prior to the pulp washing system. The knotter system equipment includes the knotter, knot drainer tanks, ancillary tanks, and any other equipment serving the same function as those previously listed.

Kraft pulping means a chemical pulping process that uses a mixture of sodium hydroxide and sodium sulfide as the cooking liquor.

Lime kiln means an enclosed combustion device used to calcine lime mud, which consists primarily of calcium carbonate, into calcium oxide.

Low volume, high concentration or LVHC collection system means the gas collection and transport system used to convey gases from the LVHC system to a control device.

Low volume, high concentration or LVHC system means the collection of equipment including the digester, turpentine recovery, evaporator, steam stripper systems, and any other equipment serving the same function as those previously listed.

Mechanical pulping means a pulping process that only uses mechanical and thermo-mechanical processes to reduce wood to a fibrous mass. The mechanical pulping processes include, but are not limited to, stone groundwood, pressurized groundwood, refiner mechanical, thermal refiner mechanical, thermo-mechanical, and tandem thermo-mechanical.

Non-wood pulping means the production of pulp from fiber sources other than trees. The non-wood fiber sources include, but are not limited to, bagasse, cereal straw, cotton, flax straw, hemp, jute, kenaf, and leaf fibers.

Oven-dried pulp or ODP means a pulp sample at zero percent moisture content by weight. Pulp samples for applicability or compliance determinations for both the pulping and bleaching systems shall be unbleached pulp. For purposes of complying with mass emission limits in this subpart, megagram of ODP shall be measured to represent the amount of pulp entering and processed by the equipment system under the specified mass limit. For equipment that does not process pulp, megagram of ODP shall be measured to represent the amount of pulp that was processed to produce the gas and liquid streams.

Oxygen delignification system means the equipment that uses oxygen to remove lignin from pulp after high-density stock storage and prior to the bleaching system. The oxygen delignification system equipment includes the blow tank, washers, filtrate tanks, any interstage pulp storage tanks, and any other equipment serving the same function as

those previously listed.

Primary fuel means the fuel that provides the principal heat input to the combustion device. To be considered primary, the fuel must be able to sustain operation of the combustion device without the addition of other fuels.

Process wastewater treatment system means a collection of equipment, a process, or specific technique that removes or destroys the HAP's in a process wastewater stream. Examples include, but are not limited to, a steam stripping unit, wastewater thermal oxidizer, or biological treatment unit.

Pulp washing system means all equipment used to wash pulp and separate spent cooking chemicals following the digester system and prior to the bleaching system, oxygen delignification system, or paper machine system (at unbleached mills). The pulp washing system equipment includes vacuum drum washers, diffusion washers, rotary pressure washers, horizontal belt filters, intermediate stock chests, and their associated vacuum pumps, filtrate tanks, foam breakers or tanks, and any other equipment serving the same function as those previously listed. The pulp washing system does not include deckers, screens, knotters, stock chests, or pulp storage tanks following the last stage of pulp washing.

Pulping line means a group of equipment arranged in series such that the wood chips are digested and the resulting pulp progresses through a sequence of steps that may include knotting, refining, washing, thickening, blending, storing, oxygen delignification, and any other equipment serving the same function as those previously listed.

Pulping process condensates means any HAP-containing liquid that results from contact of water with organic compounds in the pulping process. Examples of process condensates include digester system condensates, turpentine recovery system condensates, evaporator system condensates, LVHC system condensates, HVLC system condensates, and any other condensates from equipment serving the same function as those previously listed. Liquid streams that are intended for byproduct recovery are not considered process condensate streams.

Pulping system means all process equipment, beginning with the

digester system, and up to and including the last piece of pulp conditioning equipment prior to the bleaching system, including

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treatment with ozone, oxygen, or peroxide before the first application of a chemical bleaching agent intended to brighten pulp. The pulping system includes pulping process condensates and can include multiple pulping lines.

Recovery furnace means an enclosed combustion device where concentrated spent liquor is burned to recover sodium and sulfur, produce steam, and dispose of unwanted dissolved wood components in the liquor.

Screen system means equipment in which oversized particles are removed from the pulp slurry prior to the bleaching or papermaking system washed stock storage.

Secondary fiber pulping means a pulping process that converts a fibrous material, that has previously undergone a manufacturing process, into pulp stock through the addition of water and mechanical energy. The mill then uses that pulp as the raw material in another manufactured product. These mills may also utilize chemical, heat, and mechanical processes to remove ink particles from the fiber stock.

Semi-chemical pulping means a pulping process that combines both chemical and mechanical pulping processes. The semi-chemical pulping process produces intermediate yields ranging from 55 to 90 percent.

Soda pulping means a chemical pulping process that uses sodium hydroxide as the active chemical in the cooking liquor.

Spent liquor means process liquid generated from the separation of cooking liquor from pulp by the pulp washing system containing dissolved organic wood materials and residual cooking compounds.

Steam stripper system means a column (including associated stripper feed tanks, condensers, or heat exchangers) used to remove compounds from wastewater or condensates using steam. The steam stripper system also contains all equipment associated with a methanol rectification

process including rectifiers, condensers, decanters, storage tanks, and any other equipment serving the same function as those previously listed.

Strong liquor storage tanks means all storage tanks containing liquor that has been concentrated in preparation for combustion or oxidation in the recovery process.

Sulfite pulping means a chemical pulping process that uses a mixture of sulfurous acid and bisulfite ion as the cooking liquor.

Temperature monitoring device means a piece of equipment used to monitor temperature and having an accuracy of 1.0 percent of the temperature being monitored expressed in degrees Celsius or 0.5 degrees Celsius (deg.C), whichever is greater.

Thermal oxidizer means an enclosed device that destroys organic compounds by thermal oxidation.

Turpentine recovery system means all equipment associated with recovering turpentine from digester system gases including condensers, decanters, storage tanks, and any other equipment serving the same function as those previously listed. The turpentine recovery system includes any liquid streams associated with the turpentine recovery process such as turpentine decanter underflow. Liquid streams that are intended for byproduct recovery are not considered turpentine recovery system condensate streams.

Weak liquor storage tank means any storage tank except washer filtrate tanks containing spent liquor recovered from the pulping process and prior to the evaporator system.

Sec. 63.442 [Reserved]

Sec. 63.443 Standards for the pulping system at kraft, soda, and semi-chemical processes.

(a) The owner or operator of each pulping system using the kraft process subject to the requirements of this subpart shall control the

total HAP emissions from the following equipment systems, as specified in paragraphs (c) and (d) of this section.

(1) At existing affected sources, the total HAP emissions from the following equipment systems shall be controlled:

(i) Each LVHC system;

(ii) Each knotter or screen system with total HAP mass emission rates greater than or equal to the rates specified in paragraphs (a)(1)(ii)(A) or (a)(1)(ii)(B) of this section or the combined rate specified in paragraph (a)(1)(ii)(C) of this section.

(A) Each knotter system with emissions of 0.05 kilograms or more of total HAP per megagram of ODP (0.1 pounds per ton).

(B) Each screen system with emissions of 0.10 kilograms or more of total HAP per megagram of ODP (0.2 pounds per ton).

(C) Each knotter and screen system with emissions of 0.15 kilograms or more of total HAP per megagram of ODP (0.3 pounds per ton).

(iii) Each pulp washing system;

(iv) Each decker system that:

(A) Uses any process water other than fresh water or paper machine white water; or

(B) Uses any process water with a total HAP concentration greater than 400 parts per million by weight; and

(v) Each oxygen delignification system.

(2) At new affected sources, the total HAP emissions from the equipment systems listed in paragraphs (a)(1)(i), (a)(1)(iii), and (a)(1)(v) of this section and the following equipment systems shall be controlled:

(i) Each knotter system;

(ii) Each screen system;

(iii) Each decker system; and

(iv) Each weak liquor storage tank.

(b) The owner or operator of each pulping system using a semi-chemical or soda process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems as specified in paragraphs (c) and (d) of this section.

(1) At each existing affected sources, the total HAP emissions from each LVHC system shall be controlled.

(2) At each new affected source, the total HAP emissions from each LVHC system and each pulp washing system shall be controlled.

(c) Equipment systems listed in paragraphs (a) and (b) of this section shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (d) of this section. The enclosures and closed-vent system shall meet the requirements specified in Sec. 63.450.

(d) The control device used to reduce total HAP emissions from each equipment system listed in paragraphs (a) and (b) of this section shall:

(1) Reduce total HAP emissions by 98 percent or more by weight; or

(2) Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis; or

(3) Reduce total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 871 deg.C (1600 deg.F) and a minimum residence time of 0.75 seconds; or

(4) Reduce total HAP emissions using a boiler, lime kiln, or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone.

(e) Periods of excess emissions reported under Sec. 63.455 shall not be a violation of Sec. 63.443 (c) and (d) provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels:

(1) One percent for control devices used to reduce the total HAP emissions from the LVHC system; and

(2) Four percent for control devices used to reduce the total HAP emissions from the HVLC system; and

(3) Four percent for control devices used to reduce the total HAP

emissions from both the LVHC and HVLC systems.

Sec. 63.444 Standards for the pulping system at sulfite processes.

(a) The owner or operator of each sulfite process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems as specified in paragraphs (b) and (c) of this section.

(1) At existing sulfite affected sources, the total HAP emissions from the following equipment systems shall be controlled:

(i) Each digester system vent;

(ii) Each evaporator system vent; and

(iii) Each pulp washing system.

(2) At new affected sources, the total HAP emissions from the equipment systems listed in paragraph (a)(1) of this section and the following equipment shall be controlled:

(i) Each weak liquor storage tank;

(ii) Each strong liquor storage tank; and

(iii) Each acid condensate storage tank.

(b) Equipment listed in paragraph (a) of this section shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (c) of this section. The enclosures and closed-vent system shall meet the requirements specified in Sec. 63.450. Emissions from equipment listed in paragraph (a) of this section that is not necessary to be reduced to meet paragraph (c) of this section is not required to be routed to a control device.

(c) The total HAP emissions from both the equipment systems listed in paragraph (a) of this section and the vents, wastewater, and condensate streams from the control device used to reduce HAP emissions, shall be controlled as follows.

(1) Each calcium-based or sodium-based sulfite pulping process shall:

(i) Emit no more than 0.44 kilograms of total HAP or methanol per megagram (0.89 pounds per ton) of ODP; or

(ii) Remove 92 percent or more by weight of the total HAP or methanol.

(2) Each magnesium-based or ammonium-based sulfite pulping process shall:

(i) Emit no more than 1.1 kilograms of total HAP or methanol per megagram (2.2 pounds per ton) of ODP; or

(ii) Remove 87 percent or more by weight of the total HAP or methanol.

Sec. 63.445 Standards for the bleaching system.

(a) Each bleaching system that does not use any chlorine or chlorinated compounds for bleaching is exempt from the requirements of this section. Owners or operators of the following bleaching systems shall meet all the provisions of this section:

(1) Bleaching systems that use chlorine;

(2) Bleaching systems bleaching pulp from kraft, sulfite, or soda pulping processes that uses any chlorinated compounds; or

(3) Bleaching systems bleaching pulp from mechanical pulping processes using wood or from any process using secondary or non-wood fibers, that use chlorine dioxide.

(b) The equipment at each bleaching stage, of the bleaching systems listed in paragraph (a) of this section, where chlorinated compounds are introduced shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (c) of this section. The enclosures and closed-vent system shall meet the requirements specified in Sec. 63.450..

(c) The control device used to reduce chlorinated HAP emissions (not including chloroform) from the equipment specified in paragraph (b) of this section shall:

(1) Reduce the total chlorinated HAP mass in the vent stream entering the control device by 99 percent or more by weight;

(2) Achieve a treatment device outlet concentration of 10 parts per million or less by volume of total chlorinated HAP; or

(3) Achieve a treatment device outlet mass emission rate of 0.001 kg of total chlorinated HAP mass per megagram (0.002 pounds per ton) of ODP.

(d) The owner or operator of each bleaching system subject to paragraph (a)(2) of this section shall comply with paragraph (d)(1) or (d)(2) of this section to reduce chloroform air emissions to the atmosphere, except the owner or operator of each bleaching system complying with extended compliance under Sec. 63.440(d)(3)(ii) shall comply with paragraph (d)(1) of this section.

(1) Comply with the following applicable effluent limitation guidelines and standards specified in 40 CFR part 430:

(i) Dissolving-grade kraft bleaching systems and lines, 40 CFR 430.14 through 430.17;

(ii) Paper-grade kraft and soda bleaching systems and lines, 40 CFR 430.24(a)(1) and (e), and 40 CFR 430.26 (a) and (c);

(iii) Dissolving-grade sulfite bleaching systems and lines, 40 CFR 430.44 through 430.47; or

(iv) Paper-grade sulfite bleaching systems and lines, 40 CFR 430.54(a) and (c), and 430.56(a) and (c).

(2) Use no hypochlorite or chlorine for bleaching in the bleaching system or line.

Sec. 63.446 Standards for kraft pulping process condensates.

(a) The requirements of this section apply to owners or operators of kraft processes subject to the requirements of this subpart.

(b) The pulping process condensates from the following equipment systems shall be treated to meet the requirements specified in paragraphs (c), (d), and (e) of this section:

(1) Each digester system;

(2) Each turpentine recovery system;

(3) Each evaporator stage where weak liquor is introduced (feed stages) in the evaporator system;

(4) Each HVLC collection system; and

(5) Each LVHC collection system.

(c) One of the following combinations of HAP-containing pulping process condensates generated, produced, or associated with the equipment systems listed in paragraph (b) of this section shall be subject to the requirements of paragraphs (d) and (e) of this section:

(1) All pulping process condensates from the equipment systems specified in paragraphs (b)(1) through (b)(5) of this section.

(2) The combined pulping process condensates from the equipment systems specified in paragraphs (b)(4) and (b)(5) of this section, plus pulping process condensate stream(s) that in total contain at least 65 percent of the total HAP mass from the pulping process condensates from equipment systems listed in paragraphs (b)(1) through (b)(3) of this section.

(3) The pulping process condensates from equipment systems listed in paragraphs (b)(1) through (b)(5) of this section that in total contain a total HAP mass of 3.6 kilograms or more of total HAP per megagram (7.2 pounds per ton) of ODP for mills that do not perform bleaching or 5.5 kilograms or more of total HAP per megagram (11.1 pounds per ton) of ODP for mills that perform bleaching.

(d) The pulping process condensates from the equipment systems listed in paragraph (b) of this section shall be conveyed in a closed collection system that is designed and operated to meet the requirements specified in paragraphs (d)(1) and (d)(2) of this section.

(1) Each closed collection system shall meet the individual drain system

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requirements specified in Sec. 63.960, 63.961, and 63.962 of subpart RR of this part, except for closed vent systems and control devices shall be designed and operated in accordance with Secs. 63.443(d) and 63.450, instead of in accordance with Sec. 63.693 as specified in Sec. 63.962

(a)(3)(ii), (b)(3)(ii)(A), and (b)(3)(ii)(B)(5)(iii); and

(2) If a condensate tank is used in the closed collection system, the tank shall meet the following requirements:

(i) The fixed roof and all openings (e.g., access hatches, sampling ports, gauge wells) shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million above background, and vented into a closed-vent system that meets the requirements in Sec. 63.450 and routed to a control device that meets the requirements in Sec. 63.443(d); and

(ii) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that the tank contains pulping process condensates or any HAP removed from a pulping process condensate stream except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.

(e) Each pulping process condensate from the equipment systems listed in paragraph (b) of this section shall be treated according to one of the following options:

(1) Recycle the pulping process condensate to an equipment system specified in Sec. 63.443(a) meeting the requirements specified in Sec. 63.443(c) and (d); or

(2) Discharge the pulping process condensate below the liquid surface of a biological treatment system meeting the requirement specified in paragraph (e)(3) of this section; or

(3) Treat the pulping process condensates to reduce or destroy the total HAP's by at least 92 percent or more by weight; or

(4) At mills that do not perform bleaching, treat the pulping process condensates to remove 3.3 kilograms or more of total HAP per megagram (6.6 pounds per ton) of ODP, or achieve a total HAP concentration of 210 parts per million or less by weight at the outlet of the control device; or

(5) At mills that perform bleaching, treat the pulping process condensates to remove 5.1 kilograms or more of total HAP per megagram (10.2 pounds per ton) of ODP, or achieve a total HAP concentration of

330 parts per million or less by weight at the outlet of the control device.

(f) Each HAP removed from a pulping process condensate stream during treatment and handling under paragraphs (d) or (e) of this section, except for those treated according to paragraph (e)(2) of this section, shall be controlled as specified in Sec. 63.443(c) and (d).

(g) For each steam stripper system used to comply with the requirements specified in paragraph (e)(3) of this section, periods of excess emissions reported under Sec. 63.455 shall not be a violation of paragraphs (d), (e), and (f) of this section provided that the time of excess emissions (including periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed 10 percent.

(h) Each owner or operator of a new or existing affected source subject to the requirements of this section shall evaluate all new or modified pulping process condensates or changes in the annual bleached or non-bleached ODP used to comply with paragraph (i) of this section, to determine if they meet the applicable requirements of this section.

(i) For the purposes of meeting the requirements in paragraphs (c)(2), (e)(4), or (e)(5) of this section at mills producing both bleached and unbleached pulp products, owners and operators may meet a prorated mass standard that is calculated by prorating the applicable mass standards (kilograms of total HAP per megagram of ODP) for bleached and unbleached specified in paragraphs (c)(2), (e)(4), or (e)(5) of this section by the ratio of annual megagrams of bleached and unbleached ODP.

Sec. 63.447 Clean condensate alternative.

As an alternative to the requirements specified in Sec. 63.443(a)(1)(ii) through (a)(1)(v) for the control of HAP emissions from pulping systems using the kraft process, an owner or operator must demonstrate to the satisfaction of the Administrator, by meeting all the requirements below, that the total HAP emissions

reductions achieved by this clean condensate alternative technology are equal to or greater than the total HAP emission reductions that would have been achieved by compliance with Sec. 63.443(a)(1)(ii) through (a)(1)(v).

(a) For the purposes of this section only the following additional definitions apply.

(1) Clean condensate alternative affected source means the total of all HAP emission points in the pulping, bleaching, causticizing, and papermaking systems (exclusive of HAP emissions attributable to additives to paper machines and HAP emission points in the LVHC system).

(2) Causticizing system means all equipment associated with converting sodium carbonate into active sodium hydroxide. The equipment includes smelt dissolving tanks, lime mud washers and storage tanks, white and mud liquor clarifiers and storage tanks, slakers, slaker grit washers, lime kilns, green liquor clarifiers and storage tanks, and dreg washers ending with the white liquor storage tanks prior to the digester system, and any other equipment serving the same function as those previously listed.

(3) Papermaking system means all equipment used to convert pulp into paper, paperboard, or market pulp, including the stock storage and preparation systems, the paper or paperboard machines, and the paper machine white water system, broke recovery systems, and the systems involved in calendering, drying, on-machine coating, slitting, winding, and cutting.

(b) Each owner or operator shall install and operate a clean condensate alternative technology with a continuous monitoring system to reduce total HAP emissions by treating and reducing HAP concentrations in the pulping process water used within the clean condensate alternative affected source.

(c) Each owner or operator shall calculate HAP emissions on a kilogram per megagram of ODP basis and measure HAP emissions according to the appropriate procedures contained in Sec. 63.457.

(d) Each owner or operator shall determine the baseline HAP

emissions for each equipment system and the total of all equipment systems in the clean condensate alternative affected source based on the following:

(1) Process and air pollution control equipment installed and operating on or after December 17, 1993, and

(2) Compliance with the following requirements that affect the level of HAP emissions from the clean condensate alternative affected source:

(i) The pulping process condensates requirements in Sec. 63.446;

(ii) The applicable effluent limitation guidelines and standards in 40 CFR part 430, subparts A, B, D, and E; and

(iii) All other applicable requirements of local, State, or Federal agencies or statutes.

(e) Each owner or operator shall determine the following HAP emission reductions from the baseline HAP emissions determined in paragraph (d) of this section for each equipment system and the total of all equipment

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systems in the clean condensate alternative affected source:

(1) The HAP emission reduction occurring by complying with the requirements of Sec. 63.443(a)(1)(ii) through (a)(1)(v); and

(2) The HAP emissions reduction that occurring by complying with the clean condensate alternative technology.

(f) For the purposes of all requirements in this section, each owner or operator may use as an alternative, individual equipment systems (instead of total of all equipment systems) within the clean condensate alternative affected source to determine emissions and reductions to demonstrate equal or greater than the reductions that would have been achieved by compliance with Sec. 63.443(a)(1)(ii) through (a)(1)(v).

(g) The initial and updates to the control strategy report specified in Sec. 63.455(b) shall include to the extent possible the following information:

(1) A detailed description of:

(i) The equipment systems and emission points that comprise the clean condensate alternative affected source;

(ii) The air pollution control technologies that would be used to meet the requirements of Sec. 63.443(a)(1)(ii) through (a)(1)(v);

(iii) The clean condensate alternative technology to be used.

(2) Estimates and basis for the estimates of total HAP emissions and emissions reductions to fulfill the requirements paragraphs (d), (e), and (f) of this section.

(h) Each owner or operator shall report to the Administrator by the applicable compliance date specified in Sec. 63.440(d) or (e) the rationale, calculations, test procedures, and data documentation used to demonstrate compliance with all the requirements of this section.

Secs. 63.448-63.449 [Reserved]

Sec. 63.450 Standards for enclosures and closed-vent systems.

(a) Each enclosure and closed-vent system specified in Secs. 63.443(c), 63.444(b), and 63.445(b) for capturing and transporting vent streams that contain HAP shall meet the requirements specified in paragraphs (b) through (d) of this section.

(b) Each enclosure shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures specified Sec. 63.457(e). Each enclosure or hood opening closed during the initial performance test specified in Sec. 63.457(a) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs.

(c) Each component of the closed-vent system used to comply with Secs. 63.443(c), 63.444(b), and 63.445(b) that is operated at positive pressure and located prior to a control device shall be designed for

and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million by volume above background, as measured by the procedures specified in Sec. 63.457(d).

(d) Each bypass line in the closed-vent system that could divert vent streams containing HAP to the atmosphere without meeting the emission limitations in Secs. 63.443, 63.444, or 63.445 shall comply with either of the following requirements:

(1) On each bypass line, the owner or operator shall install, calibrate, maintain, and operate according to manufacturer's specifications a flow indicator that provides a record of the presence of gas stream flow in the bypass line at least once every 15 minutes. The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line; or

(2) For bypass line valves that are not computer controlled, the owner or operator shall maintain the bypass line valve in the closed position with a car seal or a seal placed on the valve or closure mechanism in such a way that valve or closure mechanism cannot be opened without breaking the seal.

Secs. 63.451-63.452 [Reserved]

Sec. 63.453 Monitoring requirements.

(a) Each owner or operator subject to the standards specified in Secs. 63.443(c) and (d), 63.444(b) and (c), 63.445(b) and (c), 63.446(c), (d), and (e), 63.447(b) or Sec. 63.450(d), shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS, as defined in Sec. 63.2 of this part) as specified in paragraphs (b) through (m) of this section, except as allowed in paragraph (m) of this section. The CMS shall include a continuous recorder.

(b) A CMS shall be operated to measure the temperature in the firebox or in the ductwork immediately downstream of the firebox and

before any substantial heat exchange occurs for each thermal oxidizer used to comply with the requirements of Sec. 63.443(d)(1) through (d)(3). Owners and operators complying with the requirements in Sec. 63.443(d)(2) or (d)(3) shall monitor the parameter specified and for the temperature and concentration limits specified.

(c) A CMS shall be operated to measure the following parameters for each gas scrubber used to comply with the bleaching system requirements of Sec. 63.445(c) or the sulfite pulping system requirements of Sec. 63.444(c).

(1) The pH or the oxidation/reduction potential of the gas scrubber effluent;

(2) The gas scrubber vent gas inlet flow rate; and

(3) The gas scrubber liquid influent flow rate.

(d) As an option to the requirements specified in paragraph (c) of this section, a CMS shall be operated to measure the chlorine outlet concentration of each gas scrubber used to comply with the bleaching system outlet concentration requirement specified in Sec. 63.445(c)(2).

(e) The owner or operator of a bleaching system complying with 40 CFR 430.24, shall monitor the chlorine and hypochlorite application rates, in kg of bleaching agent per megagram of ODP, of the bleaching system during the extended compliance period specified in Sec. 63.440(d)(3).

(f) A CMS shall be operated to measure the gas scrubber parameters specified in paragraphs (c)(1) through (c)(3) of this section or those site specific parameters determined according to the procedures specified in paragraph (n) of this section to comply with the sulfite pulping system requirements specified in Sec. 63.444(c).

(g) A CMS shall be operated to measure the following parameters for each steam stripper used to comply with the treatment requirements in Sec. 63.446(e) (3), (4), or (5):

(1) The process wastewater feed rate;

(2) The steam feed rate; and

(3) The process wastewater column feed temperature.

(h) As an option to the requirements specified in paragraph (g) of

this section, a CMS shall be operated to measure the methanol outlet concentration to comply with the steam stripper outlet concentration requirement specified in Sec. 63.446 (e)(4) or (e)(5).

(i) A CMS shall be operated to measure the appropriate parameters determined according to the procedures specified in paragraph (n) of this section to comply with the condensate applicability requirements specified in Sec. 63.446(c).

(j) Each owner or operator using a biological treatment system to comply with Sec. 63.446(e)(2) shall perform the following monitoring procedures.

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(1) On a daily basis, monitor the following parameters for each biological treatment unit:

(i) Composite daily sample of outlet soluble BOD5 concentration to monitor for maximum daily and maximum monthly average;

(ii) Mixed liquor volatile suspended solids;

(iii) Horsepower of aerator unit(s);

(iv) Inlet liquid flow; and

(v) Liquid temperature.

(2) Obtain daily inlet and outlet liquid grab samples from each biological treatment unit to have HAP data available to perform quarterly percent reduction tests specified in paragraph (j)(2)(ii) of this section and the compliance percent reduction tests specified in paragraph (p)(1)(i) of this section. Perform the following procedures with the liquid samples:

(i) Store the samples for 5 days as specified in Sec. 63.457(n). The 5 day storage requirement is required since the soluble BOD5 test requires 5 days to obtain results. If the results of the soluble BOD5 test are outside of the range established during the initial performance test, then the archive sample shall be used to perform the percent reduction test specified in Sec. 63.457(1).

(ii) Perform the percent reduction test procedures specified in

Sec. 63.457(l) within 45 days after the beginning of each quarter as follows.

(A) The percent reduction test performed in the first quarter (annually) shall be performed for total HAP and the percent reduction obtained from the test shall be at least as great as the total HAP reduction specified in Sec. 63.446(e)(2).

(B) The remaining quarterly percent reduction tests shall be performed for methanol and the percent reduction obtained from the test shall be at least as great as the methanol reduction determined in the previous first-quarter test specified in paragraph (j)(2)(ii)(A) of this section.

(C) The parameter values used to calculate the percent reductions required in paragraphs (j)(2)(ii)(A) and (j)(2)(ii)(B) of this section shall be parameter values measured and samples taken in paragraph (j)(1) of this section.

(k) Each enclosure and closed-vent system used to comply with Sec. 63.450(a) shall comply with the requirements specified in paragraphs (k)(1) through (k)(6) of this section.

(1) For each enclosure opening, a visual inspection of the closure mechanism specified in Sec. 63.450(b) shall be performed at least once every 30 days to ensure the opening is maintained in the closed position and sealed.

(2) Each closed-vent system required by Sec. 63.450(a) shall be visually inspected every 30 days and at other times as requested by the Administrator. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.

(3) For positive pressure closed-vent systems or portions of closed-vent systems, demonstrate no detectable leaks as specified in Sec. 63.450(c) measured initially and annually by the procedures in Sec. 63.457(d).

(4) Demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in Sec. 63.457(e).

(5) The valve or closure mechanism specified in Sec. 63.450(d)(2)

shall be inspected at least once every 30 days to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line.

(6) If an inspection required by paragraphs (k)(1) through (k)(5) of this section identifies visible defects in ductwork, piping, enclosures or connections to covers required by Sec. 63.450, or if an instrument reading of 500 parts per million by volume or greater above background is measured, or if enclosure openings are not maintained at negative pressure, then the following corrective actions shall be taken as soon as practicable.

(i) A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.

(ii) The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified.

(l) Each pulping process condensate closed collection system used to comply with Sec. 63.446(d) shall be visually inspected every 30 days and shall comply with the inspection and monitoring requirements specified in Sec. 63.964 of subpart RR of this part, except for the closed-vent system and control device inspection and monitoring requirements specified in Sec. 63.964(a)(2) of subpart RR of this part, the closed-vent system and the control device shall meet the requirements specified in paragraphs (a) and (k) of this section.

(m) Each owner or operator using a control device, technique or an alternative parameter other than those specified in paragraphs (b) through (l) of this section shall install a CMS and establish appropriate operating parameters to be monitored that demonstrate, to the Administrator's satisfaction, continuous compliance with the applicable control requirements.

(n) To establish or reestablish, the value for each operating parameter required to be monitored under paragraphs (b) through (j), (l), and (m) of this section or to establish appropriate parameters for paragraphs (f), (i), and (m) of this section, each owner or operator shall use the following procedures:

(1) During the initial performance test required in Sec. 63.457(a)

or any subsequent performance test, continuously record the operating parameter;

(2) Determinations shall be based on the control performance and parameter data monitored during the performance test, supplemented if necessary by engineering assessments and the manufacturer's recommendations;

(3) The owner or operator shall provide for the Administrator's approval the rationale for selecting the monitoring parameters necessary to comply with paragraphs (f), (i), and (m) of this section; and

(4) Provide for the Administrator's approval the rationale for the selected operating parameter value, and monitoring frequency, and averaging time. Include all data and calculations used to develop the value and a description of why the value, monitoring frequency, and averaging time demonstrate continuous compliance with the applicable emission standard.

(o) Each owner or operator of a control device subject to the monitoring provisions of this section shall operate the control device in a manner consistent with the minimum or maximum (as appropriate) operating parameter value or procedure required to be monitored under paragraphs (a) through (n) of this section and established under this subpart. Except as provided in paragraph (p) of this section, Sec. 63.443(e), or Sec. 63.446(g), operation of the control device below minimum operating parameter values or above maximum operating parameter values established under this subpart or failure to perform procedures required by this subpart shall constitute a violation of the applicable emission standard of this subpart and be reported as a period of excess emissions.

(p) Each owner or operator of a biological treatment system complying with paragraph (j) of this section shall perform all the following requirements when the monitoring parameters specified in paragraphs (j)(1)(i) through (j)(1)(iii) of this section are below minimum operating parameter values or

above maximum operating parameter values established in paragraph (n) of this section.

(1) The following shall occur and be recorded as soon as practical:

(i) Determine compliance with Sec. 63.446(e)(2) using the percent reduction test procedures specified in Sec. 63.457(l) and the monitoring data specified in paragraph (j)(1) of this section that coincide with the time period of the parameter excursion;

(ii) Steps shall be taken to repair or adjust the operation of the process to end the parameter excursion period; and

(iii) Steps shall be taken to minimize total HAP emissions to the atmosphere during the parameter excursion period.

(2) A parameter excursion is not a violation of the applicable emission standard if the percent reduction test specified in paragraph (p)(1)(i) of this section demonstrates compliance with Sec. 63.446(e)(2), and no maintenance or changes have been made to the process or control device after the beginning of a parameter excursion that would influence the results of the determination.

Sec. 63.454 Recordkeeping requirements.

(a) The owner or operator of each affected source subject to the requirements of this subpart shall comply with the recordkeeping requirements of Sec. 63.10 of subpart A of this part, as shown in table 1, and the requirements specified in paragraphs (b) through (d) of this section for the monitoring parameters specified in Sec. 63.453.

(b) For each applicable enclosure opening, closed-vent system, and closed collection system, the owner or operator shall prepare and maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment and shall record the following information for each inspection:

(1) Date of inspection;

(2) The equipment type and identification;

(3) Results of negative pressure tests for enclosures;

(4) Results of leak detection tests;

(5) The nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);

(6) The date the defect or leak was detected and the date of each attempt to repair the defect or leak;

(7) Repair methods applied in each attempt to repair the defect or leak;

(8) The reason for the delay if the defect or leak is not repaired within 15 days after discovery;

(9) The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;

(10) The date of successful repair of the defect or leak;

(11) The position and duration of opening of bypass line valves and the condition of any valve seals; and

(12) The duration of the use of bypass valves on computer controlled valves.

(c) The owner or operator of a bleaching system complying with Sec. 63.440(d)(3)(ii)(B) shall record the daily average chlorine and hypochlorite application rates, in kg of bleaching agent per megagram of ODP, of the bleaching system until the requirements specified in Sec. 63.440(d)(3)(ii)(A) are met.

(d) The owner or operator shall record the CMS parameters specified in Sec. 63.453 and meet the requirements specified in paragraph (a) of this section for any new affected process equipment or pulping process condensate stream that becomes subject to the standards in this subpart due to a process change or modification.

Sec. 63.455 Reporting requirements.

(a) Each owner or operator of a source subject to this subpart shall comply with the reporting requirements of subpart A of this part as specified in table 1 and all the following requirements in this

section. The initial notification report specified under Sec. 63.9(b)(2) of subpart A of this part shall be submitted by April 15, 1999.

(b) Each owner or operator of a kraft pulping system specified in Sec. 63.440(d)(1) or a bleaching system specified in Sec. 63.440(d)(3)(ii) shall submit, with the initial notification report specified under Sec. 63.9(b)(2) of subpart A of this part and paragraph (a) of this section and update every two years thereafter, a non-binding control strategy report containing, at a minimum, the information specified in paragraphs (b)(1) through (b)(3) of this section in addition to the information required in Sec. 63.9(b)(2) of subpart A of this part.

(1) A description of the emission controls or process modifications selected for compliance with the control requirements in this standard.

(2) A compliance schedule, including the dates by which each step toward compliance will be reached for each emission point or sets of emission points. At a minimum, the list of dates shall include:

(i) The date by which the major study(s) for determining the compliance strategy will be completed;

(ii) The date by which contracts for emission controls or process modifications will be awarded, or the date by which orders will be issued for the purchase of major components to accomplish emission controls or process changes;

(iii) The date by which on-site construction, installation of emission control equipment, or a process change is to be initiated;

(iv) The date by which on-site construction, installation of emissions control equipment, or a process change is to be completed;

(v) The date by which final compliance is to be achieved;

(vi) For compliance with paragraph Sec. 63.440(d)(3)(ii), the tentative dates by which compliance with effluent limitation guidelines and standards intermediate pollutant load effluent reductions and as available, all the dates for the best available technology's milestones reported in the National Pollutant Discharge Elimination System authorized under section 402 of the Clean Water Act and for the best professional milestones in the Voluntary Advanced Technology Incentives

Program under 40 CFR 430.24 (b)(2); and

(vii) The date by which the final compliance tests will be performed.

(3) Until compliance is achieved, revisions or updates shall be made to the control strategy report required by paragraph (b) of this section indicating the progress made towards completing the installation of the emission controls or process modifications during the 2-year period.

(c) The owner or operator of each bleaching system complying with Sec. 63.440(d)(3)(ii)(B) shall certify in the report specified under Sec. 63.10(e)(3) of subpart A of this part that the daily application rates of chlorine and hypochlorite for that bleaching system have not increased as specified in Sec. 63.440(d)(3)(ii)(B) until the requirements of Sec. 63.440(d)(3)(ii)(A) are met.

(d) The owner or operator shall meet the requirements specified in paragraph (a) of this section upon startup of any new affected process equipment or pulping process condensate stream that becomes subject to the standards of this subpart due to a process change or modification.

Sec. 63.456 [Reserved]

Sec. 63.457 Test methods and procedures.

(a) Initial performance test. An initial performance test is required for all emission sources subject to the limitations in Secs. 63.443, 63.444, 63.445, 63.446, and 63.447, except those controlled by a combustion device that is designed and operated as specified in Sec. 63.443(d)(3) or (d)(4).

(b) Vent sampling port locations and gas stream properties. For purposes of

selecting vent sampling port locations and determining vent gas stream properties, required in Secs. 63.443, 63.444, 63.445, and 63.447, each owner or operator shall comply with the applicable procedures in paragraphs (b)(1) through (b)(6) of this section.

(1) Method 1 or 1A of part 60, appendix A, as appropriate, shall be used for selection of the sampling site as follows:

(i) To sample for vent gas concentrations and volumetric flow rates, the sampling site shall be located prior to dilution of the vent gas stream and prior to release to the atmosphere;

(ii) For determining compliance with percent reduction requirements, sampling sites shall be located prior to the inlet of the control device and at the outlet of the control device; measurements shall be performed simultaneously at the two sampling sites; and

(iii) For determining compliance with concentration limits or mass emission rate limits, the sampling site shall be located at the outlet of the control device.

(2) No traverse site selection method is needed for vents smaller than 0.10 meter (4.0 inches) in diameter.

(3) The vent gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of part 60, appendix A, as appropriate.

(4) The moisture content of the vent gas shall be measured using Method 4 of part 60, appendix A.

(5) To determine vent gas concentrations, the owner or operator shall collect a minimum of three samples that are representative of normal conditions and average the resulting pollutant concentrations using the following procedures.

(i) Method 308 in Appendix A of this part shall be used to determine the methanol concentration.

(ii) Except for the modifications specified in paragraphs (b)(5)(ii)(A) through (b)(5)(ii)(K) of this section, Method 26A of part 60, appendix A shall be used to determine chlorine concentration in the vent stream.

(A) Probe/Sampling Line. A separate probe is not required. The sampling line shall be an appropriate length of 0.64 cm (0.25 in) OD

Teflon※ tubing. The sample inlet end of the sampling line shall be inserted into the stack in such a way as to not entrain liquid condensation from the vent gases. The other end shall be connected to the impingers. The length of the tubing may vary from one sampling site to another, but shall be as short as possible in each situation. If sampling is conducted in sunlight, opaque tubing shall be used. Alternatively, if transparent tubing is used, it shall be covered with opaque tape.

(B) Impinger Train. Three 30 milliliter (ml) capacity midget impingers shall be connected in series to the sampling line. The impingers shall have regular tapered stems. Silica gel shall be placed in the third impinger as a desiccant. All impinger train connectors shall be glass and/or Teflon※.

(C) Critical Orifice. The critical orifice shall have a flow rate of 200 to 250 ml/min and shall be followed by a vacuum pump capable of providing a vacuum of 640 millimeters of mercury (mm Hg). A 45 millimeter diameter in-line Teflon※ 0.8 micrometer filter shall follow the impingers to project the critical orifice and vacuum pump.

(D) The following are necessary for the analysis apparatus:

(1) Wash bottle filled with deionized water;

(2) 25 or 50 ml graduated burette and stand;

(3) Magnetic stirring apparatus and stir bar;

(4) Calibrated pH Meter;

(5) 150-250 ml beaker or flask; and

(6) A 5 ml pipette.

(E) The procedures listed in paragraphs (b)(5)(ii)(E)(1) through (b)(5)(ii)(E)(7) of this section shall be used to prepare the reagents.

(1) To prepare the 1 molarity (M) potassium dihydrogen phosphate solution, dissolve 13.61 grams (g) of potassium dihydrogen phosphate in water and dilute to 100 ml.

(2) To prepare the 1 M sodium hydroxide solution (NaOH), dissolve 4.0 g of sodium hydroxide in water and dilute to 100 ml.

(3) To prepare the buffered 2 percent potassium iodide solution,

dissolve 20 g of potassium iodide in 900 ml water. Add 50 ml of the 1 M potassium dihydrogen phosphate solution and 30 ml of the 1 M sodium hydroxide solution. While stirring solution, measure the pH of solution electrometrically and add the 1 M sodium hydroxide solution to bring pH to between 6.95 and 7.05.

(4) To prepare the 0.1 normality (N) sodium thiosulfate solution, dissolve 25 g of sodium thiosulfate, pentahydrate, in 800 ml of freshly boiled and cooled distilled water in a 1-liter volumetric flask. Dilute to volume. To prepare the 0.01 N sodium thiosulfate solution, add 10.0 ml standardized 0.1 N sodium thiosulfate solution to a 100 ml volumetric flask, and dilute to volume with water.

(5) To standardize the 0.1 N sodium thiosulfate solution, dissolve 3.249 g of anhydrous potassium bi-iodate, primary standard quality, or 3.567 g potassium iodate dried at 103 +/-2 degrees Centigrade for 1 hour, in distilled water and dilute to 1000 ml to yield a 0.1000 N solution. Store in a glass-stoppered bottle. To 80 ml distilled water, add, with constant stirring, 1 ml concentrated sulfuric acid, 10.00 ml 0.1000 N anhydrous potassium bi-iodate, and 1 g potassium iodide. Titrate immediately with 0.1 n sodium thiosulfate titrant until the yellow color of the liberated iodine is almost discharged. Add 1 ml starch indicator solution and continue titrating until the blue color disappears. The normality of the sodium thiosulfate solution is inversely proportional to the ml of sodium thiosulfate solution consumed:

[GRAPHIC] [TIFF OMITTED] TR15AP98.000

(6) To prepare the starch indicator solution, add a small amount of cold water to 5 g starch and grind in a mortar to obtain a thin paste. Pour paste into 1 L of boiling distilled water, stir, and let settle overnight. Use clear supernate for starch indicator solution.

(7) To prepare the 10 percent sulfuric acid solution, add 10 ml of concentrated sulfuric acid to 80 ml water in an 100 ml volumetric flask. Dilute to volume.

(F) The procedures specified in paragraphs (b)(5)(ii)(F)(1) through

(b)(5)(ii)(F)(5) of this section shall be used to perform the sampling.

(1) Preparation of Collection Train. Measure 20 ml buffered potassium iodide solution into each of the first two impingers and connect probe, impingers, filter, critical orifice, and pump. The sampling line and the impingers shall be shielded from sunlight.

(2) Leak and Flow Check Procedure. Plug sampling line inlet tip and turn on pump. If a flow of bubbles is visible in either of the liquid impingers, tighten fittings and adjust connections and

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impingers. A leakage rate not in excess of 2 percent of the sampling rate is acceptable. Carefully remove the plug from the end of the probe. Check the flow rate at the probe inlet with a bubble tube flow meter. The flow should be comparable or slightly less than the flow rate of the critical orifice with the impingers off-line. Record the flow and turn off the pump.

(3) Sample Collection. Insert the sampling line into the stack and secure it with the tip slightly lower than the port height. Start the pump, recording the time. End the sampling after 60 minutes, or after yellow color is observed in the second in-line impinger. Record time and remove the tubing from the vent. Recheck flow rate at sampling line inlet and turn off pump. If the flow rate has changed significantly, redo sampling with fresh capture solution. A slight variation (less than 5 percent) in flow may be averaged. With the inlet end of the line elevated above the impingers, add about 5 ml water into the inlet tip to rinse the line into the first impinger.

(4) Sample Analysis. Fill the burette with 0.01 N sodium thiosulfate solution to the zero mark. Combine the contents of the impingers in the beaker or flask. Stir the solution and titrate with thiosulfate until the solution is colorless. Record the volume of the first endpoint (TN, ml). Add 5 ml of the 10 percent sulfuric acid solution, and continue the titration until the contents of the flask are again colorless. Record the total volume of titrant required to go through the first and to the second endpoint (TA, ml). If the volume of

neutral titer is less than 0.5 ml, repeat the testing for a longer period of time. It is important that sufficient lighting be present to clearly see the endpoints, which are determined when the solution turns from pale yellow to colorless. A lighted stirring plate and a white background are useful for this purpose.

(5) Interferences. Known interfering agents of this method are sulfur dioxide and hydrogen peroxide. Sulfur dioxide, which is used to reduce oxidant residuals in some bleaching systems, reduces formed iodine to iodide in the capture solution. It is therefore a negative interference for chlorine, and in some cases could result in erroneous negative chlorine concentrations. Any agent capable of reducing iodine to iodide could interfere in this manner. A chromium trioxide impregnated filter will capture sulfur dioxide and pass chlorine and chlorine dioxide. Hydrogen peroxide, which is commonly used as a bleaching agent in modern bleaching systems, reacts with iodide to form iodine and thus can cause a positive interference in the chlorine measurement. Due to the chemistry involved, the precision of the chlorine analysis will decrease as the ratio of chlorine dioxide to chlorine increases. Slightly negative calculated concentrations of chlorine may occur when sampling a vent gas with high concentrations of chlorine dioxide and very low concentrations of chlorine.

(G) The following calculation shall be performed to determine the corrected sampling flow rate:

[GRAPHIC] [TIFF OMITTED] TR15AP98.001

Where:

SC=Corrected (dry standard) sampling flow rate, liters per minute;

SU=Uncorrected sampling flow rate, L/min;

BP=Barometric pressure at time of sampling;

PW=Saturated partial pressure of water vapor, mm Hg at temperature; and

t=Ambient temperature, deg.C.

(H) The following calculation shall be performed to determine the moles of chlorine in the sample:

[GRAPHIC] [TIFF OMITTED] TR15AP98.002

Where:

TN=Volume neutral titer, ml;

TA=Volume acid titer (total), ml; and

NThio=Normality of sodium thiosulfate titrant.

(I) The following calculation shall be performed to determine the concentration of chlorine in the sample:

[GRAPHIC] [TIFF OMITTED] TR15AP98.003

Where:

SC=Corrected (dry standard) sampling flow rate, liters per minute;

tS=Time sampled, minutes;

TN=Volume neutral titer, ml;

TA=Volume acid titer (total), ml; and

NThio=Normality of sodium thiosulfate titrant.

(J) The following calculation shall be performed to determine the moles of chlorine dioxide in the sample:

[GRAPHIC] [TIFF OMITTED] TR15AP98.004

Where:

TA=Volume acid titer (total), ml;

TN=Volume neutral titer, ml; and

NThio=Normality of sodium thiosulfate titrant.

(K) The following calculation shall be performed to determine the

concentration of chlorine dioxide in the sample:

[GRAPHIC] [TIFF OMITTED] TR15AP98.005

Where:

SC=Corrected (dry standard) sampling flow rate, liters per minute;

tS=Time sampled, minutes;

TA=Volume acid titer (total), ml;

TN=Volume neutral titer, ml; and

NThio=Normality of sodium thiosulfate titrant.

(iii) Any other method that measures the total HAP or methanol concentration that has been demonstrated to the Administrator's satisfaction.

(6) The minimum sampling time for each of the three runs per method shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

(c) Liquid sampling locations and properties. For purposes of selecting liquid sampling locations and for determining properties of liquid streams such as wastewaters, process waters, and condensates required in Secs. 63.444, 63.446, and 63.447, the owner or operator shall comply with the following procedures:

(1) Samples shall be collected using the sampling procedures specified in Method 305 of part 60, appendix A;

(i) Where feasible, samples shall be taken from an enclosed pipe prior to the liquid stream being exposed to the atmosphere; and

(ii) When sampling from an enclosed pipe is not feasible, samples shall be collected in a manner to minimize exposure of the sample to the atmosphere and loss of HAP compounds prior to sampling.

(2) The volumetric flow rate of the entering and exiting liquid streams shall be determined using the inlet and outlet flow meters or

other methods demonstrated to the Administrator's satisfaction. The volumetric flow rate measurements to determine actual mass removal shall be taken at the same time as the concentration measurements;

(3) To determine liquid stream total HAP or methanol concentrations, the owner or operator shall collect a minimum of three samples that are representative of normal conditions and average the resulting pollutant concentrations using one of the following:

(i) Method 305 in Appendix A of this part, adjusted using the following equation:

[GRAPHIC] [TIFF OMITTED] TR15AP98.006

Where:

C=Pollutant concentration for the liquid stream, parts per million by weight.

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Ci=Measured concentration of pollutant i in the liquid stream sample determined using Method 305, parts per million by weight.

fmi=Pollutant-specific constant that adjusts concentration measured by Method 305 to actual liquid concentration; the fm for methanol is 0.85. Additional pollutant fm values can be found in table 34, subpart G of this part.

n=Number of individual pollutants, i, summed to calculate total HAP.

(ii) Any other method that measures total HAP concentration that has been demonstrated to the Administrator's satisfaction.

(4) To determine soluble BOD5 in the effluent stream from a biological treatment unit used to comply with Secs. 63.446(e)(2) and 63.453(j), the owner or operator shall use Method 405.1, of part 136, with the following modifications:

(i) Filter the sample through the filter paper, into Erlenmeyer

flask by applying a vacuum to the flask sidearm. Minimize the time for which vacuum is applied to prevent stripping of volatile organics from the sample. Replace filter paper as often as needed in order to maintain filter times of less than approximately 30 seconds per filter paper. No rinsing of sample container or filter bowl into the Erlenmeyer flask is allowed.

(ii) Perform Method 405.1 on the filtrate obtained in paragraph (c)(4) of this section. Dilution water shall be seeded with 1 milliliter of final effluent per liter of dilution water. Dilution ratios may require adjustment to reflect the lower oxygen demand of the filtered sample in comparison to the total BOD5. Three BOD bottles and different dilutions shall be used for each sample.

(d) Detectable leak procedures. To measure detectable leaks for closed-vent systems as specified in Sec. 63.450 or for pulping process wastewater collection systems as specified in Sec. 63.446(d)(2)(i), the owner or operator shall comply with the following:

(1) Method 21, of part 60, appendix A; and

(2) The instrument specified in Method 21 shall be calibrated before use according to the procedures specified in Method 21 on each day that leak checks are performed. The following calibration gases shall be used:

(i) Zero air (less than 10 parts per million by volume of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 parts per million by volume methane or n-hexane.

(e) Negative pressure procedures. To demonstrate negative pressure at process equipment enclosure openings as specified in Sec. 63.450(b), the owner or operator shall use one of the following procedures:

(1) An anemometer to demonstrate flow into the enclosure opening;

(2) Measure the static pressure across the opening;

(3) Smoke tubes to demonstrate flow into the enclosure opening; or

(4) Any other industrial ventilation test method demonstrated to the Administrator's satisfaction.

(f) HAP concentration measurements. For purposes of complying with the requirements in Secs. 63.443, 63.444, and 63.447, the owner or operator shall measure the total HAP concentration as one of the following:

(1) As the sum of all individual HAP's; or

(2) As methanol.

(g) Condensate HAP concentration measurement. For purposes of complying with the kraft pulping condensate requirements in Sec. 63.446, the owner or operator shall measure the total HAP concentration as methanol except for the purposes of complying with the initial performance test specified in Sec. 63.457(a) for Sec. 63.446(e)(2) and as specified in Sec. 63.453(j)(2)(ii).

(h) Bleaching HAP concentration measurement. For purposes of complying with the bleaching system requirements in Sec. 63.445, the owner or operator shall measure the total HAP concentration as the sum of all individual chlorinated HAP's or as chlorine.

(i) Vent gas stream calculations. To demonstrate compliance with the mass emission rate, mass emission rate per megagram of ODP, and percent reduction requirements for vent gas streams specified in Secs. 63.443, 63.444, 63.445, and 63.447, the owner or operator shall use the following:

(1) The total HAP mass emission rate shall be calculated using the following equation:

[GRAPHIC] [TIFF OMITTED] TR15AP98.007

Where:

E=Mass emission rate of total HAP from the sampled vent, kilograms per hour.

K2=Constant, 2.494×10^{-6} (parts per million by volume)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 deg.C.

Cj=Concentration on a dry basis of pollutant j in parts

per million by volume as measured by the test methods specified in paragraph (b) of this section.

Mj=Molecular weight of pollutant j, gram/gram-mole.

Qs=Vent gas stream flow rate (dry standard cubic meter per minute) at a temperature of 20 deg.C as indicated in paragraph (b) of this section.

n=Number of individual pollutants, i, summed to calculate total HAP.

(2) The total HAP mass emission rate per megagram of ODP shall be calculated using the following equation:

[GRAPHIC] [TIFF OMITTED] TR15AP98.008

Where:

F=Mass emission rate of total HAP from the sampled vent, in kilograms per megagram of ODP.

E=Mass emission rate of total HAP from the sampled vent, in kilograms per hour determined as specified in paragraph (i)(1) of this section.

P=The production rate of pulp during the sampling period, in megagrams of ODP per hour.

(3) The total HAP percent reduction shall be calculated using the following equation:

[GRAPHIC] [TIFF OMITTED] TR15AP98.009

Where:

R=Efficiency of control device, percent.

Ei=Inlet mass emission rate of total HAP from the sampled vent, in kilograms of pollutant per hour, determined as specified in paragraph (i)(1) of this section.

Eo=Outlet mass emission rate of total HAP from the sampled vent, in kilograms of pollutant per hour, determined as specified in paragraph (i)(1) of this section.

(j) Liquid stream calculations. To demonstrate compliance with the mass flow rate, mass per megagram of ODP, and percent reduction requirements for liquid streams specified in Sec. 63.446, the owner or operator shall use the following:

(1) The mass flow rates of total HAP or methanol entering and exiting the treatment process shall be calculated using the following equations:

[GRAPHIC] [TIFF OMITTED] TR15AP98.010

Where:

Eb=Mass flow rate of total HAP or methanol in the liquid stream entering the treatment process, kilograms per hour.
Ea=Mass flow rate of total HAP or methanol in the liquid exiting the treatment process, kilograms per hour.

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K=Density of the liquid stream, kilograms per cubic meter.
Vbi=Volumetric flow rate of liquid stream entering the treatment process during each run i, cubic meters per hour, determined as specified in paragraph (c) of this section.
Vai=Volumetric flow rate of liquid stream exiting the treatment process during each run i, cubic meters per hour, determined as specified in paragraph (c) of this section.
Cbi=Concentration of total HAP or methanol in the stream entering the treatment process during each run i, parts per million by weight, determined as specified in paragraph (c) of this section.
Cai=Concentration of total HAP or methanol in the stream exiting the treatment process during each run i, parts per million by weight, determined as specified in paragraph (c) of this section.
n=Number of runs.

(2) The mass of total HAP or methanol per megagram ODP shall be calculated using the following equation:

[GRAPHIC] [TIFF OMITTED] TR15AP98.011

Where:

F=Mass loading of total HAP or methanol in the sample, in kilograms per megagram of ODP.

Ea=Mass flow rate of total HAP or methanol in the wastewater stream in kilograms per hour as determined using the procedures in paragraph (j)(1) of this section.

P=The production rate of pulp during the sampling period in megagrams of ODP per hour.

(3) The percent reduction of total HAP across the applicable treatment process shall be calculated using the following equation:

[GRAPHIC] [TIFF OMITTED] TR15AP98.012

Where:

R=Control efficiency of the treatment process, percent.

Eb=Mass flow rate of total HAP in the stream entering the treatment process, kilograms per hour, as determined in paragraph (j)(1) of this section.

Ea=Mass flow rate of total HAP in the stream exiting the treatment process, kilograms per hour, as determined in paragraph (j)(1) of this section.

(4) Compounds that meet the requirements specified in paragraphs (j)(4)(i) or (4)(ii) of this section are not required to be included in the mass flow rate, mass per megagram of ODP, or the mass percent reduction determinations.

(i) Compounds with concentrations at the point of determination that are below 1 part per million by weight; or

(ii) Compounds with concentrations at the point of determination that are below the lower detection limit where the lower detection limit is greater than 1 part per million by weight.

(k) Oxygen concentration correction procedures. To demonstrate compliance with the total HAP concentration limit of 20 ppmv in Sec. 63.443(d)(2), the concentration measured using the methods specified in paragraph (b)(5) of this section shall be corrected to 10 percent oxygen using the following procedures:

(1) The emission rate correction factor and excess air integrated sampling and analysis procedures of Methods 3A or 3B of part 60, appendix A shall be used to determine the oxygen concentration. The samples shall be taken at the same time that the HAP samples are taken.

(2) The concentration corrected to 10 percent oxygen shall be computed using the following equation:

[GRAPHIC] [TIFF OMITTED] TR15AP98.013

Where:

Cc=Concentration of total HAP corrected to 10 percent oxygen, dry basis, parts per million by volume.

Cm=Concentration of total HAP dry basis, parts per million by volume, as specified in paragraph (b) of this section.

%02d=Concentration of oxygen, dry basis, percent by volume.

(l) Biological treatment system percent reduction calculation. To determine compliance with an open biological treatment system option specified in Sec. 63.446(e)(2) and the monitoring requirements specified in Sec. 63.453(j)(2), the percent reduction due to destruction in the biological treatment system shall be calculated using the following equation:

R=fbio x 100

Where:

R=Destruction of total HAP or methanol in the biological treatment process, percent.

fbio=The fraction of total HAP or methanol removed in the biological treatment system. The site-specific biorate constants shall be determined using the procedures specified and as limited in appendix C of part 63.

(m) Condensate segregation procedures. The following procedures shall be used to demonstrate compliance with the condensate segregation requirements specified in Sec. 63.446(c).

(1) To demonstrate compliance with the percent mass requirements specified in Sec. 63.446(c)(1), the procedures specified in paragraphs (m)(1)(i) through (m)(1)(iii) of this section shall be performed.

(i) Determine the total HAP mass of all condensates from each equipment system listed in Sec. 63.446 (b)(1) through (b)(3) using the procedures specified in paragraphs (c) and (j) of this section.

(ii) Multiply the total HAP mass determine in paragraph (m)(1)(i) of this section by 0.65 to determine the target HAP mass for the high-HAP fraction condensate stream or streams.

(iii) Compliance with the segregation requirements specified in Sec. 63.446(c)(1) is demonstrated if the condensate stream or streams from each equipment system listed in Sec. 63.446 (b)(1) through (b)(3) being treated as specified in Sec. 63.446(e) contain at least as much total HAP mass as the target total HAP mass determined in paragraph (m)(1)(ii) of this section.

(2) To demonstrate compliance with the percent mass requirements specified in Sec. 63.446(c)(2), the procedures specified in paragraphs (m)(2)(i) through (m)(2)(ii) of this section shall be performed.

(i) Determine the total HAP mass contained in the high-HAP fraction condensates from each equipment system listed in Sec. 63.446(b)(1) through (b)(3) and the total condensates streams from the equipment systems listed in Sec. 63.446(b)(4) and (b)(5), using the procedures specified in paragraphs (c) and (j) of this section.

(ii) Compliance with the segregation requirements specified in Sec. 63.446(c)(2) is demonstrated if the total HAP mass determined in paragraph (m)(2)(i) of this section is equal to or greater than the appropriate mass requirements specified in Sec. 63.446(c)(2).

(n) Biological treatment system monitoring sampling storage. The inlet and outlet grab samples required to be collected in Sec. 63.453(j)(2) shall be stored at 4 deg. C (40 deg. F) to minimize the biodegradation of the organic compounds in the samples.

Sec. 63.458 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 112(d) of the CAA, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States:

(1) Section 63.6(g)--Use of an alternative nonopacity emission standard;

(2) Section 63.453(m)--Use of an alternative monitoring parameter;

(3) Section 63.457(b)(5)(iii)--Use of an alternative test method for total HAP or methanol in vents; and

(4) Section 63.457(c)(3)(ii)--Use of an alternative test method for total HAP or methanol in wastewater.

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Sec. 63.459 [Reserved]

Table 1 to Subpart S--General Provisions Applicability to Subpart S [a]

Reference	Applies to Subpart S	Comment
63.1(a)(1)-(3).....	Yes.....	

63.1(a)(4)	Yes	Subpart S (this table) specifies applicability of each paragraph in subpart A to subpart S.
63.1(a)(5)	No	Section reserved.
63.1(a)(6)-(8)	Yes	
63.1(a)(9)	No	Section reserved.
63.1(a)(10)	No	Subpart S and other cross-referenced subparts specify calendar or operating day.
63.1(a)(11)-(14)	Yes	
63.1(b)(1)	No	Subpart S specifies its own applicability.
63.1(b)(2)-(3)	Yes	
63.1(c)(1)-(2)	Yes	
63.1(c)(3)	No	Section reserved.
63.1(c)(4)-(5)	Yes	
63.1(d)	No	Section reserved.
63.1(e)	Yes	
63.2	Yes	
63.3	Yes	
63.4(a)(1)	Yes	
63.4(a)(3)		
63.4(a)(4)	No	Section reserved.
63.4(a)(5)	Yes	
63.4(b)	Yes	
63.4(c)	Yes	
63.5(a)	Yes	
63.5(b)(1)	Yes	
63.5(b)(2)	No	Section reserved.
63.5(b)(3)	Yes	
63.5(b)(4)-(6)	Yes	
63.5(c)	No	Section reserved.
63.5(d)	Yes	
63.5(e)	Yes	
63.5(f)	Yes	
63.6(a)	Yes	
63.6(b)	No	Subpart S specifies compliance dates for

		sources subject to subpart S.
63.6(c)	No	Subpart S specifies compliance dates for sources subject to subpart S.
63.6(d)	No	Section reserved.
63.6(e)	Yes	
63.6(f)	Yes	
63.6(g)	Yes	
63.6(h)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.6(i)	Yes	
63.6(j)	Yes	
63.7	Yes	
63.8(a)(1)	Yes	
63.8(a)(2)	Yes	
63.8(a)(3)	No	Section reserved.
63.8(a)(4)	Yes	
63.8(b)(1)	Yes	
63.8(b)(2)	No	Subpart S specifies locations to conduct monitoring.
63.8(b)(3)	Yes	
63.8(c)(1)	Yes	
63.8(c)(2)	Yes	
63.8(c)(3)	Yes	
63.8(c)(4)	No	Subpart S allows site specific determination of monitoring frequency in Sec. 63.453(n)(4).
63.8(c)(5)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.8(c)(6)	Yes	
63.8(c)(7)	Yes	
63.8(c)(8)	Yes	
63.8(d)	Yes	

63.8(e)	Yes	
63.8(f)(1)-(5)	Yes	
63.8(f)(6)	No	Subpart S does not specify relative accuracy test for CEM's.
63.8(g)	Yes	
63.9(a)	Yes	
63.9(b)	Yes	Initial notifications must be submitted within one year after the source becomes subject to the relevant standard.
63.9(c)	Yes	
63.9(d)	No	Special compliance requirements are only applicable to kraft mills.
63.9(e)	Yes	
63.9(f)	No	Pertains to continuous opacity monitors that are not part of this standard.

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63.9(g)(1)	Yes	
63.9(g)(2)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.9(g)(3)	No	Subpart S does not specify relative accuracy tests, therefore no notification is required for an alternative.
63.9(h)	Yes	
63.9(i)	Yes	
63.9(j)	Yes	

63.10(a)	Yes	
63.10(b)	Yes	
63.10(c)	Yes	
63.10(d)(1)	Yes	
63.10(d)(2)	Yes	
63.10(d)(3)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(d)(4)	Yes	
63.10(d)(5)	Yes	
63.10(e)(1)	Yes	
63.10(e)(2)(i)	Yes	
63.10(e)(2)(ii)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(e)(3)	Yes	
63.10(e)(4)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(f)	Yes	
63.11-63.15	Yes	

a Wherever subpart A specifies ``postmark'' dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent by the specified dates, but a postmark is not required.

File Number AR 454 (P-1)

AUG 1 2 1996

Mr. Keith Michaels, Chief
Division of Air Pollution Control
Arkansas Department of Pollution
Control and Ecology
P.O. Box 8913
Little Rock, AR 72219-8913

RE: International Paper Company
Camden, Ouachita County, Arkansas
PSD-725-AR-2

Dear Mr. Michaels:

We have reviewed the draft permit received on July 12, 1996, for the International Paper Company, Camden Mill, located in Camden, Arkansas. Based on our evaluation, we have the following items of concern.

Item 1. The Summary section, pages 4 and 5, cites several revisions, additions, increases, etc. to specific conditions, emission sources, and emissions. The reviewing authority should treat the previously unpermitted emissions and emission sources as new construction, process the permit accordingly, and apply current Best Available Control Technology (BACT). Also, in the case of the cogeneration unit, source number 13, the owner or operator did not obtain all necessary preconstruction approvals or permits for the permit of January, 1990, because Prevention of Significant Deterioration review was not performed for that permit. Under Title 40 of the Code of Federal Regulations 52.21(b)(9), "definition of commence", the owner or operator of a major stationary source or major modification must have all necessary preconstruction approvals or permits prior to beginning construction, in order to "commence" construction.

Item 2. The public record should address all creditable increases and decreases in emissions of all pollutants which occur as a result of physical or operational changes and which are contemporaneous with the proposed project(s). Each increase and decrease should be calculated as the difference between the new allowable emission rate and either the old level of

actual emissions or allowable emissions, whichever is lower. This includes all other previously permitted emission points from all process modules within the facility. Such contemporaneous changes should be included in the calculation of net emission increases and in the air quality impacts analyses for each pollutant which will increase significantly as a result of the proposed project.

Item 3. In the BACT Assessment section, page 6, paragraph 2 states that the cogeneration unit controls the amount of nitrogen oxides (NOx) by limiting the fuel usage to only natural gas, and by utilizing steam injection. Several recent permits issued by the State of Texas regarding gas turbine generators specified that dry low NOx burner technology would achieve a NOx emission limit of 15 ppmvd, (including Oyster Creek LTD., May 1992, and Brownsville Public Utility, April 1995). The State should address for the public record any unique and compelling reason why dry low NOx technology with an allowed NOx emission limit of 15 ppmvd is not being utilized.

This evaluation was performed to assist the Arkansas Department of Pollution Control and Ecology in its evaluation of the draft permit, and is not a final position by the Environmental Protection Agency concerning the disposition of this permitting action.

This concludes our review of the draft permit as received. Due to the serious nature of these concerns, the permit should not be issued until you have demonstrated that our items of concern have been addressed for the public record.

If you have any questions, please call Richard A. Barrett of my staff at (214) 665-7227.

Sincerely yours,

ORIGINAL SIGNED BY
JOLE C. LUEHRS

Jole C. Luehrs
Chief
Air Permits Section

bcc: 6PD-R Staff
Whaley (6PD-R) ✓

File Number AR 454 (P-1)

AUG 1 2 1996

Mr. Keith Michaels, Chief
Division of Air Pollution Control
Arkansas Department of Pollution
Control and Ecology
P.O. Box 8913
Little Rock, AR 72219-8913

RE: International Paper Company
Camden, Ouachita County, Arkansas
PSD-725-AR-2

Dear Mr. Michaels:

We have reviewed the draft permit received on July 12, 1996, for the International Paper Company, Camden Mill, located in Camden, Arkansas. Based on our evaluation, we have the following items of concern.

Item 1. The Summary section, pages 4 and 5, cites several revisions, additions, increases, etc. to specific conditions, emission sources, and emissions. The reviewing authority should treat the previously unpermitted emissions and emission sources as new construction, process the permit accordingly, and apply current Best Available Control Technology (BACT). Also, in the case of the cogeneration unit, source number 13, the owner or operator did not obtain all necessary preconstruction approvals or permits for the permit of January, 1990, because Prevention of Significant Deterioration review was not performed for that permit. Under Title 40 of the Code of Federal Regulations 52.21(b)(9), "definition of commence", the owner or operator of a major stationary source or major modification must have all necessary preconstruction approvals or permits prior to beginning construction, in order to "commence" construction.

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Sincerely yours,

ORIGINAL SIGNED BY
JOLE C. LUEHRS

Jole C. Luehrs
Chief
Air Permits Section

bcc: 6PD-R Staff
Whaley (6PD-R)

Dorothy

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
POST OFFICE BOX 8913
LITTLE ROCK, ARKANSAS 72219-8913
PHONE: (501) 682-0744
FAX: (501) 682-0707

AR 454
PE

RECEIVED
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NSR SECTION
6T-AN

November 1, 1996

Russell Delezen, Superintendent, Environmental Services
International Paper Company - Camden Mill
P.O. Box 2045
Camden, Arkansas 71701

Dear Mr. Delezen:

The enclosed Permit No. 725-AR-2 is your authority to construct, operate, and maintain the equipment and/or control apparatus as set forth in your application dated or last amended May 17, 1995.

After considering the facts and requirements of A.C.A. §8-4-101 et seq., and implementing regulations, I have determined that Permit No. 725-AR-2 for the construction, operation and maintenance of an air pollution control system for International Paper Company - Camden Mill be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under §2.1.14 of Regulation No. 8, Arkansas Department of Pollution Control and Ecology Administrative Procedures, within 30 days after service of this decision.

All persons submitting written comments during this 30 day period, and all other persons entitled to do so, may request an adjudicatory hearing and Commission review on whether the decision of the Director should be reversed or modified. Such a request shall be in the form and manner required by §2.1.14 of Regulation No. 8.

This permit is subject to the conditions specified therein and the conditions, if any, which are specified in the enclosed summary report.

Sincerely,

Keith Michaels

Keith A. Michaels
Chief, Air Division

Enclosure

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 8913
LITTLE ROCK, ARKANSAS 72219-8913
PHONE: (501) 682-0744
FAX: (501) 682-0753

November 1, 1996

Richard A. Barrett
EPA Region VI
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Re: Response to Comments (CSN: 52-0013; 725-AR-2)

Dear Mr. Barrett:

Thank you for commenting on the above referenced permit.

Pursuant to Regulation No. 8, please find enclosed a copy of the final permit, response to comments, and a certificate of service.

The applicant or permittee and any person submitting public comments on the record may request an adjudicatory hearing and Commission review of the final permitting decision as provided by Regulation No. 8.

Sincerely,

Keith A. Michaels, P.E.
Air Division Chief

xc: Cliff Hunt, United States Department of Agriculture (w/ attachment)

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Printed October 23, 1996 (2:05pm)

RESPONSE TO COMMENTS

International Paper Company - Camden Mill
0725-AR-2
CSN: 52-0013

On July 11, 1996, the Director of the Arkansas Department of Pollution Control and Ecology (ADPC&E) gave notice of a redraft permitting decision for the above referenced facility. During the comment period the Environmental Protection Agency (EPA) Region VI and the permittee submitted written comments, data, views, or arguments on the draft permitting decision.

The Department's response to issues raised by EPA Region VI follows (see Jole C. Luehrs' letter dated August 12, 1996).

Issue No. 1 - The summary section, pages 4 and 5, cites several revisions, additions, increases, etc. to specific conditions, emission sources, and emissions. The reviewing authority should treat the previously unpermitted emissions and emission sources as new construction, process the permit accordingly, and apply current Best Available Control Technology (BACT). Also, in the case of the cogeneration unit, source number 13, the owner or operator did not obtain all necessary preconstruction approvals or permits for the permit of January 1990, because Prevention of Significant Deterioration (PSD) review was not performed for that permit. Under Title 40 of the Code of Federal Regulations 52.21(b)(9), "definition of commence". The owner or operator of a major stationary source or major modification must have all necessary preconstruction approvals or permits prior to beginning construction in order to "commence" construction.

Response No. 1 - Source number's SN-17 and SN-18 are existing and have been included for the first time in an air permit. Since these sources were installed prior to PSD regulations, PSD review is not required. The permittee stated in the application that SN-18 was installed in 1974 and SN-17 in 1982/1991. Annual VOC emissions at SN-17 are estimated to be 30 tpy. This limit is federally enforceable pursuant to Specific Condition No. 6 that requires not only record keeping but specific limits on the type and quantity of inks to be used at this source. Additionally, the VOC emissions at SN-17 do not exceed a significant increase of 40 tpy. BACT will not apply to either of these two existing sources that are being included in this permit for the first time.

In regards to the construction of the cogeneration unit prior to permitting, a CAO was issued in 1991 to this facility for their neglect of the regulations. This CAO required International Paper Company to submit this PSD application. "This permit modification resolves any issues relating to PSD applicability and to move to a condition as if the PSD application had been submitted prior to construction of the cogeneration unit" as stated in the second paragraph of the permit summary.

Issue No. 2 - The public record should address all creditable increases and decreases in emissions of all pollutants which occur as a result of physical or operational changes and which are contemporaneous with the proposed project(s). Each increase and decrease should

be calculated as the difference between the new allowable emission rate and either the old level of actual emissions or allowable emissions, whichever is lower. This includes all other previously permitted facility. Such contemporaneous changes should be included in the calculation of net emission increases and in the air quality impacts analyses for each pollutant which will increase significantly as a result of the proposed project.

Response No. 2 - This PSD permit modification does address all creditable increases and decreases in emissions of all pollutants which occurred as a result of physical or operational changes. Emission increases or decreases not due too physical or operational changes have not been included in the calculations of net emission increases or decreases and in the air quality impacts analysis. These increases or decreases are a result of past over or under emission estimates. Again, only emission increases or decreases that occurred as a result of physical or operational changes are addressed in this PSD permit application.

Issue No. 3 - In the BACT Assessment section, page 6, paragraph 2 states that the cogeneration unit controls the amount of nitrogen oxides (NO_x) by limiting the fuel usage to only natural gas, and by utilizing steam injection. Several recent permits issued by the State of Texas regarding gas turbine generators specified that dry low NO_x burners technology would achieve a NO_x emission limit of 15 ppmvd, (including Oyster Creek LTD., May 1992, and Brownsville Public Utility, April 1995). The State should address for the public record any unique and compelling reason why dry low NO_x technology with an allowed NO_x emission limit of 15 ppmvd is not being utilized.

Response No. 3 - Dry low NO_x technology with an allowed NO_x emission limit of 15 ppmvd should not be utilized due to the timing of the application, permit review period, best achievable control technology, and cost considerations.

Timing of the Application. The gas turbine installed in the Camden Mill Cogeneration Facility was constructed in 1989 and began operation in 1990. At that time steam injection controls for NO_x were the BACT. The system was constructed under state permit No. 990-A as a non-PSD facility. Power boiler hours were restricted to avoid a PSD permit based on expected cogeneration facility operational capabilities and emissions. The state required NO_x and CO continuous emission monitors to assure that the annual PSD limits were not exceeded.

During the first year of operation, hourly emission limits were difficult to control as mill personnel learned about the adjustments required to deal with seasonal weather variations. The state considered hourly emissions to be excessive and the state and the mill agreed to a Consent Administrative Order (CAO). The mill paid a fine and agreed to submit an application for a PSD permit. The state agreed to make a reasonable effort to promptly issue a PSD permit to resolve the issue of hourly emission rates. Even though the hourly emission rates were an issue, the annual emissions did not and have never reached the PSD threshold.

Permit Review Period. The mill submitted an application for a PSD permit on December 31, 1991, as agreed in the CAO. This application was assigned to Alan Shar. Several submittals of emission data and modeling were made at the request of the Department. Additional data was provided for the other sources in the mill in February 1993 at the request of the Department. On January 19, 1994, the application was resubmitted. This time the application was reassigned to Steve Burghart on August 17, 1994. A draft permit went to public notice on March 20, 1996. A redraft went to public notice on July 11, 1996. The net increase in emissions has not exceeded the annual PSD threshold since the startup of the cogeneration facility.

Best Achievable Control Technology. At the time the cogeneration facility was constructed, the installed emission controls were BACT. At the time the application for a PSD permit was filed in 1991, as well as when the draft was prepared, these controls were considered BACT. To date, GE Power Systems has only one prototype Frame 5 gas turbine with dry low NO_x controls in service. Another unit has been ordered but is not expected to begin operation until Fall, 1997. There is the possibility of a retrofit kit available for between $3.5 and 4.5 million installed cost but none has been installed to determine the effectiveness. In short, this technology is not proven in the smaller Frame 5 turbine.

GE Power Systems has stated that even the prototype dry low NO_x unit has emissions of 25 ppm and they estimate that a retrofit such as would be required at the Camden Mill would need an emission limit higher than 25 ppmvd. The existing turbine should emit no more than 42 ppmvd NO_x which translates to 232 tons of NO_x per year assuming an average annual temperature of 60°F. Assuming the turbine could be retrofitted to 25 ppmvd, the emissions would be 138 tons of NO_x per year at the same temperature. However, GE Power Systems is unwilling to guarantee that a retrofit will consistently operate with emissions less than the current 42 ppmvd. References by the EPA to other dry low NO_x installations are turbines of a much larger Physical size and output than a GE Frame 5. Dry low NO_x technology works much better with the larger systems.

Cost Considerations. Total estimated cost would be approximately $5 million to install the unproven retrofit including extra utility cost during the shutdown period. The additional estimated operating cost for the first year is estimated to be approximately $1 million due to a high frequency of inspection outages. There is also an expected ongoing annual cost increase of approximately $0.4 million due to increased inspection schedules. The dry NO_x control system also makes the turbine much more sensitive to operational upsets and much easier to damage as a result of upsets. The first year cost to install a retrofit is estimated at $6 million or a NO_x reduction cost of approximately $64,000 per ton of NO_x reduction. Actual cost could be much higher since there are no available units for comparison.

Considering the history of the cogeneration facility, the timely filing of a PSD application following the CAO, the lengthy review period, and the cost involved, the permittee believes

that these circumstances constitute unique and compelling reasons to issue the PSD permit as requested, without add-on NO_x controls.

The Department's response to issues raised by the permittee follows (see Calvin Staudt's letters dated July 19 and August 9, 1996).

Issue No. 1 - Specific Condition No. 12 requires monitoring of TRS emissions from the recovery boiler and lime kiln stacks in both parts per million and pounds per hour. The manufacturer of the continuous emission monitors has been requested to add a pounds per hour column to the hourly and twelve hour average printouts. International Paper's problem arises in relation to the method of determining compliance. As previously discussed by Mr. Steve Burghart, Mr. Tim Bivens, and Mr. Russell Delezen, the Subpart BB Standards of Performance for Kraft Pulp Mills attached to the draft indicates that TRS gas concentration is to be computed as a 12-hour average even though the hourly emissions will be available for informational purposes. International Paper request that a sentence be added to Specific Condition No. 12 clarifying that CEM TRS data is enforced on 12 hour averages.

Response No. 1 - Specific Condition No. 12 has been revised to read as follows:

CONTINUOUS EMISSION MONITOR SYSTEMS (CEMS): The permittee shall continue to calibrate, maintain, and operate a monitoring device that continuously monitors and records for specific pollutants at the following sources:

Source	Pollutant
SN-03	TRS
SN-04 & SN-05	TRS
SN-06	TRS
SN-13	NO_x & CO

Each continuous emission monitoring system (CEMS) required by this permit shall comply with the CEMS Standards set forth in Attachment F of this permit. Each alternate continuous monitoring or parametric modeling system which is operated by the permittee shall comply with the protocol which has been approved by the Department.

The permittee shall provide reporting from the CEMS in parts per million (ppm) and also in pounds per hour (lbs/hr). The facility shall indicate the methodology used to determine the lbs/hr figure (based on gas flow rates from the most recent compliance test for each source) in the required reporting. Both ppm and lbs/hr shall be used for compliance purposes. However, TRS concentration and lbs/hr emission limits will be calculated and reported as 12 hour averages for compliance purposes. TRS pounds per hour will be determined using the 12 hour average concentration and the gas flow rate from the most recent compliance test for each source.

Issue No. 2 - Mill operation personnel have made International Paper aware that while the

lime kiln scrubber (SN-03) meets a pressure drop limit of 2 inches in normal operation, the pressure drop during periods of reduced loading, startup or shutdown may be below 1 inch. International Paper request that the minimum allowed pressure drop be changed to 0.8 inches of water to allow for a reduced kiln throughput in the flooded plate type scrubber.

Response No. 2 - Since no written policy exist to include minimum operating rates for the scrubber, the Department has removed this requirement from Specific Condition No. 3(a). Only the opacity limits will be used to monitor whether the scrubbers are operating properly. Specific Condition No. 3(a) now reads as follows:

> **Scrubbers.** Scrubbers associated with this plant shall be maintained and operated in serviceable condition as prescribed by the manufacturer during operation of this plant. Scrubbers shall be inspected as necessary to assure that each is in good working condition. ~~The permittee shall monitor and record the pressure drop and liquid flow for each scrubber continuously. Continuous monitoring shall be done either manually once per hour or automatically by a strip chart recorder. Records shall be maintained on site and provided to Department personnel upon request. Pressure drop and liquid flow rate for each scrubber shall be maintained at or above the minimum required. The minimum operating rate for each scrubber is given in the following table:~~

~~Source Number~~	~~Minimum Operating Rates~~	
	~~Pressure Drop (Inches of Water)~~	~~Flow Rate (gpm)~~
~~SN-01*~~	~~6.0~~	~~600~~
~~SN-02~~	~~0.01 (est.)~~	~~20~~
~~SN-03*~~	~~2.0~~	~~60~~
~~SN-07*~~	~~8.0~~	~~15~~
~~SN-08*~~	~~0.5~~	~~15~~
~~SN-09*~~	~~0.5~~	~~15~~
~~SN-12~~	~~0.5~~	~~30~~

~~*Pressure drop and flow rate at this source is continuously monitored automatically.~~

Issue No. 3 - The permittee noted that while the allowed hourly emissions for NO_x from the recovery boilers (SN-04, SN-05, and SN-06) were changed to allow for periodic usage of natural gas, the Emission Factor used in lbs NO_x per adtp is a valid limit for recovery boilers and International Paper ask that the calculations reflect this number rather than 1.0 lbs/hr.

Response No. 3 - Calculations should have been revised in the redraft but were not. Since attaching the calculations does not really serve any purpose, they have been removed from the permit. Calculations will not be attached to the final permit and can be found in the permit modification application.

Issue No. 4 - The permittee would also like to take this opportunity to correct a longstanding typographical error in the limits for SN-12. In the original incinerator permit application,

the SO_2 emission limits were 9 pounds per hour and 39 tons per year. The incinerator converts non-condensible sulfide gases into SO_2 and then a scrubber with alkaline solution removes more than 90 percent of the SO_2. Later the limit was picked up as 0.9 pounds per hour, perhaps due to a spot on the paper. International Paper request that the allowable limit be changed to 9 lbs/hr and 39 tons per year as in the original application and as in the manufacturer's guarantee.

Response No. 4 - The original application for permit number 725-AR-1 only lists SO_2 and TRS as pollutants from this source. Air permit number 725-AR-1 was issued on May 15, 1992, with limits for PM_{10}, NO_x, SO_2, CO, VOC, and TRS not just SO_2 and TRS. Emission limits for PM_{10}, NO_x, SO_2, CO, VOC, and TRS were included by the engineer reviewing that application. Basis for these emission limits was stated in the calculations attached to the draft permit (i.e., SO_2 emissions are based on permit modeling). Furthermore, the application for this permit listed emission rates for PM_{10}, NO_x, SO_2, CO, VOC, and TRS. No increase in SO_2 emissions at this source was mentioned in this application. Emission limits for SO_2 have not changed and are continued from the previous permit.

Issue No. 5 - International Paper request agreement by the Department that the exclusive use of pipeline quality natural gas in the gas turbine (SN-13) satisfies the sulfur monitoring requirement of Appendix GG.

Response No. 5 - Appendix GG can be satisfied by annual certification from gas suppliers as to sulfur content of the pipeline quality natural gas provided to the mill. No change in the permit wording will be needed to satisfy this requirement. Therefore, International Paper has withdrawn this comment.

Issue No. 6 - The opacity limits for SN-15 through SN-18 are listed as zero. Limits of zero could cause much confusion in varying weather conditions. International Paper request that these limits be set at 20 percent or left blank so that the SIP limits will apply. If limits of 20 percent or N/A cannot be set, a limit of 10 percent should be set.

Response No. 6 - The opacity limit for source numbers SN-15 and SN-18 has been set at the 10 percent. Opacity limits for SN-16 and SN-17 are not applicable (N/A).

Issue No. 7 - The subject of fuel oil burning needs to be clarified. Source number's SN-01, SN-04, SN-05, SN-06, SN-10, SN-11, and SN-12 do not normally burn fuel oil but need that capability during periods of natural gas curtailment as discussed in Specific Condition No. 5. Table I indicates that SN-10 and SN-11 may burn oil at other times. The permittee request that a footnote be added to the Allowable Emission Rate Table indicating that each of these sources may burn fuel oil for testing of equipment and that the combined emissions of the sources as a result of this burning are not to exceed 39.6 tons SO_2 or 6 tons of NO_x (168,000 total gallons of oil) for all sources combined. Also, International Paper request that

operating scenarios 10B and 11B be deleted from the Allowable Emission Rate Table as fuel oil will only be used in emergency situations.

Response No. 7 - Operating scenarios, 10B and 11B can be deleted from the Allowable Emission Rate Table (Table I). An operating scenario for burning fuel oil at source numbers SN-01B, SN-04B, SN-05B, and SN-06B has been included in Table I.

Additionally, Specific Condition No. 5 has been revised to account for the fuel oil burned at these sources. A fuel oil usage limit is required in order to make the emissions from fuel oil combustions federally enforceable. Specific Condition No. 5 now reads as follows:

> **FUEL OIL USAGE:** Fuel oil may be burned in the lime kiln (SN-03) at any time. Fuel oil usage at SN-03 shall not exceed a total of 4,380,000 gallons per year during any consecutive 12 month period. Monthly records of fuel oil usage at this source shall be maintained on site and made available for inspection by Air Division personnel upon request. These records shall be updated by the end of the month following the month for which these records pertain.
>
> Also, No. 6 fuel oil shall be used at SN-01, SN-04, SN-05, and SN-06 as a standby source of energy during natural gas curtailments and to test the oil burning capability of the equipment. ~~Actual burning of the fuel oil to test the oil burning capability of the equipment shall not exceed 48 hours per calendar year.~~ The permittee shall maintain daily records of No. 6 fuel oil usage which shall not exceed 167,600 gallons during any calendar year (i.e., January - December) ~~and of all hours of operation when the fuel oil is used~~. Records shall be made available to Department personnel upon request.
>
> Sulfur content of the fuel oil shall not exceed 3 percent sulfur by weight. Sulfur content shall be verified by testing or by vendor's written guarantee for each shipment (order) of fuel oil received at this site. The permittee shall maintain a record of each fuel order and the associated sulfur content. This record shall be updated with each order and shall be made available to Department personnel upon request.
>
> Before using fuel oil at this site, the permittee shall notify the local ADPC&E air inspector of the estimated start up time. The local air inspector for District 7 is at the Department's field office in El Dorado. The inspector's telephone number is (501) 862-5941.

Issue No. 8 - The NCG incinerator scrubber (SN-12) is a packed absorption column and operated by absorbing SO_2 as the gas contacts liquid on the surface of the packing. After reviewing manufacturers' specifications, International Paper became aware that the requested minimum flow and pressure drop for these systems were not the appropriate values. This scrubber does not work by pressure differential. The permittee request that the flow minimum be changed to 20 gpm and the minimum pressure drop be changed to either 0.1 inches or "NA". Increasing the differential only indicates that the packed column is beginning to plug.

Response No. 8 - See the Department's response to International Paper's issue number 2.

Issue No. 9 - Footnote number 3 of the allowable emission rate table discusses the expected increase in CO during grate Cleaning. Due to the impracticability of determining compliance with this provision, the permittee requests that it be dropped.

Response No. 9 - Footnote number 3 of the allowable emission rate table has been deleted from the permit.

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
POST OFFICE BOX 8913
LITTLE ROCK, ARKANSAS 72219-8913
PHONE: (501) 682-0744
FAX: (501) 682-0707

AIR PERMIT

FOR THE INSTALLATION, ALTERATION, OR REPLACEMENT OF EQUIPMENT AND/OR AIR POLLUTION CONTROL APPARATUS UNDER REGULATIONS OF THE ARKANSAS PLAN OF IMPLEMENTATION FOR AIR POLLUTION CONTROL AND THE ARKANSAS AIR POLLUTION CONTROL CODE

Permit Number: **725-AR-2** CSN: **52-0013**

TO: International Paper Company - Camden Mill
1944 Adams Avenue
Camden, Arkansas 71701

This permit is your authority to construct, operate and/or maintain the equipment and/or facility in the manner as set forth in the Department's summary report and your application dated May 17, 1995. This permit is issued pursuant to the provisions of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. Sec. 8-4-101 et seq.) hereinafter referred to as the "Act," the Arkansas Air Pollution Control Code hereinafter referred to as the "Code," and the Regulations of the Arkansas Plan of Implementation for Air Pollution Control hereinafter referred to as the "Plan."

1. This permit shall not relieve the owner or operator of the equipment and/or the facility from compliance with all applicable provisions of the Act, Code, and Plan.

2. The equipment and/or facility shall be constructed, installed, and operated in accordance with the plans, specifications, written descriptions, and other representations contained in the permit application and the Department's summary report. There shall be no deviation therefrom without the written approval of the Director of the Department of Pollution Control and Ecology.

3. The Director shall be notified in writing within thirty (30) days after construction has commenced, construction is complete, the equipment and/or facility is first placed in operation, and the equipment and/or facility first reaches the target production rate.

4. Construction must commence within eighteen (18) months after the approval of the permit application. Records must be kept for two years which will enable the Department to determine compliance with the terms of this permit--such as hours of operation, throughput, upset condition, and continuous monitoring data. The records may be used, at the discretion of the Department, to determine compliance with the conditions of the permit.

5. Each emission point for which an emission test method is specified in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. Compliance test results shall be submitted to the Department within thirty (30) days after the completed testing. The permittee shall provide:

   (a) Sampling ports adequate for applicable test methods
   (b) Safe sampling platforms
   (c) Safe access to sampling platforms
   (d) Utilities for sampling and testing equipment

6. The equipment, control apparatus and emission monitoring equipment shall be operated within their design limitations and maintained in good condition at all times.

7. If, for any reason, the permitted facility experiences an upset condition, the permittee shall report such to the Department in accordance with this General Condition. "Upset condition" is defined as those exceedances of emissions limitations lasting 30 or more minutes in the aggregate during a calendar day, unless otherwise specified in the permit or applicable regulation. The permittee shall notify the Department of an upset condition within 24 hours after the discovery of the upset. This may be done by:

   (a) Facsimile transmission (fax) of a completed *Upset Condition Reporting Form* (blank form is available from the Air Division - Compliance Section) to the Department; or

   (b) Telephone report, followed up by the mailing of the completed *Upset Condition Reporting Form* to the Department by the next business day.

   Failure by the permittee to report an upset condition in accordance with this General Condition shall constitute a violation of this permit. Compliance with this General Condition by the permittee does not constitute a waiver of the emission limitations contained in this permit.

8. The permittee shall allow representatives of the Department upon the presentation of credentials:

   (a) To enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of this permit
   (b) To have access to and copy any records required to be kept under the terms and conditions of this permit, or the Act
   (c) To inspect any monitoring equipment or monitoring method required in this permit
   (d) To sample any emission of pollutants

(e) To perform an operation and maintenance inspection of the permitted source

9. This permit is issued in reliance upon the statements and presentations made in the permit application. The Department has no responsibility for the adequacy or proper functioning of the equipment or control apparatus.

10. This permit shall be subject to revocation or modification when, in the judgment of the Director, such revocation or modification shall become necessary to comply with the provisions of the Act, Code, or Plan, or if the permittee fails to pay the permit fee in accordance with Regulation No. 9.

11. This permit may be transferred. An applicant for a transfer shall submit a written request for transfer of the permit on a form provided by the Department and submit the disclosure statement required by Arkansas Code Annotated §8-1-106 at least thirty (30) days in advance of the proposed transfer date. The permit will be automatically transferred to the new permittee unless the director denies the request to transfer within thirty (30) days of the receipt of the disclosure statement. A transfer may be denied on the basis of the information revealed in the disclosure statement or other investigation or, if there is deliberate falsification or omission of relevant information.

12. This permit shall be available for inspection on the premises where the control apparatus is located.

Approved:

Arkansas Department of Pollution
Control and Ecology

Chief, Air Division

Date November 1, 1996

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
DIVISION OF AIR POLLUTION CONTROL

Summary Report Concerning Permit Application

Submitted By: International Paper Company - Camden Mill
1944 Adams Avenue
Camden, Arkansas 71701
Ouachita County
Contact Position: Environmental Services Superintendent
Telephone No.: (501) 231-4321 Extension 251

CSN: 52-0013 **Permit No.:** 725-AR-2 **Date Issued:** 11/1/96

Submittal(s): June 23, 1994; June 27, 1994; July 7, 1994; January 19, 1995; May 17, 1995

Summary

International Paper Company - Camden Mill operates a paper mill approximately three miles south of Camden (Ouachita County). This facility is located just east of Highway 7 at 1944 Adams Avenue. A location map for this facility can be found in Attachment A of the permit. Permitted pollutants from the facility will be particulate matter (PM), nitrogen oxides (NO_x), sulfur dioxide (SO_2), carbon monoxide (CO), volatile organic compounds (VOC), total reduced sulfur (TRS), and acetone. This facility is considered a major stationary source under Prevention of Significant Deterioration (PSD) regulations (40 CFR 52.21); and is currently operating under air permits 725-AR-1, 990-A, 1239-A, and 1458-A. This permitting action seeks to consolidate all the above permits into one permit, and to permit existing emission sources which have previously been inadvertently omitted from permitting activities. Changes to the existing permit (725-AR-1) are:

1. Air permit 725-AR-2 will consolidate four currently active air permits into one air permit. These four permits are 725-AR-1, 990-A, 1239-A, and 1458-A. This permit (725-AR-2) will supersede and rescind permit numbers 725-AR-1, 990-A, 1239-A, and 1458-A.

2. Revisions have been made to the specific conditions.

3. Emissions at source numbers SN-01 through SN-16 have been revised.

4. Source numbers SN-17 and SN-18 have been added to the permit.

The Department granted permit number 990-A to International Paper on January 10, 1990, to authorize construction and operation of the cogeneration turbine. An agreement was later reached to apply for a PSD permit for this cogeneration unit. This agreement was made to clarify the meaning of the oxides of nitrogen (NO_x) and carbon monoxide (CO) emission limits. This permit modification resolves any issues relating to PSD applicability and to move to a condition as if the PSD application had been submitted prior to construction of the cogeneration unit. Exhaust gases from the cogeneration system exist from

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Installation: Installed
Control Equipment: $ N/A
Reviewed By: Steven G. Burghart
Applicable Regulation: Air Code, SIP, NSPS, PSD

Operation: Operating
Total Project: $ N/A
Approved By: Keith A. Michaels, P.E.

emission point SN-13. Sensible heat from the gas turbine exhaust are recovered in a down stream waste heat boiler. A duct burner is used to provide supplemental firing to ensure a stable supply of steam is provided by the waste heat boiler. The design and operation of the facility includes several measures to minimize emissions. These measures include (1) using natural gas as the sole fuel to power the gas turbine and the duct burner; and (2) injecting steam into the turbine combustor nozzles to lower the combustor flame temperature and, therefore, the NO_x emissions. The existing cogeneration turbine is subject to Standards of Performance for Stationary Gas Turbines constructed after October 3, 1977 (40 CFR 60, Subpart GG), and is subject to the emission limitation of 150 ppmvd NO_x. Additionally, the duct burner is subject to Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units constructed after June 19, 1984 (40 CFR 60, Subpart Db).

A PSD permit differs from other air permits in that the applicant is required to:

> Apply the "Best Available Control Technology" (BACT) for each pollutant subject to regulations under the Act for which the modification would result in a significant net emission increase. BACT is determined on a case-by-case basis for each source taking into account energy, environmental, and economic impacts as well as technical feasibility.
>
> Conduct an ambient air impact analysis in order to determine whether or not the allowable emissions from the proposed source, in conjunction with all other applicable emission increases or reductions, would cause or contribute to a violation of the applicable PSD increments and the National Ambient Air Quality Standards (NAAQS). As part of this analysis, the applicant may be required to submit ambient air quality monitoring data as part of the permit application or to demonstrate that the predicted ambient impact is so low that no monitoring data will be necessary.

Best Available Control Technology Assessment

The only emissions that are subject to PSD review are those of NO_x and CO. By limiting the hours of operation of the auxiliary power boilers, the decrease in their emissions of PM_{10} offsets the PM_{10} emissions from the cogeneration unit. Emissions of SO_2 and VOC remain insignificant without the corresponding offsets. Since NO_x and CO emissions are significant, they are subject to PSD review. As such, a Best Available Control Technology (BACT) analysis for NO_x and CO is required.

BACT is defined as an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation which the administrative authority, on a case-by-case basis, taking into account energy, environmental and economic impacts, and other costs, determined is achievable. The BACT assessment (1) identifies alternative control methods, (2) considers the technical feasibility of each method, (3) ranks the technically feasible alternatives in terms of control effectiveness, (4) evaluates the economic, energy, and environmental aspects of technically feasible alternatives, and (5) identifies the control method considered BACT for each pollutant and source combination.

NO_x Control Technologies. NO_x formation is a function of three main variables: fuel bound nitrogen in the fuel burned in the combustion chamber, combustion chamber flame temperature, and combustion chamber residence time. Conceptually, several types of NO_x control technologies exist to control the formation of NO_x at its source of formation. This can involve limiting the fuel bound nitrogen; lowering the flame temperature of the combustion chamber through wet injection, chamber design, and/or fuel to air ratios (combustion control); and decreasing the residence time of the fuel in the combustion chamber, usually through the design of the combustion device.

The other type of control technology involves reducing the NO_x content of the combustion exhaust gases (post-combustion control). This can involve Selective Catalytic Reduction, Nonselective Catalytic Reduction, and Selective Noncatalytic Reduction. These control technologies can also be used in combination with the technologies that control NO_x at its source formation.

The Camden cogeneration unit currently controls the amount of NO_x formed from fuel bound nitrogen by limiting the fuel for this unit to only natural gas. The flame temperature of the gas turbine combustion chamber is lowered, thereby reducing the amount of NO_x formed, by steam injection. Water injection is not used in the cogeneration unit. Also, the flame temperature of the downstream duct burner is controlled through the use of low NO_x burners. The control options of wet injection for NO_x reduction in the gas turbine, and the combustion control technologies built into the designs of the gas turbine and duct burner, represent the best control technology for this application. These options provide an affordable, energy efficient and environmentally acceptable alternative. Since these controls already exist for the cogeneration unit, no additional controls are proposed.

CO Control Technologies. Carbon monoxide (CO) emissions in gas turbines arise from inefficient or incomplete combustion of fuel. There are three major factors which influence CO formation in gas turbines: firing temperature, combustion chamber residence time, and combustion mixing characteristics. BACT analysis will address CO control for the cogeneration unit (gas turbine and duct burners). The control of CO emission from the cogeneration unit involves oxidizing the CO to a less noxious pollutant, carbon dioxide (CO_2). The options currently available to reduce the CO emissions, based on their CO removal efficiency, are (1) Thermal Oxidation, and (2) Catalytic Oxidation.

Since CO emissions in gas turbines arise from inefficient or incomplete combustion of fuel, there are three major factors which influence CO formation in gas turbines: firing temperature, combustion chamber residence time, and combustor mixing characteristics. By increasing the combustion chamber and residence time, the rate of CO conversion to CO_2 increases, thereby reducing CO emissions. However, by increasing the combustion temperature and residence time, NO_x emissions increase. Thus a dichotomy exists between CO and NO_x control at their source of formation. By reducing the rate of formation of one, the rate of formation of the other increases. Since NO_x is of greater concern from the point of ambient air quality and ozone formation, it is not considered environmentally acceptable to lower the CO emissions at the expense of further NO_x emissions.

International Paper also considers the duct burner to act as a thermal oxidizer to control or minimize CO emissions. The temperature of the exhaust gas is raised to 1560°F, which is near the range of thermal oxidation of CO and CO_2. No additional CO controls are proposed.

Ambient Air Quality Analysis

All pollutants subject to PSD regulations were modeled and the predicted maximum concentrations were below the significance levels. Also, these pollutants resulted in concentrations well below the de minimis levels for preconstruction monitoring. As a result of this modeling analysis, no further modeling was performed. Results of the modeling can be found in the following table:

Pollutant	Averaging Period	Maximum Concentration ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)
NO_x	Annual	29	100
CO	1 Hour	1863	40,000
	8 Hour	686	10,000

Additional impact analysis indicated that there will be no construction and growth impacts associated with the scope of the proposed modification. Nor is any significant adverse impact on soil or vegetation anticipated due to the proposed plant modification. Furthermore, it is unlikely that emissions from the mill will have any measurable impact on the nearest Class I area which is well over 250 km from the mill.

Process Description

The Camden Mill is the first mill built in the south by International Paper Company and the first paper mill built in Arkansas. Operation of the mill began in February 1928. This mill uses the Kraft process to convert wood chips to cellulose fiber. Fourdrinier paper machines then convert the fiber into unbleached Kraft paper. The mill produces up to 890 air dry tons per day of unbleached Kraft pulp and up to 900 tons per day of unbleached Kraft paper.

The Camden Mill wood-yard receives approximately one thousand cords of round-wood per day and approximately 625 cords per day of wood chips from area sawmills. Round-wood is debarked using two barking drums that tumble the logs. This removes the bark as the logs rub against each other and against the sides of the drums. Bark from the barking drums goes to a boiler (SN-01) and is burned to generate steam for mill process.

Debarked logs then go to two chippers. Each chipper has 12 rotating knife blades that quickly reduce the logs to chips. Chips then go to a screening process. Oversized chips return to the chipper. Sawdust from this process will burn with the bark at the boiler. Chips from area sawmills go to a separate screening process. Screened chips then go to silos for storage.

A belt conveyor transfers chips to the Kamyr Continuous Digester as needed. This continuous digester replaced batch digesters in 1963. The digester dissolves lignin from the wood chips using a solution of sodium hydroxide and sodium sulfide. This cooking process dissolves lignin, the compound holding the cellulose fibers together, releasing the fibers. Fibers then flow through a washing and screening process. This process removes spent cooking liquor from the fiber as it passes over vacuum drum washers. Partially cooked chips and knots are removed in pressure screens, ground up and returned to the process.

Spent cooking liquor is pumped to a multiple effect evaporator system and concentrated to approximately 50 percent solids. Sulfides remaining in the liquor are then converted to thiosulfate by passing air through the concentrated liquor (black liquor oxidation). Organics in the spent cooking liquor are then burned in recovery boilers (SN-04, SN-05, and SN-06) to produce steam for mill processes and to recover the inorganic chemicals for reprocessing.

Inorganic chemicals leave the recovery boilers as a solution of sodium carbonate and sodium sulfide called green liquor. Green liquor is reacted with calcium oxide (lime) from the lime kiln and is converted

back to cooking liquor (white liquor). This reaction also produces calcium carbonate (lime mud) which is then burned in the lime kiln (SN-03) to convert it back to calcium oxide.

Unbleached cellulose fiber from the pulping operation is stored in large tanks and pumped to the paper making area as needed. The fiber then goes through a brushing and cutting action called refining and has various chemicals added, depending on the type of paper. The fiber, suspended in water, is then put through a centrifugal cleaning process, then pumped to one of three paper machines where it flows out onto a moving wire belt. Speed of the wire and the flow of fiber onto the wire determines the weight of the paper being made. Paper is made in a variety of weights, colors and finishes.

The Camden Mill added a recycling plant in 1991 that can process up to 300 tons per day of reclaimable fiber. This reclaimable fiber comes from old newspaper, office waste, computer printout, laser print, and bag plant clippings/waste. Recycled water is used to repulp and transport the reclaimed fiber.

The mill uses approximately 8.5 million gallons of water per day and treats wastewater through primary clarification and an aeration stabilization basin (SN-16) followed by a polishing pond.

The facility also includes a multiwall bag plant (SN-17) added in 1933. This plant manufactures multi-ply paper bags. Some end uses of these bags are for fertilizer, lime, cement, dog food, sugar, yard waste, and inflatable bags to secure freight. This plant also produces its own polyethylene film from pellets to serve as an inner ply in some types of bags.

The Camden Mill operates three liquor/gas-fired recovery boilers, two gas-fired power boilers, one bark/gas-fired boiler, one gas/oil-fired lime kiln, and one co-generation system that includes a gas-fired turbine and a heat recovery boiler with duct burners. Also, the plant has approximately 160 tanks and chests with capacities greater than 1000 gallons. Control equipment to limit emissions from the mill to the air follows:

1. three electrostatic precipitators
2. seven scrubbers
3. one NO_x control system
4. one black liquor oxidation system
5. one NCG incinerator with scrubber and backup flare.

Monitoring devices for pollution control equipment include the following equipment:

1. five TRS continuous emission monitors for the recovery boilers and lime kiln
2. one NO_x and CO continuous emission monitor for the co-generation facility
3. five pressure drop and flow recorders for the scrubbers
4. two thermocouples for the NCG incinerator and flare
5. one water to fuel ratio monitor for the co-generation facility.

International Paper Company is currently subject to regulation under the *Arkansas Air Pollution Control Code* (Air Code), the *Arkansas State Implementation Plan for Air Pollution Control* (SIP), *New Source Performance Standards* (NSPS), and *Prevention of Significant Deterioration* (PSD). Opacity limits are based on the State Implementation Plan (SIP), Regulation No. 19. A complete list of emission points and their limits can be found in Table I (Allowable Emission Rates) of the permit. A plot plan showing the location of all the sources at the facility can be found in Attachment B of this permit. Specific conditions for this permit can be found on the following page.

Specific Conditions

1. **TABLE I REQUIREMENTS**

   a. Emissions shall not exceed the limits set forth in Table I of this permit.

   b. Visible emissions shall not exceed the opacity limits set forth in Table I of this permit. Visible emission limits are based on the State Implementation Plan (SIP), Regulation No. 19.

2. **REPORTING REQUIREMENTS FOR PLANNED CHANGES:** Pursuant to the State Implementation Plan (SIP), Regulation No. 19, no person shall cause or allow the construction or modification of equipment at a stationary source without first obtaining a permit from ADPC&E. Additionally, the permittee shall not install, construct, or operate any new source of emissions without prior written approval from this Department. Installation, construction, or operation of any new source of emissions without prior written approval shall be a violation of this permit. This condition does not apply to minor permit modifications as defined by the SIP.

3. **POLLUTION CONTROL EQUIPMENT REQUIREMENTS:** All equipment and associated control devices shall be operated within design specifications as described in the permit application. Specific operating conditions for each type of pollution control device used at the facility are as follows;

   a. **Scrubbers.** Scrubbers associated with this plant shall be maintained and operated in serviceable condition as prescribed by the manufacturer during operation of this plant. Scrubbers shall be inspected as necessary to assure that each is in good working condition.

   b. **Electrostatic Precipitators.** Electrostatic precipitators (ESPs) at this facility shall be operated and maintained in serviceable condition. ESPs shall not be bypassed during required maintenance. That is, uncontrolled emissions from the boilers shall not be vented to the atmosphere. In the event that a boiler is not shut down during ESP maintenance, one side of the ESP shall be isolated. During such times, boiler operation shall be limited to the following:

Source Number	Percentage of Full Service Load Rating
SN-04	50
SN-05	50
SN-06*	0

*SN-06 does not have the capability of diverting flue gas to one side of its precipitator.

   The permittee shall notify ADPC&E within 24 hours of any maintenance which requires one side being removed from service. During this operation, the permittee shall comply with the particulate limit set forth in Table I of the permit.

   c. **Incinerator.** A non-condensible gas (NCG) incinerator (SN-12) shall control emissions from the multiple effect evaporator (MEE) system at all times. The MEE system is

subject to the federal New Source Performance Standards (NSPS), Subpart BB - Standards of Performance for Kraft Pulp Mills (see Attachment C). Pursuant to 40 CFR 60.283(a)(1)(iii), the permittee shall combust gases in this incinerator at a minimum of 1200 degrees Fahrenheit for at least 0.5 seconds. A back -up flare for the NCG incinerator (SN-14) exists for emergency use only when the incinerator is inoperable. Simultaneous operation of the backup flare (SN-14) with the NCG incinerator (SN-12) may be necessary during periods of operating problems with the NCG incinerator. Simultaneous operation may occur up to 1500 hours per year. This is necessary to prevent venting of non-condensible gases. Under no condition shall non-condensible gases be vented to the atmosphere. Venting of non-condensible gases shall be a violation of this permit according to Section 111(d) of the Clean Air Act and Section 19.8(b) of Regulation No. 19 (Arkansas State Implementation Plan for Air Pollution Control).

d. **Low NO_x Burners.** Steam injection and low NO_x burners at the cogeneration unit (SN-13) exist for the control of NO_x emissions. This control device shall be in operation at all times.

4. **NATURAL GAS USAGE:** Only pipeline quality natural gas shall be used to fuel the following sources: SN-01, SN-03, SN-04, SN-05, SN-06, SN-10, SN-11, SN-12, and SN-13. Natural gas usage at SN-01, SN-03, SN-04, SN-05, and SN-06 is for supplemental purposes only. Natural gas usage shall not exceed a total of 11,810,480,000 ft^3/yr during any consecutive 12 month period. Monthly records of total natural gas usage shall be maintained on site and made available for inspection by Air Division personnel upon request. These records shall be updated by the end of the month following the month for which the records pertain. A summary of the natural gas usages at the facility is given in the following table:

Source Number	Heat Input (ft^3/hr)	Source Number	Heat Input (ft^3/hr)
01	160,000	10	200,000
03	65,000	11	200,000
04	175,000	12	26,500
05	175,000	13	589,000
06	440,000		

5. **FUEL OIL USAGE:** Fuel oil may be burned in the lime kiln (SN-03) at any time. Fuel oil usage at SN-03 shall not exceed a total of 4,380,000 gallons per year during any consecutive 12 month period. Monthly records of fuel oil usage at this source shall be maintained on site and made available for inspection by Air Division personnel upon request. These records shall be updated by the end of the month following the month for which these records pertain.

Also, No. 6 fuel oil shall be used at SN-01, SN-04, SN-05, and SN-06 as a standby source of energy during natural gas curtailments and to test the oil burning capability of the equipment. The permittee shall maintain daily records of No. 6 fuel oil usage which shall not exceed 167,600 gallons during any calendar year (i.e., January - December). Records shall be made available to Department personnel upon request.

Sulfur content of the fuel oil shall not exceed 3 percent sulfur by weight. Sulfur content shall be verified by testing or by vendor's written guarantee for each shipment (order) of fuel oil received at this site. The permittee shall maintain a record of each fuel order and the associated sulfur content.

This record shall be updated with each order and shall be made available to Department personnel upon request.

Before using fuel oil at this site, the permittee shall notify the local ADPC&E air inspector of the estimated start up time. The local air inspector for District 7 is at the Department's field office in El Dorado. The inspector's telephone number is (501) 862-5941.

6. VOLATILE ORGANIC COMPOUND (VOC) EMISSION REQUIREMENTS

a. The permittee shall not exceed 3.0 tons of VOC per month as calculated on a 12 month rolling average at SN-17. The twelve month rolling average shall be calculated by summing the total VOC emissions from source number SN-17 for the previous 12 months and then dividing by twelve. The permittee shall maintain these records which can be used by the Department, for enforcement purposes, to determine compliance with this condition.

b. The permittee shall submit an annual VOC usage report to the Department. These reports shall be comprised of the 12 monthly usage reports of each compound used to determine compliance with the rolling average each month. These reports shall be submitted to the Department every six months. The first report shall be due one year after the issuance of this permit and every six months thereafter. Reports shall be submitted to the following address:

Arkansas Department of Pollution Control and Ecology
Air Division
ATTN: Compliance Inspector Supervisor
P.O. Box 8913
Little Rock, Arkansas 72219

c. No inks, varnishes, or additives for the printing process at this facility shall exceed 6.54 pounds per gallon. The permittee shall maintain Material Safety Data Sheets (MSDS) on site which demonstrate compliance with this condition. This information shall be made available upon request.

d. The permittee shall not emit any hazardous air pollutant from source number SN-17 other than glycol ether, methanol, and triethylamine.

e. The permittee shall not use inks, varnishes, or additives for the printing process containing more than 45 percent glycol ether by weight.

f. The permittee shall not use inks, varnishes, or additives for the printing process containing more than 7 percent methanol by weight.

g. The permittee shall not use inks, varnishes, or additives for the printing process containing more than 2 percent triethylamine by weight.

h. MSDS's for all inks, varnishes, and additives for the printing process shall be maintained on site, used to demonstrate compliance with this condition and made available to Department personnel upon request.

7. **BARK/GAS BOILER REQUIREMENTS:** This boiler (SN-01), which has a heat input capacity of 225×10^6 BTU/hr, was installed prior to June 19, 1984; therefore, NSPS found in 40 CFR 60.40b (Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units) do not apply. Fuel usage will consist of bark, waste wood, (e.g., sawdust, billet ends, and hardwood pallets), and natural gas (as needed). Note that sawdust used for fuel may contain small amounts of absorbed fuel oil. Also, small amounts of waste paper (less than 0.1 percent of the total feed) may be burned. A small amount of lubricating oil will be incidentally burned as it contacts bark moving through the conveyor system. Steam production shall not exceed 1,314,000,000 lbs per year (109,500,000 lbs per month). Monthly records of steam production shall be maintained on site and made available for inspection by Air Division personnel upon request.

8. **MULTIPLE EFFECT EVAPORATOR (MEE) SYSTEM:** The multiple effect evaporator (MEE) system is subject to the NSPS found in 40 CFR 60.280, Subpart BB- Standards of Performance for Kraft Pulp Mills (see Attachment C). The permittee shall restrict the firing rate of the black liquor solids (BLS) in the recovery furnaces to a level below **496,382 tons for any 12 month contiguous period** (12 month rolling total). Annual production/use rates for the recovery boilers and the smelt dissolving tanks are bubbled and may not exceed 496,382 tons bls/12 months (330,921 tons air dried pulp @ 1.5 tons bls/ton air dry pulp). Annual maximum production/use to and tons/yr for the recovery boilers and in the allowable summary sheet were artificially prorated for spreadsheet purposes. The recovery boilers and smelt dissolving tanks may be operated in any combination so long as the annual BLS firing limit is not exceeded. Exceeding this rate shall be considered a violation of PSD regulations.

   BLS firing rate shall be calculated by measuring the flow of strong black liquor (just prior to the recovery furnace guns) and multiplying this flow by the measured weight concentration of solids in the strong black liquor (measured at the flow meter(s)). The weight concentrations shall be measured at least once per month, and the flow meters shall be read at least once per month.

   The permittee shall keep monthly records (monthly flow meter readings and concentration measurements) on the amount of BLS burned in the recovery boilers, and shall be responsible for preventing the above stated maximum firing rate from being exceeded. The permittee shall notify this office immediately if it violates the above stated maximum firing capacity.

   An annual report listing the amount (monthly and annual) of BLS burned during the previous calendar year (January 1 through December 31) shall be due on February 1 of the following year. This report shall be signed as being accurate by a corporate officer and shall be considered legally binding.

9. **AUXILIARY POWER BOILERS:** Power boiler No. 1 (SN-10) will operate on a continuous basis using natural gas throughout the year to stabilize steam pressure variability for the mill. Power boiler No. 2 (SN-11) will only operate for a total of six weeks per year (1008 hrs/yr). Additionally, each of the power boilers can utilize No. 6 fuel oil for 48 hours per year to ensure their operability during natural gas shortages. Hours of operation for power boiler No. 2 (SN-11) shall not exceed 1008 hours per year during any consecutive 12 month period. Monthly summaries of power boiler No. 2 (SN-11) hours of operation shall be maintained on site and made available for inspection by Air Division personnel upon request. These records shall be updated by the fifth day of the month following the month for which the records pertain.

Also, the permittee shall continue to maintain a separate strip chart recorder measuring the gas flow in standard cubic feet (SCF), or multiples of SCF, of natural gas going to each power boiler. Recorders shall be inspected and adjusted as necessary once each 12 hours. The strip chart shall also indicate the date and time in addition to the gas flow. Strip charts shall be maintained on site for a minimum of two years and shall be made available for Department inspection upon request.

10. **COGENERATION UNIT REQUIREMENTS:** The gas turbine cogeneration unit (SN-13) shall be subject to the federal New Source Performance Standards (NSPS), Subpart GG - Standards of Performance for Stationary Gas Turbines (see Attachment D). In addition to the continuous monitoring systems defined in 40 CFR 60.334(a), the permittee shall operate continuous emission monitors for NO_x and CO. The permittee shall maintain information relevant to this Subpart and make them available for inspection to verify compliance.

    Only natural gas shall be used as a fuel for the gas turbine and waste heat boiler (duct burner). Maximum natural gas usage for the gas turbine and waste heat boiler shall not exceed 351 MSCF/hr and 238 MSCF/hr, respectively. The permittee shall continue to maintain a separate strip chart recorder measuring the gas going to the gas turbine and to the waste heat boiler. Recorders shall be inspected and adjusted as necessary once each 12 hours. The strip chart shall also indicate the date and time in addition to the gas flow. Strip charts shall be maintained on site for a minimum of two years and shall be made available for Department inspection upon request.

    The permittee shall continue to submit a written report to the Department (Air Division, Attention: Enforcement Coordinator) which gives a quarterly report of the gas usage, total hours of operation, and NO_x and CO emitted. NO_x and CO shall be reported as an annual rolling average. Calculations used to determine the rolling average shall be included in this report.

11. **ANNUAL COMPLIANCE TESTING:** The permittee shall perform annual compliance testing on the sources listed below. Compliance tests will be run while equipment is being operated at least at 90 percent of its maximum permitted hourly operating capacity. Testing dates shall be coordinated with the Compliance Section Manager in advance. A report containing the results of testing and the actual operating conditions during testing shall be forwarded to the Air Division - Compliance Section Manager. This report shall be due no later than January 1 of the following year. Results of testing may be used by the Department in setting a baseline level of those emission sources, or for enforcement purposes.

Source	Pollutant	EPA Test Method Number
SN-01	PM_{10} CO	5, 201, or 201A* 10
SN-02	PM_{10}	5, 201, or 201A*
SN-03	PM_{10}	5, 201, or 201A*
SN-04 & SN-05	PM_{10} SO_2 CO	5, 201, or 201A* 6C 10
SN-06	PM_{10} SO_2 CO	5, 201, or 201A* 6C 10
SN-07	PM_{10} TRS	5, 201, or 201A* 16
SN-08	PM_{10} TRS	5, 201, or 201A* 16
SN-09	PM_{10} TRS	5, 201, or 201A* 16

*Note: The use of EPA Method 5 assumes that all particulate emissions are PM_{10}. The facility may elect to use PM_{10} testing methods 201 or 201A.

12. **CONTINUOUS EMISSION MONITOR SYSTEMS (CEMS):** The permittee shall continue to calibrate, maintain, and operate a monitoring devise that continuously monitors and records for specific pollutants at the following sources:

Source	Pollutant
SN-03	TRS
SN-04 & SN-05	TRS
SN-06	TRS
SN-13	NO_x & CO

Each continuous emission monitoring system (CEMS) required by this permit shall comply with the CEMS Standards set forth in Attachment E of this permit. Each alternate continuous monitoring or parametric modeling system which is operated by the permittee shall comply with the protocol which has been approved by the Department.

The permittee shall provide reporting from the CEMS in parts per million (ppm) and also in pounds per hour (lbs/hr). The facility shall indicate the methodology used to determine the lbs/hr figure (based on gas flow rates from the most recent compliance test for each source) in the required reporting. Both ppm and lbs/hr shall be used for compliance purposes. However, TRS concentration and lbs/hr emission limits will be calculated and reported as 12 hour averages for compliance purposes. TRS pounds per hour will be determined using the 12 hour average concentration and the gas flow rate from the most recent compliance test for each source.

TABLE I - ALLOWABLE EMISSION RATES

SN	Description	Hours of Operation	Control	Emission Rate		Pollutant[1]	Regulation	%Opacity
				lb/hr	tpy			
01A	Bark/Gas Boiler[2] (Natural Gas)	24 hours/day 7 days/week 52 weeks/year	Scrubber	75.0 110 3.8 619 28.0	328.5 482 16.6 2711 122.6	PM NO_x SO_2 CO VOC	SIP SIP SIP SIP SIP	20
01B	Bark/Gas Boiler[2] (Fuel Oil)	24 hours/day 7 days/week 16 hours/year	Scrubber	46 101 283 8 1.1	0.4 0.8 2.3 0.1 0.1	PM NO_x SO_2 CO VOC	SIP SIP SIP SIP SIP	20
02	Slaker Vent Scrubber[2]	24 hours/day 7 days/week 52 weeks/year	Scrubber	20.0	87.6	PM	SIP	20
03	Lime Kiln Scrubber[2,3]	24 hours/day 7 days/week 52 weeks/year	Scrubber	70.0 44.8 17.4 35.0 11.2 7.4	306.6 196 76.3 153.3 49.0 32.6	PM NO_x SO_2 CO VOC TRS	SIP SIP SIP SIP SIP SIP	20
04A	Recovery Boiler No. 1A West[2,4] (Natural Gas)	24 hours/day 7 days/week 52 weeks/year	ESP	100 96 131.3 206.3 36.6 15.9	438 200 575 903.4 160.1 69.9	PM NO_x SO_2 CO VOC TRS	SIP SIP SIP SIP SIP SIP	40

TABLE I - ALLOWABLE EMISSION RATES

SN	Description	Hours of Operation	Control	Emission Rate		Pollutant[1]	Regulation	%Opacity
				lb/hr	tpy			
04B	Recovery Boiler No. 1A West[2,4] (Fuel Oil)	24 hours/day 7 days/week 16 hours/year	ESP	43 94 659 7 1.1 15.9	0.4 0.8 5.3 0.1 0.1 0.4	PM NO_x SO_2 CO VOC TRS	SIP SIP SIP SIP SIP SIP	40
05A	Recovery Boiler No. 1B East[2,4] (Natural Gas)	24 hours/day 7 days/week 52 weeks/year	ESP	100 96 131.3 206.3 36.6 15.9	438 200 575 903.4 160.1 69.9	PM NO_x SO_2 CO VOC TRS	SIP SIP SIP SIP SIP SIP	40
05B	Recovery Boiler No. 1B East[2,4] (Fuel Oil)	24 hours/day 7 days/week 16 hours/year	ESP	43 94 659 7 1.1 15.9	0.4 0.8 5.3 0.1 0.1 0.4	PM NO_x SO_2 CO VOC TRS	SIP SIP SIP SIP SIP SIP	40
06A	Recovery Boiler No. 2 and No. 3[2,4] (Natural Gas)	24 hours/day 7 days/week 52 weeks/year	ESP	70.0 242 240.6 454 67.0 37.2	306.6 700 1054 1988 294 163	PM NO_x SO_2 CO VOC TRS	SIP SIP SIP SIP SIP SIP	20
06B	Recovery Boiler No. 2 and No. 3[2,4] (Fuel Oil)	24 hours/day 7 days/week 16 hours/year	ESP	99 214 1507 16 2.4 37.2	0.8 1.7 12.1 0.1 0.1 0.9	PM NO_x SO_2 CO VOC TRS	SIP SIP SIP SIP SIP SIP	20

TABLE I - ALLOWABLE EMISSION RATES

SN	Description	Hours of Operation	Control	Emission Rate		Pollutant[1]	Regulation	%Opacity
				lb/hr	tpy			
07	Recovery Smelt Dissolving Tank No. 1[2,5]	24 hours/day 7 days/week 52 weeks/year	Scrubber	25.0 12.9 7.5 6.0 1.5	110 56.7 32.9 26.3 6.6	PM NO_x SO_2 VOC TRS	SIP SIP SIP SIP SIP	20
08	Recovery Smelt Dissolving Tank No. 2[2,5]	24 hours/day 7 days/week 52 weeks/year	Scrubber	40.0 6.1 3.6 2.9 0.7	175.2 26.8 15.5 12.7 3.1	PM NO_x SO_2 VOC TRS	SIP SIP SIP SIP SIP	20
09	Recovery Smelt Dissolving Tank No. 3[2,5]	24 hours/day 7 days/week 52 weeks/year	Scrubber	40.0 5.5 3.2 2.6 0.6	175.2 24.2 14.0 11.2 2.7	PM NO_x SO_2 VOC TRS	SIP SIP SIP SIP SIP	20
10	Auxiliary Power Boiler No. 1[6] (Natural Gas)	24 hours/day 7 days/week 52 weeks/year	None	5.3 36.2 0.1 3.5 0.3	23.2 158.6 0.6 15.3 1.3	PM NO_x SO_2 CO VOC	SIP SIP SIP SIP SIP	40
11	Auxiliary Power Boiler No. 2[6] (Natural Gas)	24 hours/day 7 days/week 1008 hrs/yr	None	3.6 38.4 0.1 3.7 0.3	1.8 19.3 0.1 1.9 0.1	PM NO_x SO_2 CO VOC	SIP SIP SIP SIP SIP	40

TABLE I - ALLOWABLE EMISSION RATES

SN	Description	Hours of Operation	Control	Emission Rate		Pollutant[1]	Regulation	%Opacity
				lb/hr	tpy			
12	Non-Condensible Gas (NCG) Incinerator (Natural Gas)	24 hours/day 7 days/week 52 weeks/year	Incinerator and Scrubber	0.2 7.3 0.9 9.4 0.3 0.1	0.9 32.1 4.1 41.1 1.5 0.1	PM NO_x SO_2 CO VOC TRS	SIP SIP SIP SIP SIP SIP,NSPS	20
13	Cogeneration Unit	24 hours/day 7 days/week 52 weeks/year	Steam Injection and Low NO_x Burners	5.6 93.3 0.4 51.6 2.8	24.6 408.8 1.5 226.2 12.1	PM NO_x SO_2 CO VOC	SIP, NSPS S, P, N SIP, NSPS S, P, N SIP, NSPS	10
14	Back-Up Flare for NCG Incinerator	24 hours/day 7 days/week 52 weeks/year	**EMERGENCY USE ONLY WHEN NCG INCINERATOR IS INOPERABLE. THAT IS, DURING PERIODS OF OPERATING PROBLEMS.**					
15	Brown Stock Washers Non-Point Source	24 hours/day 7 days/week 52 weeks/year	None	10.0	43.8	VOC	SIP	10
16	Aeration Stabilization Basin and Process Sewer Non-Point Sources	24 hours/day 7 days/week 52 weeks/year	None	10.0	43.8	VOC	SIP	N/A
17	Fugitive Emissions from Four (4) Printing Presses[7]	24 hours/day 7 days/week 52 weeks/year	None	15.0	30.0	VOC	SIP	N/A
18	Black Liquor Oxidation Tank Vent	24 hours/day 7 days/week 52 weeks/year	None	116 25.0 1.0	348 75.0 3.0	VOC TRS Acetone	SIP SIP SIP	10

TABLE I - ALLOWABLE EMISSION RATES

SN	Description	Hours of Operation	Control	Emission Rate		Pollutant[1]	Regulation	%Opacity
				lb/hr	tpy			
Total Emissions				785.7	2418.2	PM		
				1291.5	2508.6	NO_x		
				3648.2	2396.6	SO_2		
				1656.8	6944.0	CO		
				351.3	1317.0	VOC		
				173.4	424.5	TRS		
				1.0	3.0	Acetone		
Hazardous Air Pollutant (HAPs) Emissions[8]				11.0	3.0	Glycol Ether		
				3.0	10.0	Methanol		
				1.0	1.0	Triethyl-amine		

1 Note: PM = particulate matter; NO_x = nitrogen oxides; SO_2 = sulfur dioxide; CO = carbon monoxide; VOC = volatile organic compounds; TRS = total reduced sulfur

2 See Specific Condition No. 11, page 13 of the permit.

3 Pursuant to Section 19.8(d)(1)(i) of the SIP (Regulation No. 19), the maximum TRS emissions from each lime kiln shall not exceed 40 ppm, measured as H_2S on a dry basis and a 12 hour average, corrected to 10 percent volume oxygen.

4 Pursuant to Section 19.8(d)(1)(i) of the SIP (Regulation No. 19), the maximum TRS emissions from each recovery furnace shall not exceed 40 ppm, measured as H_2S on a dry basis and a 12 hour average, corrected to 8 percent volume oxygen.

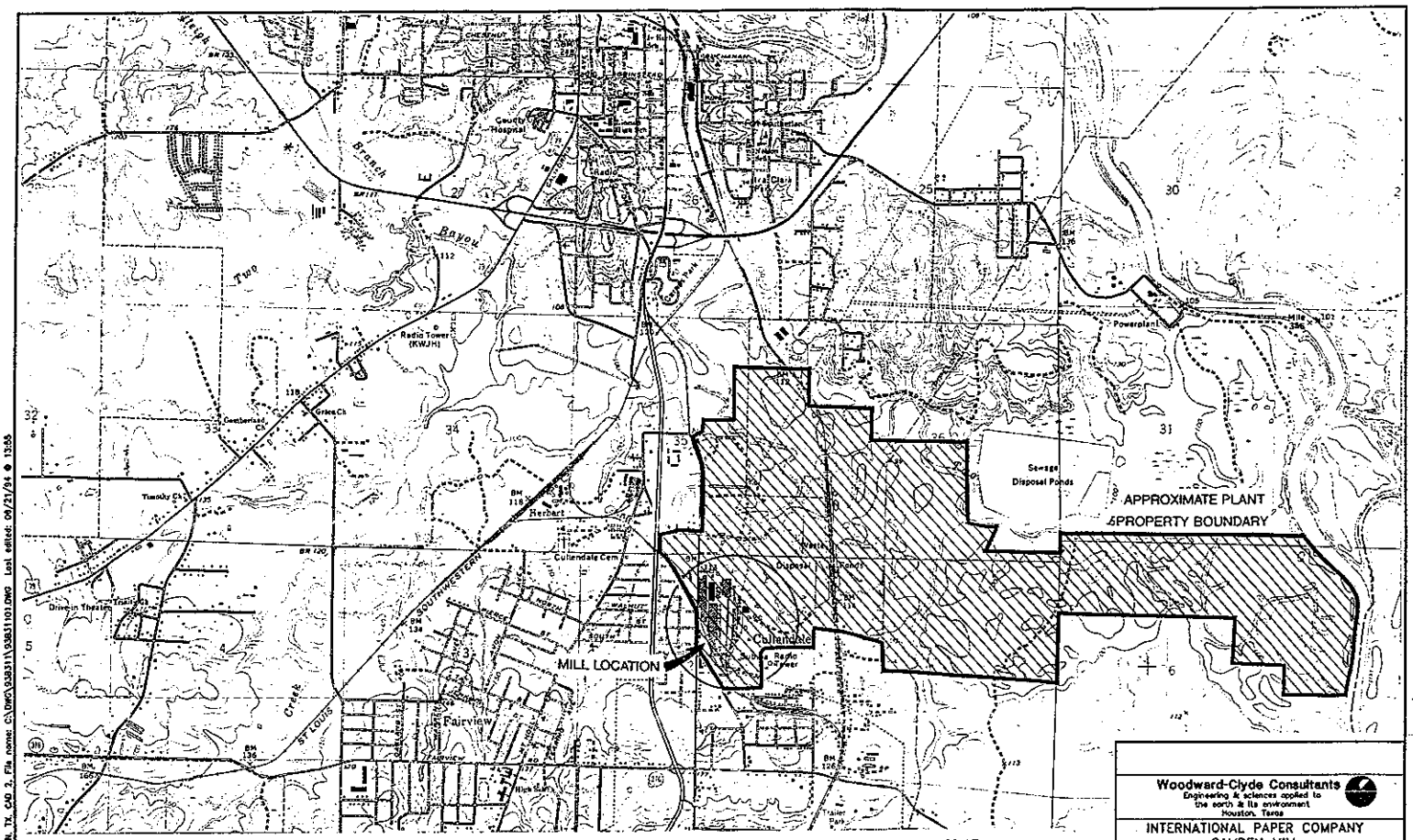
5 Pursuant to Section 19.8(d)(1)(i) of the SIP (Regulation No. 19), the maximum TRS emissions from each smelt dissolving tank shall not exceed 0.0168 g/kg, measured as grams H_2S/kg black liquor solids on a 12 hour average.

6 See Specific Condition No. 9, page 12 of the permit.

7 See Specific Condition No. 6, page 11 of the permit.

8 Emissions for HAPs have been listed separately for Department use only. These emissions are included in the total emissions for VOCs.

Attachment A - Location Map



REFERENCE: U.S.G.S. MAP FOR CAMDEN, ARKANSAS, 1971.
PHOTOREVISED 1985.

Woodward-Clyde Consultants
Engineering & sciences applied to the earth & its environment
Houston, Texas

INTERNATIONAL PAPER COMPANY
CAMDEN MILL

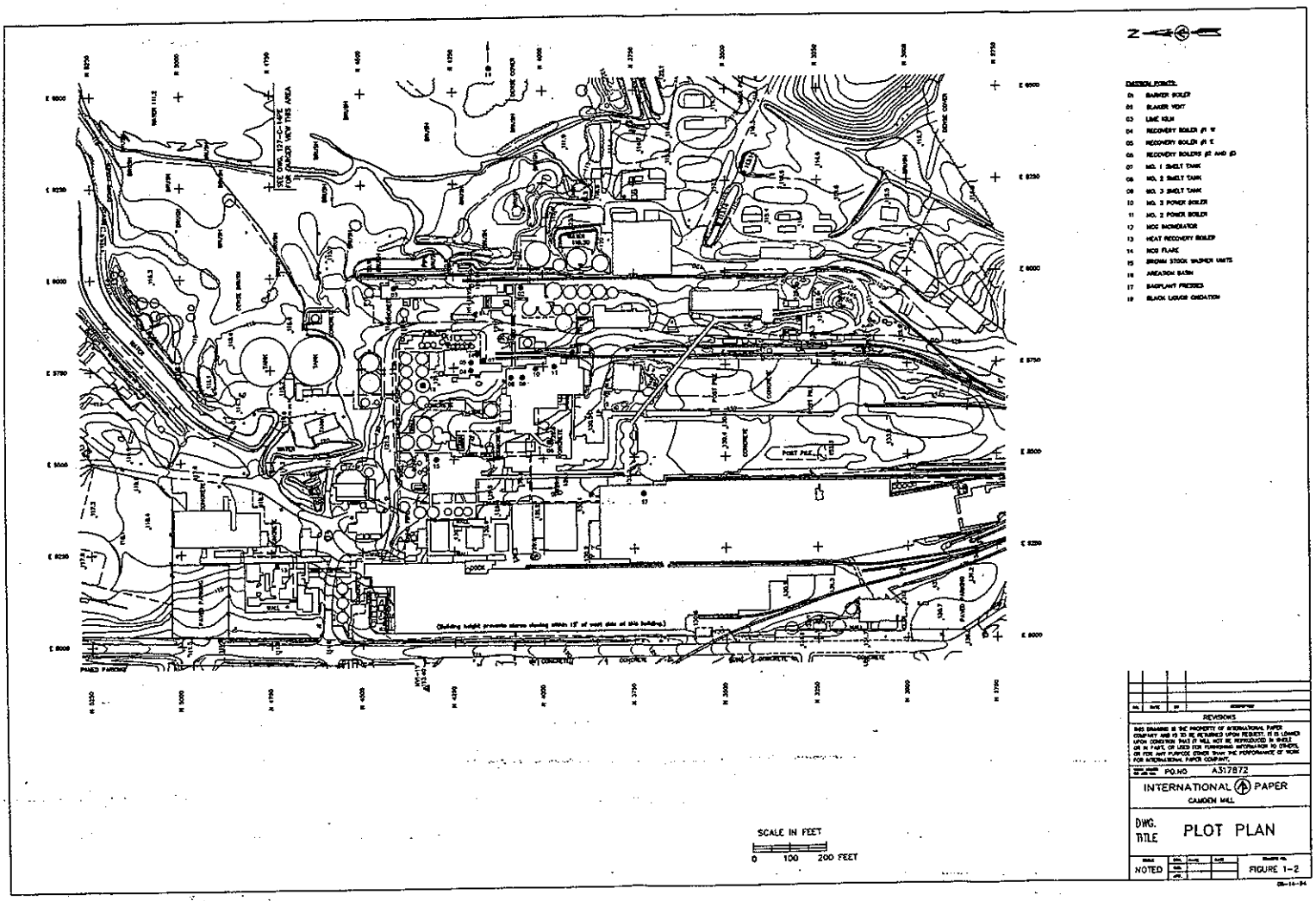
SCALE:	MADE BY: S.A	DATE: 6/21/94	FILE NO.
NOTED	CHECKED BY:	DATE:	93B311

TOPOGRAPHIC MAP

FIGURE 1

Location: HOUSTON, TX, CAD 2, File name: C:\DWG\93B311\93B311101.DWG Last edited: 06/21/94 @ 13:55

Attachment B - Plot Plan



SEE DWG. 127-C-14PE FOR CARGER VIEW THIS AREA
POST PILE
CONCRETE
PAVED PARKING
SCALE IN FEET
0 100 200 FEET
REVISIONS
PO.NO A317872
INTERNATIONAL PAPER
CAMDEN MILL
DWG. TITLE
PLOT PLAN
NOTED
FIGURE 1-2

Attachment C -Standards of Performance for Kraft Pulp Mills

Subpart BB-Standards of Performance for Kraft Pulp Mills

§ 60.280 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities in kraft pulp mills: Digester system, brown stock washer system, multiple-effect evaporator system, recovery furnace, smelt dissolving tank, lime kiln, and condensate stripper system. In pulp mills where kraft pulping is combined with neutral sulfite semichemical pulping, the provisions of this subpart are applicable when any portion of the material charged to an affected facility is produced by the kraft pulping operation.
(b) Except as noted in § 60.283(a)(1)(iv), any facility under paragraph (a) of this section that commences construction or modification after September 24, 1976, is subject to the requirements of this subpart.

[51 FR 18544, May 20, 1986]

§ 60.281 Definitions.

As used in this subpart, all terms not defined herein shall have the same meaning given them in the Act and in subpart A.
(a) Kraft pulp mill means any stationary source which produces pulp from wood by cooking (digesting) wood chips in a water solution of sodium hydroxide and sodium sulfide (white liquor) at high temperature and pressure. Regeneration of the cooking chemicals through a recovery process is also considered part of the kraft pulp mill.
(b) Neutral sulfite semichemical pulping operation means any operation in which pulp is produced from wood by cooking (digesting) wood chips in a solution of sodium sulfite and sodium bicarbonate,
followed by mechanical defibrating (grinding).
(c) Total reduced sulfur (TRS) means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide, that are released during the kraft pulping operation and measured by Reference Method 16.
(d) Digester system means each continuous digester or each batch digester used for the cooking of wood in white liquor, and associated flash tank(s), below tank(s), chip steamer(s), and condenser(s).
(e) Brown stock washer system means brown stock washers and associated knotters, vacuum pumps, and filtrate tanks used to wash the pulp following the digestion system. Diffusion washers are excluded from this definition.
(f) Multiple-effect evaporator system means the multiple-effect evaporators and associated condenser(s) and hotwell(s) used to concentrate the spent cooking liquid that is separated from the pulp (black liquor).
(g) Black liquor oxidation system means the vessels used to oxidize, with air or oxygen, the black liquor, and associated storage tank(s).
(h) Recovery furnace means either a straight kraft recovery furnace or a cross recovery furnace, and includes the direct-contact evaporator for a direct-contact furnace.
(i) Straight kraft recovery furnace means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains 7 weight percent or less of the total pulp solids from the neutral sulfite semichemical process or has green liquor sulfidity of 28 percent or less.
(j) Cross recovery furnace means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains more than 7 weight percent of the total pulp solids from the neutral sulfite semichemical process and has a green liquor sulfidity of more than 28 percent.
(k) Black liquor solids means the dry weight of the solids which enter the recovery furnace in the black liquor.
(l) Green liquor sulfidity means the sulfidity of the liquor which leaves the smelt dissolving tank.
(m) Smelt dissolving tank means a vessel used for dissolving the smelt collected from the recovery furnace.
(n) Lime kiln means a unit used to calcine lime mud, which consists primarily of calcium carbonate, into quicklime, which is calcium oxide.
(o) Condensate stripper system means a column, and associated condensers, used to strip, with air or steam, TRS compounds from condensate streams from various processes within a kraft pulp mill.

[43 FR 7572, Feb. 23, 1978, as amended at 51 FR 18544, May 20, 1986]

§ 60.282 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:
(1) From any recovery furnace any gases which:
(i) Contain particulate matter in excess of 0.10 g/dscm (0.044 gr/dscf) corrected to 8 percent oxygen.
(ii) Exhibit 35 percent opacity or greater.
(2) From any smelt dissolving tank any gases which contain particulate matter in excess of 0.1 g/kg black liquor solids (dry weight)[0.2 lb/ton black liquor solids (dry weight)].
(3) From any lime kiln any gases which contain particulate matter in excess of:
(i) 0.15 g/dscm (0.067 gr/dscf) corrected to 10 percent oxygen, when gaseous fossil fuel is burned.
(ii) 0.30 g/dscm (0.13 gr/dscf) corrected to 10 percent oxygen, when liquid fossil fuel is burned.

[43 FR 7572, Feb. 23, 1978]

§ 60.283 Standard for total reduced sulfur (TRS).

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:
(1) From any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen, unless the following conditions are met:
(i) The gases are combusted in a lime kiln subject to the provisions of paragraph (a)(5) of this section; or
(ii) The gases are combusted in a recovery furnace subject to the provisions of paragraphs (a)(2) or (a)(3) of this section; or
(iii) The gases are combusted with other waste gases in an incinerator or other device, or combusted in a lime kiln or recovery furnace not subject to the provisions of this subpart, and are subjected to a minimum temperature of 1200° F. for at least 0.5 second; or
(iv) It has been demonstrated to the Administrator's satisfaction by the owner or operator that incinerating the exhaust gases from a new, modified, or reconstructed brown stock washer system is technologically or economically unfeasible. Any exempt system will become subject to the provisions of this subpart if the facility is changed so that the gases can be incinerated.
(v) The gases from the digester system, brown stock washer system, or condensate stripper system are controlled by a means

other than combustion. In this case, this system shall not discharge any gases to the atmosphere which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to the actual oxygen content of the untreated gas stream.

(vi) The uncontrolled exhaust gases from a new, modified, or reconstructed digester system contain TRS less than 0.005 g/kg ADP (0.01 lb/ton ADP).

(2) From any straight kraft recovery furnace any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 8 percent oxygen.

(3) From any cross recovery furnace any gases which contain TRS in excess of 25 ppm by volume on a dry basis, corrected to 8 percent oxygen.

(4) From any smelt dissolving tank any gases which contain TRS in excess of 0.016 g/kg black liquor solids as H2S (0.033 lb/ton black liquor solids as H2S).

(5) From any lime kiln any gases which contain TRS in excess of 8 ppm by volume on a dry basis, corrected to 10 percent oxygen.

[43 FR 7572, Feb. 23, 1978, as amended at 50 FR 6317, Feb. 14, 1985; 51 FR 18544, May 20, 1986]

§ 60.284 Monitoring of emissions and operations.

(a) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring systems:

(1) A continuous monitoring system to monitor and record the opacity of the gases discharged into the atmos- phere from any recovery furnace. The span of this system shall be set at 70 percent opacity.

(2) Continuous monitoring systems to monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the atmosphere from any lime kiln, recovery furnace, digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system, except where the provisions of § 60.283(a)(1) (iii) or (iv) apply. These systems shall be located downstream of the control device(s) and the spans of these continuous monitoring system(s) shall be set:

(i) At a TRS concentration of 30 ppm for the TRS continuous monitoring system, except that for any cross recovery furnace the span shall be set at 50 ppm.

(ii) At 20 percent oxygen for the continuous oxygen monitoring system.

(b) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring devices:

(1) For any incinerator, a monitoring device which measures and records the combustion temperature at the point of incineration of effluent gases which are emitted from any digester system, brown stock washer system, multiple-effect evaporator system, black liquor oxidation system, or condensate stripper system where the provisions of § 60.283(a)(1)(iii) apply. The monitoring device is to be certified by the manufacturer to be accurate within ±1 percent of the temperature being measured.

(2) For any lime kiln or smelt dissolving tank using a scrubber emission control device:

(i) A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate to within a gage pressure of ±500 pascals (ca. ±2 inches water gage pressure).

(ii) A monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ±15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point. The Administrator may be consulted for approval of alternative locations.

(c) Any owner or operator subject to the provisions of this subpart shall, except where the provisions of § 60.283 (a)(1)(iv) or (a)(4) apply.

(1) Calculate and record on a daily basis 12-hour average TRS concentrations for the two consecutive periods of each operating day. Each 12-hour average shall be determined as the arithmetic mean of the appropriate 12 contiguous 1-hour average total reduced sulfur concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section.

(2) Calculate and record on a daily basis 12-hour average oxygen concentrations for the two consecutive periods of each operating day for the recovery furnace and lime kiln. These 12-hour averages shall correspond to the 12-hour average TRS concentrations under paragraph (c)(1) of this section and shall be determined as an arithmetic mean of the appropriate 12 contiguous 1-hour average oxygen concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section.

(3) Correct all 12-hour average TRS concentrations to 10 volume percent oxygen, except that all 12-hour average TRS concentration from a recovery furnace shall be corrected to 8 volume percent using the following equation:

$$C_{corr}=C_{meas}X(21-X/21-Y)$$

where:

Ccorr=the concentration corrected for oxygen.

Cmeas=the concentration uncorrected for oxygen.

X=the volumetric oxygen concentration in percentage to be corrected to (8 percent for recovery furnaces and 10 percent for lime kilns, incinerators, or other devices).

Y=the measured 12-hour average volumetric oxygen concentration.

(4) Record once per shift measurements obtained from the continuous monitoring devices installed under paragraph (b)(2) of this section.

(d) For the purpose of reports required under § 60.7(c), any owner or operator subject to the provisions of this subpart shall report semiannually periods of excess emissions as follows:

(1) For emissions from any recovery furnace periods of excess emissions are:

(i) All 12-hour averages of TRS concentrations above 5 ppm by volume for straight kraft recovery furnaces and above 25 ppm by volume for cross recovery furnaces.

(ii) All 6-minute average opacities that exceed 35 percent.

(2) For emissions from any lime kiln, periods of excess emissions
are all 12-hour average TRS concentration above 8 ppm by volume.

(3) For emissions from any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system periods of excess emissions are:

(i) All 12-hour average TRS concentrations above 5 ppm by volume unless the provisions of § 60.283(a)(1) (i), (ii), or (iv) apply; or

(ii) All periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 1200 °F, where the provisions of § 60.283(a)(1)(iii) apply.

(e) The Administrator will not consider periods of excess emissions reported under paragraph (d) of this section to be indicative of a violation of § 60.11(d) provided that:

(1) The percent of the total number of possible contiguous periods of excess emissions in a quarter (excluding periods of startup, shutdown, or malfunction and periods when the facility is

not operating) during which excess emissions occur does not exceed:

(i) One percent for TRS emissions from recovery furnaces.

(ii) Six percent for average opacities from recovery furnaces.

(2) The Administrator determines that the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions.

[43 FR 7572, Feb. 23, 1978, as amended at 51 FR 18545, May 20, 1986]

§ 60.285 Test methods and procedures.

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.

(b) The owner or operator shall determine compliance with the particulate matter standards in § 60.282(a) (1) and (3) as follows:

(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. The particulate concentration shall be corrected to the appropriate oxygen concentration according to § 60.284(c)(3).

(2) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The gas sample shall be taken at the same time and at the same traverse points as the particulate sample.

(3) Method 9 and the procedures in § 60.11 shall be used to determine opacity.

(c) The owner or operator shall determine compliance with the particular matter standard in § 60.282(a)(2) as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

E=cs Qsd/BLS

where:

E=emission rate of particulate matter, g/kg (lb/ton) of BLS.

cs=concentration --of --particulate --matter, g/dsm (lb/dscf).

Qsd=volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

BLS=black liquor solids (dry weight) feed rate, kg/hr (ton/hr).

(2) Method 5 shall be used to determine the particulate matter concentration (cs) and the volumetric flow rate (Qsd) of the effluent gas. The sampling time and sample volume shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used instead of acetone in the sample recovery.

(3) Process data shall be used to determine the black liquor solids (BLS) feed rate on a dry weight basis.

(d) The owner or operator shall determine compliance with the TRS standards in § 60.283, except § 60.283(a)(1)(vi) and (4), as follows:

(1) Method 16 shall be used to determine the TRS concentration. The TRS concentration shall be corrected to the appropriate oxygen concentration using the procedure in § 60.284(c)(3). The sampling time shall be at least 3 hours, but no longer than 6 hours.

(2) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The sample shall be taken over the same time period as the TRS samples.

(3) When determining whether a furnace is a straight kraft recovery furnace or a cross recovery furnace, TAPPI Method T.624 (incorporated by reference-see § 60.17) shall be used to determine sodium sulfide, sodium hydroxide, and sodium carbonate. These determinations shall be made 3 times daily from the green liquor, and the daily average values shall be converted to sodium oxide (Na20) and substituted into the following equation to determine the green liquor sulfidity:

GLS = 100 CNa2S/(CNA2S+CNa2H+CNa2CO3)

Where:

GLS=green liquor sulfidity, percent.

CNa2S=concentration of Na2S as Na2O, mg/liter (gr/gal).

CNaOH=concentration of NaOH as Na2O, mg/liter (gr/gal).

CNa2CO3=concentration of Na2CO3 as Na2O, mg/liter (gr/gal).

(e) The owner or operator shall determine compliance with the TRS standards in § 60.283(a)(1)(vi) and (4) as follows:

(1) The emission rate (E) of TRS shall be computed for each run using the following equation:

E=CTRS F Qsd/P

where:

E=emission rate of TRS, g/kg (lb/ton) of BLS or ADP.

CTRS=average combined concentration of TRS, ppm.

F=conversion factor, 0.001417 g H2S/m↑3 ppm (0.08844X10↑-6 lb H2S/ft3 ppm).

Qsd=volumetric flow rate of stack gas, dscm/hr (dscf/hr).

P=black liquor solids feed or pulp production rate, kg/hr (ton/hr).

(2) Method 16 shall be used to determine the TRS concentration (CTRS).

(3) Method 2 shall be used to determine the volumetric flow rate (Qsd) of the effluent gas.

(4) Process data shall be used to determine the black liquor feed rate or the pulp production rate (P).

(f) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For Method 5, Method 17 may be used if a constant value of 0.009 g/dscm (0.004 gr/dscf) is added to the results of Method 17 and the stack temperature is no greater than 205 °C (400 °F).

(2) For Method 16, Method 16A or 16B may be used if the sampling time is 60 minutes.

[54 FR 6673, Feb. 14, 1989; 54 FR 21344, May 17, 1989, as amended at 55 FR 5212, Feb. 14, 1990]

§ 60.286 Innovative technology waiver.

(a) Pursuant to section 111(j) or the Clean Air Act, 42 U.S.C. 7411(j), the No. 10 batch digester at Owens-Illinois Incorporated's Valdosta kraft pulp mill in Clyattville, Georgia, shall comply with the following conditions:

(1) Owens-Illinois, Incorporated shall obtain the necessary permits as required by section 173 of the Clean Air Act, as amended August 1977, to operate the No. 10 batch digester at the Valdosta mill.

(2) Commencing on February 14, 1985, and continuing to December 31, 1987, or until the DHS that can achieve the standard specified in 40 CFR 60.283 (February 23, 1987), is demonstrated to the Administrator's satisfaction, whichever comes first, OI Valdosta and Timber STS Inc. shall limit the discharge of TRS emissions to the atmosphere:

(i) From the No. 10 batch digester at the Valdosta mill to 0.02 lb of TRS per ton of air-dried pulp.

(ii) From the existing multiple-effect evaporators at the Valdosta mill to the TRS level existing prior to the modifications.

(3) Commencing the day after the expiration of the period described in paragraph (a)(2) of this section, and continuing thereafter, emissions of TRS from the No. 10 batch digester shall not exceed the TRS level of 0.005 g/kg ADP (0.01 lb/ton ADP) as specified in § 60.283 of this part.

(4) The No. 10 batch digester system shall comply with the provisions of §§ 60.284 and 60.285.

(5) A technology development report shall be sent to EPA, Emission Standards and Engineering Division (MD-13), Research Triangle Park, North Carolina 27711 and EPA Region IV, 345 Courtland, NE, Atlanta, Georgia 30365, postmarked before 60 days after the promulgation of this waiver and every 6 months thereafter while this waiver is in effect. The technology development report shall summarize the displacement heating system work including the results of tests of the various emission points being evaluated. The report shall include an updated schedule of attainment of
40 CFR 60.283 based on the most current information. Tests will be conducted prior to and after the digester modifications for TRS emissions and air flow rates on all vents to the atmosphere from the No. 10 digester system, the multiple effect evaporator system, and at the existing batch digester system. In addition, tests will be performed to determine the BOD content of the effluents from the multiple effect evaporator system, the brown stock washing system, and the mill prior to and after the digester modifications.

(b) This waiver shall be a federally promulgated standard of performance. As such, it shall be unlawful for Owens-Illinois, Incorporated to operate the No. 10 batch digester or the multiple-effect evaporators in violation of the requirements established
in this waiver. Violations of the terms and conditions of this waiver shall subject Owens-Illinois, Incorporated to enforcement under section 113 (b) and (c), 42 U.S.C. 7412 (b) and (c), and section 120, 42 U.S.C. 7420, of the Act as well as possible citizen enforcement under section 304 of the Act, 42 U.S.C. 7604.

[50 FR 6317, Feb. 14, 1985, as amended at 53 FR 12009, Apr. 12, 1988]

Attachment D - Standards of Performance for Stationary Gas Turbines

Subpart GG-Standards of Performance for Stationary Gas Turbines

§ 60.330 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour, based on the lower heating value of the fuel fired.
(b) Any facility under paragraph (a) of this section which commences construction, modification, or reconstruction after October 3, 1977, is subject to the requirements of this part except as provided in paragraphs (e) and (j) of § 60.332.

[44 FR 52798, Sept. 10, 1979, as amended at 52 FR 42434, Nov. 5, 1987]

§ 60.331 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.
(a) Stationary gas turbine means any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self propelled. It may, however, be mounted on a vehicle for portability.
(b) Simple cycle gas turbine means any stationary gas turbine which does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or which does not recover heat from the gas turbine exhaust gases to heat water or generate steam.
(c) Regenerative cycle gas turbine means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine.
(d) Combined cycle gas turbine means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to heat water or generate steam.
(e) Emergency gas turbine means any stationary gas turbine which operates as a mechanical or electrical power source only when the primary power source for a facility has been rendered inoperable by an emergency situation.
(f) Ice fog means an atmospheric suspension of highly reflective ice crystals.
(g) ISO standard day conditions means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.
(h) Efficiency means the gas turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output based on the lower heating value of the fuel.
(i) Peak load means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.
(j) Base load means the load level at which a gas turbine is normally operated.
(k) Fire-fighting turbine means any stationary gas turbine that is used solely to pump water for extinguishing fires.
(l) Turbines employed in oil/gas production or oil/gas transportation means any stationary gas turbine used to provide power to extract crude oil/natural gas from the earth or to move crude oil/natural gas, or products refined from these substances through pipelines.
(m) A Metropolitan Statistical Area or MSA as defined by the Department of Commerce.
(n) Offshore platform gas turbines means any stationary gas turbine located on a platform in an ocean.
(o) Garrison facility means any permanent military installation.
(p) Gas turbine model means a group of gas turbines having the same nominal air flow, combuster inlet pressure, combuster inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.
(q) Electric utility stationary gas turbine means any stationary gas turbine constructed for the purpose of supplying more than one-third of its potential electric output capacity to any utility power distribution system for sale.
(r) Emergency fuel is a fuel fired by a gas turbine only during circumstances, such as natural gas supply curtailment or breakdown
of delivery system, that make it impossible to fire natural gas in the gas turbine.
(s) Regenerative cycle gas turbine means any stationary gas turbine that recovers thermal energy from the exhaust gases and utilizes the thermal energy to preheat air prior to entering the combustor.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982]

§ 60.332 Standard for nitrogen oxides.

(a) On and after the date of the performance test required by § 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (b), (c), and (d) of this section shall comply with one of the following, except as provided in paragraphs (e), (f), (g), (h), (i), (j), (k), and (l) of this section.
(1) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$(14.4)STD = 0.0075 \frac{\quad}{\quad} + FY$$

where:
STD=allowable NOx emissions (percent by volume at 15 percent oxygen and on a dry basis).
Y=manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.
F=NOx emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

(2) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$(14.4)STD = 0.0150 \frac{\quad}{\quad} + FY$$

where:
STD=allowable NOx emissions (percent by volume at 15 percent oxygen and on a dry basis).
Y=manufacturer's rated heat rate at manufacturer's rated peak load (kilojoules per watt hour), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.
F=NOx emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

(3) F shall be defined according to the nitrogen content of the fuel as follows:

Fuel-bound nitrogen (percent by weight)	F (NOx percent by volume)
$N \leq 0.015$	0
$0.015 < N \leq 0.1$	0.04(N)
$0.1 < N \leq 0.25$	0.004+0.0067(N-0.1)
$N > 0.25$	0.005

where:
N=the nitrogen content of the fuel (percent by weight).
or:

Manufacturers may develop custom fuel-bound nitrogen allowances for each gas turbine model they manufacture. These fuel-bound nitrogen allowances shall be substantiated with data and must be approved for use by the Administrator before the initial performance test required by § 60.8. Notices of approval of custom fuel-bound nitrogen allowances will be published in the Federal Register.

(b) Electric utility stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.

(c) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired, shall comply with the provisions of paragraph (a)(2) of this section.

(d) Stationary gas turbines with a manufacturer's rated base load at ISO conditions of 30 megawatts or less except as provided in § 60.332(b) shall comply with paragraph (a)(2) of this section.

(e) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired and that have commenced construction prior to October 3, 1982 are exempt from paragraph (a) of this section.

(f) Stationary gas turbines using water or steam injection for control of NOx emissions are exempt from paragraph (a) when ice fog is deemed a traffic hazard by the owner or operator of the gas turbine.

(g) Emergency gas turbines, military gas turbines for use in other than a garrison facility, military gas turbines installed for use as military training facilities, and fire fighting gas turbines are exempt from paragraph (a) of this section.

(h) Stationary gas turbines engaged by manufacturers in research and development of equipment for both gas turbine emission control techniques and gas turbine efficiency improvements are exempt from paragraph (a) on a case-by-case basis as determined by
the Administrator.

(i) Exemptions from the requirements of paragraph (a) of this section will be granted on a case-by-case basis as determined by the Administrator in specific geographical areas where mandatory water restrictions are required by governmental agencies because of drought conditions. These exemptions will be allowed only while the mandatory water restrictions are in effect.

(j) Stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour that commenced construction, modification, or reconstruction between the dates of October 3, 1977, and January 27, 1982, and were required in the September 10, 1979, Federal Register (44 FR 52792) to comply with paragraph (a)(1) of this section, except electric utility stationary gas turbines, are exempt from paragraph (a) of this section.

(k) Stationary gas turbines with a heat input greater than or equal to 10.7 gigajoules per hour (10 million Btu/hour) when fired with natural gas are exempt from paragraph (a)(2) of this section when being fired with an emergency fuel.

(l) Regenerative cycle gas turbines with a heat input less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) are exempt from paragraph (a) of this section.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982]

§ 60.333 Standard for sulfur dioxide.

On and after the date on which the performance test required to be conducted by § 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with one or the other of the following conditions:

(a) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

[44 FR 52798, Sept. 10, 1979]

§ 60.334 Monitoring of operations.

(a) The owner or operator of any stationary gas turbine subject to the provisions of this subpart and using water injection to control NOx emissions shall install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within ±5.0 percent and shall be approved by the Administrator.

(b) The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

(1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.

(2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.

(c) For the purpose of reports required under § 60.7(c), periods of excess emissions that shall be reported are defined as follows:
(1) Nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring
system, falls below the water-to-fuel ratio determined to demonstrate compliance with § 60.332 by the performance test required in § 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in § 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under § 60.335(a).
(2) Sulfur dioxide. Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.
(3) Ice fog. Each period during which an exemption provided in § 60.332(g) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.
(4) Emergency fuel. Each period during which an exemption provided in § 60.332(k) is in effect shall be included in the report required in § 60.7(c). For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982]

§ 60.335 Test methods and procedures.

(a) To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.
(b) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided for in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.
(c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in §§ 60.332 and 60.333(a) as follows:
(1) The nitrogen oxides emission rate (NOx) shall be computed for each run using the following equation:

$$NOx=(NOxo)\ (Pr/Po)\ 0.5\ e^{(19(Ho-0.00633))}\ (288^{\circ}K/Ta)^{1.53}$$

where:
NOx=emission rate of NOx at 15 percent O2 and ISO standard ambient conditions, volume percent.
NOxo=observed NOx concentration, ppm by volume.
Pr=reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.
Po=observed combustor inlet absolute pressure at test, mm Hg.
Ho=observed humidity of ambient air, g H2O/g air.
e=transcendental constant, 2.718.
Ta=ambient temperature, °K.

(2) The monitoring device of § 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with § 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.
(3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NOx emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.
(d) The owner or operator shall determine compliance with the sulfur content standard in § 60.333(b) as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels (incorporated by reference-see § 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis
(with verification of the dilution ratio) may be used, subject to the approval of the Administrator.
(e) To meet the requirements of § 60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.
(f) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:
(1) Instead of using the equation in paragraph (b)(1) of this section, manufacturers may develop ambient condition correction factors to adjust the nitrogen oxides emission level measured by the performance test as provided in § 60.8 to ISO standard day conditions. These factors are developed for each gas turbine model they manufacture in terms of combustion inlet pressure, ambient air pressure, ambient air humidity, and ambient air temperature. They shall be substantiated with data and must be approved for use by the Administrator before the initial performance test required by § 60.8. Notices of approval of custom ambient condition correction factors will be published in the Federal Register.

[54 FR 6675, Feb. 14, 1989, as amended at 54 FR 27016, June 27, 1989]

Attachment E - Continuous Emission Monitoring Systems Standards

Arkansas Department of Pollution Control & Ecology

CONTINUOUS EMISSION MONITORING SYSTEMS STANDARDS

SECTION I

DEFINITIONS

Continuous Emission Monitoring System (CEMS) - The total equipment required for the determination of a gas concentration and/or emission rate so as to include sampling, analysis and recording of emission data.

Calibration Drift (CD) - The difference in the CEMS output reading from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustments took place.

Primary CEMS - The main reporting CEMS with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate.

Back-up CEM (Secondary CEM) - A CEM with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate. This CEM is to serve as a back-up to the primary CEMS to minimize monitor downtime.

Standby CEM - A analyzer that has been certified by a cylinder gas audit and placed aside until needed. When the standby CEM is placed in service, the monitoring system shall be certified within seven days of installation to verify data acceptability.

Portable CEM (Phase II Acid Rain Facilities Only) - A analyzer that has been certified on each source for possible use then placed aside until needed. Unit is limited to 720 hours of operation per year.

Out-of-Control Period - Begins with the hour corresponding to the completion of a daily calibration error, linearity check, or quality assurance audit that indicates that the instrument is not measuring and recording within the applicable performance specifications. Out-of-Control Period ends with the hour corresponding to the completion of an additional calibration error, linearity check, or quality assurance audit following corrective action that demonstrates that the instrument is measuring and recording within the applicable performance specifications.

Monitor Downtime - Any period during which the CEMS is unable to sample, analyze and record a minimum of four evenly spaced data points over an hour, except during one daily zero-span check during which two data points per hour are sufficient.

Excess Emissions - Any period in which the emissions exceed the permit limits.

SECTION II

NOTIFICATION AND RECORD KEEPING

A. When requested to do so by an owner or operator, the Compliance Section Manager will review plans for installation or modification for the purpose of providing technical advice to the owner or operator.

B. Each facility which operates a CEMS shall notify the Compliance Section Manager of the date for which the demonstration of the CEMS performance will commence. Notification shall be received in writing no less than 15 days prior to testing.

C. Each facility which operates a CEMS shall maintain records of the occurrence and duration of start up/shut down, cleaning/soot blowing, process problems, fuel problems, or other malfunction in the operation of the affected facility which causes excess emissions. This includes any malfunction of the air pollution control equipment or any period during which a continuous monitoring device/system is inoperative.

D. Each facility required to install a CEMS shall submit an excess emission and monitoring system performance report to the Department (Attention: Air Division, Compliance Section Manager) at least quarterly, unless more frequent submittals are warranted to assess the compliance status of the facility. Quarterly reports shall be postmarked no later than the 30th day of the month following the end of each calendar quarter.

E. All excess emissions shall be reported in terms of the applicable standard. Each report shall be submitted on ADPC&E Quarterly Excess Emission Report Forms. These forms may be obtained from the Air Division of the Little Rock office of ADPC&E. Alternate forms may be used with the prior written approval from the Department.

F. Each facility which operates a CEMS must maintain on site a file of CEMS data including all raw data, corrected and adjusted, repair logs, calibration checks, adjustments, and test audits. This file must be retained for two years, and is required to be maintained in such a condition that it can easily be audited by an inspector.

G. Quarterly reports shall be used by the Department to determine compliance with the permit. Violations of the CEMS standards may result in penalties and/or other enforcement action.

SECTION III

MONITORING REQUIREMENTS

A. For new sources, the installation date for the CEMS shall be no later than thirty (30) days from the date of start-up of the source.

B. For existing sources, the installation date for the CEMS shall be no later than sixty (60) days from the issuance of the permit unless a specific date is required by the permit.

C. Within sixty (60) days of installation of a CEMS, a performance specification test (PST) must be completed. PST's are defined in 40 CFR, Part 60, Appendix B, PS 1-7. The Department may accept alternate PSTs for pollutants not covered by Appendix B on a case-by-case basis. Alternate PST's shall be approved, in writing, by the Compliance Section Manager prior to testing.

D. Each CEMS shall have, as a minimum, a daily zero-span check. The zero-span shall be adjusted whenever the 24-hour zero or 24-hour span drift exceeds two times the limits in the applicable performance specification in 40 CFR, Part 60, Appendix B. Before any adjustments are made to either the zero or span drifts measured at the 24-hour interval the excess zero and span drifts measured must be quantified and recorded.

E. All CEMS shall be in continuous operation and shall meet minimum frequency of operation requirements of 95% up-time for each quarter for each pollutant measured. Failure to maintain operation time shall constitute a violation of the CEMS standard.

F. All sources with a CEMS shall meet 95% compliance per quarter for each pollutant. Failure to maintain compliance shall constitute a violation of the CEMS standard.

G. All CEMS measuring emissions shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive fifteen minute period unless more cycles are required by the permit. For each CEMS, one-hour averages shall be computed from four or more data points equally spaced over each one hour period unless more data points are required by the permit.

H. When the pollutant from a single affected facility is released through more than one point, a CEMS shall be installed on each point unless installation of fewer systems is approved, in writing, by the Compliance Section Manager. When more than one CEMS is used to monitor emissions from one affected facility (eg. multiple breaching or multiple exhaust) the owner or operator shall report the results as required from each CEMS.

CERTIFICATE OF SERVICE

I, Keith A. Michaels, hereby certify that a copy of this permit has been mailed by first class mail to International Paper Company - Camden Mill, P.O. Box 2045, Camden, Arkansas 71701, on this 1st day of November, 1996.

Keith A. Michaels

Keith A. Michaels, Chief, Air Division