Chris M. Hobson
Vice President
Environmental Affairs

.0221
241 Ralph McGill Boulevard NE
Atlanta, Georgia 30308-3374

Tel 404.506.7778
Fax 404.506.1499

GA0035564

RECEIVED
AUG 7 2001
GEORGIA EPD WATER PROTECTION BRANCH
PERMITTING, COMPLIANCE AND ENFORCEMENT PROGRAM

GEORGIA POWER
A SOUTHERN COMPANY

RECEIVED
AUG 1 2001
ENVIRONMENTAL PROTECTION
WATER PROTECTION

July 27, 2001

Mr. Harold F. Reheis
Director
Environmental Protection Division
Suite 1152 East
205 Butler Street, S.E.
Atlanta, Georgia 30334

RECEIVED
JUL 31 2001
ENVIRONMENTAL PROTECTION DIVISION
DIRECTOR'S OFFICE

RE: Plant Scherer
NPDES Permit No. GA0035564
Application for Permit Renewal

Dear Mr. Reheis:

Attached is the NPDES permit renewal application package for the Georgia Power Company Plant Scherer facility located in Juliette, Georgia. In addition to the required EPA Forms 1 and 2C, the application package includes the following supporting documentation:

1. Line drawing showing the water flow through the facility

2. A site map showing the locations of process wastewater discharges and comingled stormwater discharges.

3. A USGS 7.5 minute topographic map showing the facility location.

4. A segment of the USGS 7.5 minute topographic map showing the locations of the two primary outfalls, outfall numbers 01 and 04.

5. A supplemental map showing the routing of the plant final discharge pipe for outfall number 01 and the location of the River Intake Pump Seal Water Discharge, outfall number 11.

6. An evaluation demonstrating that the Plant Scherer ash treatment systems have adequate storage volume to meet EPA's co-treatment guidelines through the next permit term.

7. Copies of correspondence related to changes approved since issuance of the last permit, which include the 1998 revision to the biocide BMP and the 2000 revision to the Intake Backwash.

8. Lake Juliette water quality information.

9. A revised Best Mangement Plan, dated July 26, 2001, for Macrofouling and Biofouling Control, which supercedes the revision dated August 26, 1998, which was approved by EPD December 30, 1998. This update includes minor revisions which more accurately describe the process.

With this application, Georgia Power requests EPD consideration of a change in the monitoring of outfall number 04, the Service Water Final Discharge. This discharge was permitted in Part I.A.6 of the current permit apart from EPA's Steam Electric Effluent Guidelines, with a monitoring frequency of once per week. Lake Juliette, the receiving waters for this discharge, has experienced exemplary water quality throughout the history of plant operation, with typical characteristics discussed in the attached summary from GPC's annual lake water quality studies (attachment 8). We believe a monitoring frequency of once per quarter is warranted, with a discharge monitoring point not more than 50 feet from the discharge pipe outlet, one meter below the lake surface.

If you need additional information or have questions regarding this matter, please contact Bill Evans at 404-506-7031.

Sincerely,

C. M. Hobson

xc: Mike Creason, EPD Industrial Wastewater Unit, with attachments

FORM 1 GENERAL

EPA

U. S. ENVIRONMENTAL PROTECTION AGENCY
GENERAL INFORMATION
Consolidated Permits Program
(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

S													T/A	C
F	G	A	D	0	0	0	6	1	2	7	9	6		D

1 2 13 14 15

LABEL ITEMS

I. EPA I.D. NUMBER
III. FACILITY NAME
V. FACILITY MAILING ADDRESS
VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data is absent (the area to the left of the label space list the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	MARK "X" YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	MARK "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)	16	X 17	18	B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)	19	X 20	21
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	X 22	23	X 24	D. Is this a proposed facility (other than those described in A or B above) which will result in a **discharge** to waters of the U.S.? (FORM 2D)	25	X 26	27
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)	28	X 29	30	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)	31	X 32	33
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)	34	X 35	36	H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)	37	X 38	39
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)	40	X 41	42	J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)	43	X 44	45

III. NAME OF FACILITY

C 1 SKIP PLANT SCHERER

15 16 29 30 69

IV. FACILITY CONTACT

A. NAME & TITLE (*last, first, & title*)	B. PHONE (*area code & no.*)
C 2 HOBSON, C. M., VICE PRES., ENVIR. AFFAIRS	404 506 7778
15 16 45	46 48 49 51 52 55

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

C 3 241 RALPH MCGILL BLVD., N.E.

15 16 45

B. CITY OR TOWN	C. STATE	D. ZIP CODE
C 4 ATLANTA	GA	30308
15 16 40	41 42	47 51

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

C 5 10986 HIGHWAY 87

15 16 45

B. COUNTY NAME

MONROE

46 70

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE
C 6 JULIETTE	GA	31046	N/A
15 16 40	41 42	47 51	52 54

CONTINUE ON REVERSE

SIC CODES (4 digit, in order of priority)					
A. FIRST			B. SECOND		
C 7	4911	(specify) Generation of electricity	C 7		(specify) N/A
C. THIRD			D. FOURTH		
C 7		(specify) N/A	C 7		(specify) N/A

VIII. OPERATOR INFORMATION

A. NAME	B. Is the name listed in Item VIII-A also the owner?
C 8 GEORGIA POWER COMPANY	☒ YES * ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box; if "Other", specify.)*

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

P *(specify)*

D. PHONE *(area code & no.)*: C A 404 506 6526

E. STREET OR P.O. BOX: 241 RALPH MCGILL BLVD., N.E.

F. CITY OR TOWN	G. STATE	H. ZIP CODE	IX. INDIAN LAND
C B ATLANTA	GA	30308	Is the facility located on Indian lands? ☐ YES ☒ NO

X. EXISTING ENVIRONMENTAL PERMITS

	C	T	I			C	T	I		
A. NPDES *(Discharges to Surface Water)*	9	N		GA0053364	D. PSD *(Air Emissions from Proposed Sources)*	9	P		N/A	
B. UIC *(Underground Injection of Fluids)*	9	U		N/A	E. OTHER *(specify)*	9			N/A	*(specify)*
C. RCRA *(Hazardous Wastes)*	9	R		N/A	E. OTHER *(specify)*	9			N/A	*(specify)*

XI. MAP

Attach to this application a topgraphic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

Generation of electricity through combustion of fossil fuels.

* Plant Scherer is jointly owned by: Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, Florida Power and Light, Jacksonville Electric Authority, Gulf Power Company, and City of Dalton.

XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of thos persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
C. M. Hobson, Vice Pres., Envir. Affairs	CMHobson	7/27/01

COMMENTS FOR OFFICIAL USE ONLY

C C

Please print or type in the unshaded areas only.

EPA I.D. (*copy from Item 1 of Form 1*)
GAD000612796

Form Approved.
OMB No. 2040-0086
Approval expires 7-31-88

FORM 2C NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NO. (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1.DEG.	2. MIN.	3. SEC.	1.DEG.	2. MIN.	3. SEC.	
01	33	04	51	83	46	36	Ocmulgee River via pipeline
02	33	04	18	83	47	45	Ocmulgee River via Berry Creek
04,05,06, 07,08,09, 10,12,13, 14	33	03	14	83	48	22	Lake Juliette - Service Water Storage
11	33	03	51	83	44	21	Ocmulgee River

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO (*list*)	2. OPERATION (S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
01	Final Plant Discharge Stormwater	14,052 gpm	25,000 gpm (maximum)	2F **	4A
01A	Cooling Tower Blowdown Units 1-4	7,470 gpm	33,000 gpm (maximum)	2F **	4A
01B	Ash Transport Bleedoff	6,582 gpm	19,753 gpm (maximum)		4A
01C	Unit 3 Cooling Tower Overflow and Basin Drain	*	15,820 gpm (maximum)	2F **	4A
01D	Unit 4 Cooling Tower Overflow and Basin Drain	*	15,820 gpm (maximum)	2F **	4A
01E	NPDES Basin Minimum Flow	*	2,238 gpm (maximum)	2F **	4A
02	Detention Pond (I-pond) Stormwater	222 gpm	22,266 gpm (10 yr - 24 hr rainfall event)		4A
02A	Detention Pond Bottom Drain	*			4A
02B	Fire Training Runoff	*			4A
02C	NPDES Basin Emergency Overflow Stormwater	*		2F **	4A
	* Intermittent or emergency Discharge				
	** During periods of Chlorination				

OFFICIAL USE ONLY (effluent guidelines sub-categories)

CONTINUE ON PAGE 1b

Please print or type in the unshaded areas only.

EPA I.D. (*copy from Item 1 of Form 1*)
GAD000612796

Form Approved.
OMB No. 2040-0086
Approval expires 7-31-88

FORM 2C NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NO. (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1.DEG.	2. MIN.	3. SEC.	1.DEG.	2. MIN.	3. SEC.	

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO (*list*)	2. OPERATION (S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
03	Ash Transport Water Stormwater	32,381 gpm	50,000 gpm (maximum)	4C	4A
03A	No. 2 Sewage Treatment Plant	12 gpm	120 gpm (maximum)	3A, 2F	4C, 4A
03B	No. 4 Sewage Treatment Plant	1 gpm	17 gpm (maximum)	3A, 2F	4C, 4A
03C	No. 1 Sewage Treatment Plant	0 gpm	30 gpm (maximum)	3A,, 2F	4C, 4A
03D	Coal Pile Runoff Basin	693 gpm	5,300 gpm (maximum)	4C	4A
03E	Wastewater Basins - Units 1-4	12,400 gpm	15,000 gpm (maximum)	4C	4A
03F	Low Volume Wastes - Units 1-4	5,388 gpm	8,600 gpm (maximum)	4C	4A
03G	Tractor Garage	1 gpm	500 gpm (maximum)	4C	4A
03H	Coal Pile Runoff	260 gpm	12,800 gpm (maximum)	4C	4A
03I	Chemical Cleaning Wastes	*		2K, 2C	4C, 4A
04	Service Water Final Discharge	1,527 gpm	79,200 gpm (maximum)	2F **	4A
04A	Service Water Return	*	79,200 gpm (maximum)	2F **	4A
04B	Service Water Minimum Flow	1,527 gpm	66,000 gpm (maximum)	2F **	4A
05	Unit 1 Cooling Tower Overflow and Basin Drain	*	15,820 gpm (maximum)	2F **	4A
06	Unit 2 Cooling Tower Overflow and Basin Drain	*	15,820 gpm (maximum)	2F **	4A

OFFICIAL USE ONLY (effluent guidelines sub-categories)

CONTINUE ON PAGE 1c

Please print or type in the unshaded areas only.

EPA I.D. (*copy from Item 1 of Form 1*)
GAD000612796

Form Approved.
OMB No. 2040-0086
Approval expires 7-31-88

FORM 2C NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NO. (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1.DEG.	2. MIN.	3. SEC.	1.DEG.	2. MIN.	3. SEC.	

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO (*list*)	2. OPERATION (S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
07	Settling Pond Emergency Overflow Stormwater	*	57,000 gpm (maximum)	1U, 2K	4A
08	Employee Car Wash Stormwater	7 gpm	325 gpm (maximum)		4A
09	Service Water Pump Seal Water	65 gpm	78 gpm (maximum)		4A
10	Service Water Screen Backwash	510 gpm	765 gpm (maximum)		4A
11	River Intake Pump Seal Water	100 gpm	100 gpm (maximum)		4A
12	Condensate, Filtered Water, and Potable Water Tank Overflows Stormwater	*	2,536 gpm (maximum)	2F**	4A
13	Units 1-2 Wastewater Basin Emergency Overflow	*	4,300 gpm (maximum)		4A
14	Units 3-4 Wastewater Basin Emergency Overflow	*	4,300 gpm (maximum)		4A

OFFICIAL USE ONLY (effluent guidelines sub-categories)

 CONTINUE ON PAGE 2

CONTINUED FROM PAGE 1c

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items 11-A or B intermittent or seasonal?

☒ YES (complete the following table) ☐ NO (go to Section III)

1. OUTFALL NUMBER (list)	2. OPERATION(s) CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK (specify average)	b. MONTHS PER YEAR (specify average)	a. FLOW RATE (in mgd)		b. TOTAL VOLUME (specify with units)		c. DURATION (in days)
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	
	See attachment 1 for intermittent discharges							
	Analyses on overflows and emergency discharges are submitted with the quarterly Operation Monitoring Reports							

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☒ YES (complete Item III-B) ☐ NO (go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)?

☐ YES (complete Item III-C) ☒ NO (go to Section IV)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (*list outfall numbers*)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	

IV. IMPROVEMENTS

A. Are you now required by any Federal, state or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (complete the following table) ☒ NO (go to Item IV-B)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	B. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAM IS ATTACHED

 CONTINUE ON PAGE 3

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding - Complete one set of tables for each outfall - Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
NONE			

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (list all such pollutants below) ☒ NO (go to Item VI-B)

CONTINUE ON PAGE 4

CONTINUED FROM PAGE 3

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ YES (identify the test(s) and describe their purposes below) ☒ NO (go to Section VIII)

VIII CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contact laboratory or consulting firm?

☒ YES (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below) ☐ NO (go to Section IX)

A. NAME	B. ADDRESS	C. TELEPHONE *(area code & no.)*	D. POLLUTANTS ANALYZED *(list)*
Analytical Services Inc.	110 Technology Parkway Norcross, GA 30092	770-734-4200	All except pH, temperature, and Total Residual Chlorine

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personal properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (type or print)	B. PHONE NO. (Area code & no.)
C. M. Hobson , Vice President, Environmental Affairs	404-506-7778
C. SIGNATURE CMHobson	D. DATE SIGNED 7/27/01

INTERMITTENT FLOW DESCRIPTIONS
Attachment 1 for Form 2C page 2

Outfalls 01C, 01D, 05, and 06 – Cooling Tower Overflow / Basin Drain

Overflows from cooling towers may occur infrequently during equipment malfunction or emergency conditions. The estimated overflow discharge (15580 gpm) is the design make-up water flow. Draining of the cooling tower basins may occur during unit outages. The frequency is dependent on unit operation and is estimated at twice per year.

Outfall 01E - NPDES Basin Minimum Flow

NPDES system minimum flows typically occur during periods of unit outages or cooling tower biocide treatment due to reduced cooling tower blow-down. The effluent is service water with a maximum discharge of 2,238 gpm.

Outfall 02A - I-Pond Bottom Drain

Discharges from the Detention (I-Pond) through the bottom drain could occur if necessary to perform dike, dam, or pond maintenance.

Outfall 02B - Fire Training Runoff

Discharges of filtered water used for fire training purposes may occur during the year due to classes conducted on site.

Outfall 02C - NPDES Basin Emergency Overflow

The normal discharge for the NPDES basin is through outfall 01. In the event of equipment malfunctions or emergency conditions, the basin may discharge though this outfall. Past events have been infrequent and of short duration.

Outfall 03I - Chemical Cleaning Wastes

Boiler and Turbine cleaning wastes are usually treated with sodium hydroxide or lime to a pH sufficient to precipitate the iron and copper suspended in solution. The water is then pumped to the ash pond via the wastewater basin. Boiler cleaning is infrequent and turbine cleaning is anticipated to be performed once per year. Rainwater is also pumped out of the chemical cleaning basin into the Units 1 & 2 wastewater basin.

Outfall 07 - Settling Pond Emergency Overflow

The normal settling pond discharge is through the ash transport bleed-off system. The capacity of the bleed-off was approximately doubled in 1997 by addition of an 8" bypass around the existing regulator valve. The addition was performed in order to reduce the occurrence of settling pond overflows. Discharges from the emergency overflow should only occur during periods of equipment malfunction, heavy rainfall, or emergency conditions. Overflow volume is variable with an estimated maximum of 57,000 gpm.

Outfall 12 - Condensate/Filtered Water/Potable Water Tank Overflows to Lake Juliette (Service Water Pond)

Storage tanks could overflow during abnormal operations. These infrequent overflows would consist of condensate, demineralized water, filtered water, or potable water. An overflow is typically less than 100 gpm and short in duration.

Outfall 13 and 14 - Waste Water Basin Emergency Overflow

Discharges could occur from equipment malfunctions or emergency conditions. An emergency portable pump is in standby mode to reduce the likelihood of an overflow.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate hseets *(use the same format)* instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER *(copy from Item 1 of Form 1)* GAD000612796

Form Approved. OMB No. 2040-0086 Appproval expires 7-31-88

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO. 01

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCEN-TRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCEN-TRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCEN-TRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	3. UNITS *(specify if blank)* a. CONCEN-TRATION	3. UNITS b. MASS	4. INTAKE *(optional)* a. LONG TERM AVERAGE VALUE (1) CONCEN-TRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	<8	<1063					1	mg/l	lb/day	<8		1
b. Chemical Oxygen Demand (COD)	17	2259					1	mg/l	lb/day	12		1
c. Total Organic Carbon (TOC)	5	665					1	mg/l	lb/day	2		1
d. Total Suspended Solids (TSS)	<5	<665					1	mg/l	lb/day	12		1
e. Ammonia *(as N)*	<0.1	<13.3					1	mg/l	lb/day	<0.1		1
f. Flow	VALUE 11,075		VALUE		VALUE 25,000 max		8	gpm		VALUE		
g. Temperature *(winter)*	VALUE		VALUE		VALUE			°C		VALUE		
h. Temperature *(summer)*	VALUE 25.2		VALUE		VALUE		8	°C		VALUE 24.1		8
i. pH	MINIMUM 8.50	MAXIMUM 8.58	MINIMUM	MAXIMUM			4	STANDARD UNITS				

PART B - Mark "X: in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data for an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X' a. Believed Present	2. MARK 'X' b. Believed Absent	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCEN-TRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCEN-TRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCEN-TRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANAL-YSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE *(optional)* a. LONG TERM AVERAGE VALUE (1) CONCEN-TRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)	x		0.18	23.9					1	mg/l	lb/day	<0.1		1
b. Chlorine, Total Residual	x		0						4	mg/l	lb/day	0		4
c. Color	x		10						1	pcu		10		1
d. Fecal Coliform	x		2						1	col/100ml		84		1
e. Fluoride (16984-48-8)	x		1.0	132.9					1	mg/l	lb/day	0.2		1
f. Nitrate-Nitrite *(as N)*	x		0.7	93.0					1	mg/l	lb/day	0.5		1

CONTINUE ON REVERSE

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	a. Believed Present	b. Believed Absent	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic *(as N)*	x		0.6	79.7					1	mg/l	lb/day	0.6		1
h. Oil and Grease		x	<6	<797					1	mg/l	lb/day	<6		1
i. Phosphorus *(as P)*, Total (7723-14-0)	x		0.05	6.6					1	mg/l	lb/day	0.04		1
J. Radioactivity														
(1) Alpha, Total														
(2) Beta, Total														
(3) Radium, Total														
(4) Radium 226, Total														
k. Sulfate *(as SO_4)* (14808-79-8)	x		155	20,600					1	mg/l	lb/day	10		1
l. Sulfide *(as SO_3)* (14265-45-3)		x	<0.2	<26.6					1	mg/l	lb/day	<0.2		1
m. Sulfite *(as SO_3)* (14265-45-3)		x	<2	<266					1	mg/l	lb/day	<2		1
n. Surfactants		x	<0.04	<5.3					1	mg/l	lb/day	<0.04		1
o. Aluminum, Total (7440-39-3)	x		0.4	53					1	mg/l	lb/day	0.4		1
p. Barium, Total (7440-39-3)	x		0.15	19.9					1	mg/l	lb/day	0.02		1
q. Boron, Total (7440-42-8)	x		0.98	130.2					1	mg/l	lb/day	0.04		1
r. Cobalt, Total (7440-48-4)		x	<0.04	<5.3					1	mg/l	lb/day	<0.04		
s. Iron, Total (7439-89-6)		x	<0.04	<5.3					1	mg/l	lb/day	0.68		1
t. Magnesium, Total (7439-95-4)	x		5.5	731					1	mg/l	lb/day	1.6		1
u. Molybdenum, Total (7439-98-7)	x		0.06	8.0					1	mg/l	lb/day	<0.04		1
v. Manganese, Total (7439-96-5)		x	<0.04	<5.3					1	mg/l	lb/day	0.08		1
w. Tin, Total (7440-31-5		x	<0.04	<5.3					1	mg/l	lb/day	<0.04		1
x. Titanium, Total (7440-32-6)		x	<0.1	<13.3					1	mg/l	lb/day	<0.1		1

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OMB No. 2040-0086
Appproval expires 7-31-88

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for the pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2.4 of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2.4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise , for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	a. Testing Required	b. Believed Present	b. Believed Absent	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	x		x	<0.05	<6.6					1	mg/l	lb/day	<0.05		1
2M. Aresenic, Total (7440-38-2)	x		x	<0.03	<4.0					1	mg/l	lb/day	<0.03		1
3M. Beryllium, Total, 7440-41-7	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
4M. Cadmium, Total (7440-43-9)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
5M. Chromium Total (7440-47-3)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
6M. Copper, Total (7440-50-8)	x	x		0.02	2.7					1	mg/l	lb/day	<0.02		1
7M. Lead, Total (7439-92-1)	x		x	<0.025	<3.3					1	mg/l	lb/day	<0.025		1
8M. Mercury, Total (7439-97-6)	x		x	<0.0005	<0.07					1	mg/l	lb/day	<0.0005		1
9M. Nickel, Total (7440-02-0)	x		x	<0.02	<2.7					1	mg/l	lb/day	<0.02		1
10M. Selenium, Total (7782-49-2)	x		x	<0.04	<5.3					1	mg/l	lb/day	<0.04		1
11M. Silver, Total (7440-22-4)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
12M. Thallium, Total (7440-28-0)	x		x	<0.05	<6.6					1	mg/l	lb/day	<0.05		1
13M. Zinc, Total (7440-66-6)	x		x	<0.02	<2.7					1	mg/l	lb/day	<0.02		1
14M. Cyanide, Total (57-12-5)	x		x	<0.02	<2.7					1	mg/l	lb/day	<0.02		1
15M. Phenols, Total	x		x	<0.05	<6.6					1	mg/l	lb/day	<0.05		1
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)			x	DESCRIBE RESULTS											

CONTINUE ON REVERSE

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	b. Believed Present	b. Believed Absent	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1V. Acrolein (107-02-8)	x		x	<0.05	<6.6					1	mg/l	lb/day	<0.05		1
2V. Acrylonitrile (107-13-1)	x		x	<0.05	<6.6					1	mg/l	lb/day	<0.05		1
3V. Benzene (71-43-2)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
4V. Bis *(Chloromethyl)* Ether (542-88-1)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
5V. Bromoform (75-25-2)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
6V. Carbon Tetrachloride (56-23-5)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
7V. Chlorobenzene (108-90-7)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
8V. Chlorodibromomethane (124-48-1)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
9V. Chloroethane (75-00-3)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
10V. 2-Chloroethylvinyl Ether (110-75-8)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
11V. Chloroform (67-66-3)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
12V. Dichlorobromomethane (75-71-8)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
13V. Dichlorodifluoromethane (75-71-8)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
14V. 1,1-Dichloroethane (75-34-3)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
15V. 1,2-Dichloroethane (107-06-2)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
16V. 1,1-Dichloroethylene (75-35-4)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
17V. 1,2-Dichloropropane (78-87-5)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
18V. 1,3-Dichloropropylene (542-75-6)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
19V. Ethylbenzene (100-41-4)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
20V. Methyl Bromide (74-83-9)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
21V. Methyl Chloride (74-87-3)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1

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GAD000612796	01

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1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	a. Testing Required	b. Believed Present	b. Believed Absent	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION — VOLATILE COMPOUNDS *(continued)*															
22V. Methylene Chloride (75-09-2)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
24V. Tetrachloroethylene (127-18-4)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
25V. Toluene (108-88-3)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
27V. 1,1,1-Trichlorothene (71-56-6)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
28V. 1,1,2-Tri chloroethane (79-00-5)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
29V. Trichloroethylene (79-01-6)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
30V. Trichlorofluoromethane (75-69-4)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
31V. Vinyl Chloride (75-01-4)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
GC/MS FRACTION — ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
2A. 2,4-Dichlorophenol (120-83-2)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
3A. 2,4-Dimethylphenol (105-67-9)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	x		x	<0.05	<6.6					1	mg/l	lb/day	<0.05		1
5A. 2,4-Dinitrophenol (51-28-5)	x		x	<0.05	<6.6					1	mg/l	lb/day	<0.05		1
6A. 2-Nitrophenol (88-75-5)	x		x	<0.05	<6.6					1	mg/l	lb/day	<0.05		1
7A. 4-Nitrophenol (100-02-7)	x		x	<0.05	<6.6					1	mg/l	lb/day	<0.05		1
8A. P-Chloro-M-Cresol (59-50-7)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
9A. Pentachlorophenol (87-86-5)	x		x	<0.02	<2.7					1	mg/l	lb/day	<0.02		1
10A. Phenol (108-95-2)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
11A. 2,4,6-Trichlorophenol (88-06-2)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1

CONTINUE ON REVERSE

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	b. Believed Present	b. Believed Absent	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
2B. Acenaphtylene (208-96-8)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
3B. Anthracene (120-12-7)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
4B. Benzidine (92-87-5)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
5B. Benzo *(a)* Anthracene (56-55-3)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
6B. Benzo *(a)* Pyrene (50-32-8)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
7B. 3,4-Benzo-fluoranthene (205-99-2_	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
8B. Benzo *(ghi)* Perylene (191-24-2)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
9B. Benzo *(k)* Fluoranthene (207-08-9)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
10B. Bis *(2-Chloro-ethoxy)* Methane (111-91-1)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
11B. Bis *(2-Chloro-ethyl)* Ether (111-44-4)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
12B. Bis *(2-Chloro-isopropyl)* Ether (102-60-1)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
13B. Bis *(2-Ethyl-hexyl)* Phthalate (117-81-7)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
14B. 4-Bromo-phenyl Phenyl Ether (101-55-3)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
15B. Butyl Benzyl Phthalate (85-68-7)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
16B. 2-Chloro-naphthalene (91-58-7)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
18B. Chrysene (218-01-9)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
19B. Dibenzo *(a,h)* Anthracene (53-70-3)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
20B. 1,2-Dichloro-benzene (95-50-1)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
21B. 1,3-Dichloro-benzene (541-73-1)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1

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EPA I.D. NUMBER *(copy from Item 1 of Form 1)*	OUTFALL NUMBER
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Appproval expires 7-31-88

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	a. Testing Required	b. Believed Present	b. Believed Absent	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
22B. 1,4-Dichlorobenzene (106-46-7)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
23B. 3,3-Dichlorobenzidine (91-94-1)	x		x	<0.02	<2.7					1	mg/l	lb/day	<0.02		1
24B. Diethyl Phthalate (84-66-2)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
25B. Dimethyl Phthalate (131-11-3)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
26B. Di-N-Butyl Phthalate (84-74-2)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
27B. 2,4-Dinitrotoluene (121-14-2)	x		x	<0.02	<2.7					1	mg/l	lb/day	<0.02		1
28B. 2,6-Dinitrotoluene (606-20-2)	x		x	<0.02	<2.7					1	mg/l	lb/day	<0.02		1
29B. Di-N-Octyl Phthalate (117-84-0)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
30B. 1,2-Diphenylhydrazine *(as Azobenzene)* (122-66-7)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
31B. Fluoranthene (206-44-0)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
32B. Fluorene (86-73-7)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
33B. Hexachlorobenzene (118-74-1)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
34B. Hexachlorobutadiene (87-68-3)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
35B. Hexachlorocyclopentadiene (77-47-4)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
36B. Hexachloroethane (67-72-1)	x		x	<0.002	<0.27					1	mg/l	lb/day	<0.002		1
37B. Indeno *(1,2,3-cd)* Pyrene (193-39-5)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
38B. Isophorone (78-59-1)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
39B. Naphthalene (91-20-3)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
40B. Nitrobenzene (98-95-3)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
41B. N-Nitrosodimethylamine (62-75-9)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1

CONTINUE ON REVERSE

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	b. Believed Present	b. Believed Absent	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
43B. N-Nitrosodiphenylamine (86-30-6	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
44B. Phenanthrene (85-01-8)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
45B. Pyrene (129-00-0)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
46B. 1,2,4-Trichlorobenzene (120-82-1)	x		x	<0.01	<1.3					1	mg/l	lb/day	<0.01		1
GC/MS FRACTION — PESTICIDES															
1P. Aldrin (309-00-2)	x		x	<0.0001	<0.01					1	mg/l	lb/day	<0.0001		1
2P. α-BHC (319-84-6)	x		x	<0.0001	<0.01					1	mg/l	lb/day	<0.0001		1
3P. β-BHC (319-85-7)	x		x	<0.0001	<0.01					1	mg/l	lb/day	<0.0001		1
4P. γ-BHC (58-89-9)	x		x	<0.0001	<0.01					1	mg/l	lb/day	<0.0001		1
5P. δ-BHC (319-86-8)	x		x	<0.0001	<0.01					1	mg/l	lb/day	<0.0001		1
6P. Chlordane (57-74-9)	x		x	<0.0005	<0.07					1	mg/l	lb/day	<0.0005		1
7P. 4,4'-DDT (50-29-3)	x		x	<0.0002	<0.03					1	mg/l	lb/day	<0.0002		1
8P. 4,4'-DDE (72-55-9)	x		x	<0.0002	<0.03					1	mg/l	lb/day	<0.0002		1
9P. 4,4'-DDD (72-54-8)	x		x	<0.0002	<0.03					1	mg/l	lb/day	<0.0002		1
10P. Dieldrin (60-57-1)	x		x	<0.0001	<0.01					1	mg/l	lb/day	<0.0001		1
11P. α-Endosulfan (115-29-7)	x		x	<0.0005	<0.07					1	mg/l	lb/day	<0.0005		1
12P. β-Endosulfan (115-29-7)	x		x	<0.0005	<0.07					1	mg/l	lb/day	<0.0005		1
13P. Endosulfan Sulfate (1031-07-8)	x		x	<0.0005	<0.07					1	mg/l	lb/day	<0.0005		1
14P. Endrin (72-20-8)	x		x	<0.0002	<0.03					1	mg/l	lb/day	<0.0002		1
15P. Endrin Aldehyde (7421-93-4)	x		x	<0.0002	<0.03					1	mg/l	lb/day	<0.0002		1
16P. Heptachlor (76-44-8)	x		x	<0.0001	<0.01					1	mg/l	lb/day	<0.0001		1

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Appproval expires 7-31-88

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	a. Testing Required	b. Believed Present	b. Believed Absent	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION — PESTICIDES *(continued)*															
17P. Heptachlor Epoxide (1024-57-3)	x		x	<0.0001	<0.01					1	mg/l	lb/day	<0.0001		1
18P. PCB-1242 (53469-21-9)	x		x	<0.001	<0.1					1	mg/l	lb/day	<0.001		1
19P. PCB-1254 (11097-69-1)	x		x	<0.001	<0.1					1	mg/l	lb/day	<0.001		1
20P. PCB-1221 (11104-28-2)	x		x	<0.001	<0.1					1	mg/l	lb/day	<0.001		1
21P. PCB-1232 (11141-16-5)	x		x	<0.001	<0.1					1	mg/l	lb/day	<0.001		1
22P. PCB-1248 (12672-29-6)	x		x	<0.001	<0.1					1	mg/l	lb/day	<0.001		1
23P. PCB-1260 (11096-82-5)	x		x	<0.001	<0.1					1	mg/l	lb/day	<0.001		1
24P. PCB-1016 (12674-11-2)	x		x	<0.001	<0.1					1	mg/l	lb/day	<0.001		1
25P. Toxaphene (8001-35-2)	x		x	<0.002	<0.3					1	mg/l	lb/day	<0.002		1

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate hseets *(use the same format)* instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER *(copy from Item 1 of Form 1)* GAD000612796

Form Approved. OMB No. 2040-0086 Appproval expires 7-31-88

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO 04

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCEN-TRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCEN-TRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCEN-TRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	3. UNITS *(specify if blank)* a. CONCEN-TRATION	3. UNITS b. MASS	4. INTAKE *(optional)* a. LONG TERM AVERAGE VALUE (1) CONCEN-TRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	<8	<146.4					1	mg/l	lb/day	<8		1
b. Chemical Oxygen Demand (COD)	13	237.9					1	mg/l	lb/day	11		1
c. Total Organic Carbon (TOC)	2	36.6					1	mg/l	lb/day	2		1
d. Total Suspended Solids (TSS)	<5	<91.5					1	mg/l	lb/day	<5		1
e. Ammonia *(as N)*	0.1	1.8					1	mg/l	lb/day	<0.1		1
f. Flow	VALUE 1,527calc		VALUE		VALUE 79,200 max			gpm		VALUE		
g. Temperature *(winter)*	VALUE		VALUE		VALUE			°C		VALUE		
h. Temperature *(summer)*	VALUE 24.2		VALUE		VALUE		8	°C		VALUE 24.2		8
i. pH	MINIMUM 7.22	MAXIMUM 7.31	MINIMUM	MAXIMUM			4	STANDARD UNITS				

PART B - Mark "X: in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data for an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X' a. Believed Present	2. MARK 'X' b. Believed Absent	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCEN-TRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCEN-TRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCEN-TRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANAL-YSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE *(optional)* a. LONG TERM AVERAGE VALUE (1) CONCEN-TRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)	x		0.1	1.8					1	mg/l	lb/day	<0.1		1
b. Chlorine, Total Residual	x		0						4	mg/l	lb/day	0		4
c. Color	x		5						1	pcu		<5		1
d. Fecal Coliform	x		2						1	col/100ml		<2		1
e. Fluoride (16984-48-8)	x		0.2	3.7					1	mg/l	lb/day	0.2		1
f. Nitrate-Nitrite *(as N)*	x		0.2	3.7					1	mg/l	lb/day	<0.1		1

CONTINUE ON REVERSE

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Believed Present	b. Believed Absent	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic *(as N)*	x		0.5	9.2					1	mg/l	lb/day	0.7		1
h. Oil and Grease		x	<6	<109.8					1	mg/l	lb/day	<6		1
I. Phosphorus *(as P)*, Total (7723-14-0)		x	<0.02	<0.4					1	mg/l	lb/day	<0.02		1
J. Radioactivity														
(1) Alpha, Total														
(2) Beta, Total														
(3) Radium, Total														
(4) Radium 226, Total														
k. Sulfate *(as SO_4)* (14808-79-8)	x		11	201.3					1	mg/l	lb/day	11		1
l. Sulfide *(as SO_3)* (14265-45-3)		x	<0.2	<3.7					1	mg/l	lb/day	<0.2		1
m. Sulfite *(as SO_3)* (14265-45-3)		x	<2	<36.6					1	mg/l	lb/day	<2		1
n. Surfactants		x	<0.04	<0.7					1	mg/l	lb/day	<0.04		1
o. Aluminum, Total (7440-39-3)		x	<0.1	<1.8					1	mg/l	lb/day	<0.1		1
p. Barium, Total (7440-39-3)	x		0.02	0.4					1	mg/l	lb/day	0.02		1
q. Boron, Total (7440-42-8)	x		0.04	0.7					1	mg/l	lb/day	0.05		1
r. Cobalt, Total (7440-48-4)		x	<0.04	<0.7					1	mg/l	lb/day	<0.04		1
s. Iron, Total (7439-89-6)	x		0.06	1.1					1	mg/l	lb/day	<0.04		1
t. Magnesium, Total (7439-95-4)	x		1.8	32.9					1	mg/l	lb/day	1.8		1
u. Molybdenum, Total (7439-98-7)		x	<0.04	<0.7					1	mg/l	lb/day	<0.04		1
v. Manganese, Total (7439-96-5)		x	<0.04	<0.7					1	mg/l	lb/day	<0.04		1
w. Tin, Total (7440-31-5		x	<0.04	<0.7					1	mg/l	lb/day	<0.04		1
x. Titanium, Total (7440-32-6)		x	<0.1	<1.8					1	mg/l	lb/day	<0.1		1

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EPA I.D. NUMBER *(copy from Item 1 of Form 1)*	OUTFALL NUMBER
GAD000612796	04

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PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for the pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2.4 of at least one analysis for that pollutant if you know or have reason to discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2.4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise , for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	a. Testing Required	b. Believed Present	b. Believed Absent	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	x		x	<0.05	<0.9					1	mg/l	lb/day	<0.05		1
2M. Aresenic, Total (7440-38-2)	x		x	<0.03	<0.5					1	mg/l	lb/day	<0.03		1
3M. Beryllium, Total, 7440-41-7	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
4M. Cadmium, Total (7440-43-9)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
5M. Chromium Total (7440-47-3)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
6M. Copper, Total (7440-50-8)	x		x	<0.02	<0.4					1	mg/l	lb/day	<0.02		1
7M. Lead, Total (7439-92-1)	x		x	<0.025	<0.5					1	mg/l	lb/day	<0.025		1
8M. Mercury, Total (7439-97-6)	x		x	<0.0005	<0.01					1	mg/l	lb/day	<0.0005		1
9M. Nickel, Total (7440-02-0)	x		x	<0.02	<0.4					1	mg/l	lb/day	<0.02		1
10M. Selenium, Total (7782-49-2)	x		x	<0.04	<0.7					1	mg/l	lb/day	<0.04		1
11M. Silver, Total (7440-22-4)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
12M. Thallium, Total (7440-28-0)	x		x	<0.05	<0.9					1	mg/l	lb/day	<0.05		1
13M. Zinc, Total (7440-66-6)	x	x		0.02	0.4					1	mg/l	lb/day	<0.02		1
14M. Cyanide, Total (57-12-5)	x		x	<0.02	<0.4					1	mg/l	lb/day	<0.02		1
15M. Phenols, Total	x		x	<0.05	<0.9					1	mg/l	lb/day	<0.05		1
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)			x	DESCRIBE RESULTS											

CONTINUE ON REVERSE

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	b. Believed Present	b. Believed Absent	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1V. Acrolein (107-02-8)	x		x	<0.05	<0.9					1	mg/l	lb/day	<0.05		1
2V. Acrylonitrile (107-13-1)	x		x	<0.05	<0.9					1	mg/l	lb/day	<0.05		1
3V. Benzene (71-43-2)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
4V. Bis *(Chloromethyl)* Ether (542-88-1)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
5V. Bromoform (75-25-2)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
6V. Carbon Tetrachloride (56-23-5)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
7V. Chlorobenzene (108-90-7)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
8V. Chlorodibromomethane (124-48-1)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
9V. Chloroethane (75-00-3)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
10V. 2-Chloroethylvinyl Ether (110-75-8)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
11V. Chloroform (67-66-3)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
12V. Dichlorobromomethane (75-71-8)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
13V. Dichlorodifluoromethane (75-71-8)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
14V. 1,1-Dichloroethane (75-34-3)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
15V. 1,2-Dichloroethane (107-06-2)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
16V. 1,1-Dichloroethylene (75-35-4)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
17V. 1,2-Dichloropropane (78-87-5)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
18V. 1,3-Dichloropropylene (542-75-6)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
19V. Ethylbenzene (100-41-4)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
20V. Methyl Bromide (74-83-9)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
21V. Methyl Chloride (74-87-3)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1

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GAD000612796	04

Form Approved.
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Appproval expires 7-31-88

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				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION — VOLATILE COMPOUNDS *(continued)*															
22V. Methylene Chloride (75-09-2)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
24V. Tetrachloroethylene (127-18-4)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
25V. Tohiene (108-88-3)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
27V. 1,1,1-Trichlorothene (71-56-6)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
28V. 1,1,2-Tri chloroethane (79-00-5)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
29V. Trichloroethylene (79-01-6)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
30V. Trichlorofluoromethane (75-69-4)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.002		1
31V. Vinyl Chloride (75-01-4)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
GC/MS FRACTION — ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
2A. 2,4-Dichlorophenol (120-83-2)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
3A. 2,4-Dimethylphenol (105-67-9)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	x		x	<0.05	<0.9					1	mg/l	lb/day	<0.05		1
5A. 2,4-Dinitrophenol (51-28-5)	x		x	<0.05	<0.9					1	mg/l	lb/day	<0.05		1
6A. 2-Nitrophenol (88-75-5)	x		x	<0.05	<0.9					1	mg/l	lb/day	<0.05		1
7A. 4-Nitrophenol (100-02-7)	x		x	<0.05	<0.9					1	mg/l	lb/day	<0.05		1
8A. P-Chloro-M-Cresol (59-50-7)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
9A. Pentachlorophenol (87-86-5)	x		x	<0.02	<0.4					1	mg/l	lb/day	<0.02		1
10A. Phenol (108-95-2)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
11A. 2,4,6-Trichlorophenol (88-06-2)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1

CONTINUE ON REVERSE

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	b. Believed Present	b. Believed Absent	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
2B. Acenaphtylene (208-96-8)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
3B. Anthracene (120-12-7)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
4B. Benzidine (92-87-5)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
5B. Benzo *(a)* Anthracene (56-55-3)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
6B. Benzo *(a)* Pyrene (50-32-8)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
7B. 3,4-Benzo-fluoranthene (205-99-2	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
8B. Benzo *(ghi)* Perylene (191-24-2)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
9B. Benzo *(k)* Fluoranthene (207-08-9)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
10B. Bis *(2-Chloro-ethoxy)* Methane (111-91-1)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
11B. Bis *(2-Chloro-ethyl)* Ether (111-44-4)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
12B. Bis *(2-Chloro-isopropyl)* Ether (102-60-1)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
13B. Bis *(2-Ethyl-hexyl)* Phthalate (117-81-7)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
14B. 4-Bromo-phenyl Phenyl Ether (101-55-3)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
15B. Butyl Benzyl Phthalate (85-68-7)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
16B. 2-Chloro-naphthalene (91-58-7)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
18B. Chrysene (218-01-9)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
19B. Dibenzo *(a,h)* Anthracene (53-70-3)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
20B. 1,2-Dichloro-benzene (95-50-1)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
21B. 1,3-Dichloro-benzene (541-73-1)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1

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				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
22B. 1,4-Dichlorobenzene (106-46-7)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
23B. 3,3-Dichlorobenzidine (91-94-1)	x		x	<0.02	<0.4					1	mg/l	lb/day	<0.02		1
24B. Diethyl Phthalate (84-66-2)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
25B. Dimethyl Phthalate (131-11-3)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
26B. Di-N-Butyl Phthalate (84-74-2)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
27B. 2,4-Dinitrotoluene (121-14-2)	x		x	<0.02	<0.4					1	mg/l	lb/day	<0.02		1
28B. 2,6-Dinitrotoluene (606-20-2)	x		x	<0.02	<0.4					1	mg/l	lb/day	<0.02		1
29B. Di-N-Octyl Phthalate (117-84-0)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
30B. 1,2-Diphenylhydrazine *(as Azobenzene)* (122-66-7)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
31B. Fluoranthene (206-44-0)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
32B. Fluorene (86-73-7)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
33B. Hexachlorobenzene (118-74-1)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
34B. Hexachlorobutadiene (87-68-3)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
35B. Hexachlorocyclopentadiene (77-47-4)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
36B. Hexachloroethane (67-72-1)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1
37B. Indeno *(1,2,3-cd)* Pyrene (193-39-5)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
38B. Isophorone (78-59-1)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
39B. Naphthalene (91-20-3)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
40B. Nitrobenzene (98-95-3)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
41B. N-Nitrosodimethylamine (62-75-9)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1

CONTINUE ON REVERSE

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
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				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
43B. N-Nitrosodiphenylamine (86-30-6_	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
44B. Phenanthrene (85-01-8)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
45B. Pyrene (129-00-0)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
46B. 1,2,4-Trichlorobenzene (120-82-1)	x		x	<0.01	<0.2					1	mg/l	lb/day	<0.01		1
GC/MS FRACTION — PESTICIDES															
1P. Aldrin (309-00-2)	x		x	<0.0001	<0.002					1	mg/l	lb/day	<0.0001		1
2P. α-BHC (319-84-6)	x		x	<0.0001	<0.002					1	mg/l	lb/day	<0.0001		1
3P. β-BHC (319-85-7)	x		x	<0.0001	<0.002					1	mg/l	lb/day	<0.0001		1
4P. γ-BHC (58-89-9)	x		x	<0.0001	<0.002					1	mg/l	lb/day	<0.0001		1
5P. δ-BHC (319-86-8)	x		x	<0.0001	<0.002					1	mg/l	lb/day	<0.0001		1
6P. Chlordane (57-74-9)	x		x	<0.0005	<0.01					1	mg/l	lb/day	<0.0005		1
7P. 4,4'-DDT (50-29-3)	x		x	<0.0002	<0.004					1	mg/l	lb/day	<0.0002		1
8P. 4,4'-DDE (72-55-9)	x		x	<0.0002	<0.004					1	mg/l	lb/day	<0.0002		1
9P. 4,4'-DDD (72-54-8)	x		x	<0.0002	<0.004					1	mg/l	lb/day	<0.0002		1
10P. Dieldrin (60-57-1)	x		x	<0.0001	<0.002					1	mg/l	lb/day	<0.0001		1
11P. α-Endosulfan (115-29-7)	x		x	<0.0005	<0.01					1	mg/l	lb/day	<0.0005		1
12P. β-Endosulfan (115-29-7)	x		x	<0.0005	<0.01					1	mg/l	lb/day	<0.0005		1
13P. Endosulfan Sulfate (1031-07-8)	x		x	<0.0005	<0.01					1	mg/l	lb/day	<0.0005		1
14P. Endrin (72-20-8)	x		x	<0.0002	<0.004					1	mg/l	lb/day	<0.0002		1
15P. Endrin Aldehyde (7421-93-4)	x		x	<0.0002	<0.004					1	mg/l	lb/day	<0.0002		1
16P. Heptachlor (76-44-8)	x		x	<0.0001	<0.002					1	mg/l	lb/day	<0.0001		1

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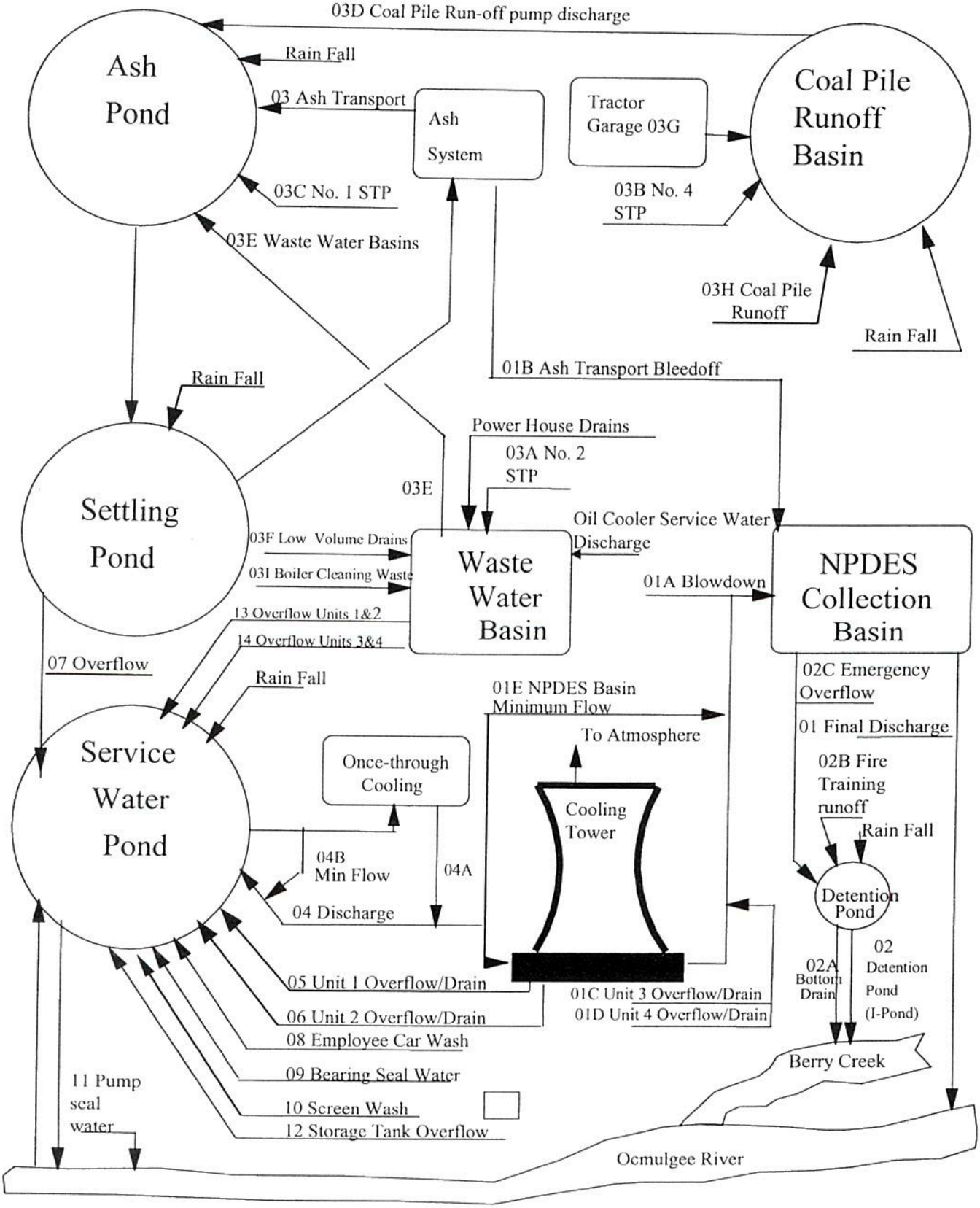
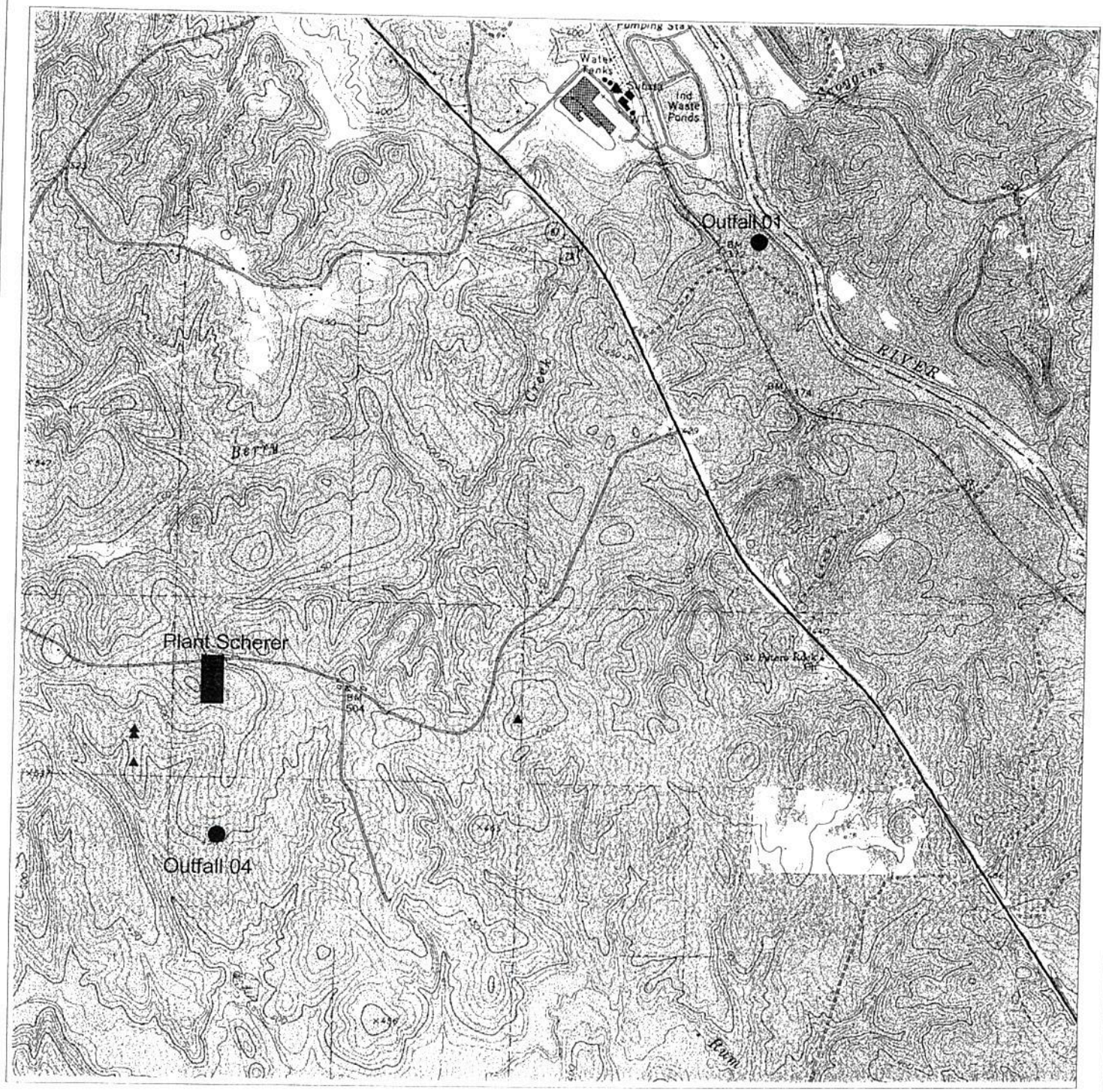
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION — PESTICIDES *(continued)*															
17P. Heptachlor Epoxide (1024-57-3)	x		x	<0.0001	<0.002					1	mg/l	lb/day	<0.0001		1
18P. PCB-1242 (53469-21-9)	x		x	<0.001	<0.02					1	mg/l	lb/day	<0.001		1
19P. PCB-1254 (11097-69-1)	x		x	<0.001	<0.02					1	mg/l	lb/day	<0.001		1
20P. PCB-1221 (11104-28-2)	x		x	<0.001	<0.02					1	mg/l	lb/day	<0.001		1
21P. PCB-1232 (11141-16-5)	x		x	<0.001	<0.02					1	mg/l	lb/day	<0.001		1
22P. PCB-1248 (12672-29-6)	x		x	<0.001	<0.02					1	mg/l	lb/day	<0.001		1
23P. PCB-1260 (11096-82-5)	x		x	<0.001	<0.02					1	mg/l	lb/day	<0.001		1
24P. PCB-1016 (12674-11-2)	x		x	<0.001	<0.02					1	mg/l	lb/day	<0.001		1
25P. Toxaphene (8001-35-2)	x		x	<0.002	<0.04					1	mg/l	lb/day	<0.002		1

Plant Scherer NPDES Flow Diagram

July 2001



Plant Scherer



Quadsheet: East Juliette

N

2000 0 2000 4000 Feet

PLANT SCHERER
ASH POND COTREATMENT
SUMMARY TABLE

A) DRY WEATHER (PROCESS) FL((Maximum Flows used)			
Coal Pile + Waste Water Basins Units 1 thru 4 + No.1 STP	29.28 MGD		20330 GPM
Ash Transport Water 100% Recycle	0 MGD		0 GPM
Total Dry Weather (Process) Flow	29.28 MG		
B) RAINFALL RUNOFF (Using SCS Method)			
Watershed Runoff	312.5 Acres		
Ash Pond Surface	490.0 Acres		
Total Runoff Area	802.5 Acres		
10-year, 24 hour storm	5.8 inches		
Annual Rainfall	49.76 inches		(0.136 inches/day)
TOTAL Rainfall Runoff	97.49 MG		
C) REQUIRED WATER VOLUME			
(A)Dry Weather Flow + (B)Rainfall Runoff =	126.77 MG	OR	627,615 CY

D) ASH POND REMAINING STORAGE (Strict Interpertation, See Note 2)

From Ash Management Projections 1996 -2000 (NO Sales)

Pond life on 12/31 at water surface elevation 494.5

YEAR	2002	2003	2004	2005	2006	2007
CU YDS	15,960,700	15,130,700	14,282,700	13,416,700	12,532,700	11,630,700
MG	3223.9	3056.3	2885.0	2710.0	2531.5	2349.3

E) AVAILABLE WATER VOLUME on 12/31/2007			
See (D) Above	2349.3 MG	OR	11,630,733 CY

FROM ABOVE, (E) IS GREATER THAN (C), THEREFORE ASH POND CAPACITY IS SUFFICIENT

NOTES:

1. The rainfall runoff was determined using the Soil Conservation Service (SCS) Method and Georgia Manual for Sediment and Erosion Control, 2000 edition.
2. Strict Interpertation uses elevation 494.5, which represents the top of the discharge structure elevation (min. discharge elevation), see plant drawing EIC3444.

BEST MANAGEMENT PRACTICES PLAN

Georgia Power Company – Plant Scherer

NPDES Permit No. GA0035564
Macrofouling and Biofouling Control
Revision 2.0
July 26, 2001

1.0 INTRODUCTION

1.1 Basis

This BMP has been developed in accordance with Part II.B.13, Part III.B.4, and Part III.B.11 of the plant's NPDES Permit. This BMP addresses the use of biocides to control macrofouling and biofouling in the plant's cooling water systems. Upon approval by the Division and implementation by the plant, it will become part of the NPDES Permit for the site.

1.2 Plant Site

Plant Scherer is composed of four generating units with a combined nameplate rating of 3272 Megawatts. All units are currently in commercial operation. Cooling water and service water for all units is provided from Lake Juliette. All units utilize closed cycle condenser cooling. The main unit cooling water flow is 260,000 gpm per unit. A fraction of the flow is discharged as blowdown. The average blowdown flow is 6,791 gpm per unit. This discharges into a holding basin with the service water discharge of 2,500 gpm and the recycle blowdown of 10,600 gpm. Bulk water capacity of each unit's cooling tower system is 4.2 million gallons.

2.0 PROBLEM DESCRIPTION

2.1 Macrofouling

Various organisms can cause severe problems in generating plant water systems, depending on the plant geographic location, prevailing local conditions and plant specific design factors. The Asiatic clam (Corbicula fluminea) is capable of blocking small heat exchanger tubes and even plugging larger diameter pipes with low flow velocities. Furthermore, once the organism is dead the relic shells can still cause blockages. Due to it's life cycle, adaptability, and resistance to control methods it is extremely difficult to eliminate from water systems once it becomes established. Current control methods include the use of biocides, physical cleaning of affected piping, straining of intake water, and heat treatment. Each of these control methods has limitations on effectiveness.

Slime and algae growths have always been a problem in cooling water systems. The biological growths tend to entrain silt and clays, which further foul the surface and will in turn provide more substrate for biological growth. The weight of this type of fouling has caused the failure and collapse of cooling tower fill. Reduced cooling efficiency penalizes the operation of system turbines.

Concern is growing over the likely invasion of the Zebra mussel (Dreissena polymorpha). Experience at other utilities, as the organism continues it's spread, prove that control is extremely difficult with conventional methods and is not entirely successful. Once attached to the substrate, the mussel is not dislodged and may become the host substrate for future colonization. This leads to further blockage of the cooling system.

2.2 Site Problem

Plant Scherer has biofouling problems with slimes, algae, and Asiatic clams. They are known to be present in the cooling water source. Algae and slimes are believed to be the dominant causes of blockage in the cooling tower fill bundles. The clams are often found in plant systems (i.e. oil coolers, auxiliary heat exchangers, low velocity piping, etc.). It is obvious that the plant is subject to infestation and is in need of a control program.

3.0 CONTROL PROGRAM

3.1 Use of Biocides

While physical and mechanical methods of control will still be employed routinely to reduce the effects of biofouling, routine treatments of biocide will likely be required to maintain efficiency of heat exchangers. An oxidizing biocide such as chlorine has long been the biocide of choice because of it's proven effectiveness, ease of application, and cost. Increasing restrictions on the use, storage, and handling of chlorine have prompted us to seek alternate control methods. Additionally, oxidizing biocides increase the rate of corrosion in copper bearing metals which are common in heat exchangers.

Non-oxidizing biocides, such as quaternary amines, have been found to be effective on certain organisms. Quaternary amines are also effective on algae. Other advantages of the non-oxidizers are reduced frequency of application, and ready absorption of the active ingredient onto mud, silt, and clay, which exhausts the toxicity.

3.1.1 Service Water Routine Biological Control

Chlorine will be used for routine control of microbiological growth in the service water systems. Chlorine will be fed intermittently throughout the year to maintain control.

3.1.2 Service Water Asiatic Clam / Zebra Mussel Control

Chlorine will be used for seasonal control of Asiatic clams and Zebra mussels in the service water systems. Chlorine will be utilized as referenced in the facility NPDES Permit Part III.B.4.

3.1.3 Cooling Tower Routine Biological Control

Either an oxidizing or a non-oxidizing biocide will be used to control the growth of slime and algae in the cooling tower systems. If necessary, both types of biocide programs may be fed to maintain performance. The primary program will be Betz Powerline 3625 or an equivalent, a non-oxidizing biocide containing the quaternary amine ADBAC (n-alkyl dimethyl benzyl ammonium chloride). The secondary program will be chlorine, either gaseous or liquid.

3.2 Application Rates and Injection Points

3.2.1 Service Water Routine Biological Control

As a general rule, chlorine will be fed to the main service water headers just downstream from the pump intake bay. The biocide will be fed to each service water system (Units 1&2 and Units 3&4) to achieve a minimum free residual oxidant level of 0.2 ppm. Applications will normally be daily for one hour when the water temperature is above 60F and three times per week for one hour during winter months. It is anticipated that one hour of biocide application will be sufficient to control biological growth, but it may be applied for up to two hours per unit per day.

3.2.2 Service Water Asiatic Clam / Zebra Mussel Control

Chlorine will be fed to the service water headers as above. Each service water system (i.e. Units 1&2 and Units 3&4) will be treated to insure there is no toxicity in the discharge streams. (Reference Part III.B.4)

3.2.3 Cooling Tower Routine Biological Control

The non-oxidizing biocide will be fed to the cooling tower basin. Biocide dosage and frequency will vary based on seasonal conditions and system demand, ranging from 2 to 7.5 ppm active quaternary amine. Feed frequency will range from one to three times per week as needed, and cooling towers will be treated independently. As an alternative, chlorine will be fed to the cooling water in place or in addition to the non-oxidizing biocide. Chlorine dosage and frequency will vary based on seasonal conditions and system demand.

3.3 Elimination of Biocide from System

3.3.1 Service Water Routine Biological Systems

The biocide program proposed will not require a detoxification.

3.3.2 Service Water Asiatic Clam / Zebra Mussel Control

The biocide program proposed will not require a detoxification.

3.3.3 Cooling Tower Routine Biological Control

During non-oxidizing biocide feed the cooling tower blowdown will be closed and will remain closed until tests show that the product concentration in the tower basin is below the detection limit of 0.5 ppm. Bentonite clay will be kept on-hand to allow for detoxification of any inadvertent overflow. When chlorine is used for biocide treatment, the discharge from the cooling tower will be controlled as currently limited in the NPDES Permit for the site.

3.4 Effects in System

3.4.1 Routine Service Water Treatment

Microbiological growth in the service water coolers and heat exchangers will be minimized, thereby improving overall heat transfer and cooling efficiency. Reduced microbiological growth in the service water systems will also improve microbiological control in the systems supplied by service water, including the water treatment plants and cooling towers.

3.4.2 Asiatic Clams / Zebra Mussel Treatment

Macrofouling organisms will be eliminated throughout the water system treated. This will reduce maintenance requirements and enhance heat exchange efficiency.

3.4.3 Cooling Tower Treatment

Algae, slime, and microbiological growth will be minimized throughout the cooling tower systems, resulting in improved results condenser performance and reduced plugging of the tower fill.

3.5 Other Biocides and Methods of Control

It is expected that this method of treatment and control will be fully effective in controlling the biofouling experienced by this plant. However implementation of this plan does not preclude the use of other biocides or control methods, if they are shown to be equally beneficial. This plan will be revised in accordance with Section 7.0, if other biocides are found to be necessary.

4.0 MONITORING PROGRAM

4.1 Sample Collection

4.1.1 Routine Service Water Treatment

Samples will be collected from the service water system consistent with the facility NPDES Permit.

The analytical method for determining the chlorine concentration is amperometric titration, 40 CFR Part 136 Method No. 31, and also listed as EPA Method 330.1. The alternative measurement method will be EPA Method 330.4, DPD.

4.1.2 Asiatic Clam / Zebra Mussel Treatment

Samples will be collected from the service water system consistent with the facility NPDES Permit.

Final plant discharge chlorine levels will not exceed limits as set in the existing NPDES Permit.

The analytical method for determining the chlorine concentration is amperometric titration, 40 CFR Part 136 Method No. 31, and also listed as EPA Method 330.1. The alternative measurement method will be EPA Method 330.4, DPD.

4.1.3 Condenser Cooling Water Treatment

When a quaternary amine biocide is used, concentration will be measured within the first two hours after beginning treatment. No discharge will be allowed if the concentration is in excess of 0.05 ppm.

The analytical method for determining concentration of the non-oxidizing biocide is the Betz Clam-Trol CT-2 Methyl Orange Method. The detection limit (MDL) for this method is 0.05 ppm as Powerline 3625 (0.025 ppm active ADBAC quat). Other analytical methods, which meet or improve the (MDL), may be utilized without modification of this plan. The Division will be notified of any change in analytical methods. QA/QC data such as instrument calibration curves and instrument maintenance records will be retained for review by the Division.

In the event of an inadvertent overflow, the bentonite clay product will be added and samples will be collected once per hour at the plant discharge to insure the biocide is not detectable.

4.2 Reporting of Monitoring Results

Biocide concentration in the service water systems and cooling tower basins will be measured and recorded each date that they are treated, as outlined in Section 4.1. Results from samples representative of the discharge will be reported on the NPDES Quarterly Operation Monitoring Report (OMR) in a suitably concise format. Results of operational analyses will be retained for twelve months and will be available for review by the Division.

4.3 Equipment Inspections

To evaluate the effectiveness of the control programs, the main condensers, auxiliary coolers, and systems treated will be periodically inspected for the presence of microbiological growth and macrofouling organisms or relics of organisms.

5.0 OPTIMIZATION PROGRAM

5.1 Equipment Maintenance

All associated equipment and monitoring instruments will be maintained in proper operating conditions at all times.

5.2 Biocide Usage

The amount of biocide used will be re-evaluated periodically to determine if lesser amounts can be effectively utilized. This determination will be based on the results of plant inspections, information from other facilities, plant performance data, and the current scientific literature. If it appears that lower concentrations can effectively control fouling in the systems, then concentrations will be reduced accordingly and more intense inspections will be performed to document the effectiveness. If fouling is found subsequent to any reductions, the concentrations may be increased to the initial levels.

6.0 NPDES PERMIT CONDITIONS

6.1 Incorporation of BMP into Permit

Upon approval by the Division and implementation by the plant, the plan will be incorporated into the NPDES Permit for the facility.

7.0 REVISIONS

7.1 Revising the BMP

This BMP may be revised if necessary. The Plant Manager must approve the revision. A copy of the revised plan will be furnished to the Manager of Environmental Affairs. The Environmental Protection Division must approve any revision prior to implementation.

Approved for implementation: Date: _____

Plant Manager: _____

Georgia Department of Natural Resources
205 Butler Street, S.E., Floyd Towers East, Atlanta, Georgia 30334
J. Leonard Ledbetter, Commissioner
Harold F. Reheis, Assistant Director
Environmental Protection Division

December 29, 1986

Mr. Jack E. Ravan
Regional Administrator
U. S. Environmental Protection Agency
Region IV
345 Courtland Street
Atlanta, Georgia 30365

Re: Georgia Power Company
Plant Scherer
NPDES Permit No. GA 0035564

Dear Mr. Ravan:

We are responding to your November 4, 1986 letter regarding our September 16, 1986 draft NPDES permit for Plant Scherer. After several discussions with Mr. Charles Kaplan of your staff and Mr. George Guill of Georgia Power Company, we have elected to implement alternative No. 1 of your letter.

Georgia Power Company has indicated that sequential discharge of cooling tower/condenser chlorine will be done during normal biofouling control, rather than simultaneous discharge as proposed in the company's May 5, 1986 letter. This is a major change in their operating procedure and should eliminate your objection. Georgia Power will be requested to revise their discussion of chlorination practices to conform to the draft permit prior to issuance.

The enclosed draft permit is written with the intent of complying exactly with your requirements for alternative No. 1. In fact, several quotes or paraphrases from your November letter have been incorporated into the permit.

Please review this draft carefully within the bounds of your specific objection. In our October 8, 1986 meeting, we asked EPA to provide us with all specific objections, so that we could revise the proposed permit for the final time. EPA's November 4 letter was intended for this purpose. There should be no reason to raise objections or comments which were not included in your November 4 letter. We wish to issue this permit as written since alternative No. 1 allows strict adherence to the regulations without requiring immediate arbitrary installation of dechlorination. Toxicity reduction can be implemented gradually based on demonstrated need during the life of the permit.

Regarding outfall 03, the modification provision of Part II. B. 8. will enable adequate toxicity control and a separate special condition is not needed. Reductions in TRC discharge will be required if EPD documents TRC toxicity in the receiving water. This approach is consistent with our developing statewide strategy for controlling and abating TRC toxicity.

Finally, the public hearing requirements have been satisfied. This permit modification was initiated by Georgia Power on October 8, 1984 specifically to begin asiatic clam control in the service water. After extensive study and negotiation, it was decided that a new permit would be necessary. On August 15, 1985, a draft permit was prepared that was very similar to the enclosed one. Public notice was issued on August 30, 1985 and expired 30 days later with no comments being received. Therefore, we do not intend to repeat the public notice procedure.

If you have questions during your review of this latest draft, please do not hesitate to call.

Sincerely,

Harold F. Reheis

Harold F. Reheis, P.E.
Assistant Director

HFR:thk
Enclosure

cc: Georgia Power Company

Kaplan

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

NOV - 4 1986

REF: 4WM-FP

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Harold F. Reheis, P.E.
Assistant Director
Environmental Protection Division
Georgia Department of Natural Resources
205 Butler Street, S.E.
Floyd Towers East
Atlanta, Georgia 30334

RE: Georgia Power Co. - Plant Scherer Steam Electric Generating Station
NPDES No. GA0035564

Dear Mr. Reheis:

Under the authority of Section III.C.3. of the Georgia-EPA NPDES Memorandum of Agreement and the EPA regulations, 40 CFR Part 123.44, I am notifying you of EPA's formal objection to the proposed NPDES permit for Georgia Power Company, Plant Scherer (GA0035564). This proposed permit was enclosed with your letter of September 16, 1986, and was received in this office September 19, 1986. On October 8, 1986, EPA NPDES permit staff met with Messrs. Nolton Johnson and Tom Hopkins of your staff and discussed the remaining issues regarding the draft permit referenced above. The following objections, recommendations, and comments are presented as a result of our review of the permit and discussion on October 8, 1986.

Specific objections to the proposed permit and recommended actions necessary to eliminate the objections are as follows:

Outfall Serial Number (OSN) 01A - Cooling Tower Blowdown

Basis for Objection

Although the limitations for OSN 01A are consistent with 40 CFR 423 requirements, approval of the permittee's "need for increased chlorination demonstration" is inconsistent with 40 CFR 423.12(b)(8) and 423.13(c)(2), unless modified chlorine limitations are provided in the permit. We are objecting to the approval of the demonstration because proposed permit limitations which incorporate the demonstration have not been provided for our review and because the discussion of chlorination practices presented by the permittee is not an adequate/acceptable demonstration that the units cannot operate at or below the level of chlorination required by the effluent guidelines.

Actions Necessary to Eliminate the Objections

In order to eliminate our objections, one of the following alternatives must be incorporated into the permit. For all alternatives, a study must be required to demonstrate minimum practicable levels and periods of continuous chlorination for the plant service water systems to adequately control asiatic clams.

1. Guideline limitations of 0.2*/0.5** mg/l of free available chlorine (FAC) attributable to cooling tower/condenser chlorination (i.e. effluent concentration of FAC above that due to continuous service water system chlorination) be applied at each individual cooling tower blowdown point prior to combination. Time of total residual chlorine (TRC) discharge, attributable to tower/condenser chlorination be limited to two hours/day/unit. Simultaneous discharge of TRC be prohibited. Suitable monitoring be required at each tower blowdown point to demonstrate compliance with each of the above three conditions.

2. Limitations of 0.05*/0.125** mg/l of FAC be applied at a combined discharge point from all cooling tower blowdowns. (This limitation is derived by flow-weighting BPT/BAT guideline limitations.) Time of TRC discharge attributable to tower/condenser chlorination be limited to two hours/day at the combined discharge. (This is consistent with BPT/BAT requirements.) Suitable monitoring be required at the combined discharge point to demonstrate compliance with both of the above conditions. Simultaneous chlorination of all four tower/condenser systems would be permitted.

3. Limitation of 0.14 mg/l of TRC as an instantaneous maximum be applied at the combined discharge point for all cooling tower blowdowns. (This limitation is based on the proposed October 14, 1980 regulations and Development Document for dechlorinated effluents at steam electric power plants.) Time of TRC discharge attributable to tower/condenser chlorination be limited to two hours/day at the combined discharge. (This is consistent with BPT/BAT requirements.) Suitable monitoring be required at the combined discharge point to demonstrate compliance with both of the above conditions. Simultaneous chlorination of all four tower/condenser systems would be permitted.

Background

The effluent limitations for OSN 01A are consistent with 40 CFR 423 requirements. Part I of the proposed final permit establishes FAC limitations of 0.2*/0.5** mg/l at each individual cooling tower discharge. Additionally, Part III.B.4. limits the discharge of FAC and TRC to two hours/day/unit and does not allow more than one unit to discharge FAC or TRC at any one time unless the utility can demonstrate to the Director that the units in a particular location cannot (emphasis added) operate at or below this level of chlorination. The proposed permit requires that any demonstration be submitted to the Director within 90 days of the effective date of this permit.

* Average during any chlorine release period
** Instantaneous maximum

The EPD letter of September 16, 1986, referenced above, states that Georgia Power Company's discussion of chlorination practices, dated May 5, 1986, (subsequently referred to as "demonstration") will be approved as a demonstration of the need to simultaneously chlorinate for more than two hours per day. The letter further states that no changes to the limitations or other permit modifications will be necessary. EPD has not provided us with the proposed effluent limitations which address the demonstration, but has indicated they will use 0.2*/0.5** mg/l FAC limitations for the combined stream flow from all four towers, will waive the two hours/day/unit requirement, and will allow simultaneous chlorination of cooling tower/condenser systems. These limitations are inconsistent with the regulations. The 0.2*/0.5** FAC limitations are applicable to each individual cooling tower prior to combination.

The demonstration indicates that continuous chlorination of the plant service water systems is necessary for asiatic clam control and that simultaneous tower/condenser chlorination is desired. Cooling tower make-up water for all units is taken from the plant service water systems. The plant service water will be chlorinated April through October (depending on temperature), five days per month for 24 hours per day at 1.0 mg/l to control the occurrence of clams in the service water systems. If the service water is continuously chlorinated, cooling tower blowdown from all four units may contain detectable TRC for more than two hours per day. Additionally, the demonstration indicates that simultaneous chlorination of four tower/condenser systems would result in cost savings and would allow operating flexibility.

We concur that the permittee has demonstrated the need to continuously chlorinate the plant service water systems and, to the extent <u>necessitated</u> by this chlorination practice, to discharge chlorine from each cooling tower simultaneously and for more than two hours per day. However, further demonstration is needed to assure that 1.0 mg/l of chlorine is necessary to control clams and that continuous chlorination during the entire seven month period is necessary. With proper controls and operation, it is possible that continuous chlorination of the plant service water systems will not result in a detectable discharge of chlorine in the cooling tower effluents. In regard to the simultaneous chlorination and discharge of chlorine from the tower/condenser systems, we disagree that the permittee has demonstrated that it <u>cannot</u> operate in a manner consistent with BPT and BAT requirements of 40 CFR Part 423. Rather, the permittee has indicated it would be more desirable to simultaneously chlorinate, i.e. would result "in a net cost saving to the Company as well as allowing operating flexibility."

* Average during any chlorine release period
** Instantaneous maximum

In addition to the objections above, we offer the following comment:

For OSN 03, service water final discharge, we would recommend effluent limitations for TRC of 0.011 mg/l average and 0.038 mg/l maximum. The continuous discharge of TRC at levels proposed by Georgia Power Company (up to 1.0 mg/l without dechlorination) would be inconsistent with the state (narrative) water quality standards regarding toxicity (GA code 391-3-6.03-(5)(d)). The permittee has proposed to install dechlorination facilities for this outfall. This technology should achieve the EPA suggested TRC limitations. Therefore, we do not understand why the revised draft permit contains no limitations for TRC. In consideration of the meeting of August 12, 1986 and Georgia's development of a statewide strategy for controlling toxics, we will not object to the permit conditions for this outfall. We recommend a special condition be added to the permit to allow the incorporation of limitations deemed necessary by the statewide toxic control strategy.

The demonstration for the Scherer site indicates that the permittee proposes to install a dechlorination facility for OSN 01A. Dechlorination should yield a virtually undetectable level of FAC/TRC in the discharge. EPA staff will be happy to work with you and Georgia Power to develop an agreeable combined discharge FAC/TRC limitations for OSN 01A with simultaneous chlorination and dechlorination. We will be most happy to meet with you and your staff or otherwise provide any assistance necessary to resolve these issues. The OSN 01A issue must be resolved prior to permit issuance.

40 CFR Part 123.44 (e) and (h) provide that within ninety (90) days of receipt by a State of an EPA objection (to a draft or proposed permit), if the State does not resubmit a permit revised to meet our objections and if the State or any other party does not request a public hearing, the exclusive authority for issuance of the permit passes to EPA. The ninety (90) day period will start on your receipt of this letter. If a permit revised to meet our objections is not submitted and if a public hearing is not requested within that time, the exclusive authority to issue this permit will pass to EPA.

Sincerely yours,

Lee A. Dietrich III, acting

Jack E. Ravan
Regional Administrator

cc. Mr. Dennis Ruddy