# 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 POI ELIMINA	LLUTANT		Page 3		
		PERMIT	APPLICA	ΓΙΟΝ			
Apply for a constr	ermit. ce of expiring permit. uction permit.	A complete application following: Form A, Form B, Form For additional informa KPDES Branch (502) 5	C, Form F, or Sh tion contact:				
		AGENCY	04-5410		77		
A. Name of business, municipal	ON AND CONTACT INFORMA ality, company, etc. requesting permit	TION USE					
Kentucky Power Company					┹╌╌╼╌┤		
Facility Location Name:	cation	C. Facility Owner/Mai Owner Name:	ling Address				
Big Sandy Plant		Kentucky Power Company of	Kentucky Power Company d/b/a/ AEP, c/o Alan R. Wood				
Facility Location Address (i.e.	street, road, etc.):	Mailing Street:					
23000 Highway 23		1 Riverside Plaza					
Facility Location City, State, Zi	p Code:	Mailing City, State, Zip Cod	e:				
Juisa, KY 41230-8703		Columbus, OH 43215-2373					
		Telephone Number: (614) 223-1233					
<ul> <li><b>II. FACILITY DESCRI</b></li> <li>A. Provide a brief descriproduces electricity.</li> </ul>	PTION ption of activities, products, etc: B The plant consists of a 250-MW un	ig Sandy Plant is a coal-fired stea it and an 800-MW unit.	m electric genera	ting facility which			
B. Standard Industrial Cla	ssification (SIC) Code and Descript	ion	- 101 AU BODD DOTAR ROAD ST	10. H			
Principal SIC Code & Description:		neration, transmission and/or dist	tribution of electr	rical energy for sale	<u>e</u>		
Other SIC Codes:	N/A	N/A	N/A				
III. FACILITY LOCATI	<u>ON</u>						
A. Attach a U.S. Geologic	al Survey 7 ½ minute quadrangle ma	m for the site (C					
B. County where facility is	located:	ap for the site. (See instructions)					
Lawrence		City where facility is locate U.S. 23, 6 miles north of Louisa,	ed (if applicable)	:			
C. Body of water receiving	discharge:		ханиску				
Big Sandy River and Blain	e Creek						
D. Facility Site Latitude (d 38 degrees 10 minutes 07 s	egrees, minutes, seconds): econds	Facility Site Longitude (de 82 degrees 37 minutes 15 s	grees, minutes, se econds	econds):			
. Method used to obtain la	titude & longitude (see instructions	): Survey					
F. Facility Dun and Bradstr	eet Number (DUNS #) (if applicabl	e): 00-486-2439	<u> </u>				

	KPSC Case No. 2011-00401
W OWNED ODED ATOD DECODES A PROD	Sierra Club's First Set of Data Requests Dated January 13, 2012
IV. OWNER/OPERATOR INFORMATION A. Type of Ownership:	Item No. 25 Attachment 2 Page 4 bf 93
Publicly Owned Privately Owned State Owned	
s. Operator Contact information (See instructions)	
Jame of Treatment Plant Operator: Jennifer Phelps, John Skaggs, Dean Bradley, E. Doug Jones,	Telephone Number: 606/686-2415
George Waugh, Charles Stapleton, Jeffrey Hughes	
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.
Certification Class:	Yes X No
Class I	Certification Number:
	8609, 8424, 6607, 4772, 6128, 13007, 13006

V. EXISTING ENVIRONMENTAL Current NPDES Number:		<u>- 전 철로 1978년 1979년 - 영화</u> 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등
	Issue Date of Current Permit:	Expiration Date of Current Permit:
KY0000221	04/01/2003	02/01/0007
Number of Times Permit Reissued:	Date of Original Permit Issuance:	03/31/2006 Sludge Disposal Permit Number:
4	December 23, 1976	
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. NoKYD-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 officia	al 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			
MR Official Telephone Number:	(606) 686-2415 Ext. 1316			

### VII. APPLICATION FILING FEE

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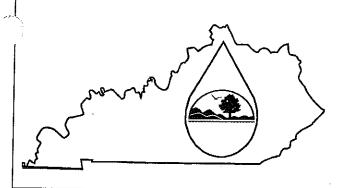
KPDES regulations require that a permit applicant pay an application filing fee equal to twenty percent of the permit base fee. Please examine the base and filing fees listed below and in the Form 1 instructions and enclose a check payable to "Kentucky State freasurer" for the appropriate amount. Descriptions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

Facility Fee Category: Filing	Fee Enclosed:
Major Industry \$640.0	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 SIGNATURE	(614) 223-1268
	DATE:
Patrick A Villon for John M. M. Manus	Sept, 27, 2005
per top - per to	12000 3 0-1, 2003



# KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

# **PERMIT APPLICATION**

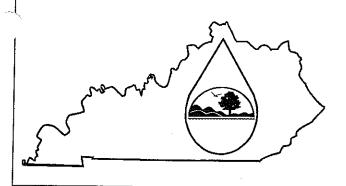
A complete application consists of this form and Form 1. For additional information, contact KPDES Branch, (502) 564-3410.

Name of Facility:	Big Sandy Pla	nt		Co	unty: Lawren	ce		
I. OUTFALL LC		NAME AND ADDRESS OF ADDRESS	$\{x_i\}_{i=1}^{n-1} = \{x_i\}_{i=1}^{n-1}$	GENCY USE				
For each outfall lis	t the latitude a	nd longitude	of its location	to the nearest	15 seconds a	nd the name o	of the receiving water	
(list)	Degrees	LATITUDE Minutes	Seconds	14 Surface of an answer in the second state	LONGITUD Minutes	an and the second second second second second second	RECEIVING WA	TER (name)
001	38	11	15	82	38	00	Blaine Creek	· · · · · · · · · · · · · · · · · · ·
l.,								
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- 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.	OPERATION(S) CONTRIBUTING FLOW						
(list)	Operation (list)	Avg/Design Flow (include units).	Description	List Codes from Table C-1			
001	Fly Ash Pond	6.602	Mixing	1-0			
			Sedimentation	1-U			
			Chemical Oxidation (Natural)	2-K			
			Chemical Precipitation (Natural)	X-X			
}			Skimming	X-X			
<u>/</u>			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				



# KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

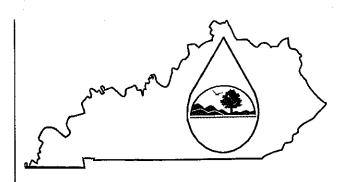
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Name of Facility:	Big Sandy Pla	nt		Co	inty: Lawren	ice		
L. OUTFALL LOCATION					GENCY USE			
For each outfall lis	For each outfall list the latitude and longitude of its location to the n				15 seconds a		of the receiving water.	
(list)	Degrees	LATITUDE Minutes	Seconds	Degrees	ONGITUD Minutes	THE REPORT OF THE PARTY OF THE	RECEIVING WATE	R (name)
001	38	11	15	82	38	00	Blaine Creek	
l.,								
·								
					,			

- 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.	OPERATION(S) CONTRIBUT	LING FLOW	TREATMENT
(list)	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
	Reclaim Water (See Below)	3.472 MGD	for the fly ash pond.
	Coal Pile Runoff	0.112 MGD	
	Rainfall (Avg.)	0.397 MGD	
<u>}</u>	Sources to Reclaim Pond:		
	Unit 1 Turbine Room Sump	1.920 MGD	All these wastestreams undergo,
	(include U-1 Cool. Twr. Blowdn)		to some degree, the treatment
	Unit 1 Bottom Ash Transport	0.379 MGD	processes listed above for the



# KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

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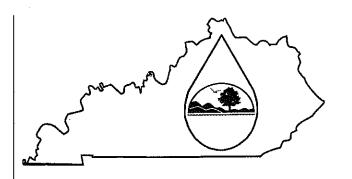
Name of Facility: Big Sandy Plant	County: Lawrence
	AGENCY
L OUTFALL LOCATION	USE

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 Minutes		Degrees	ONGITUDE	A PROPERTY OF A	RECEIVING WATER (name)
001	38	11	15	82	38	00	Blaine Creek
<u>۱</u>							
					<u></u>		

- 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.
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OUTFALL NO. (list)	OPERATION(S) CONTRIBUT	Avg/Design	TREATMEN Description	List Codes from Table C-1
di ang sang sa	Operation (list)	· · · · · · · · · · · · · · · · · · ·	Description	
001 (continued)	(include Unit 1 Pyrites Transport		fly ash pond and also recycle/	
	Unit 2 Bottom Ash Transport	1.05 MGD	reuse.	4-C
-	(incl. Unit 2 Cool. Twr. Blowdn)			
	and Pyrites Transport			
·	Unit 2 cooling Tower Blowdown	0.586 MGD	· · · · · · · · · · · · · · · · · · ·	
	Unit 2 Wastewater Sump	1.920 MGD		
······································	Rainfall (Avg.)	0.024 MGD		
ľ				
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Name of Facility: Big Sandy Plant	County: Lawrence	
	AGENCY	
- E. OUTFALL LOCATION	USE	
Charge A Conversion of the American American and the American Am		

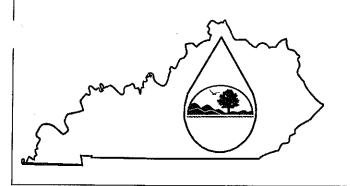
For each outfall list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

Outfall No. (list)	Degrees	LATITUDE Minutes	Seconds	Degrees	LONGITUDI Minutes	Seconds	RECEIVING WATER (name)
001	38	11	15	82	38	. 00	Blaine Creek
<u> </u>						· · · ·	

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OUTFALL NO	OPERATION(S) CONTRIBU	TINGFLOW	TREATMENT	
(list)		Avg/Design		List Codes from
lander ander sonder so Malagnes Berlingsson	Operation (list)	Flow (include units)	Description	Table C-1
001 (continued)	Maximum Flow	16.57 MGD		
	(Includes Maximum Rainfall)			· · · · · · · · · · · · · · · · · · ·
<u> </u>	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		
				<u> </u>

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# KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

## PERMIT APPLICATION

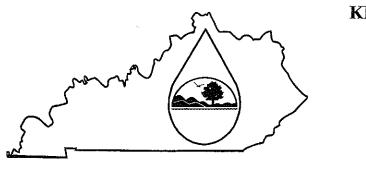
A complete application consists of this form and Form 1. For additional information, contact KPDES Branch, (502) 564-3410.

Name of Facility:	Big Sandy Pla	nt		Co	ounty: Lawren	ce			
I. OUTFALL LO	OCATION				AGENCY USE				
For each outfall lis	st the latitude a	nd longitude					of the receiving water.		
(list)	Degrees	Minutes	Seconds	Degrees	LONGITUDE Minutes	Seconds	RECEIVING WATER (name)		
002	38	10	18	82	37	13	Bottom Ash Pond		
003	38	10	18	82	37	13	Bottom Ash Pond		

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OUTFALL NO.	OPERATION(S) CONTRIBUT	ING FLOW	TREATMENT		
(list)	Operation (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1	
002	Unit 1 Cooling Tower Blowdown	0.36 MGD	Mixing	1-0	
			Sedimentation	1-U	
			Discharge to Surface Water	4-A	
003	Unit 2 Cooling Tower Blowdown	1.3 MGD	Mixing	1-0	
<u>)</u>			Sedimentation	1-U	
			Discharge to Surface Water	4-A	
	······································				

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# KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

# **PERMIT APPLICATION**

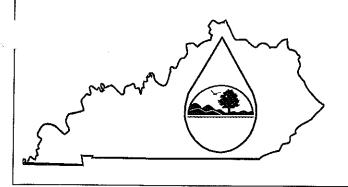
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Name of Facility:	Big Sandy Pla	nt		Co	ounty: Lawrend	xe		
I. OUTFALL					AGENCY USE		-	
For each outfall li	ist the latitude a	und longitude	of its location	to the nearest	: 15 seconds ai	d the name o	f the receiving water.	
Outfall No.		LATITUDE			LONGITUDI			
<u>(list)</u>	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	RECEIVING WATER (name)	
004	38	10	08	82	37	12	Big Sandy River	

<u>```</u>				

- 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.
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OUTFALL NO.	OPERATION(S) CONTRIBUT	ING FLOW	TREATME	TREATMENT		
(list)	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 wate	4 - A		



# KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

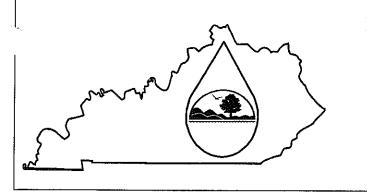
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Name of Facility:	DCATION				ounty: Lawrend AGENCY USE		
Outfall No.	And States	LATITUDE	la star a com		LONGITUDE	kâğılı k	of the receiving water.
(list)	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	RECEIVING WATER (name)
005	38	10	16	82	37	19	Bottom Ash Pond
7							
	· ·						

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OUTFALL NO.	OPERATION(S) CONTRIBUT	ING FLOW	TREATMENT		
(list)	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	NOTE 2:	Per current KPDES permit, effl.		
)	Outfall 005 after the Unit 2 chemical		analyzed for pH (12), Cu (0.006)		
<i>i</i>	metal cleaning waste is treated. This		and Fe (0.36 mg/l) but not for		
	event occurs approx. every 5-7 years.		any other Form C parameters.		
		NOTE 3:	Part V Form C not incl. for 005.		



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Name of Facility:		<u>nt</u>			unty: Lawren GENCY USE	ce	
	and the second sec	nd longitude		The state of the state of the trade to see and	15 seconds a		of the receiving water.
(list)	Degrees	Minutes	Seconds	Degrees	LONGITUDI Minutes	Seconds	RECEIVING WATER (name)
018	38	11	14	82	37	55	Blaine Creek
· · · · · · · · · · · · · · · · · · ·							

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

Revised June 1999

Item No. 25 Attachment 2

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#### FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES (Continued) П.

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

 $\times$ Yes (Complete the following table.)

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

#### MAXIMUM PRODUCTION Ш.

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

 $\boxtimes$ Yes (Complete Item III-B) List effluent guideline category:

 $\Box$ No (Go to Section IV)

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

 $\Box$ Yes (Complete Item III-C)  $\boxtimes$ No (Go to Section IV)

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
Quantity Per Day	Units of Measure	Operation, Product, Material, Etc.	(list outfall numbers)
		(specify)	

IV. **IMPROVEMENTS** 

Are you now required by any federal, state or local authority to meet any implementation schedule for the construction, A. 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)  $\boxtimes$ 

No (Go to Item IV-B)

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

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.

No (Go to Section III.)

#### 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 condensors.	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)	$\boxtimes$	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 TOXIC	TV FESTING DATA		KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests Dated January 13, 2012
Do you have any knowledge of		gical test for acute or chronic tox ithin the last 3 years?	tiem No. 25 Attachment 2 Page 16 of 93 sicity has been made on any of your
Yes (Identify	the test(s) and describe their purpe	oses below)	No (Go to Section VIII)
	of the Big Sandy Plant Outfall 001 ly testing of ceriodaphnia have all		rterly under the current KPDES
	SIS INFORMATION ed in Item V performed by a contra ame, address, and telephone numb		No (Go to Section IX)
	I by each such laboratory or firm b		POLLUTANTS
) SGS Environmental Services, Inc.	1258 Greenbrier Street Charleston, WV 25311	(Area code & number) (304) 346-0725	ANALYZED (list) 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

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the second s				
IX. CERTIFICATION			and the second	
IX CREEK ATON				
	A STATE OF A	BE AND ADDRESS OF THE NEW YORK DATES AND ADDRESS OF THE ADDRESS OF	NAMES AND ADDRESS OF A DESCRIPTION OF A	
		and the second	Contraction of a second s	and dealers of the second s

#### Sierra Club's First Set of Data Requests I certify under penalty of law that this document and all attachments were prepared under my direction or supervision. Dated January 13, 2012 with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inpuge 17 of 93 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 jubmitting 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
Patrick A. Octors for John M. Mc Manus	Sept 27, 2005

KPSC Case No. 2011-00401

### 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 (SO2) 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 SO2 is removed.

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

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KPSC Case No. 2011-00401

Sierra Club's First Set of Data Requests

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) instant of the separate sheets (use the same format) i

V. INTAKE AND Part A You must	education and the	the source of the source of	ALL DEPENDENCES		<b>rm ()</b> sle: Complete one tab	de for each outf?	dl. See instruction:	s for additional deta		OUTFALL NO.	<u> </u>		
L POLLUTANT	2. EFFLUENT a. Maximum Daily Value b. Maximum 30-Day Value c. Long-Term Avg. Value (if available)						d. No. of Analyses	- 3. UN	3. UNITS (specify if blank) a, b.		4. INTAKE (optional) C Avg. Value (2)	D. C.	
a. Biochemical Oxygen Demand (BOD)	Concentration		Concentration	Mass	Concentration	Mass	1	mg/l		(1) Concentration <2.0	Mass	Analyses	
b. Chemical Oxygen Demand (COD)	3.	) D	· · · · · · · · · · · · · · · · · · ·				1	mg/l		12.0		1	
c. Total Organic Carbon (TOC) d. Total		2					1	mg/l		2.0		1	
Suspended Solids (TSS)	3:	3 .	23		10.3		28	mg/l		73.2		53	
e. Ammonia (as N)	6.5	3			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	STAN	DARD UNITS				

#### KPSC Case No. 2011-00401 Sierra Club's First Set, of Data Requests

Part B - In the Market X" column, place an "X" in the Believed Present column for each pollutant you know or nave reason to believe is present. Place an "X" in the Believed Absent column for each pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for least Wart Control of 93

1. POLLUTANT	MAR	2. K "X"	3. EFFLUENT							4. UNITS		Page 20 o 6. INTAKE (optional)		
AND CAS NO.	а.	b.	a, Maximum Dai		b. Maximum 3 Value (if avai	lable)	c. Long-Tern Value (if ava		d. No. of	a	<b>b.</b>	a. Long-Term Value	Avg	b. No. of
(if available)	Believed Present	Believed Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses	Concentration	Mass	(1) Concentration	(2)	Analyses
a. Bromide								AT RELUG	and the second	ing a strange of a second s		Concentration	Mass	
(24959-67-9) b. Bromine	x		- <5.0						1	mg/l		<5.0		1
Total														
Residual	x		.09						1	mg/l		0.08		1
c. Chloride	x		98		10					****		0.08		<u>.</u>
d. Chlorine,	^		96						1	mg/1		11.0		1
Total						·								
Residual	x		.04						1	mg/l		0.04	-	1
e. Color	x		5.0			-			1	PCU		15		
f. Fecal Coliform									<u> </u>	FCU		15		1
g. Fluoride	<u>x</u>		160						1	c/100 ml		1400		1
(16984-48-8)	x		0.7						1	tm cr/l				
h. Hardness									1	mg/l		0.2		1
(as CaCO <sub>3</sub> ) i. Nitrate –	<u>x</u>		678						1	mg/l		185		1
Nitrite (as N)	x		4.41						1			10		
j. Nitrogen,									1	mg/l		1.0		<u>l</u>
Total Organic														
(as N)	x		<0.05						1	mg/l		<0.05		1
k. Oil and Grease			2.0											1
1. Phosphorous	<u>x</u>		2.0		1.25		0.385		27	mg/l		<1.0		1
(as P), Total														
7723-14-0 m.	x		<0.01					-	1	mg/l		<0.01		1
Radioactivity														
(1) Alpha,												i		
Total (2) Beta,		<u>x</u>												ł
Total		x												
(3) Radium														
Total (4) Radium,		x												
226, Total		x												

KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests

Part B - Continu 1, POLLUTANT		K"X"			EF	3. FLUENT				4. UNITS		INTEAK	Date Item N 5. E (option	ed January 13 No. 25 Attachr Page 21
And CAS NO.	<b>a.</b>	þ.	a. Maximum Dail		b. Maximum 3 Value (if avai	0-Day lable)	c. Long-Tern Value (if ava	ilable)	d. No. of	a.	b.	a. Long-Term Avg		b. No. of
(if available)	Believed Present	Believed Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses	Concentration	Mass	(1) Concentration	(2) Mass	Analyses
n. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	x		784						1	mg/l	·	132	111455	1
). Sulfide (as S)	x		<1.0						1	mg/l		<1.0		1
<ul> <li>Sulfite</li> <li>(as SO<sub>4</sub>)</li> <li>(14286-46-3)</li> </ul>	х		0.5						1	mg/l		1.5		1
I. Surfactants	x		<0.03						1	mg/l		<0.03		1
Aluminum, Total (7429-90)	x		0.12				:		1	mg/l		4.60		I
Barium, Total (7440-39-3)	x		116						1	ug/l		73		. 1
. Boron, Total (7440-42-8) I. Cobalt, Total	x		1.96						1	mg/l		0.51		1
(7440-48-4) v. Iron, Total	x		4.0						1	ug/l		3.0		1
(7439-89-6) 7. Magnesium Total	X		0.06						1	mg/l		6.13		1
(7439-96-4) . Molybdenum Total	x x		66.8 362						1	mg/l ug/l		21.9 <3.0		1
(7439-98-7) 7. Manganese, Total											3			
(7439-96-6) Tin, Total (7440-31-5)	<u> </u>		0.17	ļ					1	mg/l		0.24		1
(7440-31-5) a. Titanium, Total (7440-32-6)	x		<5.0 4.0			<u>-</u>			1	ug/l ug/l		<5.0		1

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#### KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests Dated January 13, 2012

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-experiment) 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		2. <u>MARK "X"</u>	S. S. Ville & Class	ns for additional deta		ર્લેટ એસ લેવના	3. LUENT			4. Y (5. 93)	4. UNITS		INTAK	5. E (options	1)
And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Daily		b. Maximum 3 Value (if avai	lable)	c. Long-Term Value (if avai	lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Ay	g Value	b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
METALS, CYAI	NIDE AND T	<b>OTAL PHE</b>	NOLS					- Sourceart anon	1. 1.14655	1.1.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2			Concentration	WIA55	
1M. Antimony			Γ						1		1	1	1		T
Total									İ			1			
(7440-36-0)	x			29.0				:		1	ug/l		0.004		1
2M. Arsenic,										-	ug/1		0.004		
Total															
(7440-38-2)	16x			0.094				.0.064		6	mg/l		0.018		6
3M. Beryllium													0.010		<u> </u>
Total															
(7440-41-7)	x			0.005				0.002		6	mg/l		0.0		6
4M. Cadmium													0.0		
Total	ĺ										]				
(7440-43-9)	X			< 0.0005				<0.0005		6	mg/l		0.0		6
5M. Chromium												1	- 0.0	~~	<u>                                      </u>
Total															-
(7440-43-9)	x			0.018				0.009	}	6	mg/l		0.005		6
6M. Copper												1			<u> </u>
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)															
9M. Nickel,	x			0.0035		L	ļ	0.001		6	ug/l		0.001		6
Total														·····	
(7440-02-0)	x			0.030											
10M. Selenium,	A			0.032				0.022		6	mg/l		0.005		6
Total															
	x			0.035				0.007				1			
11M. Silver,				0.033			<u> </u>	0.027		6	mg/l		0.008		6
Total	l														
(7440-28-0)	x			0.0005									,		
(		l	l	0.0003		L	<b>I</b>	0		6	mg/l		0		6

													Da	t Set of Da ated Janu	ary 13, 201
1.		2. MARK "X"					3. LUENT				4. UNITS		lten	n <u>5</u> No. 25 /	Attachment age 23 of 9
POLLUTANT And CAS NO.	a. Testing	a, Believed	b, Believed	a. Maximum Daily	Value	b. Maximum 3 Value (if avail	0-Day	c: Long-Term Value (if avail:		d. No. of	a. Concentration	b. Mass	INTAK a. Long-Term Avg	영수가 가 가 안	b.
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses		17,114,059	(1)	(2)	Analyses
METALS, CYA	NIDE AND T	OTAL PHE	NOLS (Con	tinued)	112400	Concentration	11,433	Concentration	171455	n waard a na Sha Sha			Concentration	Mass	
12M. Thallium, Total					·										
(7440-28-0) 13M. Zinc,	x			0.006				0.004		6	mg/l		0.001		6
Total (7440-66-6)	x			0.015		-		0.000							
14M. Cyanide, Total				0.015				0.009		6	mg/l		0.008		6
(57-12-5)	x			0.01			ļ			1	mg/l		<0.01		1
15M. Phenols, Total											mgr	· · ·	~0.01		1
	X			<0.001			ĺ			1	mg/l		<0.001		1
DIOXIN		r													-
2,3,7,8 Tetra- chlorodibenzo, P, Dioxin			x	DESCRIBE RES	JLTS:										
(1784-01-6) GC/MS FRACT		TUECOM	DOUDID												
GC/MD FRACT		LILE COM	rounds	······································											
							· · · · · ·	······							
1V. Acrolein												·			
1V. Acrolein (107-02-8) 2V.	x			<5.0				ug/l		1	ug/l		<5.0		1
(107-02-8) 2V. Acrylonitrile	x			<5.0				ug/l		1	ug/l		<5.0		1
(107-02-8) 2V. Acrylonitrile (107-13-1)	x			<5.0				ug/l		1					
(107-02-8) 2V. Acrylonitrile (107-13-1) 3V. Benzene (71-43-2)								ug/l		1	ug/l		<5.0		1
(107-02-8) 2V. Acrylonitrile (107-13-1) 3V. Benzene	x			<5.0 <5.0				ug/l		1	ug/l ug/l		<5.0		11
(107-02-8) 2V. Acrylonitrile (107-13-1) 3V. Benzene (71-43-2) 5V. Bromoform (75-25-2) 6V. Carbon Tetrachloride	x			<5.0 <5.0 <5.0				ug/l		1	ug/l		<5.0		1
(107-02-8) 2V. Acrylonitrile (107-13-1) 3V. Benzene (71-43-2) 5V. Bromoform (75-25-2) 6V. Carbon Tetrachloride (56-23-5) 7V. Chloro-	x			<5.0 <5.0				ug/l		1	ug/l ug/l		<5.0		11
(107-02-8) 2V. Acrylonitrile (107-13-1) 3V. Benzene (71-43-2) 5V. Bromoform (75-25-2) 6V. Carbon Tetrachloride (56-23-5) 7V. Chloro- benzene (108-90-7)	x x			<5.0 <5.0 <5.0				ug/l ug/l ug/l ug/l		1 1 1	ug/l ug/l ug/l ug/l		<5.0 <5.0 <5.0 <5.0		1 1 1
(107-02-8) 2V. Acrylonitrile (107-13-1) 3V. Benzene (71-43-2) 5V. Bromoform (75-25-2) 6V. Carbon Tetrachloride (56-23-5) 7V. Chloro-	x x x x			<5.0 <5.0 <5.0 <5.0				ug/l ug/l ug/l		1 1 1	ug/l ug/l ug/l		<5.0 <5.0 <5.0		1 1 1

KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests Dated January 13, 2012

Part C - Continu	ied								(del verning) al	an an the state of		And and and a state of the st	rest ite	m No. 25	Attachment
1. POLLUTANT		2. MARK "X"				EFF	3. LUENT	n se staden de La constate de la constate			4. UNITS		INTAK	5. E (option:	Page 24 of 9 al)
And CAS NO.	a. Testing Required	a. Believed Present	b, Believed Absent	a. Maximum Daily		b. Maximum 3 Value (if avai	lable)	c. Long-Term Value (if avail	lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av	g Value	b. No. of Analyses
	Negunea	I I ESCIIL-	AUSCIA	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
9V. Chloroethane (74-00-3)	x			<5.0						1	ug/l		<5.0	11433	1
10V. 2-Chloro- ethylvinyl Ether (110-75-8)	x			<5.0				:						<u></u>	1
11V. Chloroform (67-66-3)											ug/l		<5.0		1
12V. Dichloro- bromomethane	<u>x</u>			<5.0					:	1	ug/l		<5.0		1
(75-71-8) 14V. 1,1- Dichloroethane	x			<5.0						1	ug/l		<5.0		1
(75-34-3) 15V. 1,2- Dichloroethane	x			<5.0						1	ug/l		<5.0		1
(107-06-2) 16V. 1,1- Dichlorethylene	<u>x</u>			<5.0						1	ug/l		<5.0		1
(75-35-4) 17V. 1,2-Di-	x			<5.0						1	ug/l		<5.0		1
chloropropane (78-87-5) 18V. 1,3-	<u>x</u>			<5.0						1	ug/l		<5.0		1
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		
20V. Methyl Bromide (74-83-9)	x			<5.0						1	ug/l		<5.0		1

Dated	January	13,	2012	2
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Part C - Continu	ied								a da antaria. Antaria da antaria						ary 13, 2012 Attachment 2
1. POLLUTANT		2. MARK "X"			ng <i>224</i> Valey	EFF	3. LUENT				4. UNITS				age 25 of 93
And CAS NO. (if available)	a. Testing Required	a. Believed	b. Believed	a. <u>Maximum Dail</u>		b. Maximum 3 Value (if avai	lable)	c. Long-Term Value (if avail	lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av	g. Value	b. No. of Analyses
(II ATAIIADIC)	ксцинео	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1)	(2)	
21V. Methyl Chloride (74-87-3)	x		·····		111433		171855	Concentration	IVIASS				Concentration	Mass	
22V. Methylene	~			<5.0		· · · · · · · · · · · · · · · · · · ·	- 21			1	ug/l		<5.0		1
Chloride (75-00-2)	x			<5.0						1	ug/l		<5.0	2 ,	1
23V. 1,1,2,2- Tetrachloro- ethane	x	-		<5.0						1	ug/l		<5.0		1
(79-34-5) 24V.													-0.0		•
Tetrachloro- ethylene (127-18-4)	x			<5.0						1	ug/l		<5.0		1
(127-10-4)															
25V. Toluene (108-88-3)	- <b>X</b>			<5.0						1	ug/l		<5.0		1
26V. 1,2-Trans- Dichloro- ethylene (156-60-5)	x			<5.0						1	ug/l		<5.0		1
27V. 1,1,1-Tri- chloroethane															
(71-55-6) 28V. 1,1,2-Tri- chloroethane	<u>x</u>			<5.0						1	ug/l		<5.0		1
(79-00-5) 29V. Trichloro-	x			<5.0						1	ug/l		<5.0		1
ethylene (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

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KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests

Part C – Continu	ied					Alexand States - Alexandre	Nevel sector		NATION AND			an tha an	Da	ted Janu	ary 13, 2012 Attachment 2
1.		2. MARK "X"					3. LUENT				4. UNITS		INTAKE	5. P	age 26 of 9. al)
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Daily		b. Maximum 3 Value (if avail	able)	c. Long-Term Value (if avail	lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Avg	Value	b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
GC/MS FRACTI	ION - ACID	COMPOUN	DS	<b>.</b>					1	1	1		Concentration	11,4455	<u> </u>
1A. 2-Chloro- phenol (95-57-8)	x			<10							n		-10		
2A. 2,4-				~10						1	ug/l		<10		1
Dichlor- Orophenol (120-83-2)	x			<20						1	ug/l		<20		1
3A.						· · · · · · · · · · · · · · · · · · ·									<u> </u>
2,4-Dimeth- ylphenol (105-67-9)	x			<10						1	ug/l		<10		1
4A. 4,6-Dinitro- o-cresol															
(534-52-1)	x			<50						1	ug/l		<50		1
5A. 2,4-Dinitro- phenol (51-28-5)															
6A. 2-Nitro-	x			<50						1	ug/l		<50		1
phenol (88-75-5)	x			<20						1	ug/i		<20		1
7A. 4-Nitro-													~20		
phenol (100-02-7)	x			<50						1	ug/l		<50		1
8A. P-chloro-m- cresol (59-50-7)	x			<20						_					
9A.	<u> </u>									1	ug/l	ļ	<20		1
Pentachloro- phenol (87-88-5)	x			<50						. 1	ug/l		<50		1
10A. Phenol (108-05-2)				-10				1							-
(108-05-2) 11A. 2,4,6-Tri-	x			<10					ļ	1	ug/l		<10		1
chlorophenol (88-06-2)	x			<10						1	ug/l		<10		1
GC/MS FRACT		NEUTRAL	COMPOUN	DS	I	.l.,			1	1	ug/1	L	~10		1
1B. Acena- phthene															
(83-32-9)	1	1	x												

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KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests Dated January 13, 2012

Part C - Continu	ied						6700343		62250	an a			Ite	m No. 25	Attachment
l.	]	2. MARK "X"				EFI	3. LUENT				4. UNITS			5. E (optiona	Page 27 of 9
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Dail		b. Maximum . Value (if avai	lable)	c. Long-Term Value (if avai	lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av	g Value	b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
GC/MS FRACTI	ION - BASE/	NEUTRAL	COMPOUN	DS (Continued)	1.		TILLOU	concentration	112400	4			Concentration	17,435	L
2B. Acena- phtylene															
(208-96-8)			x												
3B. Anthra- cene															
(120-12-7) 4B.		····	х				_								ļ
4B. Benzidine (92-87-5)			v											-	
5B. Benzo(a)-			x												
anthracene (56-55-3)															
6B. Benzo(a)-			x												
pyrene (50-32-8)			x												
7B. 3,4-Benzo-															r
fluoranthene (205-99-2)			x												
8B. Benzo(ghl) perylene															
(191-24-2) 9B. Benzo(k)-			x												
fluoranthene (207-08-9)			x												
10B. Bis(2- chlor-															
oethoxy)- methane			x												-
(111-91-1)			1												
11B. Bis (2-chlor-												1			<u> </u>
oisopropyl)- Ether			x												
12B. Bis															
(2-ethyl- hexyl)-			x							:					
phthalate (117-81-7)															

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KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests

<u> Part C – Continu</u>	ea	in a star and a star	11 14 14 18 19 19	and the second for the second seco		a tha an				2.20			Ite		Attachment
1.		2. MARK "X"				EFI	3. LUENT				4. UNITS		INTAK	5. E (optiona	Page 28 of 9
POLLUTANT And CAS NO.	a. Testing	a, Believed	b. Believed	a. Maximum Dail	y Value	b. Maximum 3 Value (if avai	i0-Day	c. Long-Term Value (if avai	Avg. lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av		b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
C/MS FRACTI	ON - BASE/	NEUTRAL	COMPOUN	DS (Continued)	12 Intribu (		111435	Concentration	174405		Frank and the		Concentration	11400	
3B. 4-Bromo-			1	• •											
henyl henyl ether 101-55-3)			x		-										
4B. Butyl- enzyl				······											
hthalate 35-68-7)			x												
5B. 2-Chloro- aphthalene															
7005-72-3) 6B. 4-Chloro-			x												
bhenyl bhenyl ether 7005-72-3)			x												
7B. Chrysene 218-01-9)			x												
8B. Dibenzo- 1,h)															
nthracene 53-70-3) 9B. 1,2-			x												
ichloro- enzene			x												
5-50-1) )B. 1,3-			^												
ichloro- enzene			x												
(541-73-1) 21B. 1,4-	-														

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phenyl phenyl ether (7005-72-3) 17B. Chrysene (218-01-9) 18B. Dibenzo-(a,h) Anthracene (53-70-3) 19B. 1,2-Dichlorobenzene (95-50-1) 20B. 1,3-Dichloro-Benzene (541-73-1) 21B. 1,4-Dichlorobenzene

(106-46-7) 22B. 3,3-Dichlorobenzidene

(91-94-1) 23B. Diethyl Phthalate (84-66-2)

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KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests Dated January 13, 2012

Part C Continu	ied	1909 (MR)			943-64										ary 13, 201 Attachment
1.		2. MARK "X"				EFI	3. LUENT				4. UNITS				age 29 of 9
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Daily		b. Maximum 3 Value (if avai	i0-Day lable)	c. Long-Term Value (if avail	Avg. lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av		b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
GC/MS FRACT	ION - BASE/	NEUTRAL	COMPOUN	DS (Continued)		•		<u> </u>	1	I ·	1 · · · · · · · · · · · · · · · · · · ·	¥4			L
24B. Dimethyl Phthalate															
(131-11-3) 25B. Di-N-			x												
butyl Phthalate (84-74-2)									ī						
(84-74-2) 26B.			x												
2,4-Dinitro- toluene															
(121-14-2)			x												
27B. 2,6-Dinitro-															
toluene (606-20-2)			x												
28B. Di-n-octyl				··								1			
Phthalate (117-84-0)			x												
29B. 1,2- diphenyl-							-								
hydrazine (as			x												
azonbenzene) (122-66-7)															
30B. Fluoranthene		-													
(208-44-0)			x												
31B. Fluorene (86-73-7)			x												
32B. Hexachloro-											· · · · · · · · · · · · · · · · · · ·				
benzene			x												
(118-71-1) 33B.				1					<u> </u>						
Hexachloro- butadiene															
(87-68-3)			x												
34B. Hexachloro-															
cyclopenta- diene			x					2							
(77-47-4)	<u> </u>						1							ŀ	

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KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests Dated January 13, 2012

Part C – Continu	led								1913239		学校的复数 使声响 建铁	Betariae		n No. 25 A	ary 13, 201 Attachment
1.		2. MARK "X"				EFI	3. LUENT				4. UNITS	949479		5. E (optiona	age 30 of 9 II)
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Dail		b. Maximum . Value (if avai	lable)	c, Long-Term Value (if avai	lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av	g Value	b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
GC/MS FRACTI	ON - BASE/	NEUTRAL	COMPOUN	(DS (Continued)		- Convention		Concentration	173.633	1			Concentration	141255	
35B. Hexachlo- roethane															
(67-72-1)			x									·			
36B. Indneo- (1,2,3-oc)- Pyrene (193-39-5)			x												
37B. Isophorone															:
(78-59-1)			x												
38B.									·	- <u>-</u>					
Napthalene (91-20-3)															
<u>(91-20-3)</u> 39B.			x												
Nitro-															1
benzene (98-95-3)			x												
40B. N-Nitroso- dimethyl- amine															
(62-75-9) 41B.			x								·				
N-nitrosodi-n- propylamine (621-64-7)			x												
42B. N-nitro- sodiphenyl-															
amine (86-30-6)			x									1			:
43B. Phenan-															
threne (85-01-8)			x												
44B. Pyrene (129-00-0)			x										-		
45B. 1,2,4 Tri- chloro- benzene (120-82-1)			x		-										

Part C – Continu	ed State						> 		ti set sére in	2019-14-14-14-14-14-14-14-14-14-14-14-14-14-	integrate containsti	<u> इत्य के राज्य न</u>	D	ated Janu	uary 13, 201 Attachment
1.		2. MARK "X"				EFI	3. TLUENT				4. UNITS			5. F E (option:	age 31 of §
POLLUTANT And CAS NO.	a, Testing	a, Believed	b. Believed	a. Maximum Dail	y Value	b. Maximum : Value (if avai	lable)	c. Long-Term Value (if avail	able)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av		b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses	an Maria Indonesia Maria Maria Maria		(1) Concentration	(2) Mass	
GC/MS FRACT	ION – PESTI	CIDES	1	r		· · · · · · · · · · · · · · · · · · ·	1	·	,	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	,			
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. 8-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										<u> </u>	<u> </u>	<u> </u>

ι. · · · ·													Sierra Club's Firs	t Set of Da	2011-0040 ata Request
Part C – Continu I. POLLUTANT And CAS NO.		2, MARK "X"			3, EFFLUENT								Dated January 13, 201 Item No. 25 Attachment 5, Page 32 of 9 INTAKE (optional)		
	a. Testing	a, Believed	b. Believed	a. Maximum Dail		b. Maximum 3 Value (if avai	lable)	c. Long-Term Value (if avail	able)	d. No. of	a. Concentration	b. Mass	a. Long-Term Ay	g Value	b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	1
GC/MS FRACT	ION – PESTI	CIDES	loon and the second		1.14400	Concentration	ATXIND.		. 1914.55		1	1	Concentration	171435	<u> </u>
15P. Endrin Aldehyde (7421-93-4)			x												
16P Heptachlor (76-44-8)			x												
17P. Heptaclor Epoxide (1024-57-3)			x							v					
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												

#### Sierra Club's First Set of Data Requests PLEASE PRing i 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 etamoleging 12 these pages. (See instructions) Page 33 of 93

V. INTAKE AND		OUTFALL NO. OO2											
Part A - You must	provide the result	s of at least one	analysis for every p	ollutant in this tai	ole. Complete one ta	ble for each outfa	II. See instruction	s for additional detail	<b>S.</b>				
	[1] And P. Children and S. Santas, Phys. Rev. D 19, 101 (1997).			2. EFFLUENT			3. UNI (specify if	<b>FS</b>	4. INTAKE (optional)				
1. Pollutant	a. Maximum		b. Maximum 30-Day Value (if available)		c. Long-Term (if avail	able)	d. No. of	a. Concentration	b. Mass	a. Long-Term Avg. Value		Б.	
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	No of Analyses	
a. Biochemical Oxygen Demand (BOD)	<2.(						1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 19			Concentration	engeligtass (e.	Analyses	
b. Chemical Oxygen Demand	~2.1	<u>'  </u>					1	mg/I					
(COD)	41.0	)					1	mg/l					
c. Total Organic Carbon (TOC)	9.0						1	mg/l			-		
d. Total Suspended Solids (TSS)	309	)											
e. Ammonia	-0.0						1	mg/l	·····.				
(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		, _ <b></b> ,		°c	VALUE			
h. Temperature (summer)	VALUE	23.6	VALUE	·····	VALUE				°c	VALUE			
i. pH	MINIMUM	MINIMUM MAXIMUM MINIMUM MAXIMUM 8.40				ndži unistanju Ndži unistanju	1	STANI	DARD UNITS	1			

KPSC Case No. 2011-00401

KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests to be absent. If you mark the <u>Believed Present</u> 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 ladit National Zierra Albert Page 34 of 93

requirements.	A Provide Control	2.	and a second			3.			ة المريحية ا محمد المريحية	4.			6.	Page 34		
POLLUTANT		K "X"				FLUENT		같은 것은 같은 것이다. 같은 것은 것이 같은 것이다. 같은 것은 것이 같은 것이 같은 것이 같이		UNITS		INTAKE (optional)				
AND CAS NO. (if available)	<b>a.</b>	b,	a. Maximum Dai		b. Maximum 3 Value (if avai	lable)	c. Long-Tern Value (if ava	n Avg. ilable)	d. No. of	а,	b.	a. Long-Tern Value		b. No. of		
	Believed Present	Believed Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses	Concentration	Mass	(1) Concentration	(2) Mass	Analyses		
a. Bromide												- Contraction	.1741105			
(24959-67-9)	x		6.0						1	mg/l				l l		
<ul> <li>Bromine</li> <li>Total</li> </ul>														Í		
Residual	x		0.13											i		
- CONGULI	<u>^</u>		0.15						1	mg/l				· · · · · · · · · · · · · · · · · · ·		
c. Chloride	x		70.0						1					l		
d. Chlorine,			,						1	mg/l			}	h		
Total														l .		
Residual	x		0.05						1	mg/l				l		
e. Color	x		30.0													
f. Fecal			50.0						1	PCU						
Coliform	x		800						1 1	c/100				l		
g. Fluoride										0/100						
(16984-48-8)	x		0.6						1 1	mg/l				l .		
h. Hardness																
(as CaCO <sub>3</sub> ) i. Nitrate –	<u> </u>		716.0						1	mg/l				l .		
Nitrite (as N)	x		3.01						_							
j. Nitrogen,	<b>^</b>		5.01						1	mg/l						
Total														l l		
Organic						e.								1		
(as N)	x		0.13						1	mg/l				1		
k. Oil and																
Grease I. Phosphorous	x		1.0						1	mg/l				į		
(as P), Total																
7723-14-0	x		0.66											l I		
m,	<u>^</u>	I	0.00			1		L	1	mg/l		,		L		
Radioactivity																
(1) Alpha,													1			
Total		x												I		
(2) Beta,																
Total		x												I		
(3) Radium Total							- -					······				
(4) Radium,		x												I		
(4) Radium, 226, Total		x												······		
220, 10tdl		L. X							1	1						

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Part B - Continu		<u>.</u>								소리 방송 방송 전성 관계에 관계 관계			Item N	d January 13 Io. 25 Attachi
POLLUTANT And CAS NO.	MARK "X"					3. FLUENT	4. UNITS		5. Page 3 INTAKE (optional)					
	<b>a.</b>	b.	Maximum Dail		b. Maximum 30-Day Value (if ayailable)		c. Long-Term Ayg. Value (if available)		d. No. of	8.	<b>b.</b>	a. Long-Term Avg. Value		b. No. of
(if available)	Believed Present	Believed Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses	Concentration	Mass	(1) Concentration	(2) Mass	Analyses
n. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	x		744						1	mg/l		Concentration	11433	· · ·
o. Sulfide (as S)	x		<1.0						1	mg/l				
p. Sulfite (as SO <sub>4</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) t. Boron, Total	x		217						1	ug/l				
(7440-42-8) u. Cobalt, Total	x		<0.04						1	mg/l				
(7440-48-4)	x		6						1	ug/l				
v. Iron, Total (7439-89-6) w. Magnesium	x		10.6						1	mg/l				
Total (7439-96-4) x. Molybdenum	x		80.4						1	mg/l				
Total (7439-98-7)	x		<3.0			~			1	ug/l				
y. Manganese, Total (7439-96-6)	x		0.41									•		
z. Tin, Total (7440-31-5)	x		6.0						1	mg/l				
aa. Titanium, Total (7440-32-6)	x		77						1	ug/l	•			

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KPSC Case No. 2011-00401

one table (all seve	n pages) for e	ach outfall, S	ee instructio	ns for additional de	tails and r	equirements.	ji at least	one analysis for that	. роца,ан	i. Inote utat te	ere are seven pages	i w aus pa	n, picase review ea	on caterui, y.	Complete
		2. MARK "X"				EFI	3. LUENT				4. UNITS		INTAK	5. E (optional	
POLLUTANT And CAS NO.	<b>a.</b>		<b>b.</b>		Aleman and a							1000000000000	<b>a</b> , 19		b.
	d. Testing	Believed	D. Believed	a. Maximum Dail	v Value	b. Maximum 3 Value (if avai		e. Long-Term Value (if avail		d. No. of	a. Concentration	b. Mass	Long-Term Av		No. of Analyses
(if available)	Required	Present	Absent	(1)	(2)	(1)	(2)	(1)	(2)	Analyses		*14000	(1)	(2)	
METALS, CYAI	NIDE AND T	OTAL PHE	NOLS	Concentration	Mass	Concentration	Mass	Concentration	Mass	Pressing of the			Concentration	Mass	NUMBER OF STREET
1M. Antimony					1	ľ	1		1					r r	
Total										1					ľ
(7440-36-0)	x			6.0					i	1 1	ug/l				ľ
2M. Arsenic,															
Total															ł
(7440-38-2)	<u>x</u>			7.0						1	ug/l				1
3M. Beryllium Total															
(7440-41-7)	x			0.4						1					ľ
4M. Cadmium	+								<u> </u>	1	ug/l				
Total															ł
(7440-43-9)	x			<0.5						1	ug/l				
5M. Chromium															
Total									1						ľ
(7440-43-9)	x			14.0				13.5		2	ug/l				ſ
6M. Copper Total															
(7550-50-8)	x			241											1
7M. Lead	<u>^</u>			241		·····				1	ug/l				
Total												Ì			
(7439-92-1)	x			12	1					1	ug/l				
8M. Mercury												+	· · · · · · · · · · · · · · · · · · ·		
Total															1
(7439-97-6)	x	····· ,		<0.2						1	ug/l				1
9M. Nickel, Total														1	
(7440-02-0)	x			32						,					
10M. Selenium,	<u> </u>						+	· · · · · · · · · · · · · · · · · · ·		1	ug/l			-	
Total						!									
(7782-49-2)	x			19						1	ug/l				
11M. Silver,							1					<u> </u>			
Total (7440-28-0)															
(7440-28-0)	x		<u> </u>	0.4	L	L				1	ug/l	1			1

Webling Company of the			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				·					Sierra Club's Fire	Case No. 2	
1.		2. MARK "X"			3. EFFLUI					4. UNITS		D	ated Janua n No. 25 A KE (optiona	any <u>13, 201</u> ttachment
POLLUTANT And CAS NO.	a. Testing	a. b. Believed Believed	a. Maximum Daily	Value	b. Maximum 30-D Value (if available		e, Long-Term A Value (if aväilal	vg.	d. No. of	a. Concentration	b. Mass	a. Long-Term A		b. No. of
(if available)	Required	Present Absent	(1)	(2)	(1)	(2)		(2)	Analyses			(1)	(2)	Analyses
METALS CVA	NIDE AND T	OTAL PHENOLS (Con		11122	Concentration N	Lass	Concentration	Mass		and a second and a second and		Concentration	Mass	<u>Berner</u>
12M. Thallium,	TDE AND I	UTAL FRENULS (COR	itinuea)								1		- <u>1</u>	·
Total (7440-28-0)	x		<10						-					
13M. Zinc,	<u>^</u>		<1.0		·····				<u> </u>	ug/l				
Total (7440-66-6)	v		99.0				79.0		2					
14M. Cyanide,	<u>^</u>		99.0				79.0		2	ug/l		<u> </u>		
Total														1
(57-12-5) 15M. Phenols,	x		<0.01						1	mg/l				
Total	x		10.0											
DIOXIN	X	<u> </u>	<10.0					]	1	ug/l				
2,3,7,8 Tetra- chlorodibenzo, P, Dioxin		x	DESCRIBE RESU	JLTS:	······									
(1784-01-6)														
GC/MS FRACT	ION – VOLA T	TILE COMPOUNDS			T									
1V. Acrolein (107-02-8)	x		<50						1					
2V.											ug/l		_	
Acrylonitrile														
(107-13-1) 3V. Benzene	x		<5.0						1	····	ug/l	···		
(71-43-2)	x		<5.0						1		ug/l			
5V. Bromoform														
(75-25-2) 6V. Carbon	x		<5.0						1		ug/l			<u> </u>
Tetrachloride	1													
(56-23-5)	x		<5.0	:					1		ug/l			
7V. Chloro-														
benzene (108-90-7)	x		<5.0						1			-		
8V. Chlorodibro-		1							1		ug/l			
momethane														
(124-48-1)	x		<5.0								ug/l		1	1

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(	L.						( 						Sierra Club's Firs	t Set of Da ated Janu	ary 13, 2012
Part C – Continu L.		2. MARK "X"				EFF	3. LUENT				4. UNITS				Attachment 2 Page 38 of 93 al)
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Daily		b. Maximum 3 Value (if ayai	lable)	e. Long-Term Value (if avail	able)	d. No. of	a. Concentration	b, Mass	a. Long-Term Av		b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses		\$	(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					
12V. Dichloro- bromomethane						-	,			1	ug/l				
(75-71-8) 14V. 1,1- Dichloroethane	x			<5.0						1	ug/l				
(75-34-3) 15V. 1,2- Dichloroethane	x			<5.0						1	ug/l				
(107-06-2) 16V. 1,1-	x			<5.0						1	ug/l				
Dichlorethylene (75-35-4) 17V. 1,2-Di-	x			<5.0						1	ug/l				
chloropropane (78-87-5) 18V. 1,3-	x			<5.0						1	ug/l				
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				

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KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests Dated January 13, 2012 Item No. 25 Attachment 2 5, Page 39 of 93 INTAKE (optional) 3; EFFLUENT 4. UNITS

1.	JTANT				EFF	3. FLUENT				4. UNITS		INTAK	5. E (optiona	age 39 of 9. I)	
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a, <u>Maximum Daily</u>	y Value –	b. Maximum 3 Value (if avai	lable)	c. Long-Term Value (if avai	lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Avi	3. Value	b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
21V. Methyl			<u> </u>					Concentration	111400			[	Contentiation	.1114635	
Chloride (74-87-3)				-50											
22V. Methylene	x			<5.0						1	ug/l				
Chloride															
(75-00-2)	x			<5.0						1	ug/l				
23V. 1,1,2,2-									-	÷	<u> </u>				
Tetrachloro-															
ethane	x			<5.0						1	ug/l				
(79-34-5)															
24V.															
Tetrachloro- ethylene															
(127-18-4)	х			<5.0						1	ug/l				
(127-10-4)									<u> </u>						
25V. Toluene															
(108-88-3)	x			<5.0						1	ug/l				
26V. 1,2-Trans-					İ		-			1					
Dichloro-		1													
ethylene	x			<5.0						1	ug/l				
(156-60-5)															
27V. 1,1,1-Tri- chloroethane															
(71-55-6)	x			<5.0											
28V. 1,1,2-Tri-				<						1	ug/l				<u> </u>
chloroethane															
(79-00-5)	x			<5.0	ł					1 t	ug/l				
29V. Trichloro-				-0.0					<u> </u>	1	ug/i				
ethylene															
(79-01-6)	x			<5.0			1			1	ug/l				
30V. Vinyl												1			
Chloride															
(75-01-4)	x		l	<5.0						1	ug/l				 

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2. MARK "X"

Part C - Continued

Part C - Contini	ed				u an an an an an an an an an an an an an							an an an an an an an an an an an an an a	D	ated Janu	ary 13, 2012 Attachment 2
1.		2. MARK "X"					3, LUENT				4. UNITS			5. P	age 40 of 93
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Dail		b. Maximum 3 Value (if avai	0-Day lable)	c. Long-Term Value (if avail	able)	d. No, of	2. Concentration	b. Mass	a. Long-Term Av	g Value	b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
GC/MS FRACT	ION – ACID	COMPOUN	DS				1.1.2.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	CONCERNIC	1.114.00000	and the set of the special set of the	and the second second second second second second second second second second second second second second second	F	Concentration	111435	] .
1A. 2-Chloro-					Ĩ	1	T .			ſ		1			
phenol (95-57-8)						1									
(95-57-8)	x			<10.0						1	ug/l		:		
2A. 2,4-															
Dichlor-															
Orophenol (120-83-2)	х			<20.0						1	ug/i				
(120-83-2) 3A,							L								
3A. 2,4-Dimeth-							ļ		· ·						
ylphenol	x			<10.0						_					
(105-67-9)	^			<10.0				'		1	ug/l				
4A. 4,6-Dinitro-	·   ····							l							
o-cresol															
(534-52-1)	x			<50.0						1	ug/l				
5A. 2,4-Dinitro-				-50.0	+					1	ug/1				
phenol															
(51-28-5)	x			<50.0	1					1	ug/l				
6A. 2-Nitro-											ug/1				
phenol					1										
(88-75-5)	x	1	ł	<20.0	1				ł	1	ug/l				
7A. 4-Nitro-								1	1	-		<b> </b>			1
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	x			<50.0	{										
(87-88-5)	^			<50.0						1	ug/l				
						· · · · ·							1		
10A. Phenol							1								
(108-05-2)	x			<10.0	<u> </u>		ļ			1	ug/l				
11A. 2,4,6-Tri-	1	1	1												
chlorophenol (88-06-2)				-10.0					1						
GC/MS FRACT	X ION DASE			<10.0	<u> </u>	l		L	L	1	ug/l				
1B. Acena-	IUN ~ BASE/	INEUIKAL	COMPUEN	05	· · · · ·	·····	r	1		· · · · · · · · · · · · · · · · · · ·					
phthene						1									
(83-32 <b>-</b> 9)			x												
	1	J	A	11		1		1		1		i			

Part C-Continu				1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	4 <b>1</b> 5 15 16		····· Alternation	-		and the second state of the second state of the second state of the second state of the second state of the sec		an istant			ary 13, 2012
12		2. MARK "X"	service ngo Col de Coloria			<u>Sing and S</u>	3. LUENT				A. UNITS				age 41 of 93
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Dail		b. Maximum 3 Value (if avai	lable)	c: Long-Term Value (if avail	able)	d. No. of	a. Concentration	b. Mass	a, Long-Term Av		b. No. of Analyses
(if available)	Required	Present	Absent 🤤	(1) Concentration	(2) Mass	(1) Concentration	(2)	(1)	(2)	Analyses			(1)	(2)	
GC/MS FRACT	ION - BASE/	NEUTRAL	COMPOIN	DS (Continued)	IVIASS	Concentration	Mass	Concentration	Mass		haran an  1	Concentration	Mass	<u> </u>	
2B. Acena-				[				1	I	T				[	
phtylene															
(208-96-8)			х												
3B. Anthra-															
cene (120-12-7)															
4B.			x											ļ	
Benzidine		]													
(92-87-5)	-		х												
5B. Benzo(a)-					†										
anthracene				-											
(56-55-3)		·	x												
6B. Benzo(a)-															
pyrene (50-32-8)															
7B. 3,4-Benzo-			x							-				<b></b>	
fluoranthene															
(205-99-2)			х												
8B. Benzo(ghl)															<u> </u>
perylene															
(191-24-2)			<b>X</b> .												
9B. Benzo(k)- fluoranthene															
(207-08-9)			x												
10B. Bis(2-			A								<u> </u>				
chlor-															
oethoxy)-			х												
methane															
(111-91-1)															
11B. Bis														<b></b>	
(2-chlor- oisopropyl)-															
Ether			х												
12B. Bis				<u> </u>		· · · · · · · · · · · · · · · · · · ·		 						ļ	
(2-ethyl-					-										
hexyl)-			x												
phthalate	ļ														
(117-81-7)					1				· ·						

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Part C - Continu	ed						an an an that a said said said said said said said sa					<u>A stability</u>	D Iter	ated Janu	ary 13, 2012 Attachment 2
1.		2. MARK "X"	gjanta 43. julija			EFI	3. LUENT				4. UNITS			5. P E (optiona	age 42 of 93
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Dail	y Value -	b. Maximum : Value (if avai	80-Day lable)	c: Long-Term Value (if avai	ı Avg. lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av		b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
GC/MS FRACTI	ON - BASE/	NEUTRAL	COMPOUN	DS (Continued)					1	.l.,i			Concernation	TTRUDU.	·
13B. 4-Bromo- phenyl Phenyl ether			x												
(101-55-3)			<u>^</u>												
14B. Butyl- benzyl phthalate			x												
(85-68-7)			^												
15B. 2-Chloro- naphthalene (7005-72-3)	n.		x												
16B. 4-Chloro- phenyl			<u>A</u>										,   		
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			x												
(95-50-1) 20B. 1,3- Dichloro-															
Benzene (541-73-1) 21B. 1,4-		· ····-	x												
Dichloro- benzene (106-46-7)			x												
22B. 3,3- Dichloro- benzidene			x				***								
(91-94-1) 23B. Diethyl Phthalate (84-66-2)			x	· · · · · · · · · · · · · · · · · · ·											

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Part C - Continu	ied											5.15.HA		n No 257	Attachment 2
1.		2. MARK "X"				EFI	3. LUENT				4. UNITS		in a caracteria	5. P E (options	age 43 of 93
POLLUTANT And CAS NO. (if available)	a. Testing	a. Believed Present	b. Believed	a. Maximum Dail		b. Maximum ; Value (if avai	lable)	c. Long-Term Value (if avail	able)	d. No. of	a. Concentration	b. Mass	a. Long-Term Avj	g. Value	b. No. of Analyses
	Required	Fresent	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1)	(2)	Analyses			(I)	(2)	
GC/MS FRACT	ION - BASE/	NEUTRAL	COMPOUN	DS (Continued)	171.435	CONCERT AUON	IVIASS	Concentration	WI255		[1992] 1월 1997] 1999] [1992] 1월 1997] 1997]		Concentration	Mass	L
24B. Dimethyl	1	T				1									
Phthalate (131-11-3)			x										:		
25B. Di-N-			<u> </u>				-								<u>├</u> ]
butyl Phthalate															1
(84-74-2)			x												1
26B.															
2,4-Dinitro- toluene					1										
(121-14-2)			x												1
27B.						1									<b> </b>
2,6-Dinitro-															
toluene			x												
(606-20-2)															1
28B Di-n-octyl															
Phthalate (117-84-0)															1
29B. 1,2-			x												
diphenyl-															
hydrazine (as			x												-
azonbenzene)															Í
(122-66-7)															-
30B.															
Fluoranthene (208-44-0)															•
(200-44-0)	· · · · · · · · · · · · · · · · · · ·		<u>x</u>					<u> </u>							
31B. Fluorene															
(86-73-7)			x												
32B.									1						<u>  </u>
Hexachloro-	-														
benzene (118-71-1)			x												
33B.															
Hexachloro-															
butadiene		Ì	x												
(87-68-3)							· .								
34B.															<u>├</u> ────┤
Hexachloro-															
cyclopenta- diene			x		-										
(77-47-4)					1		1								
<u> </u>	L	I	1	1	1	1	1	1	1	I		1		1	1

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(120-82-1)

Part C - Continu	ied			n Salat at de la rece								a polytowane e sa		ated Janu m No. 25 A	ttachment
1.		2. MARK "X"					3. LUENT				4. UNITS				age 44 of
POLLUTANT And CAS NO. (if available)	a. Testing Required	a. Believed Present	b. Believed Absent	a. <u>Maximum Dail</u> (1)	y <u>Value</u> (2)	b. Maximum 3 Value (if avail	0-Day able) (2)	c. Long-Term Value (if avail	able)	d, No. of	a. Concentration	b. Mass	a, Long-Term Av		b. No. of Analyses
				Concentration -	(4) Mass	(1) Concentration	Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
<b>GC/MS FRACTI</b>	ON - BASE/	NEUTRAL	COMPOUN	DS (Continued)		<u></u>			11.00000			r · ·	Concentration	111435	L
35B. Hexachlo- roethane (67-72-1)			x												
36B. Indneo- (1,2,3-oc)- Pyrene			x			-									
(193-39-5) 37B. Isophorone					<u> </u>								· · ·		
(78-59-1) 38B.			x												
Napthalene (91-20-3)			x												
39B. Nitro- benzene			x												
(98-95-3) 40B. N-Nitroso-			^												
dimethyl- amine (62-75-9)			x												
41B. N-nitrosodi-n- propylamine			x												
(621-64-7) 42B. N-nitro- sodiphenyl-		1 													
amine (86-30-6)			x												
43B. Phenan- threne (85-01-8)			x											 	
44B. Pyrene (129-00-0)			x												
45B. 1,2,4 Tri- chloro- benzene (120,82,1)			x	-											<u> </u>

, L							(						Sierra Club's Firs	st Set of Da	. 2011-00401 ata Requests Jary 13, 2012
Part C Continu 1. POLLUTANT		2. MARK "X"					3. LUENT	tal anna anna anna anna anna anna anna a			4. UNITS		lte INTAK	m No. 25/	Attachment 2 Page 45 of 93
And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Dail		b. Maximum 3 Value (if avai	able)	c. Long-Term Value (if avai	lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av	g. Value	b. No. of Analyses
(if available) GC/MS FRACTI	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
IP. Aldrin (309-00-2)															
2P. α-BHC (319-84-6)			<u>x</u>												
3P. β-BHC (58-89-9)			x	,											
4P. gamma-BHC (58-89-9)			x	- -											
5P. &-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					1							
13P. Endosulfan Sulfate (1031-07-8)			x	1-2-2-1 mm		-									
14P. Endrin (72-20-8)			x		-										

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Part C Continu 1, POLLUTANT	C(F) = C(F)	2. MARK "X"			- 1999 (B)	EFI	3. LUENT	p 1			4. UNITS		Iter	m No. 25 A	Attachment 2 age 46 of 93
And CAS NO.	a. Testing Required	a. Believed Present	b. Believed Absent	a. <u>Maximum Dail</u> (1)		b. Maximum ; Value (if avai	lable)	c. Long-Term Value (if avail	lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av	g Value	b. No. of Analyses
GC/MS FRACT			1035 M	Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
15P. Endrin Aldehyde (7421-93-4)			x									-			
16P Heptachlor (76-44-8)			x												
17P. Heptaclor 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												

## KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests PLEASE PR OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instance i

 $\sigma = \delta_{n}$ 

	lan di Angelan di Ange Angelan di Angelan di An		<b>FICS (Continued fr</b> analysis for every p		orm C) ble: Complete one tal		ill See instruction			OUTFALL NO.	00	3
				2. EFFLUENT				3. UNI (specify if	TS		4, INTAKE (optional)	
1. POLLUTANT	a. Maximum I	Daily Value	b. Maximum 3 (if avai		c. Long-Term (if availa		d. No. of	a. Concentration	b. Mass	a. Long-Term A		<b>b.</b>
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	No of Analyses
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			1	°c	VALUE		
h. Temperature (summer)	VALUE	22.7	VALUE		VALUE		1		°c	VALUE		
i. pH	MINIMUM	MAXIMUM 8.38	MINIMUM	MAXIMUM			1	STAN	DARD UNITS			

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Part B - In the March "X" column, place an "X" in the Believed Present column for each pollutant you know or nove reason to believe is present. Place an "X" in the Believed Absent column for each pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for the driftibinal data the Believed Present column for the driftibinal data 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 the driftibinal data the Believed Present column for the driftibinal data the Believed Present column for any pollutant. Place an "A" in 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 the driftibinal data 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 the driftibinal data 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 the driftibinal data the pollutant of the pollutant pollutant is pollutant. Place an "A" in 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 the pollutant

1. POLLUTANT		2. K "X"			EF	3. FLUENT				4. UNITS		INTAK	6. Œ (option	Page 48
AND CAS NO.	a.	b.	a. Maximum Dai		b. Maximum 3 Value (if avail	0-Day	c. Long-Tern Value (if avai	ı Avg, lable)	d. No. of	a.	b.	a. Long-Term Value	Avg	b. No. of
(if available)	Believed Present	Believed Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses	Concentration	Mass	(1) Concentration	(2) Mass	Analyses
a. Bromide												Concentration	171433	-
(24959-67-9) b. Bromine	X		9.0						. 1	mg/l				<u> </u>
Total Residual	x		0.13						1	mg/l				
c. Chloride														
d. Chlorine,	<u>x</u>		163.0	····· ·					1	mg/l				
Total														ĺ
Residual	x		0.06						1	mg/l				
e. Color	x		50.0						1	PCU				
f. Fecal									<b>_</b>	100				
Coliform g. Fluoride	X		600		-				1	c/100				Í.
(16984-48-8)	x		1.0						1	mg/l				
h. Hardness										mgn	· · ·			
(as CaCO <sub>3</sub> ) i. Nitrate –	x		1576						1	mg/l				<u> </u>
Nitrite (as N)	x		6.18						1	mg/l				
j. Nitrogen, Total									^	ing/1				
Organic														
(as N) k. Oil and	x		0.25						1	mg/l				
Grease	x		1.0						1	mg/l *				
<ol> <li>Phosphorous (as P), Total</li> </ol>														
7723-14-0 m.	x		1.26						1	mg/l				
Radioactivity														
(1) Alpha, Total														[
(2) Beta.		X												l
Total		x												
(3) Radium Total		x									un	, <u>, , , , , , , , , , , , , , , ,</u>		
(4) Radium, 226, Total		x												

Sierra Club's First Set of Data Requests Dated January 13 2012 Part B - Continued Item No. 25 Attachment 2 1. 2, 3. 4. 5. Page 49 of 93 POLLUTANT MARK "X" EFFLUENT UNITS INTAKE (optional) And CAS NO. c. Long-Term Avg. a. b. Maximum 30-Day d. b. a. **Maximum Daily Value** a. b. Value (if available) Value (if available) No. of b. -Long-Term Avg. Value No. of à. (if available) Believed Believed (1) (2) (1) (2) (1) (2) Analyses Concentration Mass (1) (2) Analyses Present Absent Concentration Mass Concentration Mass Concentration Mass Concentration Mass n. Sulfate (as SO<sub>4</sub>) х 1860 1 mg/l (14808-79-8) o. Sulfide (as S) х <1.0 1 mg/l p. Sulfite (as SO<sub>4</sub>) 0.25 х 1 mg/l (14286-46-3) q. Surfactants 0.059 х 1 mg/l r. Aluminum, Total х 9.18 1 mg/l (7429-90) s. Barium, Total (7440-39-3) х 384 1 ug/l t. Boron, Total (7440-42-8) х < 0.04 1 mg/l u. Cobalt, Total (7440-48-4) 8 Х 1 ug/l v. Iron, Total (7439-89-6) х 11.2 1 mg/l w. Magnesium Total (7439-96-4) х 164 1 mg/l x. Molybdenum Total х <3.0 1 ug/l (7439-98-7) y. Manganese, Total (7439-96-6) 0.43 х 1 mg/l z. Tin, Total (7440-31-5) х <5.0 1 ug/l aa. Titanium, Total х 74 1 ug/l (7440 - 32 - 6)

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Dated January 13, 2012

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 trasm horeast Attachmenh 2 for all such GCMS 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, an Plage: 56, ofe93 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. 2. 3. 4. 5 1. MARK "X" EFFLUENT UNITS **INTAKE** (optional) POLLUTANT a. a. 1919 Ь. And CAS NO. Ъ. a. 2 b. Maximum 30-Day e. Long-Term Avg. d, ь. Long-Term Avg Value No. of á. Testing Believed Believed Maximum Daily Value Value (if available) Value (if available) No. of Mass Analyses Concentration (if available) Required Present Absent (2)(1) (2) (1) (2) Analyses (1) (2) Concentration Mass Concentration Mass Concentration Mass Concentration Mass METALS, CYANIDE AND TOTAL PHENOLS 1M. Antimony Total (7440-36-0) х 9.0 1 ug/l 2M. Arsenic, Total (7440-38-2) х 14 1 ug/l 3M. Beryllium Total (7440 - 41 - 7)х 0.4 1 ug/l 4M. Cadmium Total (7440-43-9) х < 0.5 1 ug/l 5M. Chromium Total (7440-43-9) х 15.0 14.0 2 ug/l 6M. Copper Total (7550-50-8) 45 х 1 ug/l 7M. Lead Total (7439-92-1) х 14 1 ug/l 8M. Mercury Total (7439-97-6) < 0.2 х 1 ug/l 9M. Nickel, Total (7440-02-0) 22 х 1 ug/l 10M. Selenium, Total (7782 - 49 - 2)15 х 1 ug/l 11M. Silver, Total (7440 - 28 - 0)х 0.5

ug/l

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LINE PROPERTY AND AND AND AND AND AND AND AND AND AND											Sierra Club's Eirst		2011-00401 a Requests
Part C - Continu											D	ated Janua	ry 13. 2012
		MARK "X"		House and the set	3. EFFLUENT		Managaran Pasar		4. UNITS	den de la com	Iter	n Ño. 25 At	tachment 2 de 51 of 93
POLLUTANT			a.						CINIC	P	1.4 LAXA 2.	T (Obrioks	<u> Je 51 01 93</u>
And CAS NO.	a:	a, b.	<b>a</b> .	b. N	Aaximum 30-Day	c. Long-	Term Avg.	d	a	b	Long-Term Av	g Value	<b>b.</b>
(if available)	Testing Required	Believed Believed Present Absent	Maximum Dail (1)		lue (if available)	Value (if		No. of	Concentration	Mass			No. of
	required	Absent Absent	(1) Concentration	(2) Mass Conce	(1) (2) entration Mass	(1) Concentra		Analyses		to-the back	(1) Concentration	(2) Mass	Analyses
METALS, CYAN	NIDE AND T	OTAL PHENOLS (Co	ntinued)				unar in survision		Investment and the second	ighter de la composition de la composition de la composition de la composition de la composition de la composit	CONCERN ABOR	1111 <b>111403</b> 1111	THE REPORT OF THE PARTY OF
12M. Thallium,													
Total													1
(7440-28-0) 13M. Zinc,	X		<1.0					1	ug/l				
Total													
(7440-66-6)	x		61			57.5	:	2	ug/l		e .		
14M. Cyanide,													
Total (57-12-5)	x		0.01										
15M. Phenols,	X		0.01	· · · · · · · · · · · · · · · · · · ·				1	mg/l				
Total													
	x		<10.0					1	ug/l				
DIOXIN												II	
2,3,7,8 Tetra- chlorodibenzo,			DESCRIBE RES	ULTS:									
P, Dioxin		x											
(1784-01-6)													
GC/MS FRACT	ON-VOLA	TILE COMPOUNDS	·····										
1V. Acrolein													
(107-02-8)	x		<50					1		ug/l			
2V.								1		ug/i			
Acrylonitrile												ę	
(107-13-1) 3V. Benzene	x		<5.0					1	·	ug/I			
(71-43-2)	x		<5.0					1			1		
5V. Bromoform	**							1	1	ug/l			
(75-25-2)	x		<5.0					1		ug/l			
6V. Carbon													
Tetrachloride (56-23-5)	x		<5.0										
7V. Chloro-	A		~5.0	+		<u> </u>		1		ug/l			
benzene													
(108-90-7)	x		<5.0					1		ug/l			
8V. Chlorodibro-													
momethane													
(124-48-1)	x		<5.0					1		ug/l			

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Sierra Club's First Set of Data Requests Dated January 13, 2012

	Ja	itec	1 JS	In	ua	iry	13,	20	12
1. 1. 1.				_					_

Part C - Continu	ied				and a file and a star		area year					911.911.11	L	Dated Jan	uary 13, 2012 Attachment 2
1.		2. MARK "X"					3. LUENT				4. UNITS				Page 52 of 93 al)
POLLUTANT And CAS NO. (if available)	a. Testing	a. Believed	b. Believed	a. Maximum Daily		b. Maximum 3 Value (if ayai	lable)	c. Long-Term Value (if avail	lable)	d. No, of	a. Concentration	b. Mass	a. Long-Term Av		b. No. of Analyses
(II AVAIIADIC)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(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				

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Dated	January	13,	2012

Part C-Continu	ued			an an an an an an an an an an an an an a								Deleter	Ite	m No. 25	Attachment 2
1.		2. MARK "X"				EFI	3. LUENT				4. UNITS			5. F Æ (option:	Page 53 of 93
POLLUTANT And CAS NO.	a. Testing	a. Believed	b, Believed	a. Maximum Dail		b. Maximum 3 Value (if avai	ilable)	c. Long-Term Value (if avail	able)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av	g. Value	b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
21V. Methyl Chloride (74-87-3)	x			<5.0						1	ug/l				
22V. Methylene Chloride								:							
(75-00-2) 23V. 1,1,2,2-	x			<5.0						1	ug/l				
25 v. 1,1,2,2- Tetrachloro- ethane (79-34-5)	x			<5.0						1	ug/l				
24V.		-													
Tetrachloro- ethylene (127-18-4)	x			<5.0						1	ug/l				
25V. Toluene (108-88-3)	x			<5.0						1	ug/l				
26V. 1,2-Trans- Dichloro- ethylene (156-60-5)	x			<5.0						1	ug/l				
27V. 1,1,1-Tri- chloroethane (71-55-6)	x			<5.0				-		1 .	ug/l				
28V. 1,1,2-Tri- chloroethane (79-00-5)	x			<5.0			-			1	ug/I				
29V. Trichloro- ethylene (79-01-6)	x			<5.0						1	ug/l				
30V. Vinyl Chloride (75-01-4)	x			<5.0						1	ug/l				

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													D	ated Janu	ary 13, 2012
Part C - Continu	ied				ciae de la		ALC: NO.	and strand the		FRANK GA	alex (alex alex alex alex alex alex alex alex	신전에	iter Iter		Attachment
1.		2. MARK "X"					3. LUENT				4. UNITS				age 54 of 9
POLLUTANT			anna an Starbard				LUENI	· 전 관계 여러 한 전 전 전 전 전 19 19 - 19 19 19 19 19 19 19 19 19 19 19 19 19	e da ante da ser Esperador est	<u>- 1956 (</u> 1956) 1956 (1958)	UNIIS		INTAK a.	E (optiona	і) b.
And CAS NO.	a. Testing	a, Believed	b. Believed	a. Maximum Daily		b. Maximum 3 Value (if avail	able)	c. Long-Term Value (if avai	able)	d. No. of	a. Concentration	b. Mass	Long-Term Av	g Value	No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
GC/MS FRACTI	ON - ACID	COMPOUN	DS			ooncentration			111483	President and and	<u>n ka dia kangkang ba</u>	<u>I </u>	Concentration	111455	
1A. 2-Chloro-											(	1			
phenol (95-57-8)	x			<10.0						1	ug/l				
2A. 2,4-															
Dichlor- Orophenol	x			<20.0						1	ug/l				
(120-83-2) 3A.															
3A. 2,4-Dimeth-															
ylphenol (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-															í
phenol (51-28-5)	x			<50.0						1	ug/I				
6A. 2-Nitro- phenol															
(88-75-5)	x			<20.0						1	ug/l				
7A. 4-Nitro- phenol (100-02-7)				-50.0						_					
8A. P-chloro-m-	x			<50.0		······				1	ug/l				
cresol (59-50-7)	x			<20.0						1	ug/l				
9A.										1					
Pentachloro- phenol (87-88-5)	x			<50.0						1	ug/l				
(0/-00-3)											ļ				ļ
10A. Phenol (108-05-2)	x			<10.0						1	ug/l				
11A. 2,4,6-Tri- chlorophenol										<u> </u>	ug/1	<u> </u>			
(88-06-2)	x			<10.0						1	ug/l				
GC/MS FRACT	ION BASE/	NEUTRAL	COMPOUN	ids								·	·	·	
1B. Acena- phthene (83-32-9)			x												

		. *											Sierra Club's Firs	t Set of Da	ata Requests ary 13, 2012
Part C – Continu	ed									6 - C - A - C - D - D - D - D - D - D - D - D - D			L Ite	m No. 25 /	Attachment 2
1.		2. MARK "X"				3. EFFLU					4. UNITS		States and second	5. P E (optiona	age 55 of 93
POLLUTANT And CAS NO.	a. Testing	a. Believed	b, Believed	a. Maximum Daily		b. Maximum 30-1 Value (if availab	le)	c. Long-Term Value (if avail	able)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av	g Value	b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass		(2) Mass	(1) Concentration	(2)	Analyses			(1)	(2)	
GC/MS FRACTI	ON - BASE/	NEUTRAL	COMPOUN	DS (Continued)	- 14185S	SCOUCCILISTION (191	viass	Concentration	Mass	a finan 2003 - Angelon	No Alternation of the		Concentration	Mass	L
2B. Acena-					I					1	1			1	
phtylene (208-96-8)			x												
3B. Anthra-			<u> </u>												<u> </u>
cene (120-12-7)			x												
4B.		·	<u> </u>					-							
Benzidine (92-87-5)			x												
5B. Benzo(a)-															
anthracene (56-55-3)			x												
6B. Benzo(a)-			<u> </u>		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·		•					
pyrene (50-32-8)			x		:										
7B. 3,4-Benzo- fluoranthene															
(205-99-2)			x												
8B. Benzo(ghl)													a		
perylene (191-24-2)			x												
9B. Benzo(k)- fluoranthene															
(207-08-9)			x												
10B. Bis(2- chlor-															
oethoxy)-			x								· ·				
methane (111-91-1)															
11B. Bis						1					<u> </u>				
(2-chlor-															-
oisopropyl)- Ether			x		-										
12B. Bis															1
(2-ethyl- hexyl)-															
phthalate			x												
(117-81-7)															

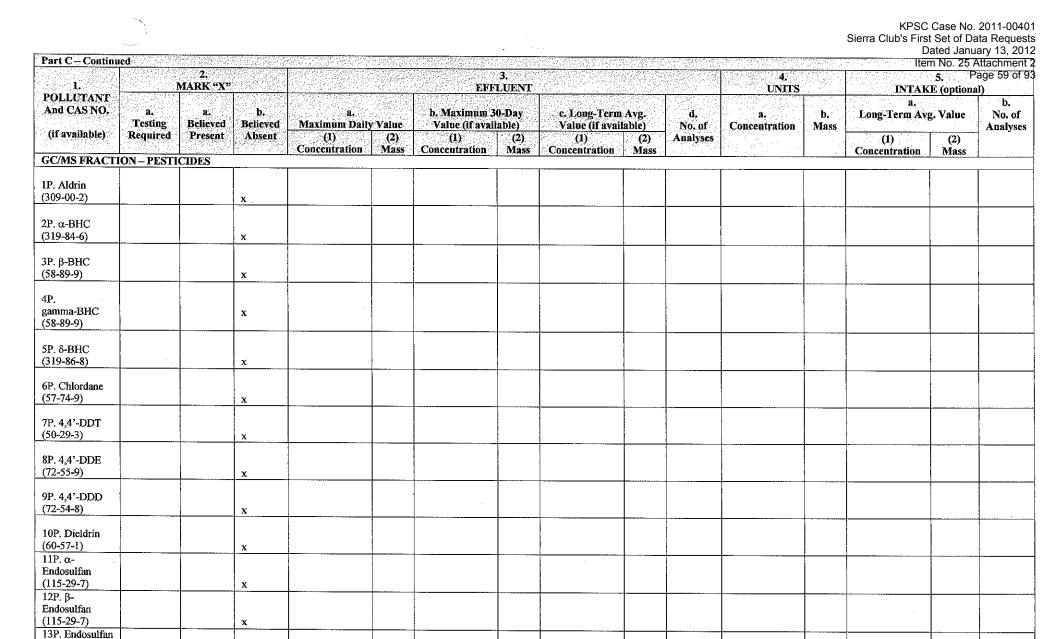
KPSC Case No. 2011-00401

	· ·													Dated Janu	uary 13, 2012
Part C - Continu	ıed								$(\beta_1,\beta_2) \in \mathbb{R}^{n_1}$				lte	m No. 25	Attachment
1		2. MARK "X"				EFF	3. LUENT		ار المعادية المحمد ( والح المحمد المحمد ( المحمد المحمد ) المحمد المحمد ( المحمد )		4. UNITS		INTAK	5. F E (options	Page 56 of 93 I)
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Dail	Value	b. Maximum 3 Value (if avai	lable)	c. Long-Term Value (if avail	able)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av		b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2)	(1)	(2)	Analyses			(1)	(2)	
GC/MS FRACTI	ION - BASE/	NELTRAL	COMPOUN	DS (Continued)	IVIASS	Concentration	Mass	Concentration	- Mass	· · · · · ·	1999 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	11 10	Concentration	Mass	L
13B. 4-Bromo-							r i		[						
phenyl Phenyl ether (101-55-3)			x												
14B. Butyl-															
benzyl phthalate			x												
(85-68-7)															
15B. 2-Chloro- naphthalene															
(7005-72-3) 16B. 4-Chloro-			. x	1	· · · ····-		ļ								
phenyl phenyl ether			x		~										
(7005-72-3)												:			
17B. Chrysene (218-01-9)															
18B. Dibenzo-			x												
(a,h) Anthracene			x				L								
(53-70-3) 19B. 1,2-									ļ			+			
Dichloro-															
benzene (95-50-1)			x												
20B. 1,3- Dichloro- Benzene			x												
(541-73-1)			^												
21B. 1,4-		1										1	<u> </u>		1
Dichloro-						1	1						ļ		
benzene (106-46-7)			x												
22B. 3,3- Dichloro-													1		
benzidene (91-94-1)			x												
23B. Diethyl		1					-					+			
Phthalate (84-66-2)			x									1		1	

	in the second second second second second second second second second second second second second second second												Sierra Club's Firs	t Set of Da Dated Janu	ary 13, 2012
Part C-Continu	ed						1.19.18.18	S 16.					lte	m No. 25 /	Attachment 2
1		2, <u>MARK "X"</u>				EFI	3. LUENT				4. UNITS		INTAK	5. E (optiona	age 57 of 93 il)
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Daily	Value	b, Maximum 3 Value (if avai	80-Day lable)	c. Long-Term Value (if avail	Avg. able)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av		b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
GC/MS FRACTI	ON BASE/	NEUTRAL	COMPOUN	DS (Continued)	1114405	Concentration	111133	Concentration.	11439	<u>P</u>		<u> </u>	Concentration	111433	
24B. Dimethyl Phthalate		:					-								
(131-11-3) 25B. Di-N-			x												
butyl Phthalate (84-74-2)			x												
26B. 2,4-Dinitro-															
toluene (121-14-2) 27B.			x												
2,6-Dinitro- toluene															
(606-20-2) 28B. Di-n-octyl			x .												
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			x												
(118-71-1) 33B.															
Hexachloro- butadiene (87-68-3)			x												
34B. Hexachloro- cyclopenta- diene (77-47-4)			x												

Part C – Continue 1.		2.	and a second second second	the second second second second second second second second second second second second second second second se											Attachment
이가 이 것은 특히 가장을 즐었었다.		2. MARK "X"				EFF	3. LUENT				4. UNITS		INTAK	5. P E (optiona	age 58 of 9
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Dail	Value	b. Maximum 3 Value (if avail	able)	c. Long-Term Value (if avail	lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av	g Value	b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
GC/MS FRACTIO	ON - BASE/	NEUTRAL	COMPOUN	DS (Continued)	- ICAUSS	Concentration	171033	Concentration	1. 191400		I	<u> </u>	Concentration	171435	[
35B. Hexachlo-							1	· · · · · · · · · · · · · · · · · · ·	[			T	[		1
roethane (67-72-1)			x												
36B. Indneo-								······································							
(1,2,3-oc)-				-											
Pyrene			x												
(193-39-5)										1					
37B.						•	1					1			
Isophorone								[							
(78-59-1)			x												
38B.			· · · ·		<b></b>					-					+
Napthalene															
(91-20-3)			x												1
39B.															+
Nitro-							-								
benzene			x									1			
(98-95-3)			^												
40B. N-Nitroso-															
dimethyl-					1										
amine			x					1							
(62-75-9)			^												
41B.										-				<u> </u>	
N-nitrosodi-n-															
propylamine			x												
(621-64-7)			^												
42B. N-nitro-				· · · · · · · · · · · · · · · · · · ·	1				+					1	
sodiphenyl-										1					
amine			x												
(86-30-6)			A .												
43B. Phenan-															
threne					1										
(85-01-8)			x												
		+	<u> </u>		+				<u> </u>			<b> </b>			
44B. Pyrene															
(129-00-0)			x												1
45B. 1,2,4 Tri-			<u>^</u>		<u> </u>										<b></b>
43B. 1,2,4 111- chloro-		1									· ·				
benzene			v												
(120-82-1)			x												

,



Sulfate (1031-07-8)

14P. Endrin (72-20-8) х

х

	and a second sec							~					Sierra Club's First	st Set of Da	. 2011-00401 ata Requests Jary 13, 2012
Part C - Continu	ied	2.											lte	m No. 25 /	Attachment 2
1,		2. MARK "X"				ana	3. LUENT				4. UNITS		INTAI	5, P Œ (option:	Page 60 of 93
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Dail	v Value	b. Maximum 3 Value (if avai	0-Day	c. Long-Term Value (if avail	Avg.	d. No, of	a. Concentration	b. Mass	a. Long-Term A		b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
GC/MS FRACT	ION - PESTI	CIDES	let e d'énie			Concontanton	1711000	Convention	1111005	1	<u>L. A., A</u>	I	Contentiation	1 11100	
15P. Endrin Aldehyde (7421-93-4)			x								1				
16P Heptachlor (76-44-8)			x												
17P. Heptaclor Epoxide (1024-57-3)			x			<u>.</u>									-
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												

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Sierra Club's First Set of Data Requests 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 events 12/12/12 these pages. (See instructions) Page 61 of 93

V. INTAKE AND	<u>EFFLUENT CE</u>	IARACTERISI	ICS (Continued fi	<mark>rom page 3 of F</mark> o	vrm C)					OUTFALL NO.	004	
Part A - You must	provide the result	is of at least one	analysis for every p	ollutant in this ta 2. EFFLUENT	ble: Complete one tab	le for each outfa	II. See instructions	for additional detail 3. UNI (specify if	TS		. INTAKE	
l. POLLUTANT		Daily Value	b. Maximum 3 (if avai	0-Day Value lable)	c. Long-Term A (if availa	ble)	d. No. of	a. Concentration	b. Mass	a. Long-Term /		ь.
	(1) Concentration	(2) 1 Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	No of Analyses
a. Biochemical Oxygen Demand (BOD)	4'	7	31		12,15		15	mg/l				
b. Chemical Oxygen Demand (COD)	4				12,10		1	mg/l	•			
c. Total Organic Carbon (TOC)	1	1					1	mg/l		3		
d. Total Suspended Solids (TSS)	2:	5	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	STAN	DARD UNITS			L

KPSC Case No. 2011-00401

KPSC Case No. 2011-004	KPS	C Cas	se No.	201	1-0040
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~	<i>,</i>												E: 1 O 1	No. 2011-0040
Part B - In the to be absent. If you requirements:		umn, place a <u>elieved Prese</u>	a "X" in the <u>Believ</u> ni column for any <sub>I</sub>	<u>ed Present</u> ioliutant, ye	column for each po ou must provide the	llutant you results of	know on dave reas at least one analys:	on to believ for that po	e is present. P dlutant. Comple	lace an "X" m the <u>l</u> ite one table for eac	<u>Believed A</u> h outfall S	Sierra Club's <u>bsent</u> column for ea see the instructions i	CONTRACTOR OF THE PARTY	Januery 19,9201 125 Attachinent
1. POLLUTANT AND CAS NO.	MAR 2.	К "Х" b/	a. Maximum Da		EF b. Maximum 3	3. FLUENT	e Long-Tern	1	d.	4. UNITS		INTAI a. Long-Tern	6. Æ (option	
(if available)	Believed Present	Believed Absent	(1) Concentration	(2) Mass	(1) Concentration		(1) Concentration		u. No. of Analyses	a. Concentration	b. Mass	(1) Concentration		b. No. of Analyses
a. Bromide					S MANDEL HUOL				E BARKES AN AN AN AN AN AN AN AN AN AN AN AN AN		CARACTER CARACTERS OF CARACTE		- CALLARASE - CAL	ALEBRICH STREET, F
(24959-67-9) b. Bromine	x		<5.0						1	mg/l		<u> </u>		
Total Residual	x		0.09						1	mg/l		_		
c. Chloride	x		131						4					
d. Chlorine,	<u>^</u>		101					·	1	mg/l				
Total Residual	x		0.05				0.004		15	mg/l				
e. Color	x		10						1	PCU				
f. Fecal							·····		<u>_</u>		 			
Coliform g. Fluoride	x		430		150		25.8		15	c/100				<b> </b>
(16984-48-8)	x		0.9						1	mg/l				
h. Hardness (as CaCO <sub>3</sub> )	х		258						1	mg/l				
<ul> <li>Nitrate –</li> <li>Nitrite (as N)</li> </ul>	x		25.8						- 1	mg/l				·····
j. Nitrogen, Total										<u> </u>			<u> </u>	
Organic (as N)	x		<0.05						1	mg/l				
k. Oil and														
Grease 1. Phosphorous	x	<u> </u>	8			 			1	mg/l				
(as P), Total														
7723-14-0 m.	x	<u> </u>	3.36						1	mg/l	ļ			
Radioactivity														
(1) Alpha, Total		x												
(2) Beta, Total		x										1	1	
(3) Radium Total	·····	x							· · ·					
(4) Radium, 226, Total		x								·				

		er bellegt et geborgen ge					References Tables				water of the Article State	Sierra Clut	KPSC Ca o <u>'s First</u> S	ase No. 2011-00 et <u>of Data Req</u> u ed January 13
Part B - Continu 1.	2.9	<b>.</b>				3.				4.			ا <u>Item</u> 5.	No. 25 Attachm Page 63 (
POLLUTANT And CAS NO.	MAR	K "X"	<b>.</b>		EF b. Maximum 3	FLUENT				UNITS			Œ (option	
가 같은 것은 것은 것을 같을 것을 했다. 같은 것은 것은 것은 것은 것은 것을 많다.	a.	<b>b.</b>	a. Maximum Dail	y Value	Value (if avai	iu-Day lable)	c. Long-Tern Value (if avai	l Avg. lable)	d. No. of	<b>a.</b>	<b>b.</b>	a. Long-Term Ave	Value	b, No. of
(if available)	Believed Present	Believed Absent	(1) Concentration	(2) Mass	(1) Concentration	(2)	(1) Concentration	(2) Mass	Analyses	Concentration	Mass	(1) Concentration	(2) Mass	Analyses
n. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	x		216						1	mg/l		Continuation	- Trange	
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) t. Boron, Total	x		20						1	ug/l				
<u>(7440-42-8)</u> u. Cobalt, Total	x		<0.04						1	mg/l				
(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						-					
z. Tin, Total (7440-31-5)	x		<5						1	mg/l 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 **Tiesting** Red in the **Red in the Red in** 

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1		2. MARK "X"		67.5		ERF	3. LUENT				4. UNITS		INTAK	5. E (options	il)
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Daily	Value	b. Maximum 3 Value (if avail	able)	c, Long-Term Value (if avai	Avg. lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av		b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
METALS, CYAI	NIDE AND T	OTAL PHE	NOLS												-
1M. Antimony Total (7440-36-0)	x			<5.0						1	ug/l				
2M. Arsenic,				.0.0						1	uga				
Total (7440-38-2)	x			<4.0						1	ug/l				
3M. Beryllium											<u> </u>	·			
Total (7440-41-7)	x			<0.2						1	ug/l				
4M. Cadmium							( ·							·	
Total (7440-43-9)	x			<0.5						1	ug/l				
5M. Chromium															1
Total (7440-43-9)	x			3.0						1	ug/l				
6M. Copper Total															
(7550-50-8)	x			18						1	ug/l				ļ
7M. Lead Total			1 1 7												
(7439-92-1)	x			4.0				1		1	ug/l			1	
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)	х	ļ		13						1	ug/l				
11M. Silver, Total															
(7440-28-0)	Х	<u> </u>	I	0.2						1	ug/l				

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								)							2011-00401
Part C - Continu							terencer Statistics						Sierra Club's Firs		ary 13, 2012
1.		2, MARK "X"	e za sign carronne og Generaliset	naras (2005) a constructivos (2005) a constructivos (2005) a constructivos (2005) a constructivos (2005) a constructivos (2005)		EFF	3. LUENT	en la ner de la seconda de La constante de la seconda de la seconda de la seconda de la seconda de la seconda de la seconda de la seconda d La seconda de la seconda de			4. UNITS		ítei	n <b>5</b> No. 25	Attachment 2 Mage 65 of 93
POLLUTANT And CAS NO. (if available)	a. Testing	a. Believed	b. Believed	a. Maximum Daily		b. Maximum 3 Value (if avai	lable)	c. Long-Term Value (if avail	able)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av		b. No. of
	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	Analyses
METALS, CYA	NIDE AND T	OTAL PHE	NOLS (Con	tinued)											
12M. Thallium, Total (7440-28-0)				<1.0							11				
13M. Zinc,				~1.0						1	ug/I				
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											
DIOXIN				<10.0						1	ug/l				
2,3,7,8 Tetra-				DESCRIBE RESI	TT TS.	·····									
chlorodibenzo,					obio.										
P, Dioxin (1784-01-6)			x												
GC/MS FRACT	ION – VOLA	TILE COM	POUNDS												
1V. Acrolein															
(107-02-8)	x			<50						1		ug/l			
2V.										<u>^</u>		ug/1			
Acrylonitrile															
(107-13-1) 3V. Benzene	x			<5.0						1		ug/l			
(71-43-2)	x			<5.0						1					
5V. Bromoform				-5.0						1		ug/l			
(75-25-2)	x			<5.0						1		ug/l			
6V. Carbon Tetrachloride															
(56-23-5)	x			<5.0											
7V. Chloro-	<u>a</u>			~3.0						1.		ug/I			
benzene															
(108-90-7)	x	ļ	ļ	<5.0						1		ug/l			
8V. Chlorodibro- momethane															
(124-48-1)	x			<5.0						1					
		I	L	-5.0	L		L			1		ug/l			

	Dated January 13, 2012
	Item No. 25 Attachment 2
<b>4.</b> State 1	<b>5.</b> Page 66 of 93
UNIIS	INTAKE (optional)
a. b. centration Mass	a. b. Long-Term Avg Value No. of Analyses

		2. <u>MARK "X"</u>	en an States en la su Production		1773 st. 1	EFF	3. LUENT				4. UNITS		INTAK		Attachment Page 66 of 9 al)
And CAS NO.	a. Testing	a. Believed.	b. Believed	a. <u>Maximum Daily</u>		b. Maximum 3 Value (if avai	lable)	c. Long-Term Value (if avail	lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av	g Value	b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
9V.		a south the second	<u> Cell Mark I de La Calle P</u>		1111135	Concentration	TURNO	Concentration	111433		and the second second second second second second second second second second second second second second second	gerig indiana.	Concentration	· 141855	
Chloroethane		:													1
(74-00-3)	x			<5.0						1	ug/l				
10V. 2-Chloro-															
ethylvinyl Ether														!	
(110-75-8)	x			<5.0						1	ug/l				
11V.							~				<u> </u>				
Chloroform															
(67-66-3)	х			47						1	ug/l				
12V. Dichloro-															1
bromomethane															ŀ
(75-71-8)	x			11.0						1	ug/l				·
14V. 1,1-												1			
Dichloroethane															l
(75-34-3)	<b>x</b> .			<5.0						1	ug/l				
15V, 1,2-															
Dichloroethane															
(107-06-2)	x			<5.0						1	ug/1				
16V. 1,1-									1						
Dichlorethylene															
(75-35-4)	х			<5.0						1	ug/l				
17V. 1,2-Di-														-	
chloropropane															
(78-87-5)	х			<5.0						1	ug/l				
18V. 1,3-											-8-				1
Dichloropro-															
pylene	х			<5.0						1	ug/l				
(452-75-6)											Ŭ				
19V. Ethyl-															· · · · · · · · · · · · · · · · · · ·
benzene															
(100-41-4)	x			<5.0						1	ug/l	1			
20V. Methyl									1						1
Bromide															
(74-83-9)	х			<5.0				-		1	ug/l				

Part C-Continued

Part C - Continu	ied														ary 13, 2012 Attachment 2
<b>l.</b>		2. MARK "X"	liter administra St. St. Galacier			EFF	3. LUENT		10 (2003) 19 - 2 (2) 19 - 2 (2)		4: UNITS		INTAK	5. E (optiona	age 67 of 93 I)
POLLUTANT And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Dail	y Value	b. Maximum 3 Value (if avai		c. Long-Term Value (if avail	Avg. lable)	d. No, of	a. Concentration	b. Mass	a. Long-Term Av	g. Value	b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1)	(2)	
21V. Methyl	<u>ny navana sa tuk</u>		an ser se se se se se se se se se se se se se	Concentration	111485	Concentration ?	IVIASS	Concentration	IVIASS		generale i l'arrege i parel	1999 - 2000 - 1	Concentration	Mass	
Chloride (74-87-3)											1				
22V. Methylene	x			<5.0			·			1	ug/l				
Chloride															- A.
(75-00-2)	х			<5.0	·					1	ug/l				
23V. 1,1,2,2- Tetrachloro-															
ethane	x			<5.0						1	ug/l				
(79-34-5)										-	-8-				
24V. Tetrachloro-															
ethylene	x			<5.0						1	ug/l				
(127-18-4)							-				201				
25V. Toluene															
(108-88-3)	х			<5.0						1	ug/l		4		
26V. 1,2-Trans-															
Dichloro- ethylene	x			<5.0						1					
(156-60-5)	~			-5.0						1	ug/l				
27V. 1,1,1-Tri-							1								· · · · · · · · · · · · · · · · · · ·
chloroethane (71-55-6)	x			<5.0						1					
28V. 1,1,2-Tri-	<u>^</u>			~5.0						1	ug/l	<u> </u>			
chloroethane															
(79-00-5) 29V. Trichloro-	x			<5.0						1	ug/l				
ethylene															
(79-01-6)	x			<5.0						1	ug/l				
30V. Vinyl													**		
Chloride (75-01-4)	x			<5.0						1	ugli				
(	1	1	1	-5.0	1	1	1	1		1	ug/l			1	

KPSC Case No. 2011-00401

1.     3.     4.     5.       POLLUTANT And CAS NO.     a.     b.     a.     b.     b. Maximum 30-Day     c. Long-Term Avg.     d.     a.     b.       If available     Required     Present     Absent     (1)     (2)     (1) </th <th>January 13, 201</th>	January 13, 201
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	25 Attachment Page 68 of 9 Ditional)
Concentration         Mass         Concentra	b. lue No. of Analyses
GC/MS FRACTION - ACID COMPOUNDS         1A 2-Chloro- phenol (95-57-8)       x       <10.0       1       ug/1          2A 2,4 - Dichlor- Orophenol X (120-83-2)       x       <20.0       1       ug/1          3A, (120-83-2)       -       -       1       ug/1           3A, (120-83-2)       -       -       1       ug/1           3A, (105-67-9)       -       -       1       ug/1           4A, 4,6-Dinitro- o-cresol (51-28-5)       x       <50.0       1       ug/1           5A, 2,4-Dinitro- phenol       -       -       1       ug/1            5A, 2,4-Dinitro- o-cresol (51-28-5)       x       <50.0       1       ug/1            (51-28-5)       x       <50.0       1       ug/1  <	2) ass
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	455
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
ylphenol (105-67-9)         x         <10.0         1         ug/1         Image: second	
(105-67-9)	
4A. 4,6-Dinitro- o-cresol (534-52-1)       x       <50.0	
o-cresol (534-52-1)         x         <50.0         1         ug/l	
(534-52-1)       x       <50.0	
5A. 2,4-Dinitro-phenol       x       <50.0	
(51-28-5)       x       <50.0       1       ug/l          6A. 2-Nitro- phenol (88-75-5)       x       <20.0	·········
6A. 2-Nitro-phenol (88-75-5)       x       -20.0       1       ug/l         7A. 4-Nitro-phenol (100-02-7)       x       -20.0       1       ug/l         8A. P-chloro-m-       -       -       -       -       -	
6A. 2-Nitro-phenol (88-75-5)       x       <20.0	
(88-75-5)         x         <20.0         1         ug/l            7A. 4-Nitro- phenol (100-02-7)         x         <50.0	
7A. 4-Nitro- phenol (100-02-7)         x         <50.0         1         ug/l           8A. P-chloro-m-         0         <	
phenol (100-02-7)         x         <50.0         1         ug/l           8A. P-chloro-m- <td< td=""><td></td></td<>	
(100-02-7)         x         <50.0         1         ug/l           8A. P-chloro-m-	
8A. P-chloro-m-	
(59-50-7)         x            I         ug/l           9A.	
Pentachloro-	
phenol x $< 50.0$ 1 $\mu \sigma/l$	
(87-88-5)	
10A. Phenol	
(108-05-2) x <10.0 1 ug/l	
11A. 2,4,6-Tri-	
chlorophenol	
(88-06-2)         X         <10.0         1         ug/l	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS 1B. Acena-	
phthene	
(83-32-9) x	



Part C - Continu	ed						The second state						D. Itel	ated Janu	ary 13, 2012 Attachment 2
1.		2. MARK "X"	ta sa a			EFF	3. LUENT				4. UNITS				age 69 of 93
POLLUTANT And CAS NO. (if available)	a. Testing	a. Believed	b. Believed	a. Maximum Dail		b. Maximum 3 Value (if ayai	lable)	c. Long-Term Value (if avai	lable)	d. No, of	a. Concentration	b. Mass	a. Long-Term Av	g Value	b. No. of Analyses
(II avanabic)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1)	(2)	
GC/MS FRACTI	ON - BASE/	NEUTRAL	COMPOUN	DS (Continued)	114405	Concentration	171455	Concentration	141455		and the second second second	<u></u>	Concentration	Mass	·
2B. Acena-				<u> </u>	[					· · · · · · · · · · · · · · · · · · ·		1			
phtylene															
(208-96-8)			x												
3B. Anthra-															
cene (120-12-7)		ŀ													1
4B.			x	····											
Benzidine		Ì													
(92-87-5)			x												
5B. Benzo(a)-											·····			· · ·	
anthracene															
(56-55-3)		ļ	x												
6B. Benzo(a)- pyrene															
(50-32-8)			x												
7B. 3,4-Benzo-			<u>^</u>												<b> </b>
fluoranthene													N		
(205-99-2)			x												
8B. Benzo(ghl)															
perylene (191-24-2)															
9B. Benzo(k)-		·····	x				]								
fluoranthene															
(207-08-9)			x												
10B. Bis(2-					1		1								
chlor-					1										1
oethoxy)- methane			x												
(111-91-1)					1										
11B. Bis				······											
(2-chlor-															
oisopropyl)-			x												
Ether					1										
12B. Bis															
(2-ethyl- hexyl)-															
phthalate			х												
(117-81-7)															

Part C - Continu	ied		20123				a ogestingsfor Galacter						 Iter	n No 257	ary 13, 20 Attachment
1.		2. MARK "X"				EFF	.3. LUENT			<u>- 1709</u> 1819 - 1917 -	4. UNITS			5. P E (optiona	age 70 of
POLLUTANT And CAS NO.	a, Testing	a. Believed	b. Believed	a. Maximum Dail		b. Maximum 3 Value (if avai	lable)	c. Long-Term Value (if avai	lable)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av	g Value	b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1)	(2)	Analyses		an an an an an an an an an an an an an a	(1)	(2)	
GC/MS FRACT	ION - BASE/	NEUTRAL	COMPOUN	DS (Continued)	IVIASS.	Concentration		Concentration	Mass			240,0000	Concentration	Mass	
13B. 4-Bromo- phenyl Phenyl ether (101-55-3)			x												
14B. Butyl- benzyl															<u> </u>
phthalate (85-68-7) 15B. 2-Chloro-			x												
naphthalene (7005-72-3)			x												
16B. 4-Chloro- phenyl phenyl ether (7005-72-3)			x							1					
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	·····	-										

KPSC Case No. 2011-00401

							, L						Sierra Club's Firs	st Set of Da	2011-0040 ata Reques
B. C. C. C.		Mar Mar and San Street		and a state of the state of the state of the state of the state of the state of the state of the state of the s	sensolatif annéar anna ès sa		• •								ary 13, 201
Part C – Continu	ued				<u>danshë</u>	tonale en et de sur-		Contraction of the second second second					lte	m No. 257	Attachment
		2.			2012	영국 영화 문화 문화	3.		1.005	A. D. A.	4.				age 71 of 9
1.	and a second second	MARK "X"			法の行為法	EF	FLUENT			$\delta_{1} \in \{0,0\} \subset \{0,1\}^{n}$	UNITS		INTAK	<b>E</b> (options	i)
POLLUTANT And CAS NO.	a. Testing	a.	1992 - 1973 1975 <b>b,</b>	ente del ante del construction de la construcción de la construcción de la construcción de la construcción de l Banda de la construcción de la construcción de la construcción de la construcción de la construcción de la const		b. Maximum	30-Day	c. Long-Term	Avg.	d,	а.	<b>b.</b>	a. Long-Term Av	an na Diana. Mga sa	b. No. of
(if available)	Required	Believed Present	Believed Absent	Maximum Dail (1)	<u>y value</u> (2)	Value (if ava (1)	ilable) (2)	Value (if avai (1)	lable) (2)	No. of Analyses	Concentration	Mass	(1)	(2)	Analyses
			She gara	Concentration	Mass	Concentration	Mass	Concentration	Mass		같은 기억되었는		Concentration	Mass	
GC/MS FRACT	<u>ION – BASE/</u>	NEUTRAL	COMPOUN	DS (Continued)											· · · · · · · · · · · · · · · · · · ·
24B. Dimethyl Phthalate (131-11-3)			x												
25B. Di-N-			A		<u> </u>		-							<u> </u>	
butyl Phthalate (84-74-2)			x												
26B.		1	<u></u>			·   ·				·				-	
2,4-Dinitro-												1			
toluene			x												
(121-14-2)	[		x												
27B.			· · · · · · · · · · · · · · · · · · ·												
2,6-Dinitro-					i i										
toluene		-	x												
(606-20-2)					l										
28B. Di-n-octyl								1							
Phthalate															
(117-84-0)			x										1		1
29B. 1,2-															
diphenyl-															
hydrazine (as			x												
azonbenzene)															
(122-66-7)		1													
30B.		1	1											1	
Fluoranthene															
(208-44-0)			x												
							-		1			1	1		1
31B. Fluorene		1													
(86-73-7)		ł	x												
32B.						-		1	+	1			-	1	1
Hexachloro-							1					1			
benzene			x								1				
(118-71-1)															
33B.						1			1					+	
Hexachloro-															
butadiene			x								}				
(87-68-3)			1 -												
34B.	1	1	1		-										
Heyechloro-			1	1	1				1	1	1	ł		1	1

diene (77-47-4) х

Part C Continued											Dated January 13, 20 Item No: 25 Attachment				
1. POLLUTANT	2. MARK *X"			3. EFFLUENT						4; UNITS			5. Page 72 of 9		
And CAS NO. (if available)	a, Testing Required		b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of	a. Concentration	b. Mass	a. Long-Term Ayg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
GC/MS FRACTI	ION - BASE	NEUTRAL	COMPOUN	DS (Continued)	11116600	Concenti anon	- 17 <b>. 11.3</b> .3	Concentration	141.435				Concentration	IVIASS	
35B. Hexachlo- roethane (67-72-1)			x												
36B. Indneo-			<u>^</u>												
(1,2,3-oc)- Pyrene (193-39-5)			x												
37B. Isophorone (78-59-1)			x												
38B. Napthalene (91-20-3)			x												-
39B. Nitro- benzene (98-95-3)			x												
40B. N-Nitroso- dimethyl- amine (62-75-9)			x												
(02-75-9) 41B. N-nitrosodi-n- propylamine															
(621-64-7)			x												
42B. N-nitro- sodiphenyl- amine			x				,								
(86-30-6) 43B. Phenan-															ļ
threne (85-01-8)		-	x												
44B. Pyrene (129-00-0)			x												
45B. 1,2,4 Tri- chloro- benzene (120-82-1)			x											<u>-</u>	

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KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests Dated January 13, 2012

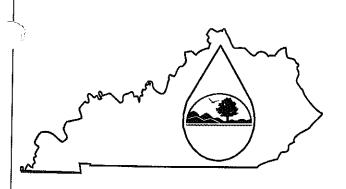
Part C - Contini	ied		a an an an an an an an an an an an an an		er sa sa te				1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 -			Ref Area (Stars) Star (Stars)		n No. 257	ary 13, 2012 Attachment 2
1. Pollutant		2, <u>MARK "X"</u>					3. LUENT				4. ÚNITS			5. E (option:	Page 73 of 9; al)
And CAS NO.	a. Testing	a. Believed	b. Believed	a. Maximum Dail		b. Maximum 3 Value (if avai	0-Day lable)	c. Long-Term Value (if avail	Avg. able)	d. No. of	a. Concentration	b. Mass	a. Long-Term Avg		b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
GC/MS FRACT	ION – PESTI		1		E			1	r	· · · · ·	F	,			
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												e e
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												

KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests

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Part C-Continu	ed .		्य व्यक्ति संस्थित विद्यालय				erenta (g.			and the De Later.		9088-05588902	C	ated Janu	uary 13, 2012 Attachment
1. POLLUTANT		2, MARK "X"				EFF	3. LUENT				4. UNITS		1878 - 1978) 1878 - 1978)		Page 74 of 9
And CAS NO,	a. Testing	a. Believed	b. Believed	a. Maximum Dail		b. Maximum 3 Value (if avai	lable)	c, Long-Term Value (if avail	able)	d. No. of	a. Concentration	b. Mass	a. Long-Term Av		b. No. of Analyses
(if available)	Required	Present	Absent	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	Analyses			(1) Concentration	(2) Mass	
GC/MS FRACT	ION – PESTI	CIDES			1		1			<u> </u>	<u></u>	1	Concentration	111430	1
15P. Endrin Aldehyde (7421-93-4)		:	x			:									
16P Heptachlor (76-44-8)			x												
17P. Heptaclor Epoxide (1024-57-3)			x										i		-
18P. PCB-1242 (53469-21-9)			x										and a group of the second second second second second second second second second second second second second s		
19P. PCB-1254 (11097-69-1)			x		1										
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 1. For additional information, Contact KPDES Branch, (502) 564-3410.

For each outfall list the latitud	le and longit	ude of its loca	ation to the	nearest 15	seconds and	name the re	eceiving 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

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.

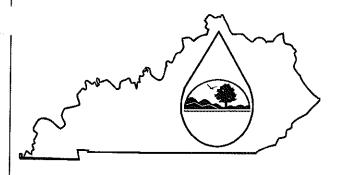
1. Identification of Conditions, Agreements, Etc.	No.	2. Affected Outfalls Source of Discharge	3. Brief Description 4. Final Compliance of Project a. req.		
N/A	N/A	N/A	N/A	N/A	b. proj. N/A
· · ·					
· · · · · · · · · · · · · · · · · · ·				·	
		•			
-					

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 know 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 of 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.

For each outfall list the latitud	te and long	tude of its I	ocation to the	nearest 1	<u>&gt; seconds a</u>	nd name the	e receiving water.
A. Outfall Number		B. Latitu	ide		C. Longit	ude	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

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.

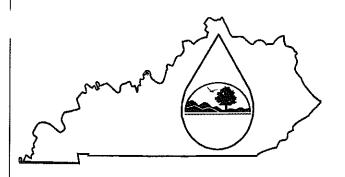
1. Identification of Conditions, Agreements, Etc.	No,	2. Affected Outfalls Source of Discharge	3. Brief Description of Project	4. Final a. req.	Compliance Date b. proj.
N/A	N/A	N/A	N/A	N/A	N/A
	-				
			· · · · · · · · · · · · · · · · · · ·		

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 know 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 of 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.

For each outfall list the latitude a		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

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.	No.	2. Affected Outfalls Source of Discharge	3. Brief Description of Project	4. Final C a. req.	4. Final Compliance Date a. req. b. proj.		
N/A	N/A	N/A	N/A	N/A	N/A		
	_			_			
					n		
			·	_			
·	-		· · · · · · · · · · · · · · · · · · ·				

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 know 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 of 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 18age)78 of 93 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
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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.	

#### 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 nonstorm 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

Signature Date Signed or John M. Mc Manus 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.

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

1. SIGNIFICANT LEAKS OR SPIL Provide existing information reg		aks or spills of toxic or hazardous	nollutants at the facility in the last					
		l or leak, and the type and amount						
		5, approx. 1000 gals. (did not reach	the river).					
	nd piping leak from a 3" return line , of no. 2 diesel fuel when testing :							
		that went into the coal pile runoff	oonds.					
VII. DISCHARGE INFORMATION								
	efore proceeding. Complete one se F-3 are included on separate pages.	t of tables for each outfall. Annota	te the outfall number in the space					
		pollutant listed in Table F-2, F-3	3, or F-4, a substance which you					
currently use or manufacture as a	an intermediate or final product or	by product.						
Yes (list all such pollutant	ts 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								
<sup>1</sup> Aischarges or on a receiving water in relation to your discharge within the last 3 years?								
Yes (list all such results belo	ow) 🛛 No (	go to Section IX)						
1777								
IX. CONTRACT ANALYSIS INFOR	MATTERN STATISTICS							
AND DATE OF A DESCRIPTION OF A DESCRIPTI	d in item VII performed by a cont	ract laboratory or consulting firm?						
Yes (list the name, address and	d telephone number of and pollutants anal	yzed by each such laboratory or firm below	use additional cheets if necessary)					
	d exeptione number of, and pointiants and		, use additional shoets if necessary).					
	ene energian comprisone energian control i comprise accorde e entro texte wither the		a na ana amin'ny fanana amin'ny fanana amin'ny fanana amin'ny fanana amin'ny fanana amin'ny fanana amin'ny fana					
A. Name SGS Environmental Services, Inc.	B. Address 1258 Greenbrier Steet	C. Area Code & Phone No. (304) 346-0725	D. Pollutants Analyzed KPDES Form F:					
	Charleston, WV 25311		color, bromide, surfactants, BOD, fecal coliform					
			Conform					
AEP Dolan Environmental Laboratory,	400 Bixby Road	(614) 836-4188	aluminum,iron, Mg, Mn, As, Ba, Be,					
Inc.	Groveport, OH 43125		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 Louisa, KY 41230	(606) 686-2415 ext. 1316	flow, temp., pH, FAC, TRC, TRO, Tot. Br.,Hardness, DO					
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د ۱	KPSC Case No. 2011-00401 Sierra Club's First Set of Data Requests
	Dated January 13, 2012
	Item No. 25 Attachment 2
	Page 80 of 93
X. CERTIFICATION	
I certify under penalty of law that this document and all attachments were prepar	ed under my direction or supervision in accordance
with a system designed to assure that qualified personnel properly gather and evalu	late the information submitted. Based on my inquiry
of the person or persons who manage the system or those persons directly respon	sible for gathering the information the information
submitted is, to the best of my knowledge and belief, true, accurate, and complete	a Lam guare that there are significant southing for
submitting false information including the possibility of fine and imprisonment for	the available that there are significant penalties for
NAME & OFFICIAL TITLE (type or print)	
NAME & OFFICIAL IIILE (type or print)	AREA CODE AND PHONE NO.
John M. McManus - Vice President	(614) 716-1268
SIGNATURE	DATE SIGNED
DANNAR I TO MOM IN	
Patrick A Leton for John M. Mc Manus	, See 27 2005

4

Revised June 1999

 KPSC Case No. 2011-00401

 Sierra Club's First Set of Data Requests

 Dated January 13, 2012

 UIL DISCHARGE INFORMATION

 OUTFALL NO: 007

 Item No. 25 Attachment 2

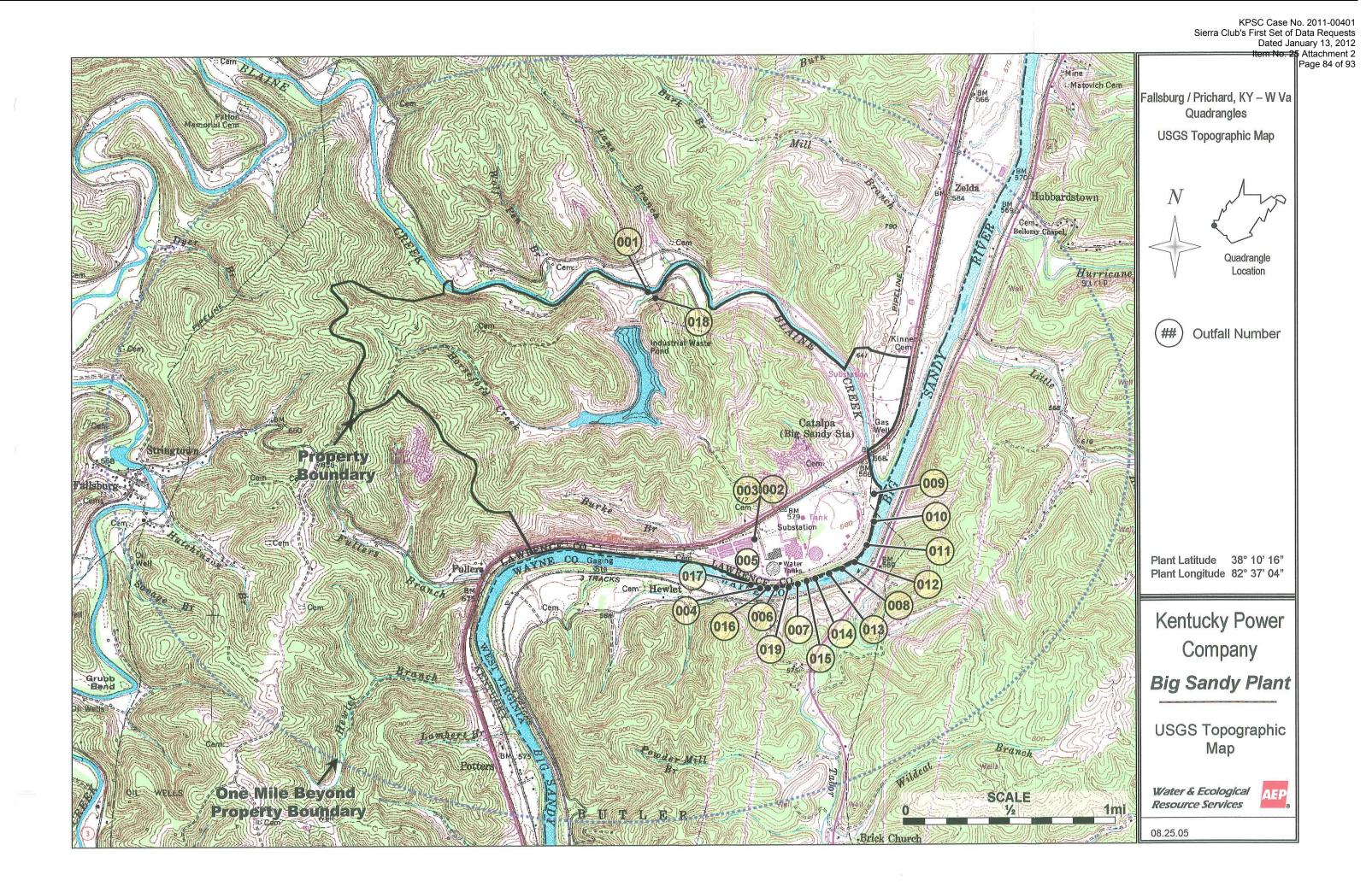
 Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for addipage 81 of 93

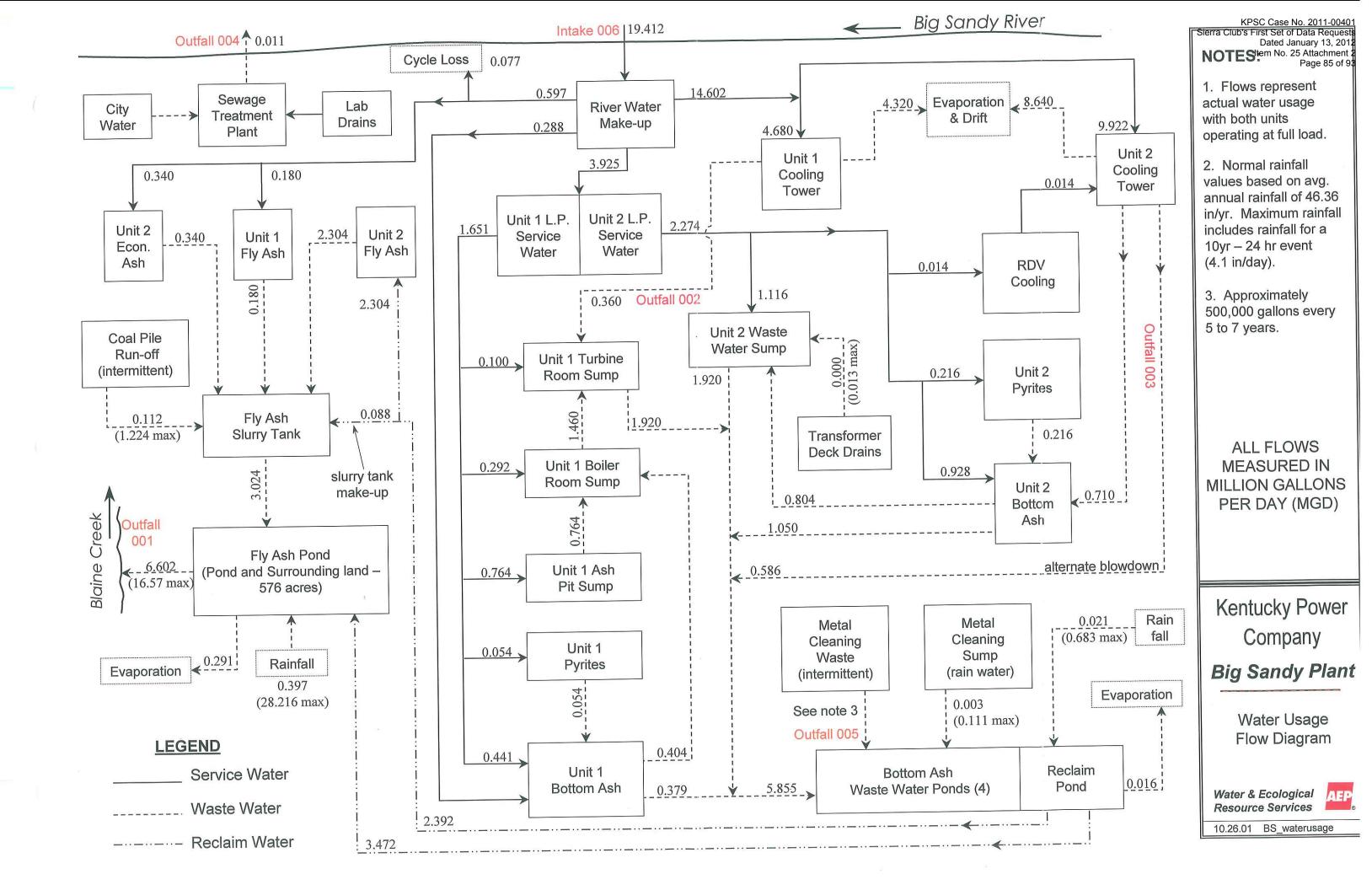
details.		-	· ·	,		
		am Values de units)		ge Values de units)		
Pollutant and CAS Number (if available)	Grab Sample Taken During 1 <sup>st</sup> 20 Minutes	Flow-weighted Composite	Grab Sample Taken During 1 <sup>st</sup> 20 Minutes	Flow-weighted Composite	Number of Storm Events Sampled	Sources of Pollutants
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/1	5.23 mg/l			1	
Nitrate plus Nitrite Nitrogen	1.53 mg/1	5.62 mg/l			1	
Total Phosphorus	<0.01 mg/l	1.96 mg/l			1	
рН	<b>1.92</b> Minimum	Maximum	Minimum	Maximum		
Part B - List each po wastewater (if the f requirements.	acility is operating unde	an effluent guideline wh er an existing KPDES Im Values	permit). Complete one	to or any pollutant liste table for each outfall. e Values	ed in the facility's l See the instruction	KPDES permit for its process ns for additional details and
	(inclue	le units)	(incluc	le units)		
Pollutant and CAS Number (if available)	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	Number of Storm Events Sampled	Sources of Pollutants
color	10 PCU	10 PCU			1	metal structures, coal and ash fines
bromide	<5.0 mg/1	<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/1	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	. <u></u>		1	
chromium	22 ug/l	15 ug/l			1	
cobalt	13 ug/l	7 ug/l		f	1	8 10 Min data Min Min and a min
copper	56 ug/l	43 ug/l			1	
lead	23 ug/l	13 ug/1			1	· • ••••
mercury	<0.2 ug/l	<0.2 ug/l			1	
molybdenum	5 ug/l	4 ug/1			1	· · · · · · · · · · · · · · · · · · ·
nickel	28 ug/l	17 ug/1	there we have a second s		1	
,,		1	I			

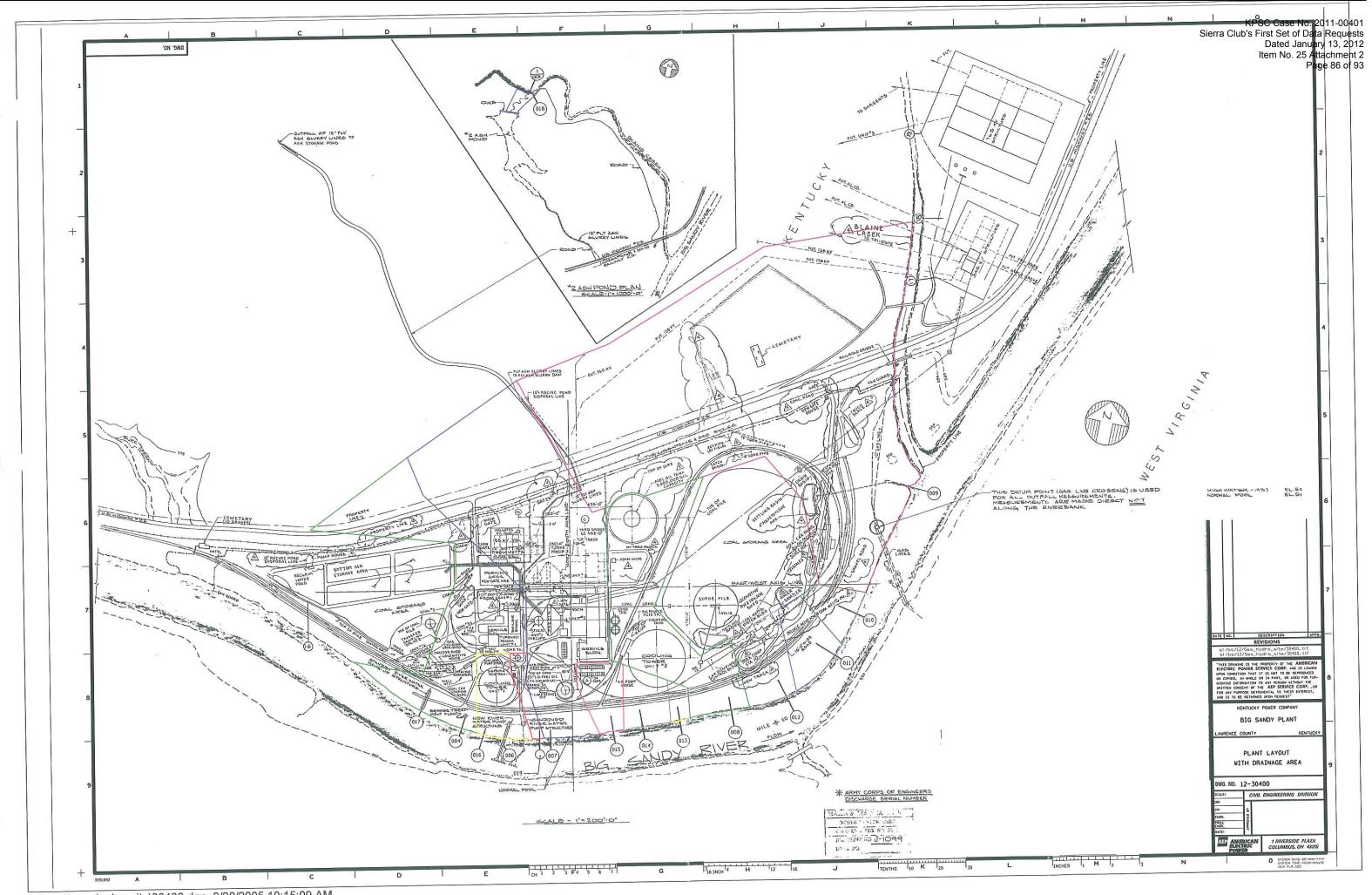
			KPSC Case No. 2011-00401
selenium 8 ug/l	7 ug/l	l Sie	rra Club's First Set of Data Requests Dated January 13, 2012

Dated January 13, 2012 Item No. 25 Attachment 2 Page 82 of 93

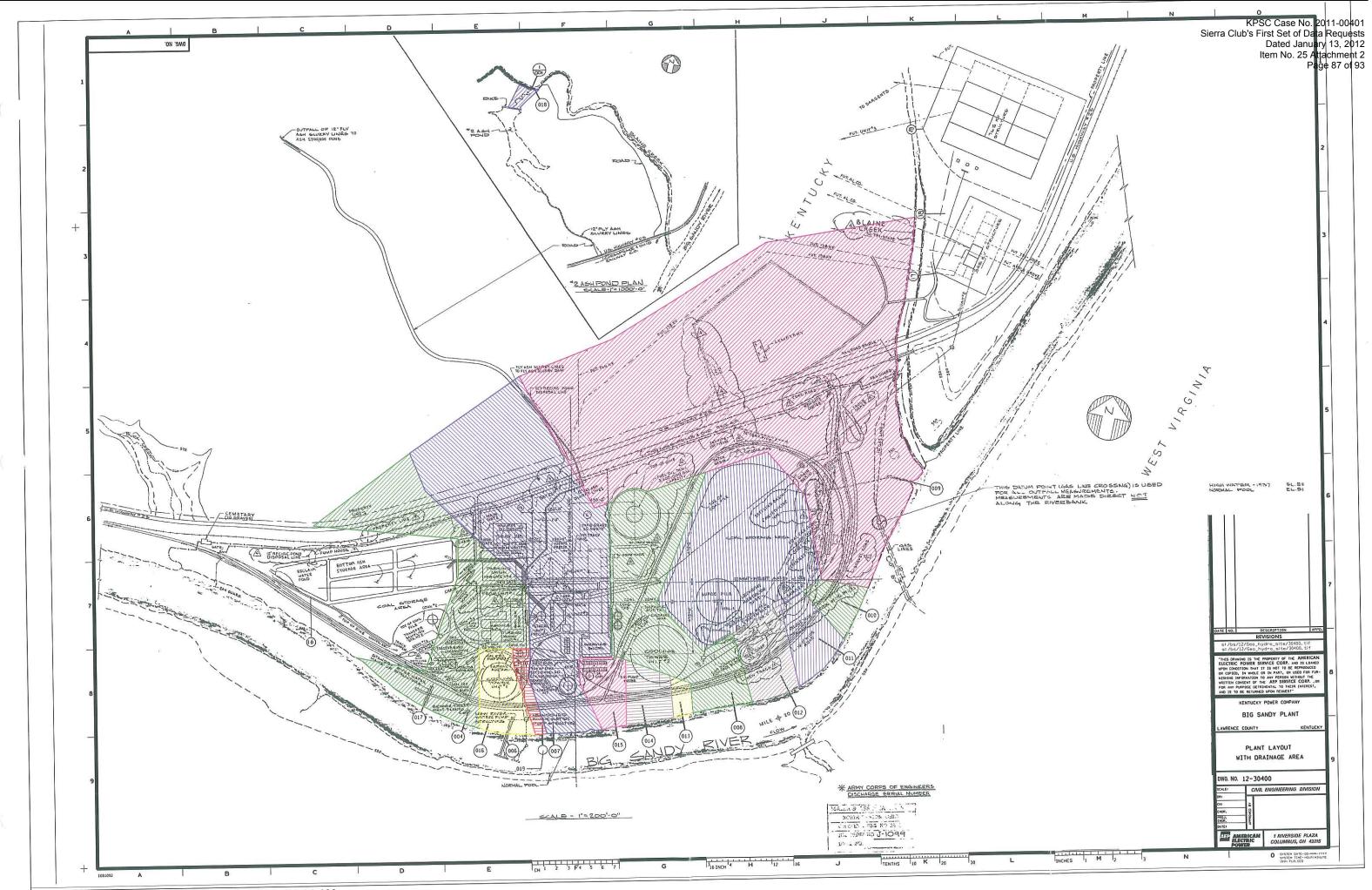
requirements. comp	Maximum Values		you know or have reason to believe is present Average Values			Page
Pollutant and CAS Number	Grab Sample Taken During 1 <sup>st</sup>	le units) Flow-weighted	(include) Grab Sample Taken During 1 <sup>st</sup>	Flow-weighted	Number of Storm Events	Sources of
(if available)	20 Minutes	Composite <0.2 ug/l	20 Minutes	Composite	Sampled	Pollutants metal structures, coal and
						ash fines
thallium	<1 ug/1	<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/i			1	
chloride	10 mg/l	17 mg/1		· · · · · · · · · · · · · · · · · · ·	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/1				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	
nardness	96 mg/l				1	
DO	6.48 mg/l				1	
fecal coliform	<4000 c/100ml				1	
	<4000 C/100mi	, ,,,,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			1	
			num values for the flow-w		ple.	
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)	
3-16-05	110 minutes	1.425 inches	120 hours	5.05 MGD	224,000 gallons	







...\bs\12\geo\_hydro\_site\30400.dgn 9/28/2005 10:15:09 AM



...\bs\12\geo\_hydro\_site\30400.dgn 9/28/2005 10:10:01 AM

#### KENTUCKY POWER COMPANY - BIG SANDY PLANT

#### DESCRIPTION OF TREATMENT SYSTEMS AND OUTFALLS

#### Outfall 001 - Fly Ash Pond Discharge

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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 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-hydroxyethylidine-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 punps 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.

#### <u>NOTE 1:</u>

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.

### <u>NOTE 2:</u>

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 Ethylene Diaminetetracetic Acid (EDTA) Sodium Hydroxide

Sulfuric Acid Sodium Nitrite

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.