Pennsylvania Department of Environmental Protection

2 Public Square
Wilkes-Barre, PA 18711-0790
August 6, 2009

Northeast Regional Office

570-826-2511
Fax 570-826-2357

CERTIFIED MAIL NO. 7009 0820 0000 7325 3002

UGI Development Company
P.O. Box 224
390 Route 11
Hunlock Creek, PA 18621

Attention: Jeff Steeber, Engineer

Dear Mr. Steeber:

Enclosed please find the Air Quality Program Permit No. 40-328-006.

I suggest that you carefully read your permit and any special conditions accompanying it, to assure all of these conditions are satisfied.

By copy of this letter, we are informing Hunlock Township and Luzerne County of the issuance of your permit.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in Braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717-787-3483) FOR MORE INFORMATION.

If the Department can be of further assistance, please contact Brian Halchak Air Quality Program at the above telephone number.

Sincerely,

Mark J. Wejkszner, P.E.
Program Manager
Air Quality Program

Enclosures

cc: Luzerne County
Hunlock Township

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY PROGRAM

PLAN APPROVAL

Issue Date: August 21, 2009 Effective Date: August 21, 2009
Expiration Date: August 31, 2010

In accordance with the provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and 25 Pa. Code Chapter 127, the Owner, [and Operator if noted] (hereinafter referred to as permittee) identified below is authorized by the Department of Environmental Protection (Department) to construct, install, modify or reactivate the air emission source(s) more fully described in the site inventory list. This Facility is subject to all terms and conditions specified in this plan approval. Nothing in this plan approval relieves the permittee from its obligations to comply with all applicable Federal, State and Local laws and regulations.

The regulatory or statutory authority for each plan approval condition is set forth in brackets. All terms and conditions in this permit are federally enforceable unless otherwise designated as "State-Only" requirements.

Plan Approval No. 40-328-006

Federal Tax Id - Plant Code: 23-3061284-1

Need To Change TAX ID To 23-16[illegible]

Plan Approval Description

This plan approval is for the construction of an electric generating plant with a nominal output of 122 megawatts, and includes the following major equipment:

a. Two GE LM 6000 PC-Sprint combustion turbines 50MW
b. Two supplementary fired HRSG
c. Two selective catalytic reduction (SCR) systems for nitrogen oxides (NOx) control
d. Two CO Oxidation Catalyst
e. One (Existing) steam turbine 27MW

Upon start-up of the new emission unit the facility will simultaneously shut down Boiler #6(coal fired)

Owner Information

Name: UGI DEV CO
Mailing Address: PO BOX 224
390 ROUTE 11
HUNLOCK CREEK, PA 18621

Plant Information

Plant: UGI DEVELOPMENT CO/HUNLOCK CREEK
Location: 40 Luzerne County 40943 Hunlock Township
SIC Code: 4911 Trans. & Utilities - Electric Services

Responsible Official

Name: DAVID R STETTLER
Title: MANAGER - POWER PRODUCTIO
Phone: (570) 830 - 1270

Plan Approval Contact Person

Name: JEFF STEEBER
Title: ENGINEER
Phone: (570) 830 - 1270

[Signature] _____

MARK J WEJKSZNER, NORTHEAST REGION AIR PROGRAM MANAGER

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Note: These same sub-sections are repeated for each source!

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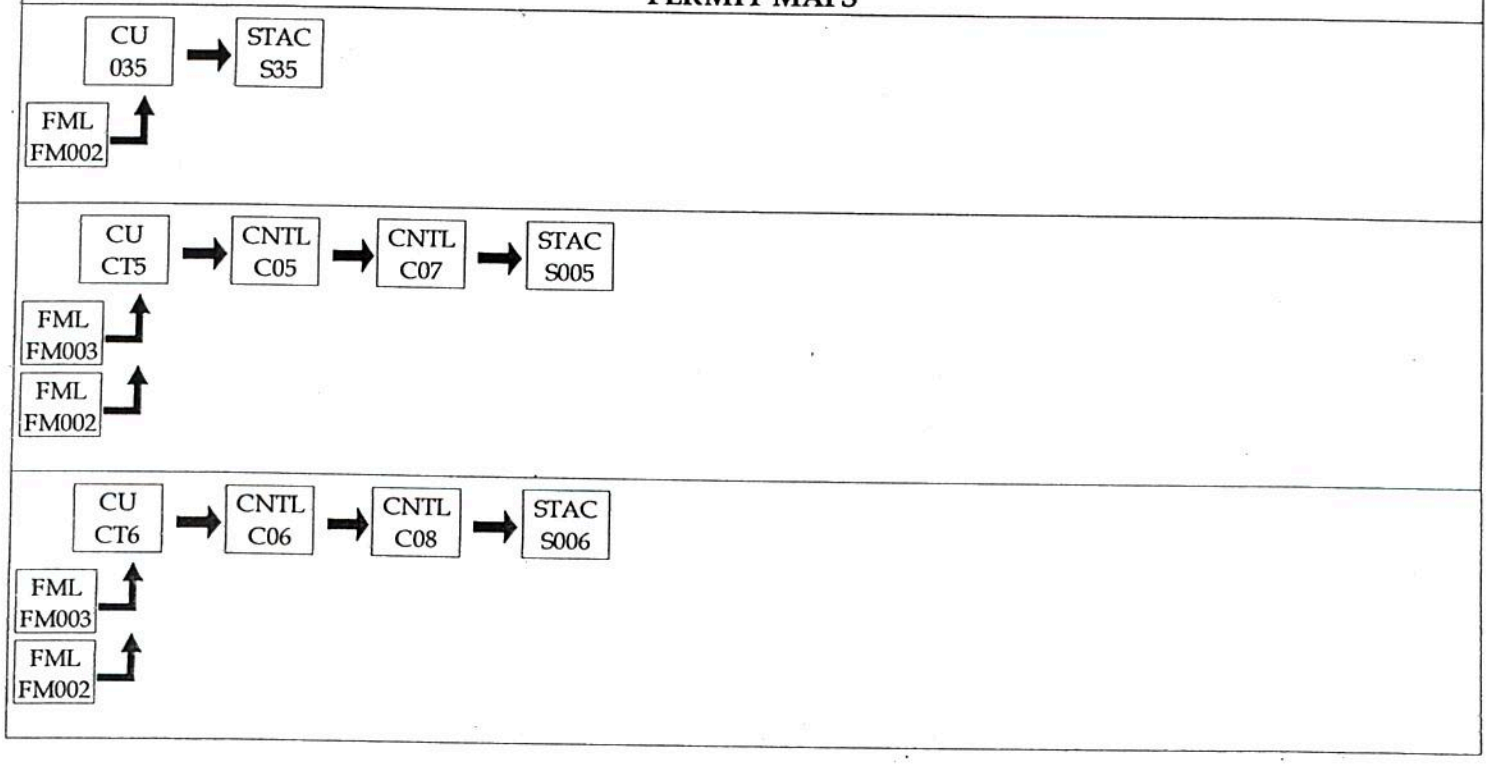
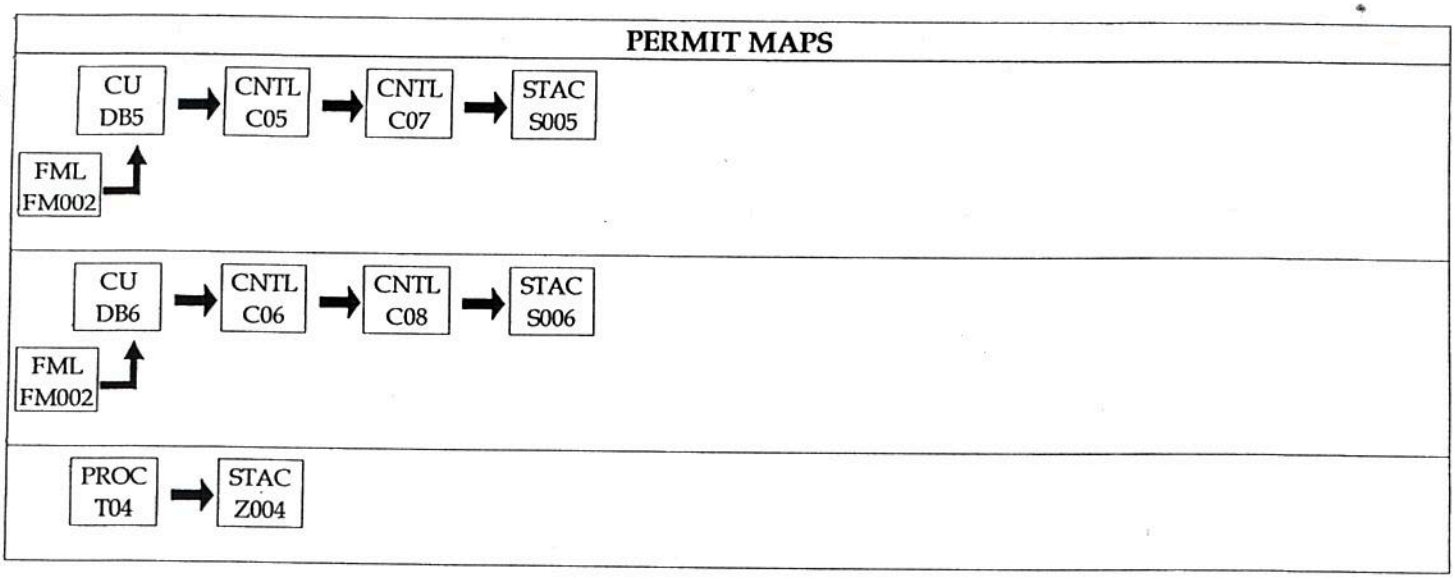
SECTION A. Plan Approval Inventory List

Source ID	Source Name	Capacity/Throughput	Fuel/Material
035	49.9 MM BTU/HR BOILER	49,900.000 CF/HR	Natural Gas
CT5	UNIT 5 COMBINED-CYCLE TURBINE WITH HRSG	471.200 MMBTU/HR	
		471,200.000 CF/HR	Natural Gas
		3,259.100 Gal/HR	ULSD
CT6	UNIT 6 COMBINED-CYCLE TURBINE WITH HRSG	471.200 MMBTU/HR	
		471,200.000 CF/HR	Natural Gas
		3,259.100 Gal/HR	ULSD
DB5	DUCT BURNER UNIT 5 HRSG	38.900 MMBTU/HR	
		38,900.000 CF/HR	Natural Gas
DB6	DUCT BURNER UNIT 6 HRSG	38.900 MMBTU/HR	
		38,900.000 CF/HR	Natural Gas
T04	10,000 GAL AMMONIA TANK		
C05	UNIT 5 SELECTIVE CATALYTIC REDUCTION		
C06	UNIT 6 SELECTIVE CATALYTIC REDUCTION		
C07	UNIT 5 CO CATALYST		
C08	UNIT 6 CO CATALYST		
FM002	NATURAL GAS		
FM003	500,000 GAL DISTILLATE FUEL TANK		
S005	UNIT 5 STACK		
S006	UNIT 6 STACK		
S35	BOILER STACK		
Z004	AMMONIA TANK EMISSIONS		

PERMIT MAPS



PERMIT MAPS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CNTL C05
CNTL C07
STAC S005
FML FM002
CU DB6
CNTL C06
CNTL C08
STAC S006
FML FM002
PROC T04
STAC Z004

SECTION B. General Plan Approval Requirements

#001 [25 Pa. Code § 121.1]

Definitions

Words and terms that are not otherwise defined in this plan approval shall have the meanings set forth in Section 3 of the Air Pollution Control Act (35 P.S. § 4003) and 25 Pa. Code § 121.1.

#002 [25 Pa. Code § 127.12b (a) (b)]

Future Adoption of Requirements

The issuance of this plan approval does not prevent the future adoption by the Department of any rules, regulations or standards, or the issuance of orders necessary to comply with the requirements of the Federal Clean Air Act or the Pennsylvania Air Pollution Control Act, or to achieve or maintain ambient air quality standards. The issuance of this plan approval shall not be construed to limit the Department's enforcement authority.

#003 [25 Pa. Code § 127.12b]

Plan Approval Temporary Operation

This plan approval authorizes temporary operation of the source(s) covered by this plan approval provided the following conditions are met.

(a) When construction, installation, modification, or reactivation is being conducted, the permittee shall provide written notice to the Department of the completion of the activity approved by this plan approval and the permittee's intent to commence operation at least five (5) working days prior to the completion of said activity. The notice shall state when the activity will be completed and when the permittee expects to commence operation. When the activity involves multiple sources on different time schedules, notice is required for the commencement of operation of each source.

(b) Pursuant to 25 Pa. Code § 127.12b (d), temporary operation of the source(s) is authorized to facilitate the shakedown of sources and air cleaning devices, to permit operations pending the issuance of a permit under 25 Pa. Code Chapter 127, Subchapter F (relating to operating permits) or Subchapter G (relating to Title V operating permits) or to permit the evaluation of the air contaminant aspects of the source.

(c) This plan approval authorizes a temporary operation period not to exceed 180 days from the date of commencement of operation, provided the Department receives notice from the permittee pursuant to paragraph (a), above.

(d) The permittee may request an extension of the 180-day shakedown period if further evaluation of the air contamination aspects of the source(s) is necessary. The request for an extension shall be submitted, in writing, to the Department at least 15 days prior to the end of the initial 180-day shakedown period and shall provide a description of the compliance status of the source, a detailed schedule for establishing compliance, and the reasons compliance has not been established. This temporary operation period will be valid for a limited time and may be extended for additional limited periods, each not to exceed 180 days.

(e) The notice submitted by the permittee pursuant to subpart (a) above, prior to the expiration of the plan approval, shall modify the plan approval expiration date on Page 1 of this plan approval. The new plan approval expiration date shall be 180 days from the date of commencement of operation.

#004 [25 Pa. Code § 127.12(a) (10)]

Content of Applications

The permittee shall maintain and operate the sources and associated air cleaning devices in accordance with good engineering practice as described in the plan approval application submitted to the Department.

#005 [25 Pa. Code §§ 127.12(c) and (d) & 35 P.S. § 4013.2]

Public Records and Confidential Information

(a) The records, reports or information obtained by the Department or referred to at public hearings shall be available to the public, except as provided in paragraph (b) of this condition.

SECTION B. General Plan Approval Requirements

(b) Upon cause shown by the permittee that the records, reports or information, or a particular portion thereof, but not emission data, to which the Department has access under the act, if made public, would divulge production or sales figures or methods, processes or production unique to that person or would otherwise tend to affect adversely the competitive position of that person by revealing trade secrets, including intellectual property rights, the Department will consider the record, report or information, or particular portion thereof confidential in the administration of the act. The Department will implement this section consistent with sections 112(d) and 114(c) of the Clean Air Act (42 U.S.C.A. § § 7412(d) and 7414(c)). Nothing in this section prevents disclosure of the report, record or information to Federal, State or local representatives as necessary for purposes of administration of Federal, State or local air pollution control laws, or when relevant in a proceeding under the act.

#006 [25 Pa. Code § 127.12b]

Plan Approval terms and conditions.

[Additional authority for this condition is derived from 25 Pa. Code Section 127.13]

(a) This plan approval will be valid for a limited time, as specified by the expiration date contained on Page 1 of this plan approval. Except as provided in § § 127.11a and 127.215 (relating to reactivation of sources; and reactivation), at the end of the time, if the construction, modification, reactivation or installation has not been completed, a new plan approval application or an extension of the previous approval will be required.

(b) If construction has commenced, but cannot be completed before the expiration of this plan approval, an extension of the plan approval must be obtained to continue construction. To allow adequate time for departmental action, a request for the extension shall be postmarked at least thirty (30) days prior to the expiration date. The request for an extension shall include the following:

(i) A justification for the extension,
(ii) A schedule for the completion of the construction

If construction has not commenced before the expiration of this plan approval, then a new plan approval application must be submitted and approval obtained before construction can commence.

(c) If the construction, modification or installation is not commenced within 18 months of the issuance of this plan approval or if there is more than an 18-month lapse in construction, modification or installation, a new plan approval application that meets the requirements of 25 Pa. Code Chapter 127, Subchapter B (related to plan approval requirements), Subchapter D (related to prevention of significant deterioration of air quality), and Subchapter E (related to new source review) shall be submitted. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified.

#007 [25 Pa. Code § 127.32]

Transfer of Plan Approvals

(a) This plan approval may not be transferred from one person to another except when a change of ownership is demonstrated to the satisfaction of the Department and the Department approves the transfer of the plan approval in writing.

(b) Section 127.12a (relating to compliance review) applies to a request for transfer of a plan approval. A compliance review form shall accompany the request.

(c) This plan approval is valid only for the specific source and the specific location of the source as described in the application.

#008 [25 Pa. Code § 127.12(4) & 35 P.S. § 4008 & § 114 of the CAA]

Inspection and Entry

(a) Pursuant to 35 P.S. § 4008, no person shall hinder, obstruct, prevent or interfere with the Department or its personnel

SECTION B. General Plan Approval Requirements

in the performance of any duty authorized under the Air Pollution Control Act.

(b) The permittee shall also allow the Department to have access at reasonable times to said sources and associated air cleaning devices with such measuring and recording equipment, including equipment recording visual observations, as the Department deems necessary and proper for performing its duties and for the effective enforcement of the Air Pollution Control Act and regulations adopted under the act.

(c) Nothing in this plan approval condition shall limit the ability of the Environmental Protection Agency to inspect or enter the premises of the permittee in accordance with Section 114 or other applicable provisions of the Clean Air Act.

#009 [25 Pa. Code 127.13a]

Plan Approval Extensions

This plan approval may be terminated, modified, suspended or revoked and reissued if one or more of the following applies:

(a) The permittee constructs or operates the source subject to the plan approval in violation of the act, the Clean Air Act, the regulations promulgated under the act or the Clean Air Act, a plan approval or permit or in a manner that causes air pollution.

(b) The permittee fails to properly or adequately maintain or repair an air pollution control device or equipment attached to or otherwise made a part of the source.

(c) The permittee fails to submit a report required by this plan approval.

(d) The Environmental Protection Agency determines that this plan approval is not in compliance with the Clean Air Act or the regulations thereunder.

#010 [25 Pa. Code §§ 121.9 & 127.216]

Circumvention

(a) The permittee, or any other person, may not circumvent the new source review requirements of 25 Pa. Code Chapter 127, Subchapter E by causing or allowing a pattern of ownership or development, including the phasing, staging, delaying or engaging in incremental construction, over a geographic area of a facility which, except for the pattern of ownership or development, would otherwise require a permit or submission of a plan approval application.

(b) No person may permit the use of a device, stack height which exceeds good engineering practice stack height, dispersion technique or other technique which, without resulting in reduction of the total amount of air contaminants emitted, conceals or dilutes an emission of air contaminants which would otherwise be in violation of this plan approval, the Air Pollution Control Act or the regulations promulgated thereunder, except that with prior approval of the Department, the device or technique may be used for control of malodors.

#011 [25 Pa. Code § 127.12c]

Submissions

Reports, test data, monitoring data, notifications shall be submitted to the:

Regional Air Program Manager
PA Department of Environmental Protection
(At the address given on the plan approval transmittal letter or otherwise notified)

#012 [25 Pa. Code § 127.12(9) & 40 CFR Part 68]

Risk Management

(a) If required by Section 112(r) of the Clean Air Act, the permittee shall develop and implement an accidental release program consistent with requirements of the Clean Air Act, 40 CFR Part 68 (relating to chemical accident prevention

SECTION B. General Plan Approval Requirements

provisions) and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act (P.L. 106-40).

(b) The permittee shall prepare and implement a Risk Management Plan (RMP) which meets the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68 and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act when a regulated substance listed in 40 CFR § 68.130 is present in a process in more than the listed threshold quantity at the facility. The permittee shall submit the RMP to the Environmental Protection Agency according to the following schedule and requirements:

(1) The permittee shall submit the first RMP to a central point specified by the Environmental Protection Agency no later than the latest of the following:

(i) Three years after the date on which a regulated substance is first listed under § 68.130; or,
(ii) The date on which a regulated substance is first present above a threshold quantity in a process.

(2) The permittee shall submit any additional relevant information requested by the Department or the Environmental Protection Agency concerning the RMP and shall make subsequent submissions of RMPs in accordance with 40 CFR § 68.190.

(3) The permittee shall certify that the RMP is accurate and complete in accordance with the requirements of 40 CFR Part 68, including a checklist addressing the required elements of a complete RMP.

(c) As used in this plan approval condition, the term "process" shall be as defined in 40 CFR § 68.3. The term "process" means any activity involving a regulated substance including any use, storage, manufacturing, handling, or on-site movement of such substances or any combination of these activities. For purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process.

#013 [25 Pa. Code § 127.25]

Compliance Requirement

A person may not cause or permit the operation of a source subject to § 127.11 (relating to plan approval requirements), unless the source and air cleaning devices identified in the application for the plan approval and the plan approval issued to the source, are operated and maintained in accordance with specifications in the application and conditions in the plan approval issued by the Department. A person may not cause or permit the operation of an air contamination source subject to this chapter in a manner inconsistent with good operating practices.

SECTION C. Site Level Plan Approval Requirements

I. RESTRICTIONS.

Emission Restriction(s).

 # 001 [25 Pa. Code §123.1]
Prohibition of certain fugitive emissions
No person may permit the emission into the outdoor atmosphere of a fugitive air contaminant from a source other than the following:

(1) Construction or demolition of buildings or structures

(2) Grading, paving and maintenance of roads and streets

(3) Use of roads and streets. Emissions from material in or on trucks, railroad cars and other vehicular equipment are not considered as emissions from use of roads and eets.

(4) Clearing of land

(5) Stockpiling of materials.

(6) Open burning operations.

(7) Sources and classes of sources other than those identified above, for which the permittee has obtained a determination from the Department that fugitive emissions from the source, after appropriate control, meet the following requirements:

(a) The emissions are of minor significance with respect to causing air pollution.

(b) The emissions are not preventing or interfering with the attainment or maintenance of any ambient air quality standard.

 # 002 [25 Pa. Code §123.2]
Fugitive particulate matter
No person may permit fugitive particulate matter to be emitted into the outdoor atmosphere from a source specified in Section C, Condition #001 if the emissions are visible at the point the emissions pass outside the person's property.

 # 003 [25 Pa. Code §123.31]
Limitations
A person may not permit the emission into the outdoor atmosphere of any malodorous air contaminants from any source in a manner that the malodors are detectable outside the property of the person on whose land the source is being operated

 # 004 [25 Pa. Code §123.41]
Limitations
A person may not permit the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emission is either of the following:

(1) Equal to or greater than 20% for a period or periods aggregating more than three minutes in any 1 hour.

(2) Equal to or greater than 60% at any time.

 # 005 [25 Pa. Code §123.42]
Exceptions
The emission limitations of 25 Pa. Code Section 123.41 shall not apply when:

(1) The presence of uncombined water is the only reason for failure of the emission to meet the limitations;

SECTION C. Site Level Plan Approval Requirements

(2) The emission results from the operation of equipment used solely to train and test persons in observing the opacity of visible emissions;

(3) The emission results from sources specified in 25 Pa. Code Section 123.1(a)(1)-(9).

 # 006 [25 Pa. Code §127.12b]
Plan approval terms and conditions.
The facility shall not emit pollutants from the following sources in excesses of the following limitations on a 12-month rolling sum.

Compliance with this limit shall include start-up and shut-down emissions

Source	pollutant (Tons /12-month rolling sum)							
	NOx	CO	VOC	SO2	PM10	H2SO4	NH3	PM2.5
Combustion Turbines	44.9	30.1	9.30	25.5	72.5	8.70	27.7	72.5
Steam Boiler/Tanks	1.8	4.2	0.3	0.1	0.4	Neg	0.0	0.40
Facility Total	46.8	34.3	9.60	25.6	72.9	8.70	27.7	72.9

Additionally the hazardous air pollutants (HAPs) shall be less than 10 tons for any one HAP and less than 25 tons for all HAPs.

The Department reserves the right to impose more stringent emission limits based on stack test data.

 # 007 [25 Pa. Code §127.12b]
Plan approval terms and conditions.
The total fuel consumption of liquid fuel in the two combustion turbines shall not exceed a total of 3,911,000 gallons during any consecutive rolling 12- month period.

 # 008 [25 Pa. Code §127.12b]
Plan approval terms and conditions.
Pursuant to the provisions of 25 Pa. Code Section 127.203a(a)(3) and Section 127.206(d)(2), UGI Development, Hunlock Creek, shall acquire creditable emission reductions that are used in the applicability determination to net out of requirements of New Source Review (NSR) and Prevention of Significant Deterioration (PSD) from the shutdown of Boiler #6 prior to start of operation of the emissions units identified in this plan approval.

 # 009 [25 Pa. Code §129.14]
Open burning operations
(a) The permittee may not permit the open burning of material in a manner that:

(1) The emissions are visible, at any time, at the point such emissions pass outside the property of the person on whose land the open burning is being conducted.

(2) Malodorous air contaminants from the open burning are detectable outside the property of the person on whose land the open burning is being conducted.

(3) The emissions interfere with the reasonable enjoyment of life or property.

(4) The emissions cause damage to vegetation or property.

SECTION C. Site Level Plan Approval Requirements

(5) The emissions are or may be deleterious to human or animal health.

(b) Exceptions. The requirements above do not apply where the open burning operations result from a fire set for either of the following reasons:

(1) to prevent or abate a fire hazard, when approved by the Department and set by o under the supervision of a public officer.

(2) to instruct personnel in fire fighting, when approved by the Department.

(3) for the prevention and control of disease or pests, when approved by the Department.

(4) in conjunction with the production of agricultural commodities in their unmanufactured state on the premises of the farm operation.

(5) for the burning of domestic refuse, when the fire is on the premise of a structure occupied solely as a dwelling by two famlies or less and when the refuse results from the normal occupancy of the structure.

(6) for recreational or ceremonial purposes.

(7) solely for cooking food.

(c) This permit does not constitute authorization to burn solid waste pursuant to Section 610(3) of the Solid Waste management Act, 35 P.S. Section 6018.610(3), or any other provision of the Solid Waste Management Act.

II. TESTING REQUIREMENTS.

 # 010 [25 Pa. Code §139.1]

Sampling facilities.

Upon the request of the Department, the permittee shall provide adequate sampling ports, safe sampling platforms and adequate utilities for the performance by the Department of tests on such source. The Department will set forth, in the request, the time period in which the facilities shall be provided as well as the specifications for such facilities.

 # 011 [25 Pa. Code §139.11]

General requirements.

(a) As specified in 25 Pa. Code Section 139.11(1), performance tests shall be conducted while the source is operating at maximum routine operating conditions or under such other conditions, within the capacity of the equipment, as may be requested by the Department.

(b) As specified in 25 Pa. Code Section 139.11(2), the Department will consider test results for approval where sufficient information is provided to verify the source conditions existing at the time of the test and where adequate data is available to show the manner in which the test was conducted. Information submitted to the Department shall include, as a minimum, all of the following:

(1) A thorough source description, including a description of any air cleaning devices and the flue.

(2) Process conditions, for example, the charging rate of raw material or rate of production of final product, boiler pressure, oven temperature and other conditions which may effect emissions from the process.

(3) The location of sampling ports.

(4) Effluent characteristics, including velocity, temperature, moisture content, gas density (percentage of CO, CO2, O2 and

SECTION C Site Level Plan Approval Requirements

N2), static and barometric pressures.

(5) Sample collection techniques employed, including procedures used, equipment descriptions and data to verify that isokinetic sampling for particulate matter collection occurred and that acceptable test conditions were met.

(6) Laboratory procedures and results.

(7) Calculated results.

III. MONITORING REQUIREMENTS.

 # 012 [25 Pa. Code §123.31]

Limitations

The permittee shall conduct routine inspections of this facility on a weekly basis, when this source is in operation, to determine the presence of malodorous air emissions detectable beyond the boundaries of this facility.

 # 013 [25 Pa. Code §123.43]

Measuring techniques

Visible emissions may be measured using either of the following:

(1) A device approved by the Department and maintained to provide accurate opacity measurements.

(2) Observers, trained and qualified, to measure plume opacity with the naked eye or with the aid of any devices approved by the Department.

 # 014 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Continuous emission monitoring system for nitrogen oxides (as NOx), carbon monoxide (CO), diluent gas (O2 or CO2), and ammonia must be approved by the Department and installed, operated and maintained in accordance with the requirements of Chapter 139 of the Rules and Regulations of the Department of Environmental Protection. Exhaust gas flow rate at all points where gas contaminants are measured shall be monitored by 40 CFR 60 Appendix A Method 19. Proposals containing information as listed in the Phase I section of the Department's Continuous Source Monitoring Manual for CEMs must be submitted at least 3 months prior to the initial start-up of the combustion turbines.

As an alternative to operating a CEM for direct measurement of ammonia slip, the Owner or Operator may substitute an "alternative" monitoring system that will assure compliance with Condition of this plan approvel, if approved by the Department. This alternative monitoring plan must be submitted for approval in conjunction with those for the CEM system.

 # 015 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Phase I Department approval must be obtained for the monitors described in Conditions of this plan approval prior to initial start-up of the combustion turbines. Phase III Department approval must be obtained within 60 days of achieving the maximum production rate at which the turbines will be operated, but not later than 180 days after initial start-up of the turbines. Department review time for the Phase III report (time between postmark of the Owner or Operator's Phase III report and the postmark of the Department's response letter) will not be charged against the turbines in determining compliance with this condition. Information on obtaining Department approval is included in the Department's Continuous Source Monitoring Manual.

 # 016 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The Owner or Operator shall install and maintain fuel flow monitors that meet the requirements of 40 CFR Part 75.

SECTION C Site Level Plan Approval Requirements

IV. RECORDKEEPING REQUIREMENTS.

 # 017 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Pursuant to the provisions of 25 Pa Code Section 122.3 and 40 CFR Part 60 (New Source Performance Standards) the Owner or Operator shall provide to the Department and the USEPA notification(s) of:

a. The anticipated date of initial start-up for each combustion turbine in combined cycle mode (to be submitted not more than 60 days nor less than 30 days prior to such date).

b. The actual date of initial start-up for each combustion turbine in combined cycle mode (to be submitted at least 15 days following such date).

 # 018 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The Owner or Operator shall, at a minimum, record the following:

a. Monthly fuel consumption rate and 12-month rolling total fuel consumption for each combustion turbine.

b. Hours of start-up and shutdown period for each turbine.

c. Monthly hours of operation for each turbine in duct/ non-duct fire.

d. Monthly emissions of PM 2.5, PM10, SO2, NOx, CO, H2SO4 and VOC.

e. 12-month rolling total of the emissions identified in Condition of this permit.

f. Results of fuel sampling required as per Conditions of this permit.

 # 019 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Records required under this Plan Approval, 40 CFR Part 60 Subpart KKKK and 40 CFR Parts 72 and 75 shall be kept for a period of 5 years and shall be made available to the Department upon request.

a. The Owner or Operator shall maintain records on all air pollution control system performance evaluations and records of calibration checks, adjustments and maintenance performed on all equipment, which is subject to this plan approval.

b. The Owner or Operator shall maintain a copy of the manufacturer's recommendation for the two combustion turbines, and air pollution control equipment on-site.

c. The Owner or Operator shall maintain a copy of the manufacturer's recommendations for all CEMs that are required by this Plan Approval.

d. The Owner or Operator shall keep a record of the date of malfunction, the time of the malfunction, the cause of the malfunction, and the action taken to correct the malfunction.

V. REPORTING REQUIREMENTS.

 # 020 [25 Pa. Code §127.12c]

Plan approval reporting requirements.

The permittee shall report malfunctions to the Department. As defined in 40 CFR Section 60.2 and incorporated by reference in 25 Pa. Code Chapter 122, a malfunction is any sudden, infrequent and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner that may result in an increase in air emissions. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

SECTION C. Site Level Plan Approval Requirements

Malfunctions shall be reported as follows:

(a) Any malfunction which poses an imminent danger to the public health, safety, welfare, and environment, shall be immediately reported to the Department by telephone. The telephone report of such malfunctions shall occur no later than two (2) hours after the incident. The permittee shall submit a written report of instances of such malfunctions to the Department within three (3) days of the telephone report.

(b) Unless otherwise required by this permit, any other malfunction that is not subject to the reporting requirements of part (a), above, shall be reported to the Department, in writing, within five (5) days of malfunction discovery.

 # 021 [25 Pa. Code §135.3]

Reporting

The owner or operator shall submit by March 1 of each year, a source report for the preceding calendar year. The report shall include information for all previously reported sources, new sources which were first operated during the preceding calendar year and sources modified during the same period which were not previously reported.

The source owner or operator may request an extension of time from the Department for the filing of a source report, and the Department may grant the extension for reasonable cause.

VI. WORK PRACTICE REQUIREMENTS.

 # 022 [25 Pa. Code §123.1]

Prohibition of certain fugitive emissions

For any source specified in Section C, Condition #001, the permittee shall take all reasonable actions to prevent particulate matter from becoming airborne. These actions shall include, but not be limited to, the following:

(1) Use, where possible, of water or chemicals for control of dust in the demolition of buildings or structures, construction operations, the grading of roads or the clearing of land.

(2) Application of asphalt, oil, or suitable chemicals on dirt roads, material stockpiles and other surfaces which may give rise to airborne dusts.

(3) Paving and maintenance of roadways.

(4) Prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

(5) Blasting in open pit mines. Emissions from drilling are not considered as emissions from blasting.

 # 023 [25 Pa. Code §127.25]

Compliance requirement.

Pursuant to 25 Pa Code Sections 127.25 and 127.444, the Owner or Operator shall construct, operate, and maintain the two (2) combustion turbines, two (2) HRSGs, one (1) steam turbine generator, and air pollution control equipment in accordance with manufacturer's recommendations, as well as good air pollution control practices to ensure compliance with all air quality emission limitations.

VII. ADDITIONAL REQUIREMENTS.

 # 024 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

All emissions shall be determined by the methods found in 40 CFR Part 60, the Plan Approval Application and supplemental materials and Continuous Source Monitoring Manual.

SECTION C. Site Level Plan Approval Requirements

025 [25 Pa. Code §127.206]

ERC general requirements.

Pursuant to the New Source provisions of Section 127.201 through 127.217 of Chapter 127 of Article III of the Rules and Regulations of the Department of Environmental Protection, the company may generate NOx, VOCs, SOx, CO, PM 10 and PM2.5 emission reduction credits (ERCs) when the company permanently shutdown Boiler #6. The Department will determine amount of ERCs in accordance with the requirements of Section 127.206 and 127.207.

VIII. COMPLIANCE CERTIFICATION.

No additional compliance certifications exist except as provided in other sections of this plan approval including Section B (relating to Plan Approval General Requirements).

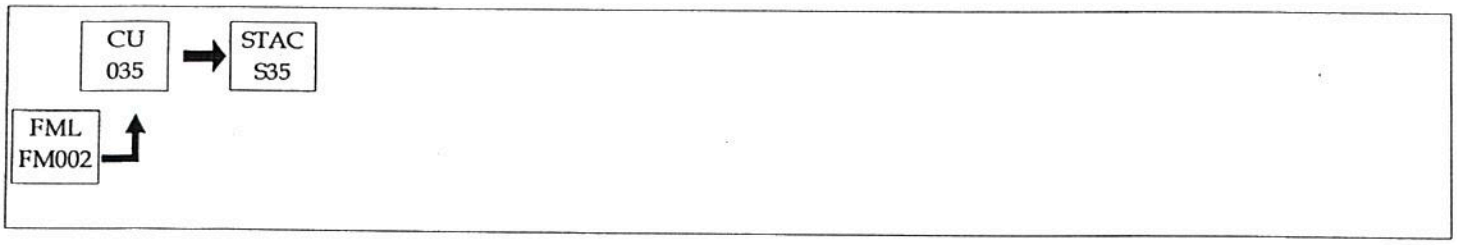
IX. COMPLIANCE SCHEDULE.

No compliance milestones exist.

SECTION D. Source Level Plan Approval Requirements

Source ID: 035 Source Name: 49.9 MM BTU/HR BOILER

Source Capacity/Throughput: 49,900.000 CF/HR Natural Gas



I. RESTRICTIONS.

Emission Restriction(s).

 # 001 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

This Small Combustion Unit is limited to a rated capacities of less than 50 million Btu per hour of heat input fueled by natural gas supplied by a public utility.

This Small Combustion Unit permit is designed to serve as both a general plan approval for one or more boilers located in a facility. The specific use of the permit will depend upon permit status, emission levels and location of the facility as outlined below.

 # 002 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

This Small Combustion Unit Permit authorizes the construction of combustion unit(s) that meet the best available technology (BAT) required under 25 Pa. Code §§127.1 and 127.12(a)(5). For purposes of this permit, BAT for units with a rated capacity equal to or greater than 10 million Btu per hour shall include the installation of low NOx burners, flue gas recirculation (FGR), combinations of other measures capable of meeting the emission limitations described in this permit. A facility owner or operator may use this general permit as a plan approval to construct qualifying combustion units.

 # 003 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

These combustion units shall also comply with this Condition, subparagraphs a. through e. of this Small Combustion Unit Permit and the emission limitations of the New Source Performance Standards prescribed in 40 CFR Part 60, Subpart Dc.

a. The permittee shall install and maintain the necessary meter(s) to determine and to record amount of fuel usage.
b. The permittee shall comply with the recordkeeping and certification requirements in accordance with 40 CFR §§60.46c(e), 60.42c(h) and 60.48c(f)(1). Reports shall be submitted on a semi-annual basis unless no excess emissions occurred. If there are no excess emissions, the permittee shall semi-annually report that no excess emissions occurred during the semi-annual reporting period (this does not apply to gas-fired units).
c. The permittee shall maintain daily fuel consumption records in accordance with 40 CFR §60.48c(g) (this applies to gas units). Records shall be kept for the fuel firing rates of the combustion unit on a monthly basis.
d. Semi-annual reports shall be submitted by the permittee in accordance with 40 CFR §§60.48c(d), 60.48c(e)(11) and 60.48c(j). The initial semi-annual report shall be postmarked by the 30th day of the sixth month following the completion of the initial performance test. Each subsequent report shall be postmarked by the 30th day following the end of the reporting period (this does not apply to gas-fired units).
e. Pursuant to 40 CFR §60.4, the permittee shall submit copies of all requests, reports, applications, submittals, and other communications to both EPA and the appropriate Regional Office of the Department. The EPA copies shall be forwarded to: Air Enforcement Branch, Mail Code 3AP12 US EPA, Region III 1650 Arch Street Philadelphia PA 19103-2029

 # 004 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Combustion Units Constructed after December 2, 1995, with Rated Capacity Equal to or Greater than 10 Million Btu per

Hour

As a condition of this Small Combustion Unit Permit, the permittee shall construct qualifying small gas combustion units capable of reducing nitrogen oxides (NOx) and carbon monoxide (CO) emissions to or below:

i. 30 ppmdv NOx at 3% O2 when firing gas;
ii. 300 ppmdv CO at 3% O2.
The combustion unit(s) shall be fired only on gas (natural or liquefied petroleum)

II. TESTING REQUIREMENTS.

 # 005 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

No later than one hundred and eighty (180) days after initial start-up, the permittee shall demonstrate compliance with the emission limitations for NOx, and CO established in Conditions 17 for each boiler. The demonstration may include either of the following methods:

a. Performance stack testing in accordance with applicable provisions of 25 Pa. Code Chapter 139 (relating to sampling and testing).
b. Portable analyzers approved by the Department.
c. Recent test data approved by the Department for identical boilers.

If performance source testing according to 25 Pa. Code Chapter 139 (relating to sampling and testing) is chosen for demonstration of compliance, the permittee shall:

a. Conduct all tests in accordance with the Department¿s latest Source Testing Manual.
b. Submit a stack test protocol to the Regional Air Quality Program Manager for approval at least sixty (60) days prior to the stack test.
c. Notify the Regional Air Quality Program Manager of the date and time of any testing, 30 days prior to the stack test.
d. Submit two copies of completed stack test reports, including all operating conditions, within 60 days of completion of testing, to the Regional Air Quality Program Manager.

The permittee shall, upon the request of the Department, provide fuel analyses, or fuel samples of the fuel used in any combustion unit authorized to operate under this permit.
If, at any time, the Department has cause to believe that air contaminant emissions from a combustion unit covered by this general permit are in excess of the limitations specified in, or established pursuant to, any applicable regulation contained in 25 Pa. Code, Subpart C, Article III, the permittee shall conduct tests deemed necessary by the Department to determine the actual emission rate(s).

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

IV. RECORDKEEPING REQUIREMENTS.

 # 006 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The permittee shall comply with applicable monitoring, recordkeeping and reporting requirements set forth in 25 Pa. Code Chapter 139 (relating to sampling and testing), the Air Pollution Control Act, the Clean Air Act, and the applicable regulations under the acts.

SECTION D. Source Level Plan Approval Requirements

V. REPORTING REQUIREMENTS.

007 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The applications and notifications required by 25 Pa. Code § 127.12b shall be submitted to the appropriate Regional Office responsible for issuing permits in the county in which the combustion unit is, or will be, located. As required under § 127.12b the application shall be either hand delivered or transmitted by certified mail return receipt requested.

The permittee shall notify the Department in writing permittee¿s intent to commence operation of source(s) authorized by the Plan Approval at least five working days prior to the completion of construction. The notice shall specify the expected date of completion of construction and date of commencement of operation for the source(s).

The permittee shall notify the Department in writing, within 24 hours of the discovery during a business day or by 5:00 pm on the first business day after a weekend or holiday, of any malfunction of the combustion unit which results in, or may result in, the emission of air contaminants in excess of the limitations specified in, or established pursuant to, any applicable rule or regulation contained in 25 Pa. Code, Subpart C, Article III (relating to air resources).

VI. WORK PRACTICE REQUIREMENTS.

008 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Any combustion unit operating under this Small Combustion Unit Permit shall comply with the terms and conditions of the permit. The combustion unit and any associated air cleaning devices shall be:
a. Operated in such a manner as not to cause air pollution.
b. Operated and maintained in a manner consistent with good operating and maintenance practices.
c. Operated and maintained in accordance with the manufacturers specifications and the applicable terms and conditions of this Small Combustion Unit Permit.

VII. ADDITIONAL REQUIREMENTS.

009 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Any person proposing to install, operate, or modify a combustion unit under this Small Combustion Unit Permit shall notify the Department using the Small Combustion Unit Permit Application provided by the Department. In accordance with 25 Pa. Code §127.12b (relating to application for use of plan approvals and operating permits), the applicant shall receive written authorization from the Department prior to constructing or operating under this general permit.

010 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

This Small Combustion Unit Permit may be modified, suspended, or revoked if the Department determines that affected combustion unit(s) cannot be adequately regulated under this permit. Authorization to use this Small Combustion Unit Permit shall be suspended or revoked if the permittee fails to comply with applicable terms and conditions of the Small Combustion Unit Permit.

Authorization to operate the combustion unit under this Small Combustion Unit Permit may be suspended, if, at any time, the permittee causes, permits or allows any modification without Department approval (as defined in 25 Pa. Code §121.1) of the combustion unit and any associated air pollution control device covered by this permit. Upon suspension of the authorization, the permittee may not continue to operate or use said combustion unit. If warranted, the Department will require that the combustion unit be permitted under the state operating permit or Title V operating permit requirements in 25 Pa. Code Chapter 127, as appropriate.

011 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Nothing in this Small Combustion Unit Permit relieves the permittee from its obligation to comply with all applicable Federal, state and local laws and regulations.

SECTION D. Source Level Plan Approval Requirements

 # 012 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

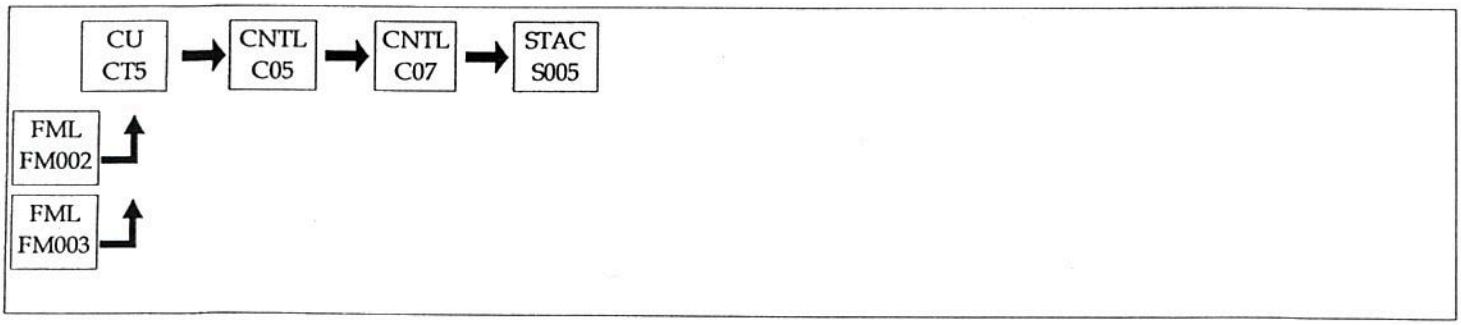
Any stationary air contamination source that is subject to the requirements of 25 Pa. Code Chapter 127, Subchapter D (relating to prevention of significant deterioration) and 25 Pa. Code Chapter 127, Subchapter E (relating to new source review) 25 Pa. Code Chapter 127, Subchapter G (relating to Title V operating permits), or 25 Pa. Code § 129.91 (relating to control of major sources of NOx and VOCs), may not operate under this Small Combustion Unit Permit. Title V facilities may use this Small Combustion Unit Permit as a plan approval when the major new source review and prevention of significant deterioration requirements are not applicable.

SECTION D. Source Level Plan Approval Requirements

Source ID: CT5 Source Name: UNIT 5 COMBINED-CYCLE TURBINE WITH HRSG

Source Capacity/Throughput: 471.200 MMBTU/HR
471,200.000 CF/HR Natural Gas
3,259.100 Gal/HR ULSD

Conditions for this source occur in the following groups: GROUP 1
GROUP 2
GROUP 3



I. RESTRICTIONS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

IV. RECORDKEEPING REQUIREMENTS.

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VII. ADDITIONAL REQUIREMENTS.

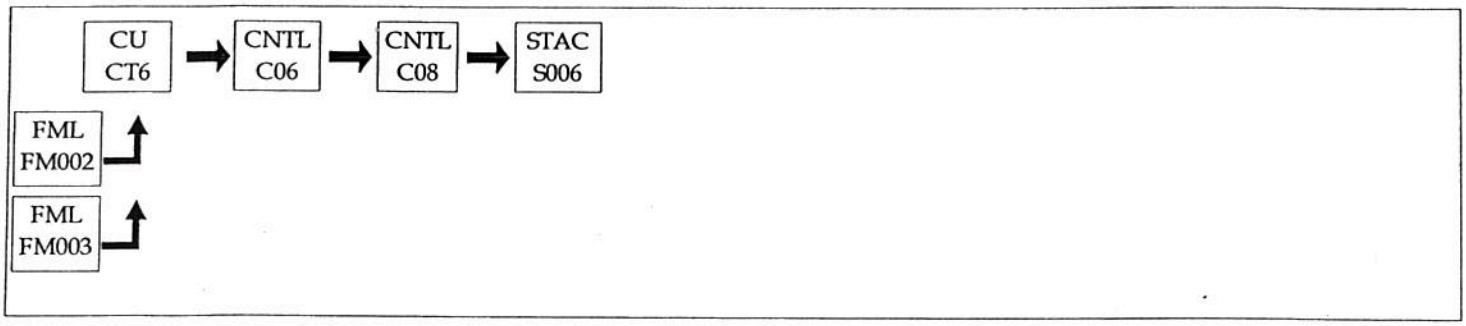
No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

SECTION D. Source Level Plan Approval Requirements

Source ID: CT6 Source Name: UNIT 6 COMBINED-CYCLE TURBINE WITH HRSG

Source Capacity/Throughput:	471.200	MMBTU/HR	
	471,200.000	CF/HR	Natural Gas
	3,259.100	Gal/HR	ULSD

Conditions for this source occur in the following groups: GROUP 1
GROUP 2
GROUP 3



I. RESTRICTIONS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

II. TESTING REQUIREMENTS.

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III. MONITORING REQUIREMENTS.

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IV. RECORDKEEPING REQUIREMENTS.

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V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VII. ADDITIONAL REQUIREMENTS.

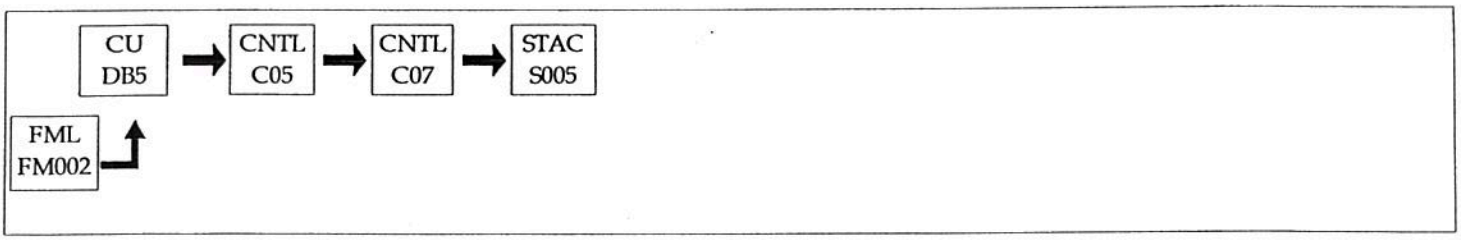
No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

SECTION D. Source Level Plan Approval Requirements

Source ID: DB5 Source Name: DUCT BURNER UNIT 5 HRSG

Source Capacity/Throughput: 38.900 MMBTU/HR
38,900.000 CF/HR Natural Gas

Conditions for this source occur in the following groups: GROUP 1
GROUP 2
GROUP 3



I. RESTRICTIONS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

II. TESTING REQUIREMENTS.

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III. MONITORING REQUIREMENTS.

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IV. RECORDKEEPING REQUIREMENTS.

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V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VII. ADDITIONAL REQUIREMENTS.

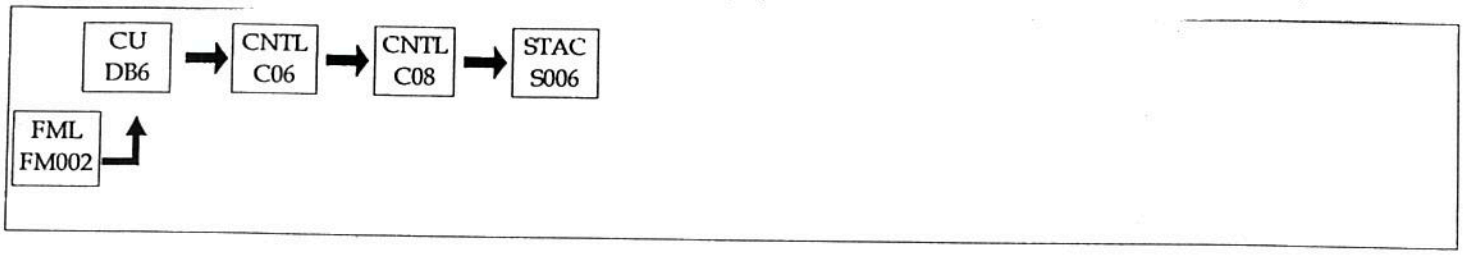
No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

SECTION D. Source Level Plan Approval Requirements

Source ID: DB6 Source Name: DUCT BURNER UNIT 6 HRSG

Source Capacity/Throughput: 38.900 MMBTU/HR
38,900.000 CF/HR Natural Gas

Conditions for this source occur in the following groups: GROUP 1
GROUP 2
GROUP 3



I. RESTRICTIONS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

IV. RECORDKEEPING REQUIREMENTS.

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V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

SECTION D. Source Level Plan Approval Requirements

Source ID: T04 Source Name: 10,000 GAL AMMONIA TANK

Source Capacity/Throughput:

PROC T04 → STAC Z004

I. RESTRICTIONS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

IV. RECORDKEEPING REQUIREMENTS.

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

SECTION D. Source Level Plan Approval Requirements

Source ID: FM003 Source Name: 500,000 GAL DISTILLATE FUEL TANK

Source Capacity/Throughput:

Conditions for this source occur in the following groups: GROUP 1

I. RESTRICTIONS.

Emission Restriction(s).

 # 001 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.112b]
Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984
Standard for volatile organic compounds (VOC).

40 CFR 60.112b Standard for volatile organic compounds (VOC).

(a) The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m3 but less than 151 m3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting the following specifications:

(i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(A) A foam-or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam-or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

(vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not

floating or at the manufacturer's recommended setting.

(vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(2) An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

(i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in §60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in §60.113b(b)(4).

(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(iii) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(3) A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, §60.485(b).

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§60.18) of the General Provisions.

(4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in §60.114b of this subpart.

(b) The owner or operator of each storage vessel with a design capacity greater than or equal to 75 m3 which contains a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 76.6 kPa shall equip each storage vessel with

one of the following:

(1) A closed vent system and control device as specified in §60.112b(a)(3).

(2) A system equivalent to that described in paragraph (b)(1) as provided in §60.114b of this subpart.

(c) Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia. This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia ("site").

(1) For any storage vessel that otherwise would be subject to the control technology requirements of paragraphs (a) or (b) of this section, the site shall have the option of either complying directly with the requirements of this subpart, or reducing the site-wide total criteria pollutant emissions cap (total emissions cap) in accordance with the procedures set forth in a permit issued pursuant to 40 CFR 52.2454. If the site chooses the option of reducing the total emissions cap in accordance with the procedures set forth in such permit, the requirements of such permit shall apply in lieu of the otherwise applicable requirements of this subpart for such storage vessel.

(2) For any storage vessel at the site not subject to the requirements of 40 CFR 60.112b(a) or (b), the requirements of 40 CFR 60.116b(b) and (c) and the General Provisions (subpart A of this part) shall not apply.

[§60.112b (c) added at 62 FR 52641, Oct. 8, 1997]

 # 002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.114b]

Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984

Alternative means of emission limitation.

40 CFR 60.114b Alternative means of emission limitation.

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in §60.112b, the Administrator will publish in the FEDERAL REGISTER a notice permitting the use of the alternative means for purposes of compliance with that requirement.

(b) Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.

(c) Any person seeking permission under this section shall submit to the Administrator a written application including:

(1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.

(2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in §60.112b.

II. TESTING REQUIREMENTS.

 # 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.113b]
Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984
Testing and procedures.

40 CFR 60.113b Testing and procedures.

The owner or operator of each storage vessel as specified in §60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of §60.112b.

(a) After installing the control equipment required to meet §60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

(1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(3) For vessels equipped with a double-seal system as specified in §60.112b(a)(1)(ii)(B):

(i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

(ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.

(4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (a)(2) and (a)(3(ii) of this sectionand at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.

(5) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a)(1)and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this

notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(b) After installing the control equipment required to meet §60.112b(a)(2) (external floating roof), the owner or operator shall:

(1) Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.

(i) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.

(ii) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.

(iii) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

(i) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

(ii) Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this section.

(4) Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4)(i) and (ii) of this section:

(i) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 Cm2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

(A) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.

(B) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(ii) The secondary seal is to meet the following requirements:

(A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section.

(B) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

(C) There are to be no holes, tears, or other openings in the seal or seal fabric.

(iii) If a failure that is detected during inspections required in paragraph (b)(1) of §60.113b(b) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(5) Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this sectionto afford the Administrator the opportunity to have an observer present.

(6) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.

(ii) For all the inspections required by paragraph (b)(6) of this section, the owner or operator shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (b)(6) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(c) The owner or operator of each source that is equipped with a closed vent system and control device as required in §60.112b (a)(3) or (b)(2) (other than a flare) is exempt from §60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by the Administrator as an attachment to the notification required by §60.7(a)(1) or, if the facility is exempt from §60.7(a)(1), as an attachment to the notification required by §60.7(a)(2), an operating plan containing the information listed below.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816°C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this

section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

(d) The owner or operator of each source that is equipped with a closed vent system and a flare to meet the requirements in §60.112b(a)(3) or (b)(2) shall meet the requirements as specified in the general control device requirements, §60.18(e) and (f).

III. MONITORING REQUIREMENTS.

 # 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.116b]
Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984
Monitoring of operations.

40 CFR 60.116b Monitoring of operations.

(a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.

(b) The owner or operator of each storage vessel as specified in §60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

[§60.116b(b) amended at 68 FR 59333, Oct. 15, 2003]

(c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m3 storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m3 but less than 151 m3 storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

(d) Except as provided in paragraph (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m3 storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m3 but less than 151 m3 storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor vapor pressure values for each volume range.

(e) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.

(1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

(2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

(i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference-see §60.17), unless the Administrator

specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

(3) For other liquids, the vapor pressure:

(i) May be obtained from standard reference texts, or

(ii) Determined by ASTM D2879-83, 96, or 97 (incorporated by reference-see §60.17); or

[§60.116b(e)(3)(ii) amended at 65 FR 61756, Oct. 17, 2000]

(iii) Measured by an appropriate method approved by the Administrator; or

(iv) Calculated by an appropriate method approved by the Administrator.

(f) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

(1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.

(2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in §60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

(i) ASTM D2879-83, 96, or 97 (incorporated by reference-see §60.17); or

[§60.116b(f)(2)(i) amended at 65 FR 61756, Oct. 17, 2000]

(ii) ASTM D323-82 or 94 (incorporated by reference-see §60.17); or

[§60.116b(f)(2)(ii) amended at 65 FR 61756, Oct. 17, 2000]

(iii) As measured by an appropriate method as approved by the Administrator.

(g) The owner or operator of each vessel equipped with a closed vent system and control device meeting the specification of §60.112b or with emissions reductions equipment as specified in 40 CFR 65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c)and (d) of this section.

[§60.116b(g) amended at 65 FR 78276, Dec. 14, 2000]

IV. RECORDKEEPING REQUIREMENTS.

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

V. REPORTING REQUIREMENTS.

 # 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.115b]

Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984

Reporting and recordkeeping requirements.

40 CFR 60.115b Reporting and recordkeeping requirements.

The owner or operator of each storage vessel as specified in §60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of §60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

(a) After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(1) and §60.113b(a)(1). This report shall be an attachment to the notification required by §60.7(a)(3).

(2) Keep a record of each inspection performed as required by §60.113b(a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(3) If any of the conditions described in §60.113b(a)(2) are detected during the annual visual inspection required by §60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

(4) After each inspection required by §60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in §60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of §61.112b(a)(1) or §60.113b(a)(3) and list each repair made.

(b) After installing control equipment in accordance with §61.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(2) and §60.113b(b)(2), (b)(3), and (b)(4) shall be an attachment to the notification required by §60.7(a)(3).

(2) Within 60 days of performing the seal gap measurements required by §60.113b(b)(1), furnish the Administrator with a report that contains:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in §60.113b(b)(2) and (b)(3).

(3) Keep a record of each gap measurement performed as required by §60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in §60.113b(b)(2) and (b)(3).

(4) After each seal gap measurement that detects gaps exceeding the limitations specified by §60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph (b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

(c) After installing control equipment in accordance with §60.112b(a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

(1) A copy of the operating plan.

(2) A record of the measured values of the parameters monitored in accordance with §60.113b(c)(2).

(d) After installing a closed vent system and flare to comply with §60.112b, the owner or operator shall meet the following requirements.

(1) A report containing the measurements required by §60.18(f)(1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator as required by §60.8 of the General Provisions. This report shall be submitted within 6 months of the initial start-up date.

(2) Records shall be kept of all periods of operation during which the flare pilot flame is absent.

(3) Semiannual reports of all periods recorded under §60.115b(d)(2) in which the pilot flame was absent shall be furnished to the Administrator.

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

SECTION E. Source Group Plan Approval Restrictions.

Group Name: GROUP 1

Group Description: Combustion Turgines Wtih HRSG

Sources included in this group:

ID	Name
C05	UNIT 5 SELECTIVE CATALYTIC REDUCTION
C06	UNIT 6 SELECTIVE CATALYTIC REDUCTION
C07	UNIT 5 CO CATALYST
C08	UNIT 6 CO CATALYST
CT5	UNIT 5 COMBINED-CYCLE TURBINE WITH HRSG
CT6	UNIT 6 COMBINED-CYCLE TURBINE WITH HRSG
DB5	DUCT BURNER UNIT 5 HRSG
DB6	DUCT BURNER UNIT 6 HRSG
FM002	NATURAL GAS
FM003	500,000 GAL DISTILLATE FUEL TANK
S005	UNIT 5 STACK
S006	UNIT 6 STACK

I. RESTRICTIONS.

Emission Restriction(s).

 # 001 [25 Pa. Code §123.22]

Combustion units

Low Sulfur Distillate in the subject air basins which contain sulfur in excess of the applicable percentage by weight set forth in the following table:

Grades Commercial Fuel Oil	Sulfur
No. 2 and Lighter (viscosity less than or equal to 5.820cSt)	0.05%

 # 002 [25 Pa. Code §123.31]

Limitations

A person may not permit the emission into the outdoor atmosphere of any malodorous air contaminants from any source in such a manner that the malodors are detectable outside the property of the person on whose land the source is being operated.

 # 003 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Pursuant to the Best Available Technology (BAT) provisions of 25 Pa. Code Section 127.1, the Owner or Operator shall limit the emission of ammonia for each selective catalytic reduction (SCR) system exhaust to 5 ppmvd (one-hour block average), measured dry volume corrected to 15% oxygen. The Department reserves the right to impose a more stringent limit based on the test results.

 # 004 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Pursuant to the Best Available Technology (BAT) provisions of 25 Pa Code Section 127.1, the Two (2) combustion turbines shall primarily fire natural gas with capability for low sulfur distillate fuel oil (liquid fuel) with sulfur content no greater than 0.05% by weight.

SECTION E. Source Group Plan Approval Restrictions

 # 005 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The Department reserves the right to use the CEM data, stack test results, and the operating parameters determined during optimization of the turbines and their associated air cleaning devices to verify emission rates, to establish emission factors, and to develop compliance assurance measures in the Operating Permit.

 # 006 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Start-up / Shut-down

The short term emission limitation contaned in Condition # 8 of this section shall not apply during the start-up and shut-down of the turbines.

Start-up, shall be defined as from initial firing to combustion turbine steady state operation

Each start-up period shall not exceed 1 (one) hour.

Shut-down, shall be defined as from when steady state combustion turbine operating load falls below normal operations to cessation of fuel firing.

Each shut-down period shall not exceed 30 (thirty) minutes.

The emissions from start-up and shut-down shall be included in the 12-month rolling sum.

 # 007 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

In accordance with 25 Pa Code 127.12b, 127.1, 127.12b(5), and BAT the following emission rates for each turbine with the operation of SCR and CO Catalyst shall not exceed the following:

Pollutant	Normal Operation (15% O2)	Normal Operation (Duct-firing)(15% O2)
NOx (Natural Gas)	2.50 ppmvd	2.90 ppmvd
NOx (Oil)	8.00 ppmvd	8.50 ppmvd
CO (Natural Gas) (>32 Degees F)	4.00 ppmvd	4.00 ppmvd
CO (Natural Gas) (<32 Degrees F)	10.00 ppmvd	10.00ppmvd
The Department reserves the right to chage the CO <32 Degree F limitation at any time)		
CO (Oil)	6.00 ppmvd	6.00 ppmvd
VOC (Natural Gas) (>32 Degees F)	1.20 ppmvd	1.20 ppmvd
VOC (Natural Gas) (<32 Degrees F)	4.00 ppmvd	4.00ppmvd
The Department reserves the right to chage the VOC <32 Degree F limitation at any time)		
VOC (Oil)	1.30 ppmvd	1.30 ppmvd
PM10 (Natural Gas)	0.0141 lb/MMBTU	0.0141 lb/MMBTU

SECTION E. Source Group Plan Approval Restrictions.

PM10 (Oil)	0.066 lb/MMBTU	0.066 lb/MMBTU
PM2.5 (Natural Gas)	0.0141 lb/MMBTU	0.0141 lb/MMBTU
PM2.5 (Oil)	0.066 lb/MMBTU	0.066 lb/MMBTU
SO2 (Natural Gas)	0.0030 lb/MMBTU	0.0030 lb/MMBTU
SO2 (Oil)	0.0660 lb/MMBTU	0.0660 lb/MMBTU
H2SO4 (Natural Gas)	0.0009 lb/MMBTU	0.0009 lb/MMBTU
H2SO4 (Oil)	0.0200 lb/MMBTU	0.0200 lb/MMBTU

The Department reserves the right to impose more stringent emission limits based on stack test data.

 # 008 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

A person may not permit the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emission is either of the following:

(1) Equal to or greater than 10% for a period or periods aggregating more than three minutes in any 1 hour.

(2) Equal to or greater than 30% at any time.

Operation Hours Restriction(s).

 # 009 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Duct burner operations are limited to the following

Source	hours/year	MMcf/yr (Natural Gas)
DB5	2000	77.8
DB6	2000	77.8

II. TESTING REQUIREMENTS.

 # 010 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

At least 60 days prior to the test, the Owner or Operator shall submit to the Department for approval the procedures for a test and a sketch with dimensions indicating the location of sampling ports and other data to ensure the collection of representative samples.

 # 011 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

At least 30 days prior to the test, the Regional Air Quality Program Manager shall be informed of the date and time of the test.

 # 012 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Within 60 days after the source test(s), two copies of the complete test report, including all operating conditions, shall be submitted to the Regional Air Quality Program Manager for approval.

SECTION E. Source Group Plan Approval Restrictions.

013 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The permittee shall conduct stack testing annually to demonstrate compliance with the limitation described in Condition # 8 of this section. The Department reserves the right to change the frequency of the testing based upon historical data and the permittee's ability to demonstrate complience with the limitations established in this permit.

In addition the permittee shall stack test for PM2.5 on an annual basis.

014 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The permittee shall submit an alternative plan for direct measurement of ammonia slip from each combustion turbine that will assure compliance with Plan Approval Condition #4, if approved by the Department. This alternative monitoring plan must be submitted for approval in conjunction with those for the continuous emission monitoring system.

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

IV. RECORDKEEPING REQUIREMENTS.

015 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The Owner or Operator shall record each start-up and shutdown, including date and times of each event, for the combustion turbines.

016 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The permittee shall maintain a log of the hours of operation or fuel usage of each duct burner to demonstrate compliance with the hours of operation / fuel usage limitation.

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

VII. ADDITIONAL REQUIREMENTS.

017 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The Owner or Operator, within one hour of occurrence, shall notify the Department at (570) 826-2511, of any malfunction of the source(s) or associated air cleaning device(s) which results in, or may possibly be resulting in, the emission of air contaminants in excess of the limitations specified in, or established pursuant to, any applicable rule or regulation contained in Article III of the Rules and Regulations of the Department of Environmental Protection. A written report shall be submitted to the Department within five working days following the incident describing the malfunctions and corrective actions taken. The Department may take enforcement actions for any violations of the applicable standards.

018 [40 CFR Part 72 Regulations on Permits §40 CFR 72.1]

Subpart A--Acid Rain Program General Provisions

Purpose and scope.

The two (2) combustion turbines are subject to the federal Acid Rain Program requirements specified in Title IV of the Clean Air Act Amendments of 1990 and shall comply with all applicable provisions of Title IV and implementing regulations

SECTION E Source Group Plan Approval Restrictions

including:

40 CFR Part 72 Permits Regulation
40 CFR Part 73 Sulfur Dioxide Allowance System
40 CFR Part 75 Continuous Emissions Monitoring
40 CFR Part 77 Excess Emissions

a. Upon start-up, the facility is subject to the applicable requirements in 40 CFR Parts 72 through 78. In addition, the facility is subject to the applicable requirements in 25 Pa. Code Section 127.531, regarding special conditions related to acid rain.

b. The owner(s) and operator(s) of each affected source and each affected unit at the source shall:

i. Operate the unit(s) in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and,

ii. Have an Acid Rain permit.

SECTION E Source Group Plan Approval Restrictions

Group Name: GROUP 2

Group Description: 40 CFR Part 60 Subpart KKKK Turbine NSPS

Sources included in this group:

ID	Name
C05	UNIT 5 SELECTIVE CATALYTIC REDUCTION
C06	UNIT 6 SELECTIVE CATALYTIC REDUCTION
C07	UNIT 5 CO CATALYST
C08	UNIT 6 CO CATALYST
CT5	UNIT 5 COMBINED-CYCLE TURBINE WITH HRSG
CT6	UNIT 6 COMBINED-CYCLE TURBINE WITH HRSG
DB5	DUCT BURNER UNIT 5 HRSG
DB6	DUCT BURNER UNIT 6 HRSG

I. RESTRICTIONS.

Emission Restriction(s).

 # 001 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4330]

Subpart KKKK - Standards of Performance for Stationary Combustion Turbines

What emission limits must I meet for sulfur dioxide (SO2)?

(a) If your turbine is located in a continental area, you must comply with either paragraph (a)(1) or (a)(2) of this section.

(1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO2 in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output,

or

(2) You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO2/J (0.060 lb SO2/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.

II. TESTING REQUIREMENTS.

 # 002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4400]

Subpart KKKK - Standards of Performance for Stationary Combustion Turbines

How do I conduct the initial and subsequent performance tests, regarding NOX ?

(a) You must conduct an initial performance test, as required in §60.8. Subsequent NOX performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).

(1) There are two general methodologies that you may use to conduct the performance tests. For each test run:

(i) Measure the NOX concentration (in parts per million (ppm)), using EPA Method 7E or EPA Method 20 in appendix A of this part. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix Aof this part, and measure and record the electrical and thermal output from the unit. Then, use the following equation to calculate the NOX emission rate:

"Equation 5"

(Formula omitted...refer to regulation for exact formula notation).

(a) You must conduct an initial performance test, as required in §60.8. Subsequent NOX performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).

(1) There are two general methodologies that you may use to conduct the performance tests. For each test run:

SECTION E. Source Group Plan Approval Restrictions.

(i) Measure the NOX concentration (in parts per million (ppm)), using EPA Method 7E or EPA Method 20 in appendix A of this part. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix Aof this part, and measure and record the electrical and thermal output from the unit. Then, use the following equation to calculate the NOX emission rate:

"Equation 5"

(Formula omitted...refer to regulation for exact formula notation).

Where:
E = NOX emission rate, in lb/MWh
1.194 x 10-7 = conversion constant, in lb/dscf-ppm
(NOX)c = average NOX concentration for the run, in ppm
Qstd = stack gas volumetric flow rate, in dscf/hr
P = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to §60.4350(f)(2); or

(ii) Measure the NOX and diluent gas concentrations, using either EPA Methods 7E and 3A, or EPA Method 20 in appendix A of this part. Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix Aof this part to calculate the NOX emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the NOX emission rate in lb/MWh.

(2) Sampling traverse points for NOX and (if applicable) diluent gas are to be selected following EPA Method 20or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

(3) Notwithstanding paragraph (a)(2) of this section, you may test at fewer points than are specified in EPA Method 1 or EPA Method 20 in appendix A of this part if the following conditions are met:

(i) You may perform a stratification test for NOX and diluent pursuant to

(A) [Reserved], or

(B) The procedures specified in section 6.5.6.1(a) through (e) of appendix A of part 75 of this chapter.

(ii) Once the stratification sampling is completed, you may use the following alternative sample point selection criteria for the performance test:

(A) If each of the individual traverse point NOX concentrations is within ±10 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±5ppm or ±0.5 percent CO2 (or O2) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average NOX concentration during the stratification test; or

(B) For turbines with a NOX standard less than or equal to 15 ppm @ 15% O2, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NOX concentrations is

within ±2.5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±1ppm or ±0.15 percent CO2 (or O2) from the mean for all traverse points.

(b) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. You may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. You must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes.

(1) If the stationary combustion turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel.

(2) For a combined cycle and CHP turbine systems with supplemental heat (duct burner), you must measure the total NOX emissions after the duct burner rather than directly after the turbine. The duct burner must be in operation during the performance test.

(3) If water or steam injection is used to control NOX with no additional post-combustion NOX control and you choose to monitor the steam or water to fuel ratio in accordance with §60.4335, then that monitoring system must be operated concurrently with each EPA Method 20 or EPA Method 7E run and must be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable §60.4320 NOXemission limit.

(4) Compliance with the applicable emission limit in §60.4320 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NOX emission rate at each tested level meets the applicable emission limit in §60.4320.

(5) If you elect to install a CEMS, the performance evaluation of the CEMS may either be conducted separately or (as described in §60.4405) as part of the initial performance test of the affected unit.

(6) The ambient temperature must be greater than 0 °F during the performance test.

Where:
E = NOX emission rate, in lb/MWh
1.194 x 10-7 = conversion constant, in lb/dscf-ppm
(NOX)c = average NOX concentration for the run, in ppm
Qstd = stack gas volumetric flow rate, in dscf/hr
P = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to §60.4350(f)(2); or

(ii) Measure the NOX and diluent gas concentrations, using either EPA Methods 7E and 3A, or EPA Method 20 in appendix A of this part. Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix Aof this part to calculate the NOX emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the NOX emission rate in lb/MWh.

(2) Sampling traverse points for NOX and (if applicable) diluent gas are to be selected following EPA Method 20or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

(3) Notwithstanding paragraph (a)(2) of this section, you may test at fewer points than are specified in EPA Method 1 or EPA Method 20 in appendix A of this part if the following conditions are met:

(i) You may perform a stratification test for NOX and diluent pursuant to

(A) [Reserved], or

(B) The procedures specified in section 6.5.6.1(a) through (e) of appendix A of part 75 of this chapter.

(ii) Once the stratification sampling is completed, you may use the following alternative sample point selection criteria for the performance test:

(A) If each of the individual traverse point NOX concentrations is within ±10 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±5ppm or ±0.5 percent CO2 (or O2) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average NOX concentration during the stratification test; or

(B) For turbines with a NOX standard less than or equal to 15 ppm @ 15% O2, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NOX concentrations is within ±2.5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±1ppm or ±0.15 percent CO2 (or O2) from the mean for all traverse points.

(b) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. You may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. You must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes.

(1) If the stationary combustion turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel.

(2) For a combined cycle and CHP turbine systems with supplemental heat (duct burner), you must measure the total NOX emissions after the duct burner rather than directly after the turbine. The duct burner must be in operation during the performance test.

(3) If water or steam injection is used to control NOX with no additional post-combustion NOX control and you choose to monitor the steam or water to fuel ratio in accordance with §60.4335, then that monitoring system must be operated concurrently with each EPA Method 20 or EPA Method 7E run and must be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable §60.4320 NOXemission limit.

(4) Compliance with the applicable emission limit in §60.4320 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NOX emission rate at each tested level meets the applicable emission limit in §60.4320.

(5) If you elect to install a CEMS, the performance evaluation of the CEMS may either be conducted separately or (as described in §60.4405) as part of the initial performance test of the affected unit.

(6) The ambient temperature must be greater than 0 °F during the performance test.

 # 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4405]

Subpart KKKK - Standards of Performance for Stationary Combustion Turbines

How do I perform the initial performance test if I have chosen to install a NOX-diluent CEMS?

If you elect to install and certify a NOX-diluent CEMS under §60.4345, then the initial performance test required under §60.8 may be performed in the following alternative manner:

(a) Perform a minimum of nine RATA reference method runs, with a minimum time per run of 21 minutes, at a single load level, within plus or minus 25 percent of 100 percent of peak load. The ambient temperature must be greater than 0 °F

during the RATA runs.

(b) For each RATA run, concurrently measure the heat input to the unit using a fuel flow meter (or flow meters) and measure the electrical and thermal output from the unit.

(c) Use the test data both to demonstrate compliance with the applicable NOX emission limit under §60.4320 and to provide the required reference method data for the RATA of the CEMS described under §60.4335.

(d) Compliance with the applicable emission limit in §60.4320 is achieved if the arithmetic average of all of the NOX emission rates for the RATA runs, expressed in units of ppm or lb/MWh, does not exceed the emission limit.

 # 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4415]

Subpart KKKK - Standards of Performance for Stationary Combustion Turbines

How do I conduct the initial and subsequent performance tests for sulfur?

(a) You must conduct an initial performance test, as required in §60.8. Subsequent SO2 performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests.

(1) If you choose to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference, see §60.17) for natural gas or ASTM D4177 (incorporated by reference, see §60.17) for oil. Alternatively, for oil, you may follow the procedures for manual pipeline sampling in section 14 of ASTM D4057 (incorporated by reference, see §60.17). The fuel analyses of this section may be performed either by you, a service contractor retained by you, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using:

(i) For liquid fuels, ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 (all of which are incorporated by reference, see §60.17); or

(ii) For gaseous fuels, ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17).

(2) Measure the SO2 concentration (in parts per million (ppm)), using EPA Methods 6, 6C, 8, or 20 in appendix A of this part. In addition, the American Society of Mechanical Engineers (ASME) standard, ASME PTC 19-10-1981-Part 10, "Flue and Exhaust Gas Analyses," manual methods for sulfur dioxide (incorporated by reference, see §60.17) can be used instead of EPA Methods 6 or 20. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then use the following equation to calculate the SO2 emission rate:

"Equation 6"

(Formula omitted...refer to regulation for exact notation).

Where:
E = SO2 emission rate, in lb/MWh
1.664 x 10-7 = conversion constant, in lb/dscf-ppm
(SO2)c = average SO2 concentration for the run, in ppm
Qstd = stack gas volumetric flow rate, in dscf/hr
P = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to §60.4350(f)(2); or

(3) Measure the SO2 and diluent gas concentrations, using either EPA Methods 6, 6C, or 8 and 3A, or 20 in appendix A of this

part. In addition, you may use the manual methods for sulfur dioxide ASME PTC 19-10-1981-Part 10 (incorporated by reference, see §60.17). Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the SO2 emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the SO2 emission rate in lb/MWh.

(b) [Reserved]

III. MONITORING REQUIREMENTS.

 # 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4335]
Subpart KKKK - Standards of Performance for Stationary Combustion Turbines
How do I demonstrate compliance for NOX if I use water or steam injection?

(a) If you are using water or steam injection to control NOX emissions, you must install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine when burning a fuel that requires water or steam injection for compliance.

(b) Alternatively, you may use continuous emission monitoring, as follows:

(1) Install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a NOX monitor and a diluent gas (oxygen (O2) or carbon dioxide (CO2)) monitor, to determine the hourly NOX emission rate in parts per million (ppm) or pounds per million British thermal units (lb/MMBtu); and

(2) For units complying with the output-based standard, install, calibrate, maintain, and operate a fuel flow meter (or flow meters) to continuously measure the heat input to the affected unit; and

(3) For units complying with the output-based standard, install, calibrate, maintain, and operate a watt meter (or meters) to continuously measure the gross electrical output of the unit in megawatt-hours; and

(4) For combined heat and power units complying with the output-based standard, install, calibrate, maintain, and operate meters for useful recovered energy flow rate, temperature, and pressure, to continuously measure the total thermal energy output in British thermal units per hour (Btu/h).

 # 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4345]
Subpart KKKK - Standards of Performance for Stationary Combustion Turbines
What are the requirements for the continuous emission monitoring system equipment, if I choose to use this option?

If the option to use a NOX CEMS is chosen:

(a) Each NOX diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B to this part, except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in appendix F to this part is not required. Alternatively, a NOX diluent CEMS that is installed and certified according to appendix A of part 75 of this chapter is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis.

(b) As specified in §60.13(e)(2), during each full unit operating hour, both the NOX monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NOX emission rate for the hour.

(c) Each fuel flowmeter shall be installed, calibrated, maintained, and operated according to the manufacturer's instructions. Alternatively, with state approval, fuel flowmeters that meet the installation, certification, and quality assurance requirements of appendix D to part 75 of this chapter are acceptable for use under this subpart.

SECTION E. Source Group Plan Approval Restrictions.

(d) Each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer's instructions.

(e) The owner or operator shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in paragraphs (a), (c), and (d) of this section. For the CEMS and fuel flow meters, the owner or operator may, with state approval, satisfy the requirements of this paragraph by implementing the QA program and plan described in section 1 of appendix B to part 75of this chapter.

 # 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4350]

Subpart KKKK - Standards of Performance for Stationary Combustion Turbines

How do I use data from the continuous emission monitoring equipment to identify excess emissions?

For purposes of identifying excess emissions:

(a) All CEMS data must be reduced to hourly averages as specified in §60.13(h).

(b) For each unit operating hour in which a valid hourly average, as described in §60.4345(b), is obtained for both NOX and diluent monitors, the data acquisition and handling system must calculate and record the hourly NOX emission rate in units of ppm or lb/MMBtu, using the appropriate equation from method 19 in appendix A of this part. For any hour in which the hourly average O2 concentration exceeds 19.0 percent O2 (or the hourly average CO2 concentration is less than 1.0 percent CO2), a diluent cap value of 19.0 percent O2 or 1.0 percent CO2 (as applicable) may be used in the emission calculations.

(c) Correction of measured NOX concentrations to 15 percent O2 is not allowed.

(d) If you have installed and certified a NOX diluent CEMS to meet the requirements of part 75 of this chapter, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in subpart D of part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under §60.7(c).

(e) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages.

(f) Calculate the hourly average NOX emission rates, in units of the emission standards under §60.4320, using either ppm for units complying with the concentration limit or the following equation for units complying with the output based standard:

(1) For simple-cycle operation:

"Equation 1"

(Formula omitted...refer to regulation for exact formula notation).

Where:

E = hourly NOX emission rate, in lb/MWh,
(NOX)h = hourly NOX emission rate, in lb/MMBtu,
(HI)h = hourly heat input rate to the unit, in MMBtu/h, measured using the fuel flowmeter(s), e.g., calculated using Equation D-15a in appendix D to part 75 of this chapter, and
P = gross energy output of the combustion turbine in MW.

(2) For combined-cycle and combined heat and power complying with the output-based standard, use Equation 1 of this subpart, except that the gross energy output is calculated as the sum of the total electrical and mechanical energy generated by the combustion turbine, the additional electrical or mechanical energy (if any) generated by the steam turbine following the heat recovery steam generator, and 100 percent of the total useful thermal energy output that is not used to generate