

**KENTUCKY POWER COMPANY  
BIG SANDY PLANT  
LAWRENCE COUNTY, KENTUCKY**

**NPDES PERMIT REISSUANCE APPLICATION**

**PERMIT NO. KY0000221**

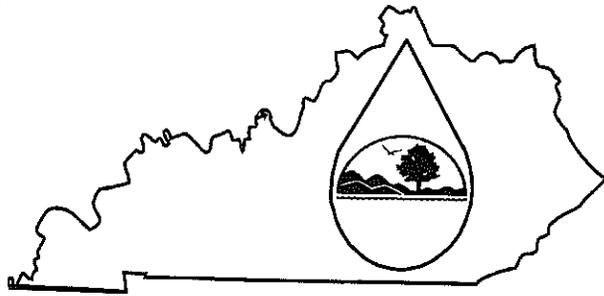
**SEPTEMBER 2005**

**Prepared by:**

**American Electric Power  
Environmental Services  
1 Riverside Plaza  
Columbus, Ohio 43215**

## **Big Sandy Plant NPDES Permit Renewal Application Table of Contents**

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## KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

### PERMIT APPLICATION

This is an application to: (check one)

- Apply for a new permit.
- Apply for reissuance of expiring permit.
- Apply for a construction permit.
- Modify an existing permit.

Give reason for modification under Item H.A.

A complete application consists of this form and one of the following:

Form A, Form B, Form C, Form F, or Short Form C

For additional information contact:

KPDES Branch (502) 564-3410

I. FACILITY LOCATION AND CONTACT INFORMATION		AGENCY USE							
A. Name of business, municipality, company, etc. requesting permit Kentucky Power Company									
B. Facility Name and Location		C. Facility Owner/Mailing Address							
Facility Location Name: Big Sandy Plant		Owner Name: Kentucky Power Company d/b/a/ AEP, c/o Alan R. Wood							
Facility Location Address (i.e. street, road, etc.): 23000 Highway 23		Mailing Street: 1 Riverside Plaza							
Facility Location City, State, Zip Code: Louisia, KY 41230-8703		Mailing City, State, Zip Code: Columbus, OH 43215-2373							
		Telephone Number: (614) 223-1233							

II. FACILITY DESCRIPTION			
A. Provide a brief description of activities, products, etc: Big Sandy Plant is a coal-fired steam electric generating facility which produces electricity. The plant consists of a 250-MW unit and an 800-MW unit.			
B. Standard Industrial Classification (SIC) Code and Description			
Principal SIC Code & Description:	4911 Facility engaged in generation, transmission and/or distribution of electrical energy for sale.		
Other SIC Codes:	N/A	N/A	N/A

III. FACILITY LOCATION	
A. Attach a U.S. Geological Survey 7 1/2 minute quadrangle map for the site. (See instructions)	
B. County where facility is located: Lawrence	City where facility is located (if applicable): U.S. 23, 6 miles north of Louisa, Kentucky
C. Body of water receiving discharge: Big Sandy River and Blaine Creek	
D. Facility Site Latitude (degrees, minutes, seconds): 38 degrees 10 minutes 07 seconds	Facility Site Longitude (degrees, minutes, seconds): 82 degrees 37 minutes 15 seconds
E. Method used to obtain latitude & longitude (see instructions): Survey	
F. Facility Dun and Bradstreet Number (DUNS #) (if applicable): 00-486-2439	

**IV. OWNER/OPERATOR INFORMATION**

A. Type of Ownership:

Publicly Owned  Privately Owned  State Owned  Both Public and Private Owned  Federally owned

B. Operator Contact Information (See instructions)

Name of Treatment Plant Operator:

Jennifer Phelps, John Skaggs, Dean Bradley, E. Doug Jones,  
 George Waugh, Charles Stapleton, Jeffrey Hughes

Telephone Number:  
 606/686-2415

Operator Mailing Address (Street):

23000 Hwy 23

Operator Mailing Address (City, State, Zip Code):

Louisa, Kentucky 41230-8703

Is the operator also the owner?

Yes  No

Is the operator certified? If yes, list certification class and number below.

Yes  No

Certification Class:

Class I

Certification Number:

8609, 8424, 6607, 4772, 6128, 13007, 13006

**V. EXISTING ENVIRONMENTAL PERMITS**

Current NPDES Number:

KY0000221

Issue Date of Current Permit:

04/01/2003

Expiration Date of Current Permit:

03/31/2006

Number of Times Permit Reissued:

4

Date of Original Permit Issuance:

December 23, 1976

Sludge Disposal Permit Number:

Kentucky DOW Operational Permit #:

Kentucky DSMRE Permit Number(s):

C. Which of the following additional environmental permit/registration categories will also apply to this facility?

CATEGORY	EXISTING PERMIT WITH NO.	PERMIT NEEDED WITH PLANNED APPLICATION DATE
Air Emission Source	V-97-009	
Solid or Special Waste		
Hazardous Waste - Registration or Permit	Hazardous Waste Generator EPA I.D. No. -KYD-004-862-439	

**VI. DISCHARGE MONITORING REPORTS (DMRs)**

KPDES permit holders are required to submit DMRs to the Division of Water on a regular schedule (as defined by the KPDES permit). The information in this section serves to specifically identify the department, office or individual you designate as responsible for submitting DMR forms to the Division of Water.

A. Name of department, office or official submitting DMRs:	M. H. Thomas, General Plant Manager
B. Address where DMR forms are to be sent. (Complete only if address is different from mailing address in Section I.)	
DMR Mailing Name:	Jennifer B. Phelps; Plant Environmental Coordinator, Senior; Big Sandy Plant
DMR Mailing Street:	23000 Highway 23
DMR Mailing City, State, Zip Code:	Louisa, Kentucky 41230-8703
DMR Official Telephone Number:	(606) 686-2415 Ext. 1316

**VII. APPLICATION FILING FEE**

KPDES regulations require that a permit applicant pay an application filing fee equal to twenty percent of the permit base fee. Please examine the base and filing fees listed below and in the Form 1 instructions and enclose a check payable to "Kentucky State Treasurer" for the appropriate amount. Descriptions of the base fee amounts are given in the "General Instructions."

Facility Fee Category:	Filing Fee Enclosed:
Major Industry	\$640.00

**VIII. CERTIFICATION**

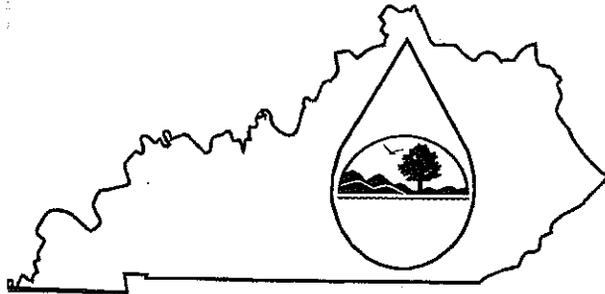
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage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

NAME AND OFFICIAL TITLE (type or print):	TELEPHONE NUMBER (area code and number):
John M. McManus - Vice President Environmental Services	(614) 223-1268
SIGNATURE	DATE:
<i>Patrick A. DeWitt for John M. McManus</i>	<i>Sept. 27, 2005</i>

# KPDES FORM C

## KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

### PERMIT APPLICATION



A complete application consists of this form and Form 1.  
 For additional information, contact KPDES Branch, (502) 564-3410.

Name of Facility: Big Sandy Plant				County: Lawrence			
<b>I. OUTFALL LOCATION</b>				AGENCY USE			

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

Outfall No. (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
001	38	11	15	82	38	00	Blaine Creek

### II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

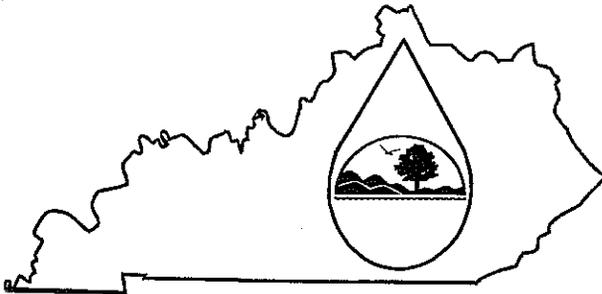
- A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfall. 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.

OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1
001	Fly Ash Pond	6.602	Mixing	1-O
			Sedimentation	1-U
			Chemical Oxidation (Natural)	2-K
			Chemical Precipitation (Natural)	X-X
			Skimming	X-X
	Discharge to Surface Water	4-A		
	Sources to Fly Ash Pond:			
	Unit 1 Fly Ash Transport	0.18 MGD	All these wastestreams	
	Unit 2 Fly Ash Transport	2.392 MGD	undergo, to some degree, the	

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	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
001	38	11	15	82	38	00	Blaine Creek

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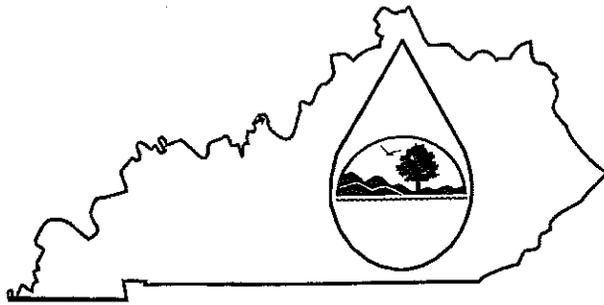
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OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1
001 (continued)	Unit 2 Economizer Ash Transport	0.34 MGD	treatment processes listed above for the fly ash pond.	
	Reclaim Water (See Below)	3.472 MGD		
	Coal Pile Runoff	0.112 MGD		
	Rainfall (Avg.)	0.397 MGD		
	Sources to Reclaim Pond:			
	Unit 1 Turbine Room Sump (include U-1 Cool. Twr. Blowdn)	1.920 MGD	All these wastestreams undergo, to some degree, the treatment processes listed above for the	
	Unit 1 Bottom Ash Transport	0.379 MGD		

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Outfall No. (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
001	38	11	15	82	38	00	Blaine Creek

### II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

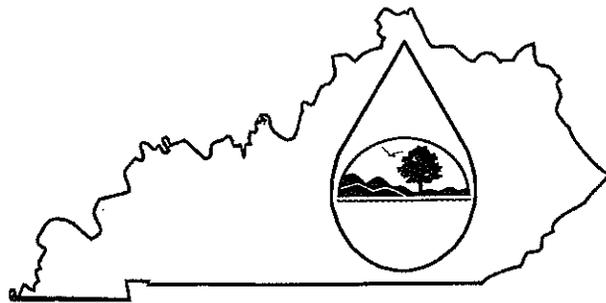
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OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1
001 (continued)	(include Unit 1 Pyrites Transport Unit 2 Bottom Ash Transport (incl. Unit 2 Cool. Twr. Blowdn and Pyrites Transport	1.05 MGD	fly ash pond and also recycle/ reuse.	4-C
	Unit 2 cooling Tower Blowdown	0.586 MGD		
	Unit 2 Wastewater Sump	1.920 MGD		
	Rainfall (Avg.)	0.024 MGD		

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

Outfall No. (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
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001	38	11	15	82	38	00	Blaine Creek

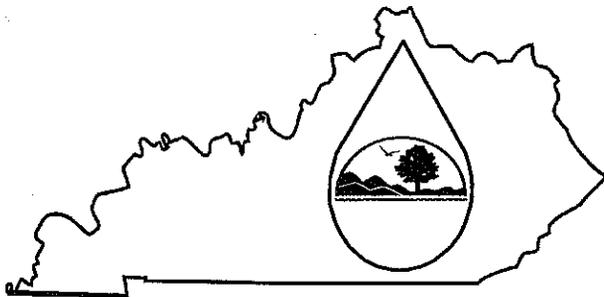
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OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1
001 (continued)	Maximum Flow (Includes Maximum Rainfall)	16.57 MGD		
	Fly Ash Pond Area	28.216 MGD		
	Bottom Ash Pond Area	0.794 MGD		
	Coal Pile Runoff	1.224 MGD		
	Transformer Deck Drains	0.013 MGD		

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

Outfall No. (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
002	38	10	18	82	37	13	Bottom Ash Pond
003	38	10	18	82	37	13	Bottom Ash Pond

### II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

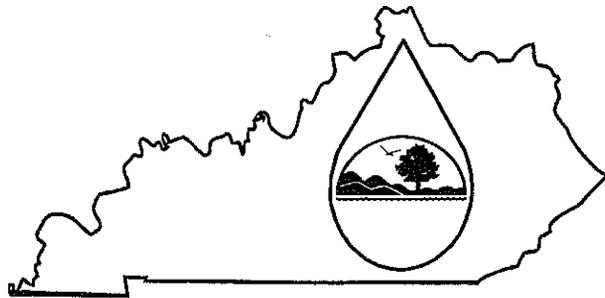
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OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1
002	Unit 1 Cooling Tower Blowdown	0.36 MGD	Mixing	1-O
			Sedimentation	1-U
			Discharge to Surface Water	4-A
003	Unit 2 Cooling Tower Blowdown	1.3 MGD	Mixing	1-O
			Sedimentation	1-U
			Discharge to Surface Water	4-A

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

Outfall No. (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
004	38	10	08	82	37	12	Big Sandy River

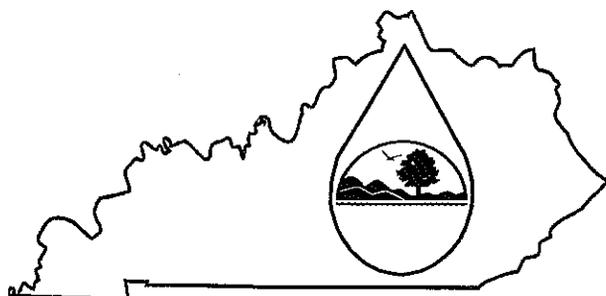
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OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1
004	Sewage Treatment Plant	0.11 MGD	Screening	1 - T
			Activated Sludge	3 - A
			Sedimentation	1 - U
			Disinfection (chlorine)	2 - F
			Dechlorination	2 - E
			Skimming	X - X
			Discharge to surface water	4 - A

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				USE			

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Outfall No. (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
005	38	10	16	82	37	19	Bottom Ash Pond

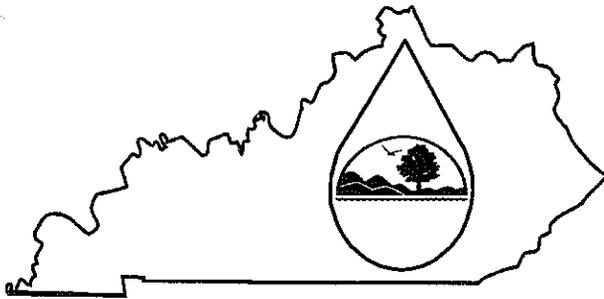
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OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1
005	Chemical Metal Cleaning Waste		Chemical Precipitation	2-C
	Supernatant (Intermittent)		Flocculation	1-G
			Sedimentation	1-U
NOTE 1:	Effluent is only discharged through Outfall 005 after the Unit 2 chemical metal cleaning waste is treated. This event occurs approx. every 5-7 years.	NOTE 2:	Per current KPDES permit, effl. analyzed for pH (12), Cu (0.006) and Fe (0.36 mg/l) but not for any other Form C parameters.	
		NOTE 3:	Part V Form C not incl. for 005.	

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

Outfall No. (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
018	38	11	14	82	37	55	Blaine Creek

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OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1
018	Drains Interior of Fly Ash Dam (Coal seam seepage sump overflows to Outfall 018 if sump pumps are out of service.)	0.13 MGD	Discharge to Surface Water	4-A

**II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES (Continued)**

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

- Yes (Complete the following table.)  No (Go to Section III.)

OUTFALL NUMBER (list)	OPERATIONS CONTRIBUTING FLOW (list)	FREQUENCY		FLOW				Duration (in days)
		Days Per Week (specify average)	Months Per Year (specify average)	Flow Rate (in mgd)		Total volume (specify with units)		
				Long-Term Average	Maximum Daily	Long-Term Average	Maximum Daily	
005	Unit 2 Chemical Metal Cleaning Waste Supernatant.	7	once per 60 - 84 months	0.560	0.080	560,000 Gallons	112,000 Gallons	7

**III. MAXIMUM 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) List effluent guideline category:  
 No (Go to Section IV)

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

- Yes (Complete Item III-C)  No (Go to Section IV)

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

MAXIMUM QUANTITY			Affected Outfalls (list outfall numbers)
Quantity Per Day	Units of Measure	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 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)

IDENTIFICATION OF CONDITION AGREEMENT, ETC.	AFFECTED OUTFALLS		BRIEF DESCRIPTION OF PROJECT	FINAL COMPLIANCE DATE	
	No.	Source of Discharge		Required	Projected

3. 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 under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

**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 5-18.

D. Use the space below to list any of the pollutants (refer to SARA Title III, Section 313) listed in Table C-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.

POLLUTANT	SOURCE	POLLUTANT	SOURCE
Ammonia	Use in Water Treatment and pH control, and SCR and flue gas conditioning	Sodium Hydroxide	Use to regenerate demineralizer resins and for pH control and in the reverse osmosis system.
Sodium Hypochlorite	Use to control organisms that contribute to fouling problems in cooling towers and condensers.	Sodium Nitrite	Cooling water conditioner to prevent corrosion.
Ethylene Diamine-Tetracetic Acid (EDTA)	Units 1 & 2 chemical cleaning solution consists in part of this substance in diluted amounts.	Sulfuric Acid	pH control of cooling towers and regeneration of demineralizer resins

**VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS**

A. Is any pollutant listed in Item V-C a substance or a component of a substance which you use or produce, or expect to use or produce over the next 5 years as an immediate or final product or byproduct?

- Yes (List all such pollutants below)                       No (Go to Item VI-B)

B. Are your operations such that your raw materials, processes, or products can reasonably be expected to vary so that your discharge of pollutants may during the next 5 years exceed two times the maximum values reported in Item V?

- Yes (Complete Item VI-C)                       No (Go to Item VII)

J. If you answered "Yes" to Item VI-B, explain below and describe in detail to the best of your ability at this time the sources and expected levels of such pollutants which you anticipate will be discharged from each outfall over the next 5 years. Continue on additional sheets if you need more space.

**VII. BIOLOGICAL TOXICITY TESTING DATA**

Do you have any knowledge of 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)

Whole effluent toxicity testing of the Big Sandy Plant Outfall 001 effluent has been performed quarterly under the current KPDES permit. The results of quarterly testing of ceriodaphnia have all been below the permit limit.

**VIII. CONTRACT ANALYSIS INFORMATION**

Were any of the analyses reported in Item V performed by a contract 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)

NAME	ADDRESS	TELEPHONE (Area code & number)	POLLUTANTS ANALYZED (list)
1) SGS Environmental Services, Inc.	1258 Greenbrier Street Charleston, WV 25311	(304) 346-0725	KPDES Form C Sec. V: color, bromide, surfactants, BOD, fecal coliform Part C 1V - 30V, 1A - 11A
2) AEP Dolan Environmental Laboratory	400 Bixby Road Groveport, OH 43125	(614) 836-4188	KPDES Form C Sec. V: Part A all except BOD Part B c, g, i, j, k, l, n, o and (r - aa.) Part C, 1M - 15M
3) Big Sandy Plant Lab	23000 Hwy 23 Louis, KY 41230	(606) 686-2415 ext. 1316	temp., pH, FAC, TRO, TRC, Tot. Br., sulfite, hardness, flow

**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 personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (type or print): John M. McManus - Vice President Environmental Services	TELEPHONE NUMBER (area code and number): (614) 223-1268
SIGNATURE <i>Patrick A. DePorto for John M. McManus</i>	DATE <i>Sept 27, 2005</i>

KPDES FORM C  
IV. B.

AEP is installing a flue gas desulfurization (FGD) system on Big Sandy Unit 2 which is 800 megawatts. FGD systems, commonly called "scrubbers," use chemical and mechanical processes to remove sulfur dioxide (SO<sub>2</sub>) from gas produced by burning coal. Exhaust gas from a coal-fired unit's steam generator is routed through absorber vessels where chemical reactions take place, and SO<sub>2</sub> is removed.

The resulting NPDES affects from the previous mentioned environmental control addition will be addressed in a NPDES Permit Modification around 2008.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of filling in these pages. (See instructions)

V. INTAKE AND EFFLUENT CHARACTERISTICS (Continued from page 3 of Form C)											OUTFALL NO. 001	
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						3. UNITS (specify if blank)		4. INTAKE (optional) 006			
	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Biochemical Oxygen Demand (BOD)	3.7						1	mg/l		<2.0		1
b. Chemical Oxygen Demand (COD)	3.0						1	mg/l		12.0		1
c. Total Organic Carbon (TOC)	2						1	mg/l		2.0		1
d. Total Suspended Solids (TSS)	33		23		10.3		28	mg/l		73.2		53
e. Ammonia (as N)	6.53				1.25		36	mg/l		<0.05		1
f. Flow (in units of MGD)	VALUE 12.13		VALUE 9.275		VALUE 6.421		59		MGD	VALUE 9.913		369
g. Temperature (winter)	VALUE		VALUE		VALUE				°c	VALUE		
h. Temperature (summer)	VALUE 25.2		VALUE		VALUE		1		°c	VALUE 27.7		1
i. pH	MINIMUM 7.28	MAXIMUM 7.92	MINIMUM	MAXIMUM			28	STANDARD UNITS				

Part B - In the MARK "X" column, place an "X" in the Believed Present column for each pollutant you know or have reason to believe is present. Place an "X" in the Believed Absent column for each pollutant you believe to be absent. If you mark the Believed Present column for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO.  (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		6. INTAKE (optional)		
	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Bromide (24959-67-9)	x		<5.0						1	mg/l		<5.0		1
b. Bromine Total Residual	x		.09						1	mg/l		0.08		1
c. Chloride	x		98						1	mg/l		11.0		1
d. Chlorine, Total Residual	x		.04						1	mg/l		0.04		1
e. Color	x		5.0						1	PCU		15		1
f. Fecal Coliform	x		160						1	c/100 ml		1400		1
g. Fluoride (16984-48-8)	x		0.7						1	mg/l		0.2		1
h. Hardness (as CaCO <sub>3</sub> )	x		678						1	mg/l		185		1
i. Nitrate - Nitrite (as N)	x		4.41						1	mg/l		1.0		1
j. Nitrogen, Total Organic (as N)	x		<0.05						1	mg/l		<0.05		1
k. Oil and Grease	x		2.0		1.25		0.385		27	mg/l		<1.0		1
l. Phosphorous (as P), Total 7723-14-0	x		<0.01						1	mg/l		<0.01		1
m. Radioactivity														
(1) Alpha, Total		x												
(2) Beta, Total		x												
(3) Radium Total		x												
(4) Radium, 226, Total		x												

Part B - Continued														
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 Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
n. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	x		784						1	mg/l		132		1
o. Sulfide (as S)	x		<1.0						1	mg/l		<1.0		1
p. Sulfite (as SO <sub>3</sub> ) (14286-46-3)	x		0.5						1	mg/l		1.5		1
q. Surfactants	x		<0.03						1	mg/l		<0.03		1
r. Aluminum, Total (7429-90)	x		0.12						1	mg/l		4.60		1
s. Barium, Total (7440-39-3)	x		116						1	ug/l		73		1
t. Boron, Total (7440-42-8)	x		1.96						1	mg/l		0.51		1
u. Cobalt, Total (7440-48-4)	x		4.0						1	ug/l		3.0		1
v. Iron, Total (7439-89-6)	x		0.06						1	mg/l		6.13		1
w. Magnesium Total (7439-96-4)	x		66.8						1	mg/l		21.9		1
x. Molybdenum Total (7439-98-7)	x		362						1	ug/l		<3.0		1
y. Manganese, Total (7439-96-6)	x		0.17						1	mg/l		0.24		1
z. Tin, Total (7440-31-5)	x		<5.0						1	ug/l		<5.0		1
aa. Titanium, Total (7440-32-6)	x		4.0						1	ug/l		61		1

**Part C** – If you are a primary industry and this outfall contains process wastewater, refer to Table C-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in the Testing Required column 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 this column (secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions), mark "X" in the Believed Present column for each pollutant you know or have reason to believe is present. Mark "X" in the Believed Absent column for each pollutant you believe to be absent. If you mark either the Testing Required or Believed Present columns for any pollutant, you must provide the result of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements.

Item No. 25 Attachment 2  
 Page 27 of 93

1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>METALS, CYANIDE AND TOTAL PHENOLS</b>															
1M. Antimony Total (7440-36-0)	x			29.0						1	ug/l		0.004		1
2M. Arsenic, Total (7440-38-2)	16x			0.094				0.064		6	mg/l		0.018		6
3M. Beryllium Total (7440-41-7)	x			0.005				0.002		6	mg/l		0.0		6
4M. Cadmium Total (7440-43-9)	x			<0.0005				<0.0005		6	mg/l		0.0		6
5M. Chromium Total (7440-43-9)	x			0.018				0.009		6	mg/l		0.005		6
6M. Copper Total (7550-50-8)	x			0.019				0.008		6	mg/l		0.006		6
7M. Lead Total (7439-92-1)	x			0.004				0.002		6	mg/l		0.002		6
8M. Mercury Total (7439-97-6)	x			0.0035				0.001		6	ug/l		0.001		6
9M. Nickel, Total (7440-02-0)	x			0.032				0.022		6	mg/l		0.005		6
10M. Selenium, Total (7782-49-2)	x			0.035				0.027		6	mg/l		0.008		6
11M. Silver, Total (7440-28-0)	x			0.0005				0		6	mg/l		0		6

Part C - Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>METALS, CYANIDE AND TOTAL PHENOLS (Continued)</b>															
12M. Thallium, Total (7440-28-0)	x			0.006				0.004		6	mg/l		0.001		6
13M. Zinc, Total (7440-66-6)	x			0.015				0.009		6	mg/l		0.008		6
14M. Cyanide, Total (57-12-5)	x			0.01						1	mg/l		<0.01		1
15M. Phenols, Total	x			<0.001						1	mg/l		<0.001		1
<b>DIOXIN</b>															
2,3,7,8 Tetra- chlorodibenzo, P, Dioxin (1784-01-6)			x	DESCRIBE RESULTS:											
<b>GC/MS FRACTION - VOLATILE COMPOUNDS</b>															
1V. Acrolein (107-02-8)	x			<5.0				ug/l		1	ug/l		<5.0		1
2V. Acrylonitrile (107-13-1)	x			<5.0				ug/l		1	ug/l		<5.0		1
3V. Benzene (71-43-2)	x			<5.0				ug/l		1	ug/l		<5.0		1
5V. Bromoform (75-25-2)	x			<5.0				ug/l		1	ug/l		<5.0		1
6V. Carbon Tetrachloride (56-23-5)	x			<5.0				ug/l		1	ug/l		<5.0		1
7V. Chloro- benzene (108-90-7)	x			<5.0				ug/l		1	ug/l		<5.0		1
8V. Chlorodibro- m methane (124-48-1)	x			<5.0				ug/l		1	ug/l		<5.0		1

Part C -- Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
9V. Chloroethane (74-00-3)	x			<5.0						1	ug/l		<5.0	1	
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	x			<5.0						1	ug/l		<5.0	1	
11V. Chloroform (67-66-3)	x			<5.0						1	ug/l		<5.0	1	
12V. Dichloro-bromomethane (75-71-8)	x			<5.0						1	ug/l		<5.0	1	
14V. 1,1-Dichloroethane (75-34-3)	x			<5.0						1	ug/l		<5.0	1	
15V. 1,2-Dichloroethane (107-06-2)	x			<5.0						1	ug/l		<5.0	1	
16V. 1,1-Dichloroethylene (75-35-4)	x			<5.0						1	ug/l		<5.0	1	
17V. 1,2-Di-chloropropane (78-87-5)	x			<5.0						1	ug/l		<5.0	1	
18V. 1,3-Dichloropro-pylene (452-75-6)	x			<5.0						1	ug/l		<5.0	1	
19V. Ethyl-benzene (100-41-4)	x			<5.0						1	ug/l		<5.0	1	
20V. Methyl Bromide (74-83-9)	x			<5.0						1	ug/l		<5.0	1	

Part C - Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
21V. Methyl Chloride (74-87-3)	x			<5.0						1	ug/l		<5.0		1
22V. Methylene Chloride (75-00-2)	x			<5.0						1	ug/l		<5.0		1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	x			<5.0						1	ug/l		<5.0		1
24V. Tetrachloroethylene (127-18-4)	x			<5.0						1	ug/l		<5.0		1
25V. Toluene (108-88-3)	x			<5.0						1	ug/l		<5.0		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	x			<5.0						1	ug/l		<5.0		1
27V. 1,1,1-Trichloroethane (71-55-6)	x			<5.0						1	ug/l		<5.0		1
28V. 1,1,2-Trichloroethane (79-00-5)	x			<5.0						1	ug/l		<5.0		1
29V. Trichloroethylene (79-01-6)	x			<5.0						1	ug/l		<5.0		1
30V. Vinyl Chloride (75-01-4)	x			<5.0						1	ug/l		<5.0		1

Part C - Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - ACID COMPOUNDS</b>															
1A. 2-Chloro-phenol (95-57-8)	x			<10						1	ug/l		<10	1	
2A. 2,4-Dichloro-phenol (120-83-2)	x			<20						1	ug/l		<20	1	
3A. 2,4-Dimethylphenol (105-67-9)	x			<10						1	ug/l		<10	1	
4A. 4,6-Dinitro-cresol (534-52-1)	x			<50						1	ug/l		<50	1	
5A. 2,4-Dinitro-phenol (51-28-5)	x			<50						1	ug/l		<50	1	
6A. 2-Nitro-phenol (88-75-5)	x			<20						1	ug/l		<20	1	
7A. 4-Nitro-phenol (100-02-7)	x			<50						1	ug/l		<50	1	
8A. P-chloro-m-cresol (59-50-7)	x			<20						1	ug/l		<20	1	
9A. Pentachloro-phenol (87-88-5)	x			<50						1	ug/l		<50	1	
10A. Phenol (108-05-2)	x			<10						1	ug/l		<10	1	
11A. 2,4,6-Trichlorophenol (88-06-2)	x			<10						1	ug/l		<10	1	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>															
1B. Acenaphthene (83-32-9)			x												

Part C -- Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
2B. Acena- phtylene (208-96-8)			x												
3B. Anthra- cene (120-12-7)			x												
4B. Benzidine (92-87-5)			x												
5B. Benzo(a)- anthracene (56-55-3)			x												
6B. Benzo(a)- pyrene (50-32-8)			x												
7B. 3,4-Benzo- fluoranthene (205-99-2)			x												
8B. Benzo(ghi) perylene (191-24-2)			x												
9B. Benzo(k)- fluoranthene (207-08-9)			x												
10B. Bis(2- chlor- oethoxy)- methane (111-91-1)			x												
11B. Bis (2-chlor- oisopropyl)- Ether			x												
12B. Bis (2-ethyl- hexyl)- phthalate (117-81-7)			x												

Part C - Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
13B. 4-Bromo-phenyl Phenyl ether (101-55-3)			x												
14B. Butyl- benzyl phthalate (85-68-7)			x												
15B. 2-Chloro- naphthalene (7005-72-3)			x												
16B. 4-Chloro- phenyl phenyl ether (7005-72-3)			x												
17B. Chrysene (218-01-9)			x												
18B. Dibenzo- (a,h) Anthracene (53-70-3)			x												
19B. 1,2- Dichloro- benzene (95-50-1)			x												
20B. 1,3- Dichloro- Benzene (541-73-1)			x												
21B. 1,4- Dichloro- benzene (106-46-7)			x												
22B. 3,3- Dichloro- benzidene (91-94-1)			x												
23B. Diethyl Phthalate (84-66-2)			x												

Part C -- Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
24B. Dimethyl Phthalate (131-11-3)			x												
25B. Di-N-butyl Phthalate (84-74-2)			x												
26B. 2,4-Dinitrotoluene (121-14-2)			x												
27B. 2,6-Dinitrotoluene (606-20-2)			x												
28B. Di-n-octyl Phthalate (117-84-0)			x												
29B. 1,2-diphenylhydrazine (as azonbenzene) (122-66-7)			x												
30B. Fluoranthene (208-44-0)			x												
31B. Fluorene (86-73-7)			x												
32B. Hexachlorobenzene (118-71-1)			x												
33B. Hexachlorobutadiene (87-68-3)			x												
34B. Hexachlorocyclopentadiene (77-47-4)			x												

Part C - Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
35B. Hexachloroethane (67-72-1)			x												
36B. Indeno-(1,2,3-oc)-Pyrene (193-39-5)			x												
37B. Isophorone (78-59-1)			x												
38B. Napthalene (91-20-3)			x												
39B. Nitrobenzene (98-95-3)			x												
40B. N-Nitrosodimethylamine (62-75-9)			x												
41B. N-nitrosodi-n-propylamine (621-64-7)			x												
42B. N-nitrosodiphenylamine (86-30-6)			x												
43B. Phenanthrene (85-01-8)			x												
44B. Pyrene (129-00-0)			x												
45B. 1,2,4 Trichlorobenzene (120-82-1)			x												

Part C - Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - PESTICIDES</b>															
1P. Aldrin (309-00-2)			x												
2P. $\alpha$ -BHC (319-84-6)			x												
3P. $\beta$ -BHC (58-89-9)			x												
4P. gamma-BHC (58-89-9)			x												
5P. $\delta$ -BHC (319-86-8)			x												
6P. Chlordane (57-74-9)			x												
7P. 4,4'-DDT (50-29-3)			x												
8P. 4,4'-DDE (72-55-9)			x												
9P. 4,4'-DDD (72-54-8)			x												
10P. Dieldrin (60-57-1)			x												
11P. $\alpha$ - Endosulfan (115-29-7)			x												
12P. $\beta$ - Endosulfan (115-29-7)			x												
13P. Endosulfan Sulfate (1031-07-8)			x												
14P. Endrin (72-20-8)			x												

Part C – Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION – PESTICIDES</b>															
15P. Endrin Aldehyde (7421-93-4)			x												
16P. Heptachlor (76-44-8)			x												
17P. Heptachlor Epoxide (1024-57-3)			x												
18P. PCB-1242 (53469-21-9)			x												
19P. PCB-1254 (11097-69-1)			x												
20P. PCB-1221 (11104-28-2)			x												
21P. PCB-1232 (11141-16-5)			x												
22P. PCB-1248 (12672-29-6)			x												
23P. PCB-1260 (11096-82-5)			x												
24P. PCB-1016 (12674-11-2)			x												
25P. Toxaphene (8001-35-2)			x												

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

V. INTAKE AND EFFLUENT CHARACTERISTICS (Continued from page 3 of Form C)											OUTFALL NO. 002	
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						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Biochemical Oxygen Demand (BOD)	<2.0						1	mg/l				
b. Chemical Oxygen Demand (COD)	41.0						1	mg/l				
c. Total Organic Carbon (TOC)	9.0						1	mg/l				
d. Total Suspended Solids (TSS)	309						1	mg/l				
e. Ammonia (as N)	<0.05						1	mg/l				
f. Flow (in units of MGD)	VALUE 0		VALUE 0		VALUE 0		14	MGD		VALUE		
g. Temperature (winter)	VALUE		VALUE		VALUE			°c		VALUE		
h. Temperature (summer)	VALUE 23.6		VALUE		VALUE		1	°c		VALUE		
i. pH	MINIMUM	MAXIMUM 8.40	MINIMUM	MAXIMUM			1	STANDARD UNITS				

Part B - In the MARK "X" column, place an "X" in the Believed Present column for each pollutant you know or have reason to believe is present. Place an "X" in the Believed Absent column for each pollutant you believe to be absent. If you mark the Believed Present column for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for Additional Attachment 2 requirements.

1. POLLUTANT AND CAS NO.  (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		6. INTAKE (optional)		
	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Bromide (24959-67-9)	x		6.0						1	mg/l				
b. Bromine Total Residual	x		0.13						1	mg/l				
c. Chloride	x		70.0						1	mg/l				
d. Chlorine, Total Residual	x		0.05						1	mg/l				
e. Color	x		30.0						1	PCU				
f. Fecal Coliform	x		800						1	c/100				
g. Fluoride (16984-48-8)	x		0.6						1	mg/l				
h. Hardness (as CaCO <sub>3</sub> )	x		716.0						1	mg/l				
i. Nitrate - Nitrite (as N)	x		3.01						1	mg/l				
j. Nitrogen, Total Organic (as N)	x		0.13						1	mg/l				
k. Oil and Grease	x		1.0						1	mg/l				
l. Phosphorous (as P), Total 7723-14-0	x		0.66						1	mg/l				
m. Radioactivity														
(1) Alpha, Total		x												
(2) Beta, Total		x												
(3) Radium Total		x												
(4) Radium, 226, Total		x												

Part B - Continued														
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 Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
			(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
			Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
n. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	x		744						1	mg/l				
o. Sulfide (as S)	x		<1.0						1	mg/l				
p. Sulfite (as SO <sub>3</sub> ) (14286-46-3)	x		0.5						1	mg/l				
q. Surfactants	x		0.039						1	mg/l				
r. Aluminum, Total (7429-90)	x		8.21						1	mg/l				
s. Barium, Total (7440-39-3)	x		217						1	ug/l				
t. Boron, Total (7440-42-8)	x		<0.04						1	mg/l				
u. Cobalt, Total (7440-48-4)	x		6						1	ug/l				
v. Iron, Total (7439-89-6)	x		10.6						1	mg/l				
w. Magnesium Total (7439-96-4)	x		80.4						1	mg/l				
x. Molybdenum Total (7439-98-7)	x		<3.0						1	ug/l				
y. Manganese, Total (7439-96-6)	x		0.41						1	mg/l				
z. Tin, Total (7440-31-5)	x		6.0						1	ug/l				
aa. Titanium, Total (7440-32-6)	x		77						1	ug/l				

**Part C** – If you are a primary industry and this outfall contains process wastewater, refer to Table C-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in the **Testing Required** column 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 this column (secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions), mark "X" in the **Believed Present** column for each pollutant you know or have reason to believe is present. Mark "X" in the **Believed Absent** column for each pollutant you believe to be absent. If you mark either the **Testing Required** or **Believed Present** columns for any pollutant, you must provide the result of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
<b>METALS, CYANIDE AND TOTAL PHENOLS</b>															
1M. Antimony Total (7440-36-0)	x			6.0						1	ug/l				
2M. Arsenic, Total (7440-38-2)	x			7.0						1	ug/l				
3M. Beryllium Total (7440-41-7)	x			0.4						1	ug/l				
4M. Cadmium Total (7440-43-9)	x			<0.5						1	ug/l				
5M. Chromium Total (7440-43-9)	x			14.0				13.5		2	ug/l				
6M. Copper Total (7550-50-8)	x			241						1	ug/l				
7M. Lead Total (7439-92-1)	x			12						1	ug/l				
8M. Mercury Total (7439-97-6)	x			<0.2						1	ug/l				
9M. Nickel, Total (7440-02-0)	x			32						1	ug/l				
10M. Selenium, Total (7782-49-2)	x			19						1	ug/l				
11M. Silver, Total (7440-28-0)	x			0.4						1	ug/l				

Part C - Continued				3. EFFLUENT						4. UNITS		a. Long-Term Avg Value		b. No. of Analyses	
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)					a. Long-Term Avg Value		
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
<b>METALS, CYANIDE AND TOTAL PHENOLS (Continued)</b>															
12M. Thallium, Total (7440-28-0)	x			<1.0						1	ug/l				
13M. Zinc, Total (7440-66-6)	x			99.0				79.0		2	ug/l				
14M. Cyanide, Total (57-12-5)	x			<0.01						1	mg/l				
15M. Phenols, Total	x			<10.0						1	ug/l				
<b>DIOXIN</b>															
2,3,7,8 Tetra-chlorodibenzo, P, Dioxin (1784-01-6)		x		DESCRIBE RESULTS:											
<b>GC/MS FRACTION - VOLATILE COMPOUNDS</b>															
1V. Acrolein (107-02-8)	x			<50						1		ug/l			
2V. Acrylonitrile (107-13-1)	x			<5.0						1		ug/l			
3V. Benzene (71-43-2)	x			<5.0						1		ug/l			
5V. Bromoform (75-25-2)	x			<5.0						1		ug/l			
6V. Carbon Tetrachloride (56-23-5)	x			<5.0						1		ug/l			
7V. Chlorobenzene (108-90-7)	x			<5.0						1		ug/l			
8V. Chlorodibromomethane (124-48-1)	x			<5.0						1		ug/l			

Part C - Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
9V. Chloroethane (74-00-3)	x			<5.0						1	ug/l				
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	x			<5.0						1	ug/l				
11V. Chloroform (67-66-3)	x			<5.0						1	ug/l				
12V. Dichloro-bromomethane (75-71-8)	x			<5.0						1	ug/l				
14V. 1,1-Dichloroethane (75-34-3)	x			<5.0						1	ug/l				
15V. 1,2-Dichloroethane (107-06-2)	x			<5.0						1	ug/l				
16V. 1,1-Dichlorethylene (75-35-4)	x			<5.0						1	ug/l				
17V. 1,2-Di-chloropropane (78-87-5)	x			<5.0						1	ug/l				
18V. 1,3-Dichloropro-pylene (452-75-6)	x			<5.0						1	ug/l				
19V. Ethyl-benzene (100-41-4)	x			<5.0						1	ug/l				
20V. Methyl Bromide (74-83-9)	x			<5.0						1	ug/l				

Part C - Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
21V. Methyl Chloride (74-87-3)	x			<5.0						1		ug/l			
22V. Methylene Chloride (75-00-2)	x			<5.0						1		ug/l			
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	x			<5.0						1		ug/l			
24V. Tetrachloroethylene (127-18-4)	x			<5.0						1		ug/l			
25V. Toluene (108-88-3)	x			<5.0						1		ug/l			
26V. 1,2-Trans-Dichloroethylene (156-60-5)	x			<5.0						1		ug/l			
27V. 1,1,1-Trichloroethane (71-55-6)	x			<5.0						1		ug/l			
28V. 1,1,2-Trichloroethane (79-00-5)	x			<5.0						1		ug/l			
29V. Trichloroethylene (79-01-6)	x			<5.0						1		ug/l			
30V. Vinyl Chloride (75-01-4)	x			<5.0						1		ug/l			

Part C -- Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - ACID COMPOUNDS</b>															
1A. 2-Chloro-phenol (95-57-8)	x			<10.0						1	ug/l				
2A. 2,4-Dichloro-phenol (120-83-2)	x			<20.0						1	ug/l				
3A. 2,4-Dimethylphenol (105-67-9)	x			<10.0						1	ug/l				
4A. 4,6-Dinitro-cresol (534-52-1)	x			<50.0						1	ug/l				
5A. 2,4-Dinitro-phenol (51-28-5)	x			<50.0						1	ug/l				
6A. 2-Nitro-phenol (88-75-5)	x			<20.0						1	ug/l				
7A. 4-Nitro-phenol (100-02-7)	x			<50.0						1	ug/l				
8A. P-chloro-m-cresol (59-50-7)	x			<20.0						1	ug/l				
9A. Pentachloro-phenol (87-88-5)	x			<50.0						1	ug/l				
10A. Phenol (108-05-2)	x			<10.0						1	ug/l				
11A. 2,4,6-Trichlorophenol (88-06-2)	x			<10.0						1	ug/l				
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>															
1B. Acenaphthene (83-32-9)			x												

Part C - Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
2B. Acena- phtylene (208-96-8)			x												
3B. Anthra- cene (120-12-7)			x												
4B. Benzidine (92-87-5)			x												
5B. Benzo(a)- anthracene (56-55-3)			x												
6B. Benzo(a)- pyrene (50-32-8)			x												
7B. 3,4-Benzo- fluoranthene (205-99-2)			x												
8B. Benzo(ghi) perylene (191-24-2)			x												
9B. Benzo(k)- fluoranthene (207-08-9)			x												
10B. Bis(2- chlor- oethoxy)- methane (111-91-1)			x												
11B. Bis (2-chlor- oisopropyl)- Ether			x												
12B. Bis (2-ethyl- hexyl)- phthalate (117-81-7)			x												

Part C - Continued															
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
13B. 4-Bromo-phenyl Phenyl ether (101-55-3)			x												
14B. Butyl-benzyl phthalate (85-68-7)			x												
15B. 2-Chloro-naphthalene (7005-72-3)			x												
16B. 4-Chloro-phenyl phenyl ether (7005-72-3)			x												
17B. Chrysene (218-01-9)			x												
18B. Dibenzo-(a,h) Anthracene (53-70-3)			x												
19B. 1,2-Dichloro-benzene (95-50-1)			x												
20B. 1,3-Dichloro-Benzene (541-73-1)			x												
21B. 1,4-Dichloro-benzene (106-46-7)			x												
22B. 3,3-Dichloro-benzidene (91-94-1)			x												
23B. Diethyl Phthalate (84-66-2)			x												

Part C - Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
24B. Dimethyl Phthalate (131-11-3)			x												
25B. Di-N-butyl Phthalate (84-74-2)			x												
26B. 2,4-Dinitrotoluene (121-14-2)			x												
27B. 2,6-Dinitrotoluene (606-20-2)			x												
28B. Di-n-octyl Phthalate (117-84-0)			x												
29B. 1,2-diphenylhydrazine (as azobenzene) (122-66-7)			x												
30B. Fluoranthene (208-44-0)			x												
31B. Fluorene (86-73-7)			x												
32B. Hexachlorobenzene (118-71-1)			x												
33B. Hexachlorobutadiene (87-68-3)			x												
34B. Hexachlorocyclopentadiene (77-47-4)			x												

Part C - Continued															
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
35B. Hexachloroethane (67-72-1)			x												
36B. Indeno-(1,2,3-oc)-Pyrene (193-39-5)			x												
37B. Isophorone (78-59-1)			x												
38B. Napthalene (91-20-3)			x												
39B. Nitrobenzene (98-95-3)			x												
40B. N-Nitrosodimethylamine (62-75-9)			x												
41B. N-nitrosodi-n-propylamine (621-64-7)			x												
42B. N-nitrosodiphenylamine (86-30-6)			x												
43B. Phenanthrene (85-01-8)			x												
44B. Pyrene (129-00-0)			x												
45B. 1,2,4 Trichlorobenzene (120-82-1)			x												

Part C -- Continued															
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
<b>GC/MS FRACTION - PESTICIDES</b>															
1P. Aldrin (309-00-2)			x												
2P. α-BHC (319-84-6)			x												
3P. β-BHC (58-89-9)			x												
4P. gamma-BHC (58-89-9)			x												
5P. δ-BHC (319-86-8)			x												
6P. Chlordane (57-74-9)			x												
7P. 4,4'-DDT (50-29-3)			x												
8P. 4,4'-DDE (72-55-9)			x												
9P. 4,4'-DDD (72-54-8)			x												
10P. Dieldrin (60-57-1)			x												
11P. α- Endosulfan (115-29-7)			x												
12P. β- Endosulfan (115-29-7)			x												
13P. Endosulfan Sulfate (1031-07-8)			x												
14P. Endrin (72-20-8)			x												

Part C -- Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - PESTICIDES</b>															
15P. Endrin Aldehyde (7421-93-4)			x												
16P. Heptachlor (76-44-8)			x												
17P. Heptachlor Epoxide (1024-57-3)			x												
18P. PCB-1242 (53469-21-9)			x												
19P. PCB-1254 (11097-69-1)			x												
20P. PCB-1221 (11104-28-2)			x												
21P. PCB-1232 (11141-16-5)			x												
22P. PCB-1248 (12672-29-6)			x												
23P. PCB-1260 (11096-82-5)			x												
24P. PCB-1016 (12674-11-2)			x												
25P. Toxaphene (8001-35-2)			x												

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

V. INTAKE AND EFFLUENT CHARACTERISTICS (Continued from page 3 of Form C)										OUTFALL NO. 003		
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						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No of Analyses
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Biochemical Oxygen Demand (BOD)	2.4						1	mg/l				
b. Chemical Oxygen Demand (COD)	56.0						1	mg/l				
c. Total Organic Carbon (TOC)	15.0						1	mg/l				
d. Total Suspended Solids (TSS)	401						1	mg/l				
e. Ammonia (as N)	<0.05						1	mg/l				
f. Flow (in units of MGD)	VALUE 0		VALUE 0		VALUE 0		14		MGD	VALUE		
g. Temperature (winter)	VALUE		VALUE		VALUE				°c	VALUE		
h. Temperature (summer)	VALUE 22.7		VALUE		VALUE		1		°c	VALUE		
i. pH	MINIMUM	MAXIMUM 8.38	MINIMUM	MAXIMUM			1	STANDARD UNITS				

Part B - In the MARK "X" column, place an "X" in the Believed Present column for each pollutant you know or have reason to believe is present. Place an "X" in the Believed Absent column for each pollutant you believe to be absent. If you mark the Believed Present column for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional information requirements.

1. POLLUTANT AND CAS NO.  (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		6. INTAKE (optional)			
	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses	
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass		
															(1) Concentration
a. Bromide (24959-67-9)	x		9.0						1	mg/l					
b. Bromine Total Residual	x		0.13						1	mg/l					
c. Chloride	x		163.0						1	mg/l					
d. Chlorine, Total Residual	x		0.06						1	mg/l					
e. Color	x		50.0						1	PCU					
f. Fecal Coliform	x		600						1	c/100					
g. Fluoride (16984-48-8)	x		1.0						1	mg/l					
h. Hardness (as CaCO <sub>3</sub> )	x		1576						1	mg/l					
i. Nitrate – Nitrite (as N)	x		6.18						1	mg/l					
j. Nitrogen, Total Organic (as N)	x		0.25						1	mg/l					
k. Oil and Grease	x		1.0						1	mg/l					
l. Phosphorous (as P), Total 7723-14-0	x		1.26						1	mg/l					
m. Radioactivity															
(1) Alpha, Total		x													
(2) Beta, Total		x													
(3) Radium Total		x													
(4) Radium, 226, Total		x													

Part B - Continued														
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 Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
n. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	x		1860						1	mg/l				
o. Sulfide (as S)	x		<1.0						1	mg/l				
p. Sulfite (as SO <sub>4</sub> ) (14286-46-3)	x		0.25						1	mg/l				
q. Surfactants	x		0.059						1	mg/l				
r. Aluminum, Total (7429-90)	x		9.18						1	mg/l				
s. Barium, Total (7440-39-3)	x		384						1	ug/l				
t. Boron, Total (7440-42-8)	x		<0.04						1	mg/l				
u. Cobalt, Total (7440-48-4)	x		8						1	ug/l				
v. Iron, Total (7439-89-6)	x		11.2						1	mg/l				
w. Magnesium Total (7439-96-4)	x		164						1	mg/l				
x. Molybdenum Total (7439-98-7)	x		<3.0						1	ug/l				
y. Manganese, Total (7439-96-6)	x		0.43						1	mg/l				
z. Tin, Total (7440-31-5)	x		<5.0						1	ug/l				
aa. Titanium, Total (7440-32-6)	x		74						1	ug/l				

**Part C** – If you are a primary industry and this outfall contains process wastewater, refer to Table C-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in the **Testing Required** column 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 this column (secondary industries, nonprocess wastewater outfalls, and Page 60 of 93 GC/MS fractions) mark "X" in the **Believed Present** column for each pollutant you know or have reason to believe is present. Mark "X" in the **Believed Absent** column for each pollutant you believe to be absent. If you mark either the **Testing Required** or **Believed Present** columns for any pollutant, you must provide the result of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>METALS, CYANIDE AND TOTAL PHENOLS</b>															
1M. Antimony Total (7440-36-0)	x			9.0						1	ug/l				
2M. Arsenic, Total (7440-38-2)	x			14						1	ug/l				
3M. Beryllium Total (7440-41-7)	x			0.4						1	ug/l				
4M. Cadmium Total (7440-43-9)	x			<0.5						1	ug/l				
5M. Chromium Total (7440-43-9)	x			15.0				14.0		2	ug/l				
6M. Copper Total (7550-50-8)	x			45						1	ug/l				
7M. Lead Total (7439-92-1)	x			14						1	ug/l				
8M. Mercury Total (7439-97-6)	x			<0.2						1	ug/l				
9M. Nickel, Total (7440-02-0)	x			22						1	ug/l				
10M. Selenium, Total (7782-49-2)	x			15						1	ug/l				
11M. Silver, Total (7440-28-0)	x			0.5						1	ug/l				

Part C - Contin...	2. MARK "X"			3. EFFLUENT						4. UNITS		a. Long-Term Avg Value		b. No. of Analyses	
1. POLLUTANT And CAS NO. (if available)	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
<b>METALS, CYANIDE AND TOTAL PHENOLS (Continued)</b>															
12M. Thallium, Total (7440-28-0)	x			<1.0						1	ug/l				
13M. Zinc, Total (7440-66-6)	x			61				57.5		2	ug/l				
14M. Cyanide, Total (57-12-5)	x			0.01						1	mg/l				
15M. Phenols, Total	x			<10.0						1	ug/l				
<b>DIOXIN</b>															
2,3,7,8 Tetra-chlorodibenzo, P, Dioxin (1784-01-6)		x		DESCRIBE RESULTS:											
<b>GC/MS FRACTION - VOLATILE COMPOUNDS</b>															
1V. Acrolein (107-02-8)	x			<50						1	ug/l				
2V. Acrylonitrile (107-13-1)	x			<5.0						1	ug/l				
3V. Benzene (71-43-2)	x			<5.0						1	ug/l				
5V. Bromoform (75-25-2)	x			<5.0						1	ug/l				
6V. Carbon Tetrachloride (56-23-5)	x			<5.0						1	ug/l				
7V. Chloro-benzene (108-90-7)	x			<5.0						1	ug/l				
8V. Chlorodibromomethane (124-48-1)	x			<5.0						1	ug/l				

Part C - Continued															
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
9V. Chloroethane (74-00-3)	x			<5.0						1	ug/l				
10V. 2-Chloroethylvinyl Ether (110-75-8)	x			<5.0						1	ug/l				
11V. Chloroform (67-66-3)	x			<5.0						1	ug/l				
12V. Dichlorobromomethane (75-71-8)	x			<5.0						1	ug/l				
14V. 1,1-Dichloroethane (75-34-3)	x			<5.0						1	ug/l				
15V. 1,2-Dichloroethane (107-06-2)	x			<5.0						1	ug/l				
16V. 1,1-Dichloroethylene (75-35-4)	x			<5.0						1	ug/l				
17V. 1,2-Dichloropropane (78-87-5)	x			<5.0						1	ug/l				
18V. 1,3-Dichloropropylene (452-75-6)	x			<5.0						1	ug/l				
19V. Ethylbenzene (100-41-4)	x			<5.0						1	ug/l				
20V. Methyl Bromide (74-83-9)	x			<5.0						1	ug/l				

Part C -- Continued															
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
21V. Methyl Chloride (74-87-3)	x			<5.0						1	ug/l				
22V. Methylene Chloride (75-00-2)	x			<5.0						1	ug/l				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	x			<5.0						1	ug/l				
24V. Tetrachloroethylene (127-18-4)	x			<5.0						1	ug/l				
25V. Toluene (108-88-3)	x			<5.0						1	ug/l				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	x			<5.0						1	ug/l				
27V. 1,1,1-Trichloroethane (71-55-6)	x			<5.0						1	ug/l				
28V. 1,1,2-Trichloroethane (79-00-5)	x			<5.0						1	ug/l				
29V. Trichloroethylene (79-01-6)	x			<5.0						1	ug/l				
30V. Vinyl Chloride (75-01-4)	x			<5.0						1	ug/l				

Part C – Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION – ACID COMPOUNDS</b>															
1A. 2-Chloro-phenol (95-57-8)	x			<10.0						1	ug/l				
2A. 2,4-Dichloro-phenol (120-83-2)	x			<20.0						1	ug/l				
3A. 2,4-Dimethylphenol (105-67-9)	x			<10.0						1	ug/l				
4A. 4,6-Dinitro-cresol (534-52-1)	x			<50.0						1	ug/l				
5A. 2,4-Dinitro-phenol (51-28-5)	x			<50.0						1	ug/l				
6A. 2-Nitro-phenol (88-75-5)	x			<20.0						1	ug/l				
7A. 4-Nitro-phenol (100-02-7)	x			<50.0						1	ug/l				
8A. P-chloro-m-cresol (59-50-7)	x			<20.0						1	ug/l				
9A. Pentachloro-phenol (87-88-5)	x			<50.0						1	ug/l				
10A. Phenol (108-05-2)	x			<10.0						1	ug/l				
11A. 2,4,6-Trichlorophenol (88-06-2)	x			<10.0						1	ug/l				
<b>GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS</b>															
1B. Acenaphthene (83-32-9)			x												

Part C - Continued															
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
2B. Acena- phtylene (208-96-8)			x												
3B. Anthra- cene (120-12-7)			x												
4B. Benzidine (92-87-5)			x												
5B. Benzo(a)- anthracene (56-55-3)			x												
6B. Benzo(a)- pyrene (50-32-8)			x												
7B. 3,4-Benzo- fluoranthene (205-99-2)			x												
8B. Benzo(ghi) perylene (191-24-2)			x												
9B. Benzo(k)- fluoranthene (207-08-9)			x												
10B. Bis(2- chlor- oethoxy)- methane (111-91-1)			x												
11B. Bis (2-chlor- oisopropyl)- Ether			x												
12B. Bis (2-ethyl- hexyl)- phthalate (117-81-7)			x												

Part C - Continued															
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
13B. 4-Bromo-phenyl Phenyl ether (101-55-3)			x												
14B. Butyl-benzyl phthalate (85-68-7)			x												
15B. 2-Chloro-naphthalene (7005-72-3)			x												
16B. 4-Chloro-phenyl phenyl ether (7005-72-3)			x												
17B. Chrysene (218-01-9)			x												
18B. Dibenzo-(a,h) Anthracene (53-70-3)			x												
19B. 1,2-Dichloro-benzene (95-50-1)			x												
20B. 1,3-Dichloro-Benzene (541-73-1)			x												
21B. 1,4-Dichloro-benzene (106-46-7)			x												
22B. 3,3-Dichloro-benzidene (91-94-1)			x												
23B. Diethyl Phthalate (84-66-2)			x												

Part C -- Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
<b>GC/MS FRACTION -- BASE/NEUTRAL COMPOUNDS (Continued)</b>															
24B. Dimethyl Phthalate (131-11-3)			x												
25B. Di-N-butyl Phthalate (84-74-2)			x												
26B. 2,4-Dinitro-toluene (121-14-2)			x												
27B. 2,6-Dinitro-toluene (606-20-2)			x												
28B. Di-n-octyl Phthalate (117-84-0)			x												
29B. 1,2-diphenyl-hydrazine (as azonbenzene) (122-66-7)			x												
30B. Fluoranthene (208-44-0)			x												
31B. Fluorene (86-73-7)			x												
32B. Hexachloro-benzene (118-71-1)			x												
33B. Hexachloro-butadiene (87-68-3)			x												
34B. Hexachloro-cyclopenta-diene (77-47-4)			x												

Part C - Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
35B. Hexachloroethane (67-72-1)			x												
36B. Indeno-(1,2,3-oc)-Pyrene (193-39-5)			x												
37B. Isophorone (78-59-1)			x												
38B. Napthalene (91-20-3)			x												
39B. Nitrobenzene (98-95-3)			x												
40B. N-Nitrosodimethylamine (62-75-9)			x												
41B. N-nitrosodi-n-propylamine (621-64-7)			x												
42B. N-nitrosodiphenylamine (86-30-6)			x												
43B. Phenanthrene (85-01-8)			x												
44B. Pyrene (129-00-0)			x												
45B. 1,2,4 Trichlorobenzene (120-82-1)			x												

Part C -- Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION -- PESTICIDES</b>															
1P. Aldrin (309-00-2)			x												
2P. α-BHC (319-84-6)			x												
3P. β-BHC (58-89-9)			x												
4P. gamma-BHC (58-89-9)			x												
5P. δ-BHC (319-86-8)			x												
6P. Chlordane (57-74-9)			x												
7P. 4,4'-DDT (50-29-3)			x												
8P. 4,4'-DDE (72-55-9)			x												
9P. 4,4'-DDD (72-54-8)			x												
10P. Dieldrin (60-57-1)			x												
11P. α- Endosulfan (115-29-7)			x												
12P. β- Endosulfan (115-29-7)			x												
13P. Endosulfan Sulfate (1031-07-8)			x												
14P. Endrin (72-20-8)			x												

Part C – Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION – PESTICIDES</b>															
15P. Endrin Aldehyde (7421-93-4)			x												
16P. Heptachlor (76-44-8)			x												
17P. Heptachlor Epoxide (1024-57-3)			x												
18P. PCB-1242 (53469-21-9)			x												
19P. PCB-1254 (11097-69-1)			x												
20P. PCB-1221 (11104-28-2)			x												
21P. PCB-1232 (11141-16-5)			x												
22P. PCB-1248 (12672-29-6)			x												
23P. PCB-1260 (11096-82-5)			x												
24P. PCB-1016 (12674-11-2)			x												
25P. Toxaphene (8001-35-2)			x												

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

V. INTAKE AND EFFLUENT CHARACTERISTICS (Continued from page 3 of Form C)											OUTFALL NO. 004	
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						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No of Analyses
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Biochemical Oxygen Demand (BOD)	47		31		12.15		15	mg/l				
b. Chemical Oxygen Demand (COD)	49						1	mg/l				
c. Total Organic Carbon (TOC)	11						1	mg/l				
d. Total Suspended Solids (TSS)	25		25		9.23		14	mg/l				
e. Ammonia (as N)	2		2		0.23		14	mg/l				
f. Flow (in units of MGD)	VALUE 0.10		VALUE 0.1		VALUE 0.015		15		MGD	VALUE		
g. Temperature (winter)	VALUE		VALUE		VALUE				°c	VALUE		
h. Temperature (summer)	VALUE 22.9		VALUE		VALUE		1		°c	VALUE		
i. pH	MINIMUM	MAXIMUM 7.47	MINIMUM	MAXIMUM			1	STANDARD UNITS				

Part B - In the MARK "X" column, place an "X" in the Believed Present column for each pollutant you know or have reason to believe is present. Place an "X" in the Believed Absent column for each pollutant you believe to be absent. If you mark the Believed Present column for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for analysis requirements.

1. POLLUTANT AND CAS NO.  (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		6. INTAKE (optional)			
	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Bromide (24959-67-9)	x		<5.0						1	mg/l				
b. Bromine Total Residual	x		0.09						1	mg/l				
c. Chloride	x		131						1	mg/l				
d. Chlorine, Total Residual	x		0.05				0.004		15	mg/l				
e. Color	x		10						1	PCU				
f. Fecal Coliform	x		430		150		25.8		15	c/100				
g. Fluoride (16984-48-8)	x		0.9						1	mg/l				
h. Hardness (as CaCO <sub>3</sub> )	x		258						1	mg/l				
i. Nitrate -- Nitrite (as N)	x		25.8						1	mg/l				
j. Nitrogen, Total Organic (as N)	x		<0.05						1	mg/l				
k. Oil and Grease	x		8						1	mg/l				
l. Phosphorous (as P), Total 7723-14-0	x		3.36						1	mg/l				
m. Radioactivity														
(1) Alpha, Total		x												
(2) Beta, Total		x												
(3) Radium Total		x												
(4) Radium, 226, Total		x												

Part B - Continued														
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 Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
n. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	x		216						1	mg/l				
o. Sulfide (as S)	x		<1.0						1	mg/l				
p. Sulfite (as SO <sub>4</sub> ) (14286-46-3)	x		1.0						1	mg/l				
q. Surfactants	x		<0.03						1	mg/l				
r. Aluminum, Total (7429-90)	x		0.36						1	mg/l				
s. Barium, Total (7440-39-3)	x		20						1	ug/l				
t. Boron, Total (7440-42-8)	x		<0.04						1	mg/l				
u. Cobalt, Total (7440-48-4)	x		<2						1	ug/l				
v. Iron, Total (7439-89-6)	x		0.07						1	mg/l				
w. Magnesium Total (7439-96-4)	x		25.3						1	mg/l				
x. Molybdenum Total (7439-98-7)	x		17						1	ug/l				
y. Manganese, Total (7439-96-6)	x		<0.01						1	mg/l				
z. Tin, Total (7440-31-5)	x		<5						1	ug/l				
aa. Titanium, Total (7440-32-6)	x		<2.0						1	ug/l				

**Part C** – If you are a primary industry and this outfall contains process wastewater, refer to Table C-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in the **Testing Required** column 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 this column (secondary industries, nonprocess wastewater outfalls, and Homebrewing GC/MS fractions), mark "X" in the **Believed Present** column for each pollutant you know or have reason to believe is present. Mark "X" in the **Believed Absent** column for each pollutant you believe to be absent. If you mark either the **Testing Required** or **Believed Present** columns for any pollutant, you must provide the result of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
<b>METALS, CYANIDE AND TOTAL PHENOLS</b>															
1M. Antimony Total (7440-36-0)	x			<5.0						1	ug/l				
2M. Arsenic, Total (7440-38-2)	x			<4.0						1	ug/l				
3M. Beryllium Total (7440-41-7)	x			<0.2						1	ug/l				
4M. Cadmium Total (7440-43-9)	x			<0.5						1	ug/l				
5M. Chromium Total (7440-43-9)	x			3.0						1	ug/l				
6M. Copper Total (7550-50-8)	x			18						1	ug/l				
7M. Lead Total (7439-92-1)	x			4.0						1	ug/l				
8M. Mercury Total (7439-97-6)	x			<0.2						1	ug/l				
9M. Nickel, Total (7440-02-0)	x			<3.0						1	ug/l				
10M. Selenium, Total (7782-49-2)	x			13						1	ug/l				
11M. Silver, Total (7440-28-0)	x			0.2						1	ug/l				

Part C - Continued															
I. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
<b>METALS, CYANIDE AND TOTAL PHENOLS (Continued)</b>															
12M. Thallium, Total (7440-28-0)	x			<1.0						1	ug/l				
13M. Zinc, Total (7440-66-6)	x			25						1	ug/l				
14M. Cyanide, Total (57-12-5)	x			<0.01						1	mg/l				
15M. Phenols, Total	x			<10.0						1	ug/l				
<b>DIOXIN</b>															
2,3,7,8 Tetra- chlorodibenzo, P, Dioxin (1784-01-6)			x	DESCRIBE RESULTS:											
<b>GC/MS FRACTION - VOLATILE COMPOUNDS</b>															
1V. Acrolein (107-02-8)	x			<50						1	ug/l				
2V. Acrylonitrile (107-13-1)	x			<5.0						1	ug/l				
3V. Benzene (71-43-2)	x			<5.0						1	ug/l				
5V. Bromoform (75-25-2)	x			<5.0						1	ug/l				
6V. Carbon Tetrachloride (56-23-5)	x			<5.0						1	ug/l				
7V. Chloro- benzene (108-90-7)	x			<5.0						1	ug/l				
8V. Chlorodibro- momethane (124-48-1)	x			<5.0						1	ug/l				

Part C - Continued															
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
9V. Chloroethane (74-00-3)	x			<5.0						1	ug/l				
10V. 2-Chloroethylvinyl Ether (110-75-8)	x			<5.0						1	ug/l				
11V. Chloroform (67-66-3)	x			47						1	ug/l				
12V. Dichlorobromomethane (75-71-8)	x			11.0						1	ug/l				
14V. 1,1-Dichloroethane (75-34-3)	x			<5.0						1	ug/l				
15V. 1,2-Dichloroethane (107-06-2)	x			<5.0						1	ug/l				
16V. 1,1-Dichlorethylene (75-35-4)	x			<5.0						1	ug/l				
17V. 1,2-Dichloropropane (78-87-5)	x			<5.0						1	ug/l				
18V. 1,3-Dichloropropylene (452-75-6)	x			<5.0						1	ug/l				
19V. Ethylbenzene (100-41-4)	x			<5.0						1	ug/l				
20V. Methyl Bromide (74-83-9)	x			<5.0						1	ug/l				

Part C - Continued															
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
21V. Methyl Chloride (74-87-3)	x			<5.0						1	ug/l				
22V. Methylene Chloride (75-00-2)	x			<5.0						1	ug/l				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	x			<5.0						1	ug/l				
24V. Tetrachloroethylene (127-18-4)	x			<5.0						1	ug/l				
25V. Toluene (108-88-3)	x			<5.0						1	ug/l				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	x			<5.0						1	ug/l				
27V. 1,1,1-Trichloroethane (71-55-6)	x			<5.0						1	ug/l				
28V. 1,1,2-Trichloroethane (79-00-5)	x			<5.0						1	ug/l				
29V. Trichloroethylene (79-01-6)	x			<5.0						1	ug/l				
30V. Vinyl Chloride (75-01-4)	x			<5.0						1	ug/l				

Part C - Continued																	
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses		
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)			
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass			
<b>GC/MS FRACTION - ACID COMPOUNDS</b>																	
1A. 2-Chloro-phenol (95-57-8)	x			<10.0						1	ug/l						
2A. 2,4-Dichloro-phenol (120-83-2)	x			<20.0						1	ug/l						
3A. 2,4-Dimethylphenol (105-67-9)	x			<10.0						1	ug/l						
4A. 4,6-Dinitro-o-cresol (534-52-1)	x			<50.0						1	ug/l						
5A. 2,4-Dinitro-phenol (51-28-5)	x			<50.0						1	ug/l						
6A. 2-Nitro-phenol (88-75-5)	x			<20.0						1	ug/l						
7A. 4-Nitro-phenol (100-02-7)	x			<50.0						1	ug/l						
8A. P-chloro-m-cresol (59-50-7)	x			<20.0						1	ug/l						
9A. Pentachloro-phenol (87-88-5)	x			<50.0						1	ug/l						
10A. Phenol (108-05-2)	x			<10.0						1	ug/l						
11A. 2,4,6-Trichlorophenol (88-06-2)	x			<10.0						1	ug/l						
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>																	
1B. Acenaphthene (83-32-9)			x														

Part C - Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
2B. Acena- phtylene (208-96-8)			x												
3B. Anthra- cene (120-12-7)			x												
4B. Benzidine (92-87-5)			x												
5B. Benzo(a)- anthracene (56-55-3)			x												
6B. Benzo(a)- pyrene (50-32-8)			x												
7B. 3,4-Benzo- fluoranthene (205-99-2)			x												
8B. Benzo(ghi) perylene (191-24-2)			x												
9B. Benzo(k)- fluoranthene (207-08-9)			x												
10B. Bis(2- chlor- oethoxy)- methane (111-91-1)			x												
11B. Bis (2-chlor- oisopropyl)- Ether			x												
12B. Bis (2-ethyl- hexyl)- phthalate (117-81-7)			x												

Part C - Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
13B. 4-Bromo-phenyl Phenyl ether (101-55-3)			x												
14B. Butyl-benzyl phthalate (85-68-7)			x												
15B. 2-Chloro-naphthalene (7005-72-3)			x												
16B. 4-Chloro-phenyl phenyl ether (7005-72-3)			x												
17B. Chrysene (218-01-9)			x												
18B. Dibenzo-(a,h) Anthracene (53-70-3)			x												
19B. 1,2-Dichloro-benzene (95-50-1)			x												
20B. 1,3-Dichloro-Benzene (541-73-1)			x												
21B. 1,4-Dichloro-benzene (106-46-7)			x												
22B. 3,3-Dichloro-benzidene (91-94-1)			x												
23B. Diethyl Phthalate (84-66-2)			x												

Part C - Continued															
I. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
24B. Dimethyl Phthalate (131-11-3)			x												
25B. Di-N-butyl Phthalate (84-74-2)			x												
26B. 2,4-Dinitrotoluene (121-14-2)			x												
27B. 2,6-Dinitrotoluene (606-20-2)			x												
28B. Di-n-octyl Phthalate (117-84-0)			x												
29B. 1,2-diphenylhydrazine (as azonbenzene) (122-66-7)			x												
30B. Fluoranthene (208-44-0)			x												
31B. Fluorene (86-73-7)			x												
32B. Hexachlorobenzene (118-71-1)			x												
33B. Hexachlorobutadiene (87-68-3)			x												
34B. Hexachlorocyclopentadiene (77-47-4)			x												

Part C - Continued															
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)</b>															
35B. Hexachloroethane (67-72-1)			x												
36B. Indeno-(1,2,3-oc)-Pyrene (193-39-5)			x												
37B. Isophorone (78-59-1)			x												
38B. Napthalene (91-20-3)			x												
39B. Nitrobenzene (98-95-3)			x												
40B. N-Nitrosodimethylamine (62-75-9)			x												
41B. N-nitrosodipropylamine (621-64-7)			x												
42B. N-nitrosodiphenylamine (86-30-6)			x												
43B. Phenanthrene (85-01-8)			x												
44B. Pyrene (129-00-0)			x												
45B. 1,2,4 Trichlorobenzene (120-82-1)			x												

Part C - Continued

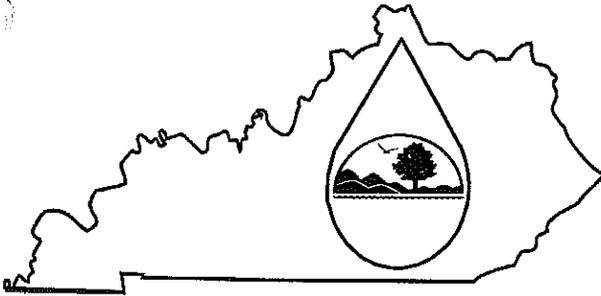
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - PESTICIDES</b>															
1P. Aldrin (309-00-2)			x												
2P. α-BHC (319-84-6)			x												
3P. β-BHC (58-89-9)			x												
4P. gamma-BHC (58-89-9)			x												
5P. δ-BHC (319-86-8)			x												
6P. Chlordane (57-74-9)			x												
7P. 4,4'-DDT (50-29-3)			x												
8P. 4,4'-DDE (72-55-9)			x												
9P. 4,4'-DDD (72-54-8)			x												
10P. Dieldrin (60-57-1)			x												
11P. α- Endosulfan (115-29-7)			x												
12P. β- Endosulfan (115-29-7)			x												
13P. Endosulfan Sulfate (1031-07-8)			x												
14P. Endrin (72-20-8)			x												

Part C -- Continued															
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
<b>GC/MS FRACTION - PESTICIDES</b>															
15P. Endrin Aldehyde (7421-93-4)			x												
16P. Heptachlor (76-44-8)			x												
17P. Heptachlor Epoxide (1024-57-3)			x												
18P. PCB-1242 (53469-21-9)			x												
19P. PCB-1254 (11097-69-1)			x												
20P. PCB-1221 (11104-28-2)			x												
21P. PCB-1232 (11141-16-5)			x												
22P. PCB-1248 (12672-29-6)			x												
23P. PCB-1260 (11096-82-5)			x												
24P. PCB-1016 (12674-11-2)			x												
25P. Toxaphene (8001-35-2)			x												

# KPDES FORM F

## KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

### PERMIT APPLICATION



A complete application consists of this form and Form I.  
 For additional information, Contact KPDES Branch, (502) 564-3410.

<b>I. OUTFALL LOCATION</b>				AGENCY USE													
----------------------------	--	--	--	------------	--	--	--	--	--	--	--	--	--	--	--	--	--

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

A. Outfall Number	B. Latitude			C. Longitude			D. Receiving Water (name)
007	38	10	09	82	37	03	Big Sandy River
008	38	10	12	82	36	50	Big Sandy River
009	38	10	31	82	36	40	Big Sandy River
010	38	10	24	82	36	39	Big Sandy River
011	38	10	18	82	36	41	Big Sandy River

<b>II. IMPROVEMENTS</b>							
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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.

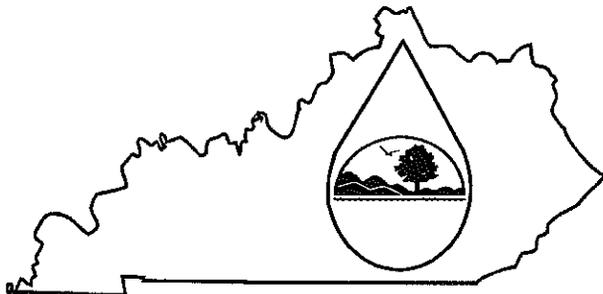
1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls Source of Discharge		3. Brief Description of Project	4. Final Compliance Date	
	No.			a. req.	b. proj.
N/A	N/A	N/A	N/A	N/A	N/A

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

<b>III. SITE DRAINAGE MAP</b>
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Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility.

# KPDES FORM F



## KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

### PERMIT APPLICATION

A complete application consists of this form and Form 1.  
 For additional information, Contact KPDES Branch, (502) 564-3410.

<b>I. OUTFALL LOCATION</b>				AGENCY USE											
----------------------------	--	--	--	------------	--	--	--	--	--	--	--	--	--	--	--

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

A. Outfall Number	B. Latitude			C. Longitude			D. Receiving Water (name)
012	38	10	14	82	36	46	Big Sandy River
013	38	10	11	82	36	54	Big Sandy River
014	38	10	10	82	36	58	Big Sandy River
015	38	10	09	82	37	00	Big Sandy River
016	38	10	08	82	37	09	Big Sandy River

### II. 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.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	No.	Source of Discharge		a. req.	b. proj.
N/A	N/A	N/A	N/A	N/A	N/A

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

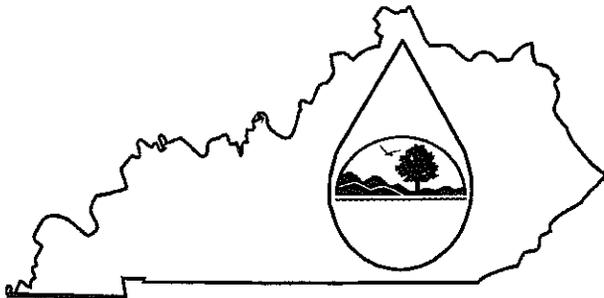
### III. SITE DRAINAGE MAP

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility.

# KPDES FORM F

## KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

### PERMIT APPLICATION



A complete application consists of this form and Form 1.  
 For additional information, Contact KPDES Branch, (502) 564-3410.

<b>I. OUTFALL LOCATION</b>	AGENCY USE								
----------------------------	------------	--	--	--	--	--	--	--	--

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

A. Outfall Number	B. Latitude			C. Longitude			D. Receiving Water (name)
017	38	10	08	82	37	15	Big Sandy River
019	38	10	09	82	37	04	Big Sandy River

### II. 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.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls Source of Discharge		3. Brief Description of Project	4. Final Compliance Date	
	No.			a. req.	b. proj.
N/A	N/A	N/A	N/A	N/A	N/A

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

### III. SITE DRAINAGE MAP

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility.

**IV. NARRATIVE DESCRIPTION OF POLLUTANT SOURCES**

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
007	7.7 acres	91.8 acres	013	0.0 acres	0.4 acres
008	0.0 acres	5.7 acres	014	0.0 acres	2.0 acres
009	0.0 acres	104.3 acres	015	0.35 acres	1.7 acres
010	0.0 acres	0.8 acres	016	0.1 acres	0.7 acres
011	0.0 acres	1.3 acres	017	5.2 acres	38.8 acres
012	0.0 acres	1.2 acres	019	0.4 acres	1.5 acres

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

A 500,000 gallon diked fuel oil tank and associated piping, trenched fly ash lines, electrical transformers are within the drainage area of Outfall 007. Tote tanks and diked tanks holding sulfuric acid and HEDP are within the drainage areas of Outfalls 008. Tote tanks and diked tanks holding sulfuric acid and HEDP and G.E. Betz Spectrus CT 1300 and AZ8104 are within the drainage area of 016. Sodium hypochlorite and sodium bromide tanks (inside bldgs. on both units) are also within the drainage area of Outfalls 008 and 016. Also within the drainage area of 008 are storage tanks of ammonia hydroxide and used oil tote tanks. Tote tanks containing G.E. Betz PY5200, Spectrus BD 1501, Spectrus CT 1300, AZ 8104, sodium hydroxide and Nalco 1232 cleaner are stored within Outfall 015. Outfall 017 contains a diked electrical transformer, underground concrete vaults containing brine, a coal conveyor, a vehicle washing facility and herbicides are used on the railroad tracks to control weeds.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table F-1
All	Catch basin gratings prevent large debris and particles from entering the storm drains. Many of the catch basins are surrounded by grassy areas which act as filters or buffer zones to prevent the release of solids. Others are surrounded by gravel which may act in a similar manner. Outfalls are inspected periodically and good housekeeping measures are also practiced.	1-T

**V. NON-STORM WATER DISCHARGES**

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of non-storm water discharges, and that all non-storm water discharges from these outfall(s) are identified in either an accompanying Form C or Form SC application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
John M. McManus - Vice President		Sept 27, 2005

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

From the analysis of the water usage flow diagram, all storm water discharges are normally free of non-storm water discharges.

**I. SIGNIFICANT LEAKS OR SPILLS**

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

12-23-02 Underground fuel oil return tank overflow into outfall 015, approx. 1000 gals. (did not reach the river).  
 6-25-03 No. 6 fuel oil underground piping leak from a 3" return line. Unknown quantity.  
 12-17-03 spilled approx. 50 gals. of no. 2 diesel fuel when testing new pumps  
 1-26-04 spilled approx. 2,000 gals. of no. 2 diesel fuel at coal yard that went into the coal pile runoff ponds.

**VII. DISCHARGE INFORMATION**

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Tables F-1, F-2, and F-3 are included on separate pages.

E: Potential discharges not covered by analysis - is any toxic pollutant listed in Table F-2, F-3, or F-4, a substance which you currently use or manufacture as an intermediate or final product or by product.

Yes (list all such pollutants below)  No (go to Section IX)

**VIII. 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 (list all such results below)  No (go to Section IX)

N/A

**IX. CONTRACT ANALYSIS INFORMATION**

Were any of the analyses reported in item VII performed by a contract laboratory or consulting firm?

Yes (list the name, address and telephone number of, and pollutants analyzed by each such laboratory or firm below; use additional sheets if necessary).

No (go to Section IX)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
SGS Environmental Services, Inc.	1258 Greenbrier Steet Charleston, WV 25311	(304) 346-0725	KPDES Form F: color, bromide, surfactants, BOD, fecal coliform
AEP Dolan Environmental Laboratory, Inc.	400 Bixby Road Groveport, OH 43125	(614) 836-4188	aluminum, iron, Mg, Mn, As, Ba, Be, Cr, Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Tl, Ti, Zn, NH3, B, COD, Cl, F, NO3, NO2, P, TSS, SO4, TKN, TON
Big Sandy Plant Lab	23000 Hwy 23 Louisia, KY 41230	(606) 686-2415 ext. 1316	flow, temp., pH, FAC, TRC, TRO, Tot. Br., Hardness, DO

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**X. 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 personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

<b>NAME &amp; OFFICIAL TITLE (type or print)</b>	<b>AREA CODE AND PHONE NO.</b>
John M. McManus - Vice President	(614) 716-1268
<b>SIGNATURE</b> <i>Patrick A. DeHock for John M. McManus</i>	<b>DATE SIGNED</b> <i>Sept 27, 2005</i>

**VII. DISCHARGE INFORMATION** **OUTFALL NO: 007**

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.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During 1 <sup>st</sup> 20 Minutes	Flow-weighted Composite	Grab Sample Taken During 1 <sup>st</sup> 20 Minutes	Flow-weighted Composite		
Oil and Grease	1.0 mg/l	N/A			1	vehicle traffic, coal and ash fines
Biological Oxygen Demand BOD <sub>5</sub>	<2.0 mg/l	<2.0 mg/l			1	
Chemical Oxygen Demand (COD)	56 mg/l	38 mg/l			1	
Total Suspended Solids (TSS)	874 mg/l	401 mg/l			1	
Total Kjeldahl Nitrogen	5.16 mg/l	5.23 mg/l			1	
Nitrate plus Nitrite Nitrogen	1.53 mg/l	5.62 mg/l			1	
Total Phosphorus	<0.01 mg/l	1.96 mg/l			1	
pH	7.92 Minimum	Maximum	Minimum	Maximum		

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's KPDES permit for its process wastewater (if the facility is operating under an existing KPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During 1 <sup>st</sup> 20 Minutes	Flow-weighted Composite	Grab Sample Taken During 1 <sup>st</sup> 20 Minutes	Flow-weighted Composite		
color	10 PCU	10 PCU			1	metal structures, coal and ash fines
bromide	<5.0 mg/l	<5.0 mg/l			1	
surfactants	0.033 mg/l	0.044 mg/l			1	
aluminum	13.5 mg/l	9.16 mg/l			1	
iron	16.2 mg/l	9.96 mg/l			1	
magnesium	9.5 mg/l	15.0 mg/l			1	
manganese	0.53 mg/l	0.26 mg/l			1	
arsenic	13 ug/l	7 ug/l			1	
barium	180 ug/l	123 ug/l			1	
beryllium	1.7 ug/l	1.0 ug/l			1	
chromium	22 ug/l	15 ug/l			1	
cobalt	13 ug/l	7 ug/l			1	
copper	56 ug/l	43 ug/l			1	
lead	23 ug/l	13 ug/l			1	
mercury	<0.2 ug/l	<0.2 ug/l			1	
molybdenum	5 ug/l	4 ug/l			1	
nickel	28 ug/l	17 ug/l			1	

selenium	8 ug/l	7 ug/l			1
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Part C - List each pollutant shown in Tables F-2, F-3, and F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

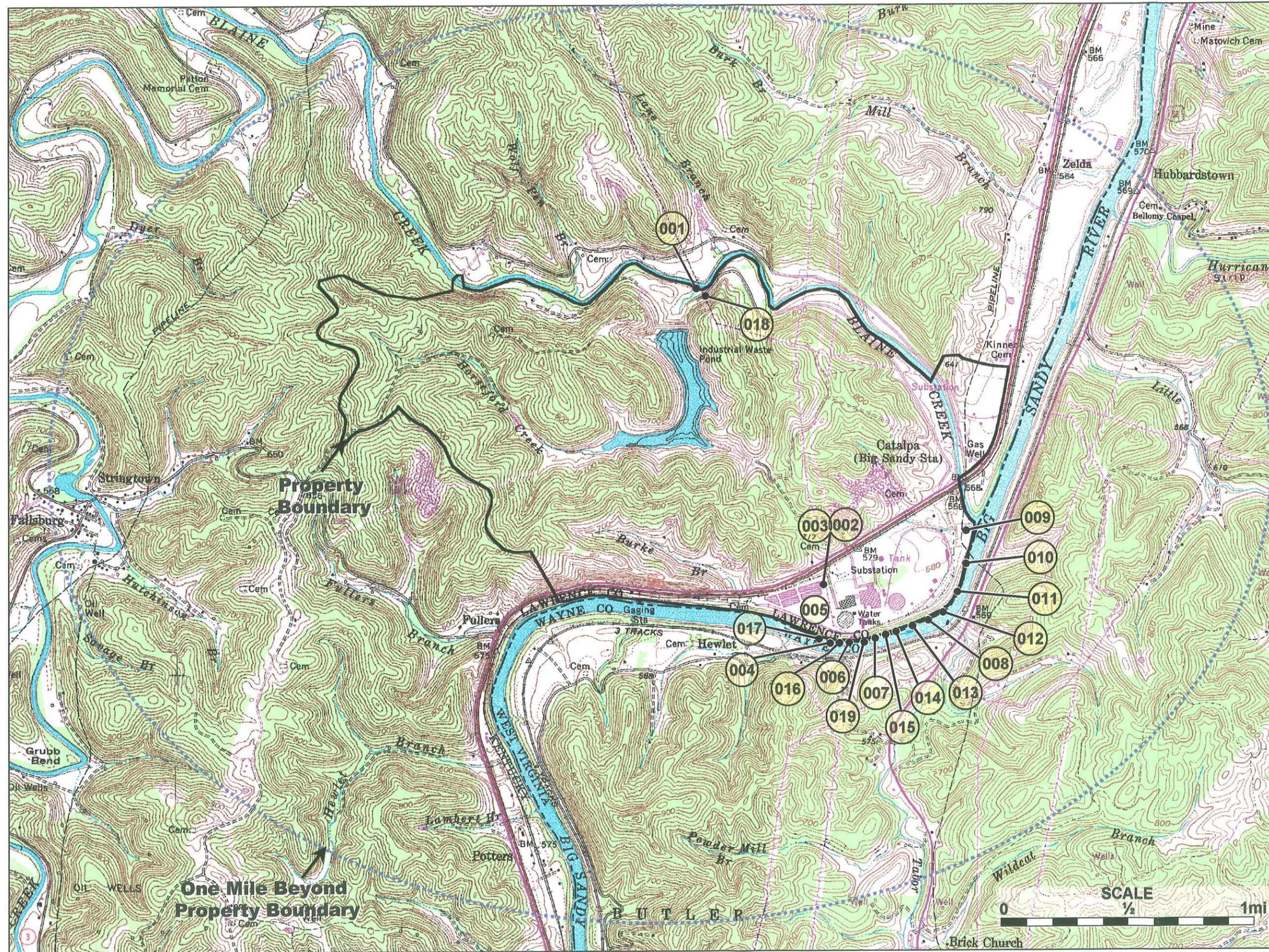
Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During 1 <sup>st</sup> 20 Minutes	Flow-weighted Composite	Grab Sample Taken During 1 <sup>st</sup> 20 Minutes	Flow-weighted Composite		
silver	<0.2 ug/l	<0.2 ug/l			1	metal structures, coal and ash fines
thallium	<1 ug/l	<1.0 ug/l			1	
titanium	284 ug/l	199 ug/l			1	
zinc	466 ug/l	242 ug/l			1	
ammonia, NH3	<0.05 mg/l	<0.05 mg/l			1	
boron	0.05 mg/l	0.06 mg/l			1	
chloride	10 mg/l	17 mg/l			1	
cyanide	<0.01 mg/l				1	
fluoride	0.2 mg/l	0.3 mg/l			1	
FAC	0.02 mg/l				1	
oil & grease	1 mg/l				1	
phenolics	0.001 mg/l				1	
sulfate	58 mg/l	131 mg/l			1	
TON	0.17 mg/l	2.04 mg/l			1	
TRC	0.02 mg/l				1	
TRO	0.04 mg/l				1	
Tot. Bromine	0.05 mg/l				1	
hardness	96 mg/l				1	
DO	6.48 mg/l				1	
fecal coliform	<4000 c/100ml				1	

Part D - Provide data for the storm event(s) which resulted in the maximum values for the flow-weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gal/min or specify units)	6. Total flow from rain event (gallons or specify units)
8-16-05	110 minutes	1.425 inches	120 hours	5.05 MGD	224,000 gallons

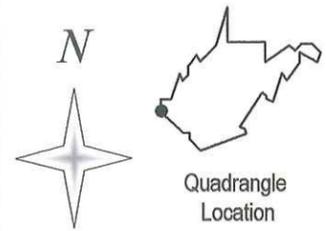
7. Provide a description of the method of flow measurement or estimate.

Measured the inches of water in outfall 007 discharge pipe and used an EPA formula for estimating flow from an open channel pipe.



Fallsburg / Prichard, KY – W Va  
 Quadrangles

USGS Topographic Map



## Outfall Number

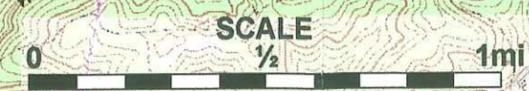
Plant Latitude 38° 10' 16"  
 Plant Longitude 82° 37' 04"

Kentucky Power  
 Company  
**Big Sandy Plant**

USGS Topographic  
 Map

Water & Ecological  
 Resource Services **AEP**

08.25.05

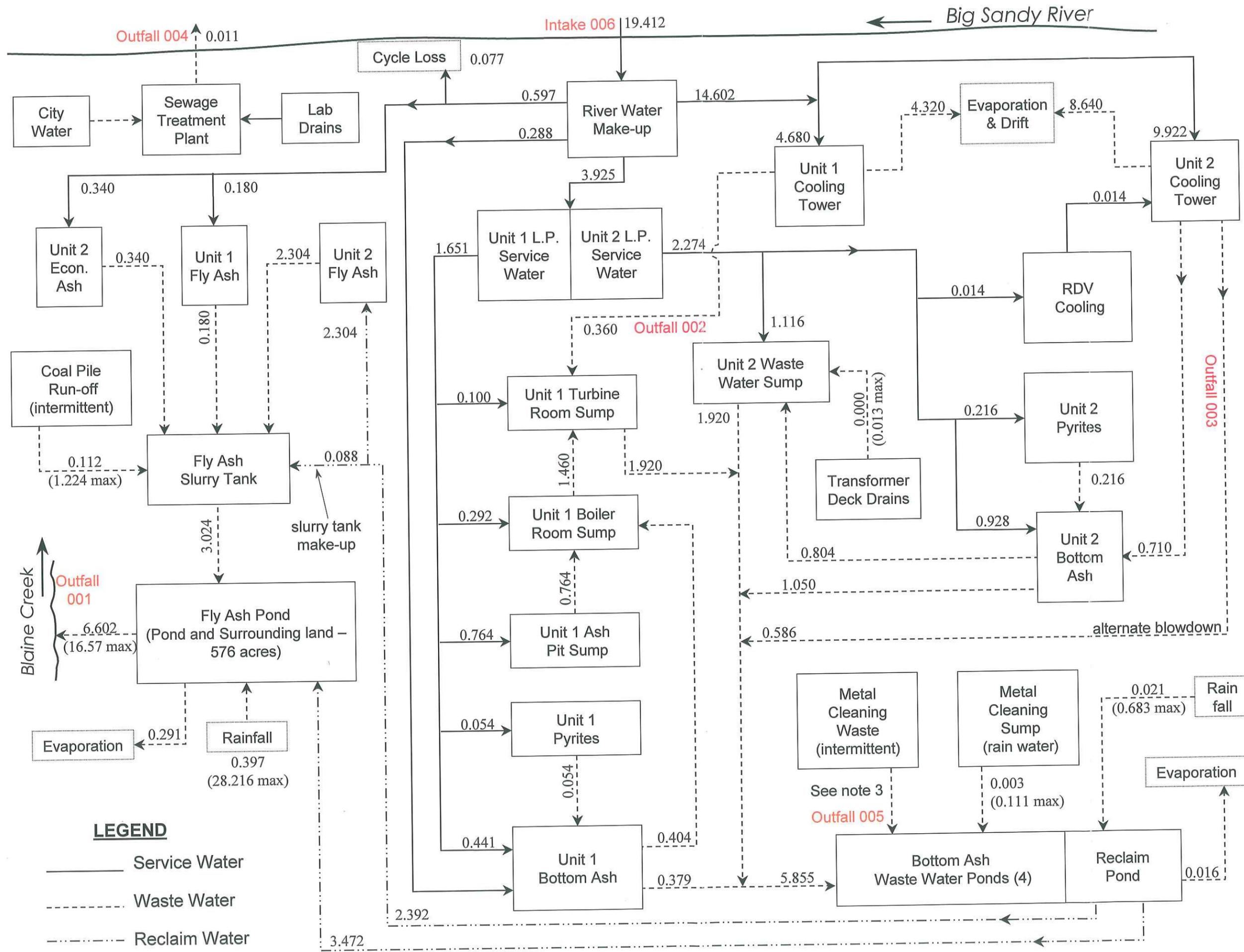


**Property Boundary**

**One Mile Beyond  
 Property Boundary**

BUTLER

Brick Church

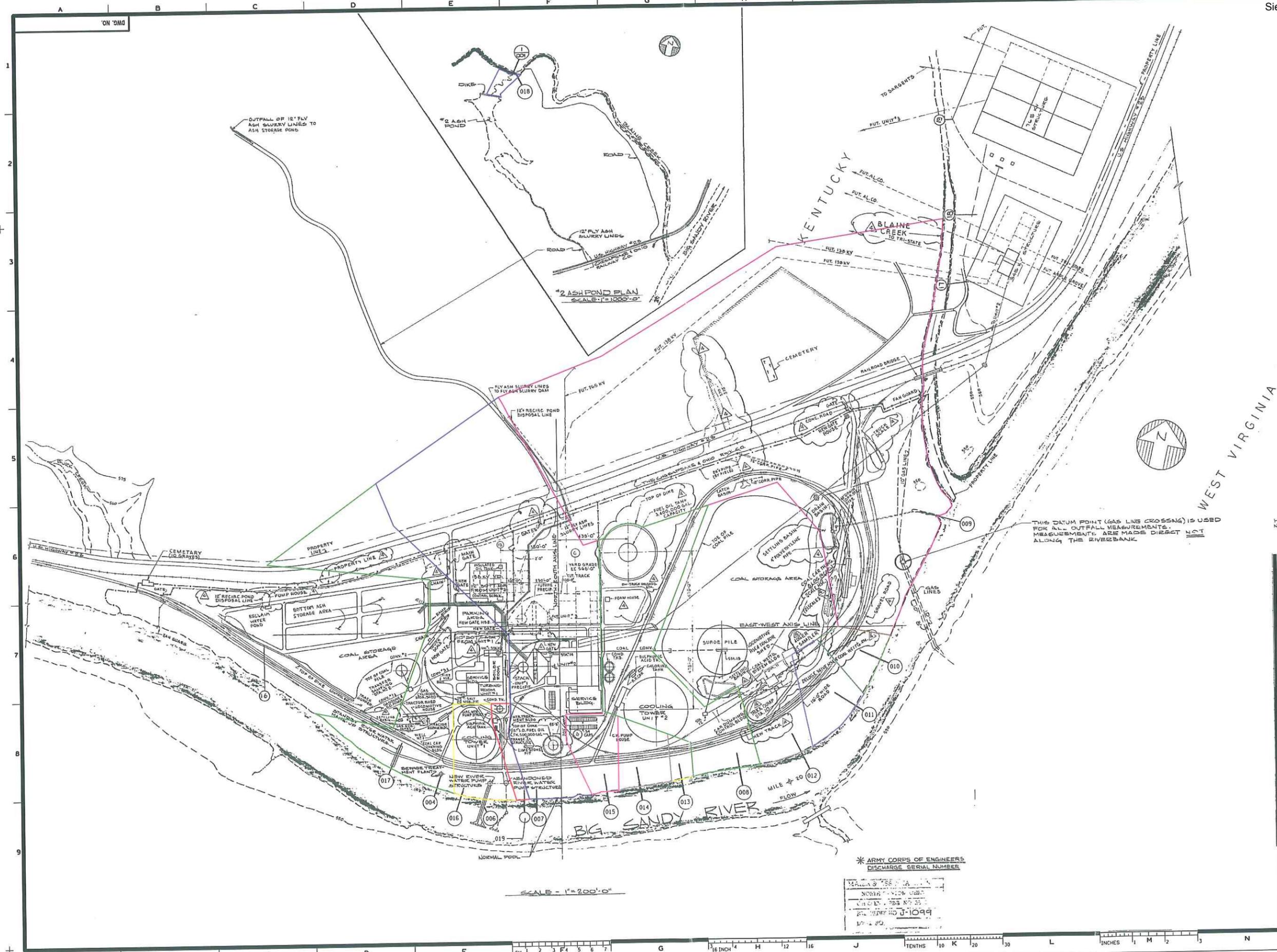


- NOTES:**
- Flows represent actual water usage with both units operating at full load.
  - Normal rainfall values based on avg. annual rainfall of 46.36 in/yr. Maximum rainfall includes rainfall for a 10yr – 24 hr event (4.1 in/day).
  - Approximately 500,000 gallons every 5 to 7 years.

ALL FLOWS MEASURED IN MILLION GALLONS PER DAY (MGD)

**Kentucky Power Company**  
**Big Sandy Plant**

Water Usage Flow Diagram



HIGH WATER - 1937  
 NORMAL POOL  
 ELEV  
 EL. 51

THIS DATUM POINT (GAS LINE CROSSING) IS USED FOR ALL OUTFALL MEASUREMENTS. MEASUREMENTS ARE MADE DIRECTLY ALONG THE RIVERBANK.

DATE	NO.	DESCRIPTION	APPROV.
<b>REVISIONS</b>			
01/12/05	1	st/bs/12/Geo_hydro_site/30400.tif	
01/12/05	2	st/bs/12/Geo_hydro_site/30400.tif	

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KENTUCKY POWER COMPANY  
**BIG SANDY PLANT**  
 LAWRENCE COUNTY KENTUCKY

**PLANT LAYOUT WITH DRAINAGE AREA**

DWG. NO. 12-30400

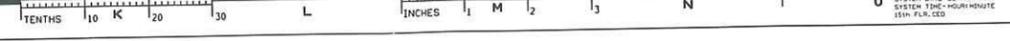
SCALE: CIVIL ENGINEERING DIVISION  
 DESIGNED BY: [ ]  
 DRAWN BY: [ ]  
 CHECKED BY: [ ]  
 APPROVED BY: [ ]  
**AEP AMERICAN ELECTRIC POWER**  
 1 RIVERSIDE PLAZA  
 COLUMBUS, OH 43215

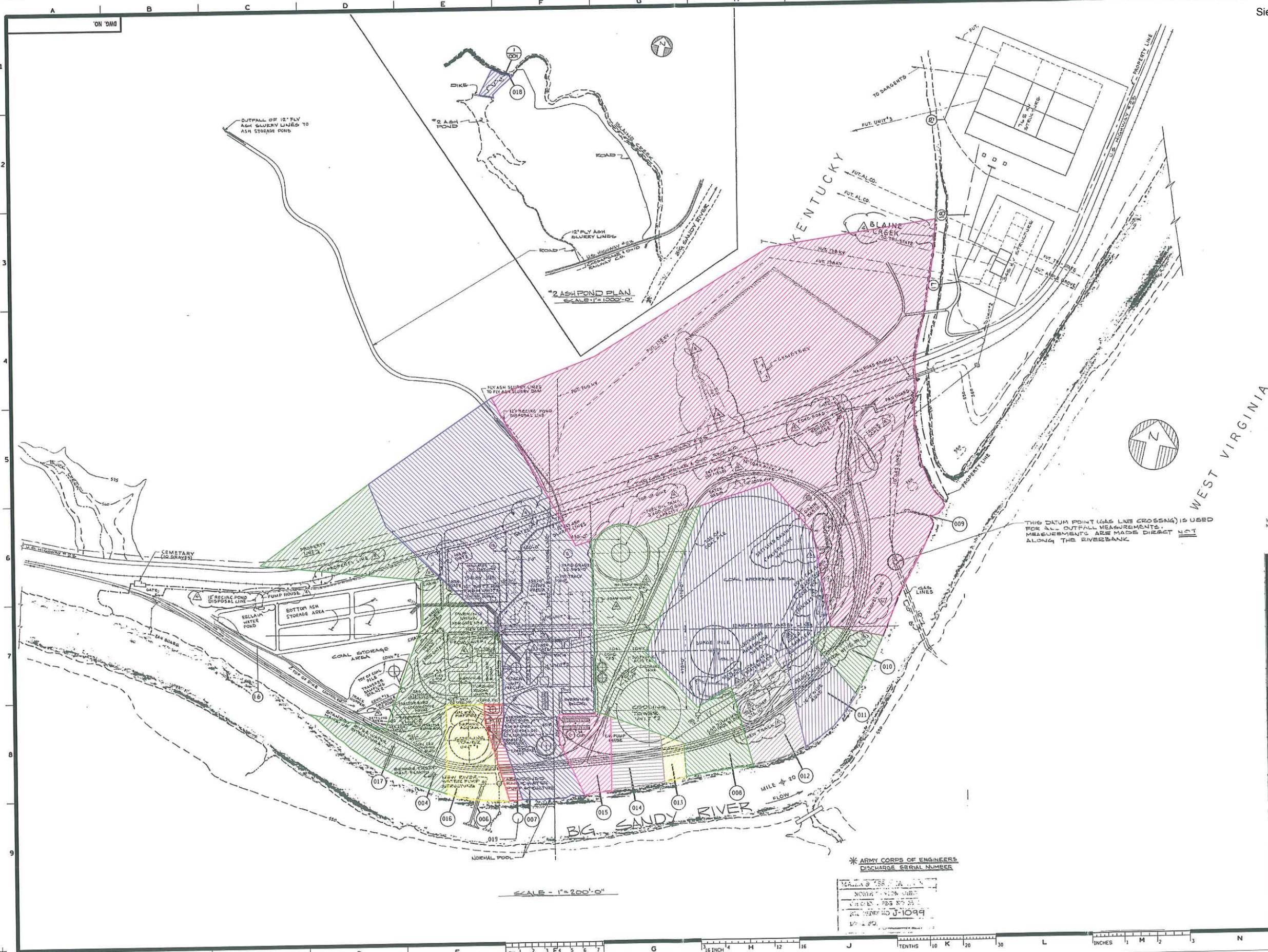
SYSTEM DATE: 00-0000-1111  
 SYSTEM TIME: 00:00:00  
 SYSTEM USER: [ ]

SCALE - 1" = 200'-0"

\* ARMY CORPS OF ENGINEERS  
 DISCHARGE SERIAL NUMBER

MADE & ISSUED BY: [ ]  
 NORTH ARROW: [ ]  
 CHECKED BY: [ ]  
 DATE: [ ]





HIGH WATER - 1977 EL. 51  
 NORMAL POOL EL. 51

DATE	NO.	DESCRIPTION	APPD.
REVISIONS			
01/12/05	1	Initial Issue	
02/15/05	2	Revised	

KENTUCKY POWER COMPANY  
**BIG SANDY PLANT**  
 LAWRENCE COUNTY KENTUCKY  
**PLANT LAYOUT WITH DRAINAGE AREA**

DWG. NO. 12-30400  
 SCALE: CIVIL ENGINEERING DIVISION  
 APPROVED BY: [Signature]  
 AEP AMERICAN ELECTRIC POWER  
 1 RIVERSIDE PLAZA  
 COLUMBUS, OH 43215

## KENTUCKY POWER COMPANY - BIG SANDY PLANT

### DESCRIPTION OF TREATMENT SYSTEMS AND OUTFALLS

#### Outfall 001 - Fly Ash Pond Discharge

The Big Sandy Plant, like any coal-fired electric generating station its size, produces large quantities of coal ash, as well as other process wastes. In developing a method for treatment and disposal of plant wastes which, in terms of volume, consist almost entirely of ash, an efficient wastewater treatment scheme was designed enabling the plant to have only one process wastewater discharge, the fly ash pond discharge to Blaine Creek (Outfall 001).

At Big Sandy Plant, various waste streams have been combined for treatment and reuse. Specifically, the cooling tower blowdown from Unit 2 is used to sluice Unit 2 bottom ash and pyrites to the bottom ash wastewater treatment system through Outfall 001. Coal pile runoff is discharged to the bottom ash pond. Bottom ash and low-volume wastewaters from both units are also discharged to the bottom ash wastewater system for mixing, self-neutralization, and settling. From the bottom ash wastewater treatment ponds, the treated wastewater is decanted into a reclaim pond. A portion of this water is pumped back to the plant for reuse in sluicing fly ash to the fly ash pond. Excess treated water from the reclaim pond is also pumped directly to the fly ash pond for final clarification with the fly ash transport water, and the combined waste stream is discharged into Blaine Creek.

Periodically, the bottom ash wastewater treatment system receives other wastewater, resulting from the chemical cleaning of the waterside of the steam generating tubes of Unit 2 (Outfall 005) and deslagging operations from both units. The chemical cleaning wastes from Unit 2 are chemically treated in the metal cleaning waste tank to reduce the level of iron and copper below 1 mg/L before discharging into the bottom ash pond. Boiler deslagging wastes and air preheater wash wastes (which do not involve chemicals) are discharged to the bottom ash ponds for self-neutralization and settling via the bottom ash handling system.

The bottom ash wastewater treatment system consists of two series of treatment ponds (two ponds per series) and a reclaim pond. One series of ponds is used while the other is being excavated. Coal ash and other residues from the bottom ash wastewater ponds are temporarily stored for later beneficial reuse. Bottom ash is used by the State Highway Department for ice control on roadways, for plant construction projects, and some is sold as a light-weight aggregate for concrete block construction.

The fly ash pond at Big Sandy Plant was formed by building a dam and utilizing a portion of the hollow drained by Horseford Creek. Therefore, in addition to the wastewater input to the fly ash pond, the pond receives rainfall runoff from the Horseford Creek drainage basin of 576 acres, of which 135 acres are occupied by the fly ash pond. In 1993, a permit to raise the dam was received from the Kentucky Department of Environmental Protection utilizing a segmented construction methodology. This on-going construction project will increase the area of the fly ash pond to approximately 185 acres.

### Outfalls 002 and 003 - Cooling Tower Blowdowns

Big Sandy Units 1 and 2 utilize natural draft hyperbolic cooling towers in conjunction with closed cycle cooling water (CCCW) systems to condense steam into condensate. The Unit 1 CCCW system circulates water at a rate of 120,000 GPM while the Unit 2 CCCW system circulates water at a rate of 250,000 GPM. Water is drawn from the cooling tower basins by pumps, circulated through the main steam turbine condensers, and returned to the cooling towers. The closed cycle is completed as the water returns to the circulating water pumps via open concrete flumes. The individual circulating water systems are treated with sodium hypochlorite and sodium bromide for one to two 30-minute periods per day. The circulating water systems are also treated with sulfuric acid for pH control, PY 5200, a deposit control agent (a dispersent) and 1-hydroxyethylidene-1,1-diphosphonic (HEDP) acid to prevent scale formation in the condensers. A copper corrosion inhibitor, AZ8104, and an algaecide, Spectrus CT 300, are also used.

In order to maintain the quality of cooling water required for efficient operation of the circulating water systems, it is necessary to blowdown (discharge) a portion of the circulating water. Blowdown is accomplished on Unit 1 by opening a manually-operated valve which discharges through Outfall 002 to the Unit 1 turbine room sump. The water from the turbine room sump is subsequently pumped to the bottom ash pond (see enclosed water usage flow diagram). The circulating water system on Unit 2 is blown down by using cooling tower water, discharging through Outfall 003, to transport bottom ash from Unit 2 to the bottom ash storage ponds (see enclosed water usage flow diagram). An alternate blowdown for the Unit 2 cooling tower also discharges into the bottom ash pond. Each cooling tower basin is equipped with an emergency overflow to the Big Sandy River. In the event of an emergency, the Unit 1 cooling tower overflow would discharge through Outfall 007, and the Unit 2 overflow would discharge through Outfall 008.

### Outfall 004 - Sewage Treatment Plant

The sewage treatment plant is a prefabricated package sewage treatment plant, which utilizes a modified activated sludge treatment process known as "extended aeration." The treatment facility has a design capacity of 15,000 GPD and consists of the following:

- A 1" spaced inlet bar screen
- A 6,600 gallon equalization chamber
- A 15,000 gallon aeration chamber
- A 2,500 gallon clarifying chamber
- A 3,000 gallon sludge holding chamber
- A 2,100 gallon chlorination chamber
- A dechlorination unit

Wastewater passing through the sewage treatment plant is processed by the following treatment stages:

- Pretreatment (trash trap and inlet bar screen)
- Equalization
- Aeration
- Clarification
- Chlorination
- Dechlorination

Sanitary wastewater passes through a bar screen and enters the equalization chamber which is equipped with grinder pumps to facilitate transfer of solid waste to the aeration chamber. The flow rate to the aeration chamber is controlled by a flow-splitter channel equipped with manually-operated slide gates to allow water to be directed to the aeration chamber or returned to the equalization chamber. The aeration chamber is designed to give a 24-hour retention time. The incoming sewage is mixed with an activated sludge containing bacteria and other microorganisms to decompose the sewage. Wastewater flows from the aeration chamber into the clarifier where floating solids are skimmed and the activated sludge settles to the bottom. The floating solids and settled sludge are recirculated back to the aeration chamber.

Clarified wastewater passes through a chlorine contact chamber for a minimum of thirty (30) minutes. Chlorine for disinfection is provided by a tablet chlorination system which allows HTH tablets to dissolve releasing the chlorine at a rate to provide approximately 1 ppm residual. The chlorinated wastewater then passes through a dechlorination chamber prior to discharge to Big Sandy River. Sodium bicarbonate is used for pH control and table sugar is occasionally used for microbial metabolic substrate.

#### Outfall 005 - Metal Cleaning Waste Tank

Outfall 005 is only used to decant supernatant from the chemical metal cleaning waste (CMCW) tank. The waste is generated by chemically cleaning the water side of the boiler tubes in Unit 2 and is collected in the CMCW tank. Chemical cleaning wastewater from Unit 2 can be treated in the tank to precipitate iron and copper and allow the supernatant to be discharged to the bottom ash pond when levels of iron and copper in the supernatant are below 1 mg/l. Alternate cleaning solutions may be stored in the tank for future incineration in the boiler or for shipment to an off-site disposal facility. The bottom ash pond overflows into the reclaim pond. Discharge through this outfall is intermittent as the Unit 2 boiler is typically cleaned every 5 to 7 years. Wastes generated from a Unit 1 cleaning are collected in frac tanks and incinerated in Unit 1 when it returns to full operational load.

#### Reverse Osmosis System

The plant has a reverse osmosis system for the production of demineralized water for boiler make-up feed water. Sodium hydroxide and sodium bisulfite are used routinely for maintenance of the system. The following chemicals have been approved for use as cleaning agents for the reverse osmosis membranes: Nalco PC 191, Nalco PC-56, Nalco PC 11, Nalco PC-77, and Nalco PC-99.

In addition, brine is used for water softening and CDP 450 is used as a coagulant for the treatment of river water. These may be discharged to the Unit 2 wastewater sump.

#### Outfall 006 - Plant Intake

Outfall 006 is the designation given to the intake structure used to withdraw water from the Big Sandy River. The only water discharged at this designated outfall is from the pump house floor drains and the pump house sump, which collects pump seal water. The source of these waters is the Big Sandy River and no treatment is provided before discharging back into the river.

#### Outfall 007 - Storm Drain

Outfall 007 receives stormwater runoff from 91.8 acres north of U.S. 23 (including highway drainage), the area north of Unit 2, and the area around the performance building and behind the storage warehouses. Also, occasional fire header flushing and Unit 1 cooling tower emergency overflow may be discharged through this storm drain. Unit 1 condensate storage tank overflow and drain discharge through outfall 007. During a Unit 2 outage this drain will collect water from the cooling water coolers and auxiliary blowdown. This outfall discharges to the Big Sandy River at River Mile (RM) 20.4.

#### Outfall 008 - Storm Drain

Outfall 008 receives stormwater runoff from 5.7 acres located west of the Unit 2 coal storage area and Unit 2 turbine roof drains. Also, Unit 2 condensate storage tank overflow, Unit 2 wastewater sump overflow, south Unit 2 coal pile drainage pond sump overflow, occasional fire header flushing, and Unit 2 cooling tower emergency overflow may be discharged through this storm drain. This outfall discharges to the Big Sandy River at RM 20.1.

#### Outfall 009 - Storm Drain

Outfall 009 receives stormwater runoff from 104.3 acres located north of U.S. 23 and north of the Unit 2 coal storage area. This outfall discharges to the Big Sandy River at RM 19.6.

#### Outfall 010 - Storm Drain

Outfall 010 receives storm water runoff from 0.8 acres located east of the Unit 2 coal yard buildings. This outfall discharges to the Big Sandy River at RM 19.8.

#### Outfall 011 - Storm Drain

Outfall 011 receives storm water runoff from the coal yard building roof drains and 1.3 acres located south of the Unit 2 coal yard buildings. This outfall discharges to the Big Sandy River at RM 19.9.

#### Outfall 012 - Storm Drain

Outfall 012 previously collected drainage from the coal handling area. With the addition of coal truck unloading Station 10 this drainage was rerouted to the coal pile runoff ponds. A small amount of surface and/or groundwater infiltration may still discharge through this outfall to the Big Sandy River.

#### Outfall 013 - Storm Drain

Outfall 013 receives storm water runoff from 0.4 acres located south of the Unit 2 cooling tower. This outfall discharges to the Big Sandy River at RM 20.2.

#### Outfall 014 - Storm Drain

Outfall 014 receives storm water runoff from 2.0 acres located west of the Unit 2 cooling tower. This outfall discharges to the Big Sandy River at RM 20.25.

Outfall 015 - Storm Drain

Outfall 015 receives stormwater runoff from 1.7 acres located around the storeroom warehouses, storeroom parking lot, and roof drains. This outfall discharges to the Big Sandy River at RM 20.3.

Outfall 016 - Storm Drain

Outfall 016 receives stormwater runoff from 0.7 acres located around the Unit 1 condensate storage tank and adjoining road. Also, Unit 1 condensate storage tank overflow, Unit 1 cooling tower basin drain, and tower flume overflow may be discharged through this storm drain. This outfall discharges to the Big Sandy River at RM 20.45.

Outfall 017 - Storm Drain

Outfall 017 receives storm water runoff from 38.8 acres located north of U.S. 23, around the bottom ash ponds and parking lot, around the Unit 1 Service Building, coal storage area, tractor sheds, and roof drains. This outfall discharges to the Big Sandy River at RM 20.55. Salt brine used in regenerating the Unit 1 water softener is stored in concrete vaults within the drainage area of Outfall 017. Under normal operation water is added to salt brine and the solution is pumped to the Unit 1 water softener. If equipment failure occurs and water continues to be added beyond the required amount the concrete vault may overflow and pass through Outfall 017.

Outfall 018 - Fly Ash Dam Interior Drains

Outfall 018 is the discharge for interior drains of the fly ash dam. This outfall discharges into Blaine Creek immediately downstream of Outfall 001. Nearby mine seepage is collected in a sump and pumped to the fly ash pond under normal operation. If the sump pumps fail the sump will overflow to this outfall.

Outfall 019 - Storm Drain

This outfall receives stormwater runoff from 1.5 acres located east of the Unit 1 cooling tower. This outfall discharges to the Big Sandy River at RM 20.4.

**KENTUCKY POWER COMPANY – BIG SANDY PLANT  
APPLICATION NOTES**

**NOTE 1:**

Values recorded in Part VII A, B and C for Outfall 007 are representative of discharges from all storm water outfalls. This is consistent with past NPDES permit renewal applications for this facility and the current NPDES permit.

**NOTE 2:**

Section 311 (a)(2) of the Clean Water Act provides three exclusions from hazardous substance discharge reporting. These three exclusions were adopted verbatim by Congress in defining federally permitted releases in section 101 (10) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. 9601(10), which are also exempt from CERCLA hazardous substance release reporting.

Clean Water Act Section 311 reporting Exclusion 2 covers “discharges resulting from circumstances identified and reviewed and made a part of the public record with respect to a permit and made a part of the public record with respect to a permit issued or modified under section 402 of this Act, and subject to a condition in such permit”. As noted in the preamble to EPA’s August 29, 1979 rule incorporating this provision, Exclusion 2 “applies where the source, nature and amount of a potential discharge was identified and made part of the public record, and a treatment system was made a permit requirement.” (44 Fed. Reg. 50766)

Kentucky Power Company hereby requests reporting Exclusion 2 for the following hazardous substances present at the Big Sandy Plant in excess of EPA’s reportable quantity:

Ammonium Hydroxide	
Sodium Hypochlorite	Sulfuric Acid
Ethylene Diaminetetracetic Acid (EDTA)	Sodium Nitrite
Sodium Hydroxide	

Big Sandy Plant has small supplies of Section 311 substances that are used in the laboratory and stored within cabinets of the laboratory. These substances are not expected to ever reach a discharge.

Clean Water Act Section 311 reporting Exclusion 3 covers “continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under Section 402 of the Act, which are caused by events occurring within the scope of relevant operating or treatment systems”. 33 U.S.C. 1321(a)(2)(C). Ethylene glycol is a component of Big Sandy Plant’s fire protection system. Periodic releases during inspections, training, and emergencies occur to ash ponds.

Kentucky Power Company requests reporting Exclusion 3 coverage for these discharges.