2265 Harrodsburg Road • Suite 200 • Lexington, Kentucky • 40504
phone (859) 381-1000 • fax (859) 381-1005

ERMC²

ENVIRONMENTAL RESOURCES MANAGEMENT CONSULTING COMPANY, LLC

May 6, 2009

RECEIVED
MAY 07 2009
By

KDPES Branch, KY Division of Water
Frankfort Office Park
14 Reilly Road
Frankfort, KY 40601

ATTN: Mr. Larry Sowder

SUBJECT: KPDES Individual Permit Application

Dear Mr. Sowder:

Please find the enclosed KPDES Individual Permit Application for KDSMRE Permit No. 861-0496. In addition, a "waiver request" is sought for the KPDES Permit Application Form C under Section V, Part A, Subheading 1.f and 1.g. Both of the aforementioned requests will be submitted at a later date. Also included within this application packet is the appropriate Surface Mining permit application filing fee of $240. Please do not hesitate to call if you have any questions or concerns.

Sincerely,

Kevin Bailey

Members of The Woodbridge Group, LLC

www.ermc2.us

STAGG Resource Consultants, Inc.
5457 Big Tyler Road • Cross Lanes, West Virginia • 25313
phone (304) 776-6660 • fax (304 776-7867

STAGG

ALDEN RESOURCES, LLC

KPDES Individual Permit

FORMS:
KPDES Form 1
KPDES Form C

Prepared:
May 6, 2009

Prepared By:
Environmental Resources Management
Consulting Company, LLC
2265 Harrodsburg Rd, Ste 200
Lexington, KY 40504

KPDES FORM 1

AZH 98751

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

RECEIVED
MAY 07 2009
By MAC

PERMIT APPLICATION

This is an application to: (check one)

- ☐ Apply for a new permit.
- ☐ Apply for reissuance of expiring permit.
- ☐ Apply for a construction permit.
- ☒ Modify an existing permit.
  Give reason for modification under Item II.A.

A complete application consists of this form and one of the following:
Form A, Form B, Form C, Form F, or Form SC

For additional information contact:
KPDES Branch (502) 564-3410

CK 245

I. FACILITY LOCATION AND CONTACT INFORMATION	AGENCY USE	0	1	0	7	8	7	5

A. Name of Business, Municipality, Company, Etc. Requesting Permit
Alden Resources, LLC

B. Facility Name and Location	C. Primary Mailing Address (all facility correspondence will be sent to this address). **Include owner's mailing address (if different) in D.**
Facility Location Name: HWY 459 Mine	Facility Contact Name and Title: Mr. ☒ Ms. ☐ Keith Smith
Facility Location Address (i.e. street, road, etc., **not P.O. Box**): 4.1 miles SE of KY HWY 6 and 459 intersection & 0.65 miles west from KY HWY 459 and Bull Run Rd intersection	Mailing Address: 332 West Cumberland Gap Parkway, Suite 200
Facility Location City, State, Zip Code: Swan Lake, KY40921	Mailing City, State, Zip Code: Corbin, KY 40701
D. Owner's name (if not the same as in part A and C): N/A	Facility Contact Telephone Number: 606-523-9557
Owner's Mailing Address: 332 West Cumberland Gap Parkway, Suite 200 Corbin, KY 40701	Owner's Telephone Number (if different): N/A

II. FACILITY DESCRIPTION

A. Provide a brief description of activities, products, etc: Discharge of on-bench dugout ponds constructed to retain settlement during surface coal mining operations.

B. Standard Industrial Classification (SIC) Code and Description

Principal SIC Code & Description:	1221 Bituminous Coal and Lignite Surface Mining		
Other SIC Codes:			

III. FACILITY LOCATION

A. Attach a U.S. Geological Survey 7 ½ minute quadrangle map for the site. (See instructions)

C. County where facility is located: Knox	City where facility is located (if applicable):
C. Body of water receiving discharge: UT to Big Indian Creek (Engle Hollow), Big Indian Creek, UT to Bull Run, Bull Run	
D. Facility Site Latitude (degrees, minutes, seconds):	Facility Site Longitude (degrees, minutes, seconds):

36° 49' 00"	83° 56' 44.2"
E. Method used to obtain latitude & longitude (see instructions):	GIS software
F. Facility Dun and Bradstreet Number (DUNS #) (if applicable):	N/A

IV. OWNER/OPERATOR INFORMATION

A. Type of Ownership:
☐ Publicly Owned ☒ Privately Owned ☐ State Owned ☐ Both Public and Private Owned ☐ Federally owned

B. Operator Contact Information (See instructions)

Name of Treatment Plant Operator: N/A	Telephone Number: N/A
Operator Mailing Address (Street): N/A	
Operator Mailing Address (City, State, Zip Code): N/A	
Is the operator also the owner? Yes ☐ No ☐	Is the operator certified? If yes, list certification class and number below. Yes ☐ No ☐
Certification Class: N/A	Certification Number: N/A

V. EXISTING ENVIRONMENTAL PERMITS

Current NPDES Number: N/A	Issue Date of Current Permit: N/A	Expiration Date of Current Permit: N/A
Number of Times Permit Reissued: N/A	Date of Original Permit Issuance: N/A	Sludge Disposal Permit Number: N/A
Kentucky DOW Operational Permit #: N/A	Kentucky DSMRE Permit Number(s): 861-0496	N/A

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	N/A	N/A
Solid or Special Waste	N/A	N/A
Hazardous Waste - Registration or Permit	N/A	N/A

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). Information in this section serves to specifically identify the name and telephone number of the DMR official and the DMR mailing address (if different from the primary mailing address in Section I.C).

A. DMR Official (i.e., the department, office or individual designated as responsible for submitting DMR forms to the Division of Water):	Alden Resources, LLC
DMR Official Telephone Number:	606 523 9557

B. DMR Mailing Address:
- Address the Division of Water will use to mail DMR forms (if different from mailing address in Section I.C), or
- Contact address if another individual, company, laboratory, etc. completes DMRs for you; e.g., contract laboratory address.

DMR Mailing Name:	See Section I. C.
DMR Mailing Address:	
DMR Mailing City, State, Zip Code:	

VII. APPLICATION FILING FEE

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

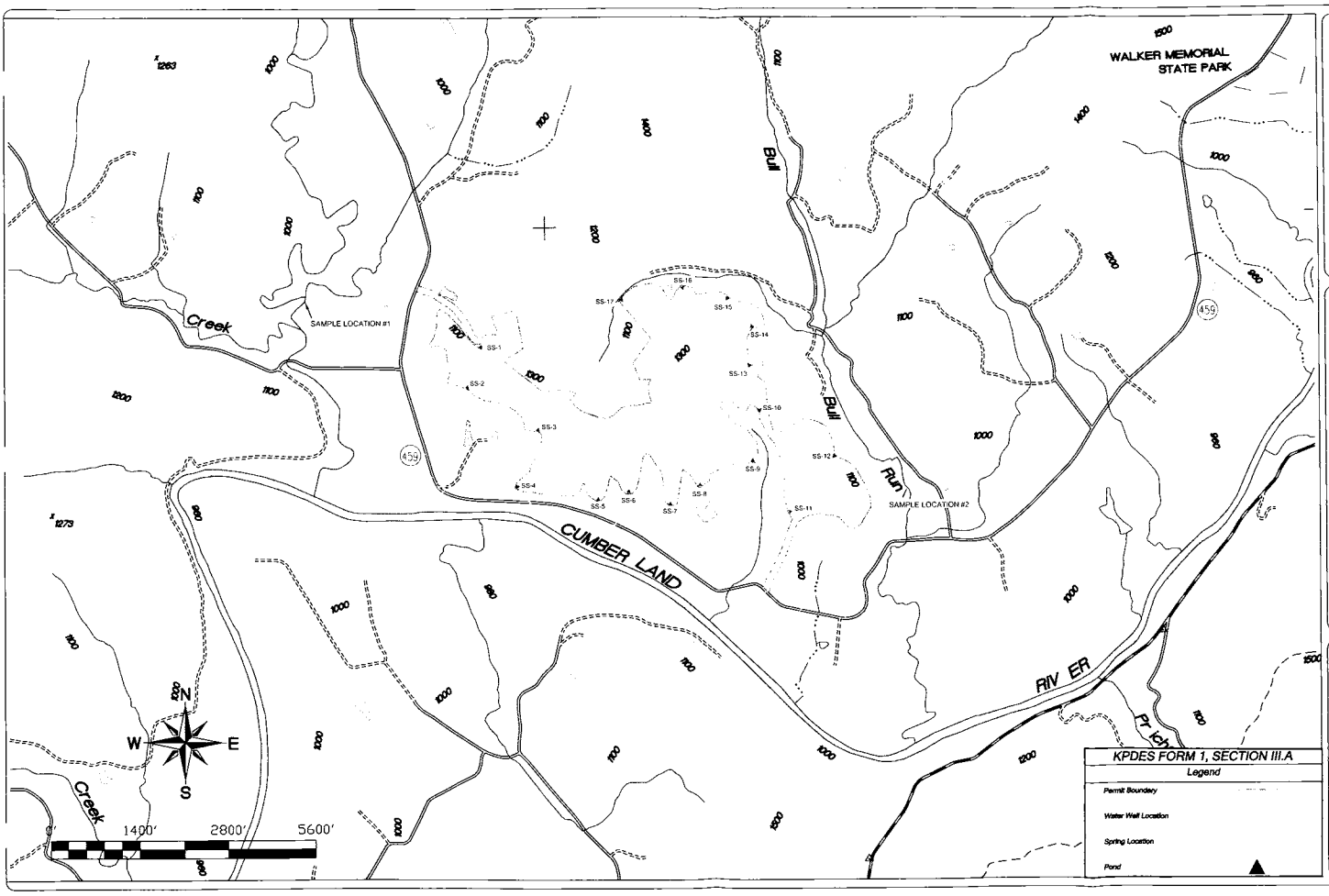
Facility Fee Category:	Filing Fee Enclosed:
Surface Mining Operation	$240.00

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):
Mr. ☒ Ms. ☐ Keith Smith President	606-523-9557
SIGNATURE	DATE:
[signature]	4-9-09

Return completed application form and attachments to: **KPDES Branch, Division of Water, Frankfort Office Park, 14 Reilly Road, Frankfort, KY 40601. Direct questions to: KPDES Branch at (502) 564-3410.**



Environmental Resources Management Consulting
2265 Harrodsburg Rd., Suite 200
Lexington, KY 40504
(859) 381-1000

ALDEN RESOURCES, LLC
HWY 459 SFC. MINE KDSMRE 861-0496
332 West Cumberland Gap Pkwy, Ste 100
Corbin, KY 40701

DATE: 05-04-09
DRAWN BY: KTB
CHECKED BY: KTB
Scale: 1"=1400'

SHEET
Facility Location Map

AI # 98751

KPDES FORM C

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT APPLICATION

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

Name of Facility: HWY 459 Mine	County: Knox							
I. OUTFALL LOCATION	AGENCY USE	0	1	0	7	8	7	5

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

Outfall No. (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
SEE APPENDIX A							

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

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

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

OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1
	SEE APPENDIX B			

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

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

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

OUTFALL NUMBER (list)	OPERATIONS CONTRIBUTING FLOW (list)	FREQUENCY		FLOW				
		Days Per Week (specify average)	Months Per Year (specify average)	Flow Rate (in mgd)		Total volume (specify with units)		Duration (in days)
				Long-Term Average	Maximum Daily	Long-Term Average	Maximum Daily	

III. MAXIMUM PRODUCTION

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

☐ Yes (Complete Item III-B) List effluent guideline category:

☒ No (Go to Section IV)

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

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

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

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

IV. IMPROVEMENTS

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

☐ Yes (Complete the following table) ☒ No (Go to Item IV-B)

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

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

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered 5-18.

D. Use the space below to list any of the pollutants (refer to SARA Title III, Section 313) listed in Table C-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

POLLUTANT	SOURCE	POLLUTANT	SOURCE

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

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

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

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

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

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

VII. BIOLOGICAL TOXICITY TESTING DATA

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

☐ Yes (Identify the test(s) and describe their purposes below) ☒ No (Go to Section VIII)

VIII. CONTRACT ANALYSIS INFORMATION

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

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

NAME	ADDRESS	TELEPHONE (Area code & number)	POLLUTANTS ANALYZED (list)
Fouser Environmental Services, LTD.	165 Camden Avenue Versailles, KY 40383	859-873-6211	pH; Oil & Grease, T; Cyanide, Total; Phenol; Hardness; BOD; TSS; Ammonia-N; COD; TOC; Nitrate-N; Nitrite-N; Sulfate; Antimony; Arsenic; Beryllium; Cadmium; Chromium, Total; Copper; Iron; Lead; Manganese; Mercury; Nickel; Selenium; Silver; Thallium; Zinc

IX. CERTIFICATION

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

NAME AND OFFICIAL TITLE (type or print):	TELEPHONE NUMBER (area code and number):
Keith Smith - President	606-523-9557
SIGNATURE	DATE
	4-9-09

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

V. INTAKE AND EFFLUENT CHARACTERISTICS (Continued from page 3 of Form C)

OUTFALL NO. ***Site #1 – Big Indian Creek***

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

1. POLLUTANT	2. EFFLUENT							3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No of Analyses
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Biochemical Oxygen Demand (BOD)	<3	<3					1	mg/L	mg			
b. Chemical Oxygen Demand (COD)	14	14					1	mg/L	mg			
c. Total Organic Carbon (TOC)	2.49	2.49					1	mg/L	mg			
d. Total Suspended Solids (TSS)	3	3					1	mg/L	mg			
e. Ammonia (as N)	0.13	0.13					1	mg/L	mg			
f. Flow (in units of MGD)	VALUE	WR	VALUE		VALUE				MGD	VALUE		
g. Temperature (winter)	VALUE	WR	VALUE		VALUE				WR °c	VALUE		
h. Temperature (summer)	VALUE	10.1	VALUE		VALUE		1		10.1 °c	VALUE		
i. pH	MINIMUM 7.4	MAXIMUM 7.4	MINIMUM	MAXIMUM			1		STANDARD UNITS 7.4			

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

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. Believed Present	2. MARK "X" b. Believed Absent	3. EFFLUENT a. Maximum Daily Value (1) Concentration	a. Maximum Daily Value (2) Mass	b. Maximum 30-Day Value (if available) (1) Concentration	b. Maximum 30-Day Value (2) Mass	c. Long-Term Avg. Value (if available) (1) Concentration	c. Long-Term Avg. Value (2) Mass	d. No. of Analyses	4. UNITS a. Concentration	4. UNITS b. Mass	6. INTAKE (optional) a. Long-Term Avg Value (1) Concentration	a. Long-Term Avg Value (2) Mass	b. No. of Analyses
a. Bromide (24959-67-9)		X												
b. Bromine Total Residual		X												
c. Chloride		X												
d. Chlorine, Total Residual		X												
e. Color		X												
f. Fecal Coliform		X												
g. Fluoride (16984-48-8)		X												
h. Hardness (as $CaCO_3$)	X		196	196					1	mg/L	mg			
i. Nitrate – Nitrite (as N)		X	<0.5 / <0.25	<0.5 / <0.25					1	mg/L	mg			
j. Nitrogen, Total Organic (as N)		X												
k. Oil and Grease	X		<2.00	<2.00					1	mg/L	mg			
l. Phosphorous (as P), Total 7723-14-0		X												
m. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium Total		X												
(4) Radium, 226, Total		X												

Part B - Continued

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
n. Sulfate (as SO_4) (14808-79-8)	X		127	127					1	mg/L	mg			
o. Sulfide (as S)		X												
p. Sulfite (as SO_4) (14286-46-3)		X												
q. Surfactants		X												
r. Aluminum, Total (7429-90)		X												
s. Barium, Total (7440-39-3)		X												
t. Boron, Total (7440-42-8)		X												
u. Cobalt, Total (7440-48-4)		X												
v. Iron, Total (7439-89-6)	X		0.488	0.488					1	mg/L	mg			
w. Magnesium Total (7439-96-4)		X												
x. Molybdenum Total (7439-98-7)		X												
y. Manganese, Total (7439-96-6)	X		0.252	0.252					1	mg/L	mg			
z. Tin, Total (7440-31-5)		X												
aa. Titanium, Total (7440-32-6)		X												

Part C – If you are a primary industry and this outfall contains process wastewater, refer to Table C-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in the **Testing Required** column for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark this column (secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions), mark "X" in the **Believed Present** column for each pollutant you know or have reason to believe is present. Mark "X: in the **Believed Absent** column for each pollutant you believe to be absent. If you mark either the **Testing Required** or **Believed Present** columns for any pollutant, you must provide the result of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
METALS, CYANIDE AND TOTAL PHENOLS															
1M. Antimony Total (7440-36-0)	X			<0.010	<0.010					1	mg/L	mg			
2M. Arsenic, Total (7440-38-2)	X			<0.010	<0.010					1	mg/L	mg			
3M. Beryllium Total (7440-41-7)	X			<0.005	<0.005					1	mg/L	mg			
4M. Cadmium Total (7440-43-9)	X			<0.0025	<0.0025					1	mg/L	mg			
5M. Chromium Total (7440-43-9)	X			<0.010	<0.010					1	mg/L	mg			
6M. Copper Total (7550-50-8)	X			<0.010	<0.010					1	mg/L	mg			
7M. Lead Total (7439-92-1)	X			<0.010	<0.010					1	mg/L	mg			
8M. Mercury Total (7439-97-6)	X			<0.0001	<0.0001					1	mg/L	mg			
9M. Nickel, Total (7440-02-0)	X			<0.010	<0.010					1	mg/L	mg			
10M. Selenium, Total (7782-49-2)	X			<0.010	<0.010					1	mg/L	mg			
11M. Silver, Total (7440-28-0)	X			<0.005	<0.005					1	mg/L	mg			

Part C – Continued

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
METALS, CYANIDE AND TOTAL PHENOLS (Continued)															
12M. Thallium, Total (7440-28-0)	X			<0.010	<0.010					1	mg/l	mg			
13M. Zinc, Total (7440-66-6)	X			<0.010	<0.010					1	mg/L	mg			
14M. Cyanide, Total (57-12-5)	X			<0.01	<0.01					1	mg/L	mg			
15M. Phenols, Total	X			<0.05	<0.05					1	mg/L	mg			
DIOXIN															
2,3,7,8 Tetra-chlorodibenzo, P, Dioxin (1784-01-6)			X	DESCRIBE RESULTS:											
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chloro-benzene (108-90-7)			X												
8V. Chlorodibro-momethane (124-48-1)			X												

Part C – Continued

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

Part C – Continued

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
21V. Methyl Chloride (74-87-3)			X												
22V. Methylene Chloride (75-00-2)			X												
23V. 1,1,2,2-Tetrachloro-ethane (79-34-5)			X												
24V. Tetrachloro-ethylene (127-18-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-Trans-Dichloro-ethylene (156-60-5)			X												
27V. 1,1,1-Tri-chloroethane (71-55-6)			X												
28V. 1,1,2-Tri-chloroethane (79-00-5)			X												
29V. Trichloro-ethylene (79-01-6)			X												
30V. Vinyl Chloride (75-01-4)			X												

Part C – Continued

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

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

Part C – Continued

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

Part C – Continued

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

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

Part C – Continued

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

Part C – Continued

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS FRACTION – PESTICIDES															
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												

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

V. INTAKE AND EFFLUENT CHARACTERISTICS (Continued from page 3 of Form C)	OUTFALL NO. *Site #2 – Bull Run*

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

1. POLLUTANT	2. EFFLUENT							3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No of Analyses
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Biochemical Oxygen Demand (BOD)	<3	<3					1	mg/L	mg			
b. Chemical Oxygen Demand (COD)	<10	<10					1	mg/L	mg			
c. Total Organic Carbon (TOC)	2.07	2.07					1	mg/L	mg			
d. Total Suspended Solids (TSS)	2	2					1	mg/L	mg			
e. Ammonia (as N)	0.17	0.17					1	mg/L	mg			
f. Flow (in units of MGD)	VALUE	WR	VALUE		VALUE				MGD	VALUE		
g. Temperature (winter)	VALUE	WR	VALUE		VALUE				°c	VALUE		
h. Temperature (summer)	VALUE	8.3	VALUE		VALUE		1		8.3 °c	VALUE		
i. pH	MINIMUM 7.34	MAXIMUM 7.34	MINIMUM	MAXIMUM			1		STANDARD UNITS 7.34			

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

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. Believed Present	2. MARK "X" b. Believed Absent	3. EFFLUENT a. Maximum Daily Value (1) Concentration	a. Maximum Daily Value (2) Mass	b. Maximum 30-Day Value (if available) (1) Concentration	b. Maximum 30-Day Value (2) Mass	c. Long-Term Avg. Value (if available) (1) Concentration	c. Long-Term Avg. Value (2) Mass	d. No. of Analyses	4. UNITS a. Concentration	4. UNITS b. Mass	6. INTAKE (optional) a. Long-Term Avg Value (1) Concentration	a. Long-Term Avg Value (2) Mass	b. No. of Analyses
a. Bromide (24959-67-9)		X												
b. Bromine Total Residual		X												
c. Chloride		X												
d. Chlorine, Total Residual		X												
e. Color		X												
f. Fecal Coliform		X												
g. Fluoride (16984-48-8)		X												
h. Hardness (as $CaCO_3$)	X		300	300					1	mg/L	mg			
i. Nitrate – Nitrite (as N)		X	<0.5 / <0.25	<0.5 / <0.25					1	mg/L	mg			
j. Nitrogen, Total Organic (as N)		X												
k. Oil and Grease	X		<2.00	<2.00					1	mg/L	mg			
l. Phosphorous (as P), Total 7723-14-0		X												
m. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium Total		X												
(4) Radium, 226, Total		X												

Part B - Continued

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
n. Sulfate (as SO_4) (14808-79-8)	X		184	184					1	mg/L	mg			
o. Sulfide (as S)		X												
p. Sulfite (as SO_4) (14286-46-3)		X												
q. Surfactants		X												
r. Aluminum, Total (7429-90)		X												
s. Barium, Total (7440-39-3)		X												
t. Boron, Total (7440-42-8)		X												
u. Cobalt, Total (7440-48-4)		X												
v. Iron, Total (7439-89-6)	X		0.331	0.331					1	mg/L	mg			
w. Magnesium Total (7439-96-4)		X												
x. Molybdenum Total (7439-98-7)		X												
y. Manganese, Total (7439-96-6)	X		0.116	0.116					1	mg/L	mg			
z. Tin, Total (7440-31-5)		X												
aa. Titanium, Total (7440-32-6)		X												

Part C – If you are a primary industry and this outfall contains process wastewater, refer to Table C-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in the **Testing Required** column for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark this column (secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions), mark "X" in the **Believed Present** column for each pollutant you know or have reason to believe is present. Mark "X: in the **Believed Absent** column for each pollutant you believe to be absent. If you mark either the **Testing Required** or **Believed Present** columns for any pollutant, you must provide the result of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
METALS, CYANIDE AND TOTAL PHENOLS															
1M. Antimony Total (7440-36-0)	X			<0.010	<0.010					1	mg/L	mg			
2M. Arsenic, Total (7440-38-2)	X			<0.010	<0.010					1	mg/L	mg			
3M. Beryllium Total (7440-41-7)	X			<0.005	<0.005					1	mg/L	mg			
4M. Cadmium Total (7440-43-9)	X			<0.0025	<0.0025					1	mg/L	mg			
5M. Chromium Total (7440-43-9)	X			<0.010	<0.010					1	mg/L	mg			
6M. Copper Total (7550-50-8)	X			<0.010	<0.010					1	mg/L	mg			
7M. Lead Total (7439-92-1)	X			<0.010	<0.010					1	mg/L	mg			
8M. Mercury Total (7439-97-6)	X			<0.0001	<0.0001					1	mg/L	mg			
9M. Nickel, Total (7440-02-0)	X			<0.010	<0.010					1	mg/L	mg			
10M. Selenium, Total (7782-49-2)	X			<0.010	<0.010					1	mg/L	mg			
11M. Silver, Total (7440-28-0)	X			<0.005	<0.005					1	mg/L	mg			

Part C – Continued																
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
METALS, CYANIDE AND TOTAL PHENOLS (Continued)															
12M. Thallium, Total (7440-28-0)	X			<0.010	<0.010					1	mg/l	mg			
13M. Zinc, Total (7440-66-6)	X			<0.010	<0.010					1	mg/L	mg			
14M. Cyanide, Total (57-12-5)	X			<0.01	<0.01					1	mg/L	mg			
15M. Phenols, Total	X			<0.05	<0.05					1	mg/L	mg			
DIOXIN															
2,3,7,8 Tetra-chlorodibenzo, P, Dioxin (1784-01-6)			X	DESCRIBE RESULTS:											
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chloro-benzene (108-90-7)			X												
8V. Chlorodibro-momethane (124-48-1)			X												

Part C – Continued

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

Part C – Continued

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
21V. Methyl Chloride (74-87-3)			X												
22V. Methylene Chloride (75-00-2)			X												
23V. 1,1,2,2-Tetrachloro-ethane (79-34-5)			X												
24V. Tetrachloro-ethylene (127-18-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-Trans-Dichloro-ethylene (156-60-5)			X												
27V. 1,1,1-Tri-chloroethane (71-55-6)			X												
28V. 1,1,2-Tri-chloroethane (79-00-5)			X												
29V. Trichloro-ethylene (79-01-6)			X												
30V. Vinyl Chloride (75-01-4)			X												

Part C – Continued

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

Part C – Continued

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

Part C – Continued

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

Part C – Continued

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

Part C – Continued

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

Part C – Continued

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

Part C – Continued

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS FRACTION – PESTICIDES															
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												

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM
FORM C -- INSTRUCTIONS

Listed below are explanations of select Form C questions. If further information is needed concerning any questions, please contact the Division of Water, at (502) 564-3410.

I. OUTFALL LOCATION

Use the map you provided for Item III of Form 1 to determine the latitude and longitude of each of your outfalls and the name of the receiving water.

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. The line drawing should show generally the route taken by water in your facility from intake to discharge. Show all operations contributing wastewater, including process and production areas, sanitary flows, cooling water, and storm water runoff. Group similar operations into a single unit and label to correspond to the more detailed listing in Item II.B. The water balance should show average flows. Show all significant losses of water to products, atmosphere, and discharge. Use actual measurements whenever available. Otherwise, use your best estimate.

B. List all sources of wastewater to each outfall. Operations may be described in general terms (for example, "dye-making reactor" or "distillation tower"). Estimate the flow contributed by each source if no data are available. For storm water, use any reasonable measure of duration, volume, or frequency. For each treatment unit, indicate its size, flow rate, and retention time; and describe the ultimate disposal of any solid or liquid wastes not discharged. Treatment units should be listed in order. Select the proper code from Table C-1 to fill in column 3-b for each treatment unit. Insert "XX" into column 3-b if no code corresponds to a treatment unit you have listed.

If the permit application is for a privately-owned treatment works, you must also identify all of your contributors in an attached listing.

C. A discharge is intermittent unless it occurs without interruption during the operating hours of the facility, except for shutdowns for maintenance, process changes, or other similar activities. A discharge is seasonal if it occurs during certain parts of the year. Fill in every applicable column in this item for each source of intermittent or seasonal discharge. Base your answers on actual data whenever available, otherwise, provide your best estimate. Report the highest daily for flow rate and total volume in the "Maximum Daily" columns (columns 4-a-2 and 4-b-2). Report the average of all daily values measured during days when discharge occurred within the last year in the "Long Term Average" columns (columns 4-a-1 and 4-b-1).

III. MAXIMUM PRODUCTION

A. If you are unsure whether you are covered by a promulgated effluent guideline, check with the Department for Environmental Protection, Division of Water. You must check "yes" if an applicable effluent guideline has been promulgated, even if the guideline limitations are being contested in court. If you believe that promulgated effluent guideline has been remanded for reconsideration by a court and does not apply to your operation, you may check "no."

B. An effluent guideline is expressed in terms of production (or other measure of operation) if the limitations are expressed as mass of pollutant per operational parameter, for example, "pounds of BOD per cubic foot of logs from which bark is removed," or "pounds of TSS per megawatt hour of electrical energy consumed by smelting furnace." An example of a guideline not expressed in terms of a measure of operation is one that limits the concentration of pollutants.

C. This item must be completed only if you check "yes" to Item III.B. The production information requested here is necessary to apply effluent guidelines to your facility and you may not claim it as confidential. However, you do not have to indicate how the reported information was calculated.

Report quantities in the units of measurements used in the applicable effluent guidelines. The figures provided must be a measure of actual operation over a one month period, such as the production for the highest month during the last twelve months, or the monthly average production for the highest year of the last five years, or other reasonable measure of actual operation. But these figures may not be based on design capacity or on predictions of future increases in operation.

If you have two or more substantially identical outfalls, request permission from the Division of Water to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If your request is

granted, identify on a separate sheet attached to the application form the outfall tested, and describe why the outfalls not tested are substantially identical to the tested outfall.

IV. IMPROVEMENTS

A. If you check "yes" to this question, complete all parts of the chart or attach a copy of any previous submission you have made to the Department for Environmental Protection containing the same information.

V. INTAKE AND EFFLUENT CHARACTERISTICS

This item requires you to collect and report data on the pollutants discharged for each of your outfalls. Each part of this item addresses a different set of pollutants and must be completed in accordance with the specific instructions for that part. The following general instructions apply to the entire item.

GENERAL INSTRUCTIONS

In the "Mark X" columns of Parts B and C mark only one box per pollutant. Part D requires you to list any of a group of pollutants which you believe to be present, with a brief explanation of why you believe it to be present. See specific instruction on the form and below for Parts A through D.

Base your determination that a pollutant is present in or absent from your discharge on your knowledge of your raw materials, maintenance chemicals, intermediate and final products and byproducts, and any previous analyses known to you of your effluent or of any similar effluent. (For example, if you manufacture pesticides, you should expect those pesticides to be present in contaminated storm water runoff.) If you would expect a pollutant to be present solely as a result of its presence in your intake water, you must mark "Believed Present" but "X" in that "Intake" column.

REPORTING

All levels must be reported as concentration and as total mass. Use the following abbreviations in the columns headed "Units" (column 3, Part A, and column 4, Parts B and C).

CONCENTRATIONS		MASS	
ppm	parts per million	lbs.	Pounds
mg/l	milligrams per liter	ton	Tons (english tons)
ppb	parts per billion	mg	Milligrams
µg/l	micrograms per liter	g	Grams
		kg	Kilograms
		T	Tonnes (metric tons)
		MGD	Million Gallons Per Day

If you measure only one daily value, complete only the "Maximum Daily Values" columns and insert "1" into the "Number of Analyses" columns (columns 2-a and 2-d, Part A, and columns 3-a and 3-d, Parts B and C).

For composite samples, the daily value is the total mass or average concentration found in a composite sample taken over the operating hours of the facility during a 24-hour period. For grab samples, the daily value is the arithmetic or flow-weighted total mass or average concentration found in a series of at least four grab samples taken over the operating hours of the facility during a 24-hour period.

If you measure more than one daily value for a pollutant, determine the average of all values within the last year and report the concentration and mass under the "Long-Term Average Values" columns (column 2-c, Part A, and column 3-c, Parts B and C). Also report the total number of daily values under the "Number of Analyses" columns (column 2-d, Part A, and column 3-d, Parts B and C). Determine the average of all daily values taken during each calendar month, and report the highest average under the "Maximum 30-Day Values" columns (2-b, Part A, and column 3-b, Parts B and C).

SAMPLING

The collection of the samples for the reported analyses should be supervised by a person experienced in performing sampling of industrial wastewater. You may contact the Department for Environmental Protection or appropriate regional office for detailed guidance on sampling techniques and for answers to specific questions. Any specific requirements contained in the applicable analytical methods should be followed for sample containers, sample preservation, holding times, the collection of duplicate samples, etc. The time when you sample should be representative of your normal operation, to the extent feasible, with all processes which contribute wastewater in normal operation, and with your treatment system operating properly with no system upsets.

ANALYSIS

Use test methods promulgated in 40 CFR Part 136; however, if none have been promulgated for a particular pollutant, use any suitable methods for measuring the level of the pollutant in your discharge provided that you submit a description of the methods or a reference to a published method. Your description should include the sample holding times, preservation techniques, and the quality control measures used.

REPORTING OF INTAKE DATA

You are not required to report data under the "Intake" columns unless you wish to demonstrate your eligibility for a "net" effluent limitation for one or more pollutants, that is, effluent limitations adjusted by subtracting the average level of the pollutant(s) present in your intake water. 401 KAR 5:065, Section 3(7), allows net limitations only in certain circumstances. To demonstrate your eligibility, report the average of the results of analysis on your intake water in the "Intake" columns (if your water is treated before use, test the water after it is treated), and attach a separate sheet containing the following for each pollutant:

1. A statement that the intake and discharge are from the same water body (Otherwise, you are not eligible for net limitations);
2. A statement of the extent to which the level of the pollutant is reduced by treatment of your wastewater (Your limitations will be adjusted only to the extent that the pollutant is not removed);
3. When applicable (for example, when the pollutant represents a class of compounds), a demonstration of the extent to which the pollutants in the intake vary physically, chemically, or biologically from the pollutants contained in your discharge. (Your limitations will be adjusted only to the extent that the intake pollutants do not vary from the discharged pollutants.)

SPECIFIC INSTRUCTIONS

A. This part must be completed by all applicants for all outfalls, including outfalls containing only noncontact cooling water or storm runoff. However, at your request, the Division of Water may waive the requirements to test for one or more of these pollutants upon a determination that testing for the pollutant(s) is not appropriate for your effluents.

   Use grab samples for pH and temperature. Use composite samples for all pollutants in this part. See discussion in General Instructions to Item V for definitions of the columns in Part A. The "Long-Term Average Values" column (column 2-c) and "Maximum 30-Day Values" column (column 2-b) are not compulsory but should be filled out if data are available.

B. This part must be completed by all applicants for all outfalls including those containing only noncontact cooling water or storm runoff.

   Use composite samples for all pollutants you analyze in this part, except use grab samples for residual chlorine, oil and grease, and fecal coliform. The "Long-Term Average Values" column (column 3-b) are not compulsory but should be filled out if data are available.

C. Table C-2 lists the 34 "primary" industry categories in the left-hand column. For each outfall, if any of your processes which contribute wastewater falls into one of those categories, you must mark "X" in "Testing Required" column (column 2-a) and test for: (A) all of the toxic metals, cyanide, and total phenols; and (B) the organic toxic pollutants contained in the gas chromatography/mass spectrometry (GC/MS) fractions indicated in Table C-2 as applicable to your category, unless you qualify as a small business (see below). The organic toxic pollutants are listed by GC/MS fractions on pages V-4 through V-10 in Part V-C. For example, the Organic Chemical industry has an "X" in all four fractions; therefore, applicants in this category must test for all organic toxic pollutants in Part V-C. If you are applying for a permit for a

privately owned treatment works, determine your testing contributors. The industry category you use for testing requirements is not used to categorize you for any other purpose.

For all other cases (secondary industries, non-process wastewater outfalls, and non-required GC/MS fractions), you must mark "X" in either the "Believed Present" column (column 2-b) or the "Believed Absent" column (column 2-c) for each pollutant, and test for those you believe present (those marked "X" in column 2-b). If you qualify as a small business (see below) you are exempt from testing for the organic toxic pollutants listed on page V-4 through V-10 in Part C. For pollutants in intake water, see discussion in General Instructions to this item. The "Long-Term Average Values" column (column 3-c) and "Maximum 30-Day Values" column (column 3-b) are not compulsory but should be filled out if data are available.

Use grab samples for total phenols and cyanide. Use composite samples for all other pollutants in this part.

Mark "Testing Required" for dioxin if you use or manufacture one of the following compounds:

A. 2,4,5-trichlorophenoxy acetic acid (2,4,5-T);
B. 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5,-TP);
C. 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon);
D. 0, 0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel);
E. 2,4,5-trichlorophenol (TCP); or
F. Hexachlorophene (HCP)

If you mark "Testing Required" or "Believed Present" you must perform a screening analysis for dioxins, using gas chromotography with an electron capture detector. A TCDD standard for quantification is not required. Describe the results of this analysis in the space provided, for example, "no measurable baseline deflection at the retention time of TCDD" or "a measurable peak within the tolerances of the retention time of TCDD." You may be required to perform a quantitative analysis if you report a positive result.

The Engineering and Analysis Division of EPA has collected and analyzed samples from some facilities for the pollutants listed in Part C in the course of its BAT guidelines development program. If your effluents were sampled and analyzed as part of this program in the last three years, you may use this data to answer Part C. This may be done provided that no process change or change in raw materials, process or operating practices has occurred since the samples were taken which would make the analyses unrepresentative of your current discharge.

Small Business Exemption

If you qualify as a "small business," under 401 KAR 5:060, Section 2(8) you are exempt from the reporting requirements for the organic toxic pollutants listed on pages 9 through 18 in Part C. If your facility is a coal mine with a probable total annual production of less than 100,000 tons, you may submit past production data or estimated future production (such as a schedule of estimated total production under 30 CFR Section 795.14(c)) instead of conducting analyses for the organic toxic pollutants. If your facility is not a coal mine, and if your gross total annual sales for the most recent three years average less than $100,000 per year (in second quarter 1980 dollars), you may submit sales data for those years instead of conducting analyses for the organic toxic pollutants.

The production or sales data must be for the facility that is the source of the discharge. The data should not be limited to production or sales for the process or processes that contribute to the discharge, unless those are the only processes of your facility. For sales data, in situations involving intra-corporate transfers of goods and services, the transfer price per unit should approximate market prices for those goods and services as closely as possible. Sales figures for years after 1980 should be indexed to the second quarter of 1980 by using the gross national product prices deflator (second quarter of 1980 = 100). This index is available in "National Income and Product Accounts of the United States" (U.S. Department of Commerce, Bureau of Economic Analysis).

D. List any pollutants in Table C-3 that you believe to be present and explain why you believe them to be present. No analysis is required, but if you have analytical data, you must report it also.

NOTE: Under 40 CFR 117.12(a)(2), certain discharges of hazardous substances (listed in Table C-3 of these instructions) may be exempted from the requirements of Section 311 of the Clean Water Act (33 USC Section 1321), which establishes reporting requirements, civil penalties, and liability for cleanup costs for spills of oil and hazardous substances. A discharge of a particular substance may be exempted if the origin, source, and amount of the discharged substance are identified in the KPDES permit application or in the permit, if the permit contains a requirement for treatment of the discharge, and if the treatment is in place. To apply for an exclusion of the discharge of any hazardous substance from the requirement of Section 311, attach additional sheets of paper to your form, setting forth the following information:

A. the substance and the amount of each substance which may be discharged;
B. the origin and source of the discharge of the substance;
C. the treatment which is provided or to be provided for the discharge by:

1. an on-site treatment system separate from any treatment system treating your normal discharge;
2. a treatment system designed to treat your normal discharge and which is additionally capable of treating the amount of the substance identified under paragraph 1 above; or
3. any combination of the above.

See 40 CFR Section 117.12(a)(2) and (c), published on August 29, 1979, or contact the Division of Water for further information on exclusions from Section 311.

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

A. You may not claim this information as confidential. However, you do not have to distinguish between use of production of the pollutants or list the amounts. Under KPDES regulations, your permit will contain limits to control all pollutants you report in answer to this question, as well as pollutants reported in Item V and VI.B at levels exceeding the technology-based limits appropriate to your facility. Your permit will also require you to report to the Department for Environmental Protection if you begin or expect to begin to use or manufacture any toxic pollutant as an immediate or final product or byproduct which you did not report here. Your permit may be modified at that time if necessary to control that pollutant.

B. Consider only those variations which may result in the concentrations of pollutants in effluents which exceed twice the maximum values you reported in Item V. These variations may be part of your routing operations, or part of your regular cleaning cycles.

Under KPDES regulations, your permit will contain limits to control any pollutant that you report in this item at levels exceeding the technology-based limits appropriate to your facility. Your permit will also require you to report to the Department for Environmental Protection if you know or have reason to believe that any toxic pollutant two times the maximum values reported in Item V-C or in this item. Your permit may be modified at that time if necessary to control the pollutant.

Do not consider variations that are the result of bypasses or upsets. Increased levels of pollutants that are discharged as a result of bypasses or upsets are regulated separately under KPDES regulations.

C. Variation exemptions to be described here include:

Changes in raw or intermediate materials
Changes in process equipment or materials;
Changes in product lines;
Significant chemical reactions among pollutants in waste streams; and
Significant variation in removal efficiencies of pollution control equipment.

You may indicate other types of variations as well, except those that are the result of bypasses or upsets. You may be required to further investigate or document variations you report here.

Base your prediction on expected levels of these pollutants upon your knowledge of your processes, raw materials, past and projected product ranges, etc., or upon any testing of your effluent which indicates the range of variability that can be expected over the next five years.

EXAMPLE: Outfall 001 discharges water used to clean six 500-gallon tanks. These tanks are used for formulation of dispersions of synthetic resins in water (adhesives). Use of toxic pollutants which can be expected in the next 5 years is:

1. copper acetate inhibitor, 1/2 lb. per tank;
2. dibutyl phthalate, 50 lbs. per tank;
3. toluene, 5 lbs. per tank; and
4. antimony oxide, 1 lb. per tank.

Based on normal cleaning, an average of 1% and a maximum of 3% of the contents of each tank is collected and discharged once every two weeks in the 150 gallons of water used for cleaning. Treatment (pH adjustment, flocculation, filtration) removes 85% of metals and 50% of organic compounds.

IX. CERTIFICATION

The certification is to be signed as follows:

Corporation: by a principal officer of at least the level of vice president.

Partnership or sole proprietorship: by a general partner or the proprietor, respectively.

Municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.

TABLE C-1
CODES FOR TREATMENT UNITS
(For use with Form C, Item II, Part B)

PHYSICAL TREATMENT PROCESSES

1-A	Ammonia Stripping	1-M	Grit Removal
1-B	Dialysis	1-N	Microstraining
1-C	Diatomaceous Earth Filtration	1-O	Mixing
1-D	Distillation	1-P	Moving Bed Filters
1-E	Electrodialysis	1-Q	Multimedia Filtration
1-F	Evaporation	1-R	Rapid Sand Filtration
1-G	Flocculation	1-S	Reverse Osmosis (Hyperfiltration)
1-H	Flotation	1-T	Screening
1-I	Foam Fractionation	1-U	Sedimentation (Settling)
1-J	Freezing	1-V	Slow Sand Filtration
1-K	Gas-Phase Separation	1-W	Solvent Extraction
1-L	Grinding (Comminutors)	1-X	Sorption

CHEMICAL TREATMENT PROCESSES

2-A	Carbon Adsorption	2-G	Disinfection (Ozone)
2-B	Chemical Oxidation	2-H	Disinfection (Other)
2-C	Chemical Precipitation	2-I	Electrochemical Treatment
2-D	Coagulation	2-J	Ion Exchange
2-E	Dechlorination	2-K	Neutralization
2-F	Disinfection (Chlorine)	2-L	Reduction

BIOLOGICAL TREATMENT PROCESSES

3-A	Activated Sludge	3-E	Pre-Aeration
3-B	Aerated Lagoons	3-F	Spray Irrigation/Land Application
3-C	Anaerobic Treatment	3-G	Stabilization Ponds
3-D	Nitrification-Denitrification	3-H	Trickling Filtration

OTHER PROCESSES

4-A	Discharge to Surface Water	4-C	Reuse/Recycle of Treated Effluent
4-B	Ocean Discharge Through Outfall	4-D	Underground Injection

SLUDGE TREATMENT AND DISPOSAL PROCESSES

5-A	Aerobic Digestion	5-M	Heat Drying
5-B	Anaerobic Digestion	5-N	Heat Treatment
5-C	Belt Filtration	5-O	Incineration
5-D	Centrifugation	5-P	Land Application
5-E	Chemical Conditioning	5-Q	Landfill
5-F	Chlorine Treatment	5-R	Pressure Filtration
5-G	Composting	5-S	Pyrolysis
5-H	Drying Beds	5-T	Sludge Lagoons
5-I	Elutriation	5-U	Vacuum Filtration
5-J	Flotation Thickening	5-V	Vibration
5-K	Freezing	5-W	Wet Oxidation
5-L	Gravity Thickening		

TABLE C-2
TESTING REQUIREMENTS FOR ORGANIC TOXIC POLLUTANTS BY INDUSTRY CATEGORY
(For use with Form C, Item V, Part C)

FRACTION*			GC/MS	
INDUSTRY CATEGORY	**Volatile**	**Acid**	**Base/Neutral**	**Pesticide**
esives and sealants	x	x	x	-
inum forming	x	x	x	-
and other laundries	x	x	x	x
ry manufacturing	x	-	x	-
mining	x	x	x	x
coating	x	x	x	-
er forming	x	x	x	-
ric and electronic compounds	x	x	x	x
roplating	x	x	x	-
osives manufacturing	-	x	x	-
Foundries	x	x	x	-
and wood chemicals	x	x	x	x
ganic chemicals manufacturing	x	x	x	-
and steel manufacturing	x	x	x	-
ner tanning and finishing	x	x	x	x
hanical products manufacturing	x	x	x	-
ferrous metals manufacturing	x	x	x	x
nining	x	x	x	x
nic chemicals manufacturing	x	x	x	x
and ink formulation	x	x	x	-
cides	x	x	x	x
oleum refining	x	x	x	x
maceutical preparation	x	x	x	-
ographic equipment and supplies	x	x	x	x
ic and synthetic materials manufacturing	x	x	x	x
ic processing	x	-	-	-
elain enameling	x	-	x	x
ing and publishing	x	x	x	x
and paperboard mills	x	x	x	x
er Processing	x	x	x	-
and detergent manufacturing	x	x	x	-
n electric power plants	x	x	x	-
ile mills	x	x	x	x
er products processing	x	x	x	x

The pollutants in each fraction are listed in item V-C.

= **Testing required.**

= **Testing not required.**

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES REQUIRED TO BE IDENTIFIED BY APPLICANTS IF EXPECTED TO BE PRESENT

(For use with Form C, Item V, Part D)

TOXIC POLLUTANT

Asbestos

HAZARDOUS SUBSTANCES

1.	Acetaldehyde	35.	Ammonium thiocyanate	69.	Calcium chromate
2.	Acetic Acid	36.	Ammonium thiosulfate	70.	Calcium cyanide
3.	Acetic anhydride	37.	Amyl acetate	71.	Calcium dodecylbenzenesulfonate
4.	Acetone cyanohydrin	38.	Aniline	72.	Calcium hypochlorite
5.	Acetyl bromide	39.	Antimony pentachloride	73.	Captan
6.	Acetyl chloride	40.	Antimony potassium tartrate	74.	Carbaryl
7.	Acrolein	41.	Antimony tribromide	75.	Carbofuran
8.	Acrylonitrile	42.	Antimony trichloride	76.	Carbon disulfide
9.	Adipic acid	43.	Antimony trifluoride	77.	Carbon tetrachloride
10.	Aldrin	44.	Antimony trioxide	78.	Chlordane
11.	Allyl alcohol	45.	Arsenic disulfide	79.	Chlorine
12.	Allyl chloride	46.	Arsenic pentoxide	80.	Chlorobenzene
13.	Aluminum sulfate	47.	Arsenic trichloride	81.	Chloroform
14.	Ammonia	48.	Arsenic trioxide	82.	Chloropyrifos
15.	Ammonium acetate	49.	Arsenic trisulfide	83.	Chlorosulfonic acid
16.	Ammonium benzoate	50.	Barium cyanide	84.	Chromic acetate
17.	Ammonium bicarbonate	51.	Benzene	85.	Chromic acid
18.	Ammonium bichromate	52.	Benzoic acid	86.	Chromic sulfate
19.	Ammonium bifluoride	53.	Benzonitrile	87.	Chromous chloride
20.	Ammonium bisulfite	54.	Benzoyl chloride	88.	Cobaltous bromide
21.	Ammonium carbamate	55.	Benzyl chloride	89.	Cobaltous formate
22.	Ammonium carbonate	56.	Beryllium chloride	90.	Cobaltous sulfamate
23.	Ammonium chloride	57.	Beryllium fluoride	91.	Coumaphos
24.	Ammonium chromate	58.	Beryllium nitrate	92.	Cresol
25.	Ammonium citrate	59.	Butylacetate	93.	Crotonaldehyde
26.	Ammonium fluoroborate	60.	n-Butylphthalate	94.	Cupric acetate
27.	Ammonium fluoride	61.	Butylamine	95.	Cupric acetoarsenite
28.	Ammonium hydroxide	62.	Butyric acid	96.	Cupric chloride
29.	Ammonium oxalate	63.	Cadmium acetate	97.	Cupric nitrate
30.	Ammonium silicofluoride	64.	Cadmium bromide	98.	Cupric oxalate
31.	Ammonium sulfamate	65.	Cadmium chloride	99.	Cupric sulfate
32.	Ammonium sulfide	66.	Cadmium arsenate	100.	Cupric sulfate ammoniated
33.	Ammonium sulfite	67.	Calcium arsenite	101.	Cupric tartrate
34.	Ammonium tartrate	68.	Calcium carbide	102.	Cyanogen chloride

HAZARDOUS SUBSTANCES (continued)

103.	Cyclohexane	134.	Ethylene dichloride	165.	Lead iodide
104.	2,4-D acid (2,4-Dichlorophenoxyacetic acid)	135.	Ethylene diaminetetracetic acid (EDTA)	166.	Lead nitrate
105.	2,4-D esters (2,4-Dichlorophenoxyacetic acid esters)	136.	Ferric ammonium citrate	167.	Lead stearate
106.	DDT	137.	Ferric ammonium oxalate	168.	Lead sulfate
107.	Diazinon	138.	Ferric chloride	169.	Lead sulfide
108.	Dicamba	139.	Ferric fluoride	170.	Lead thiocyanate
109.	Dichlobenil	140.	Ferric nitrate	171.	Lindane
110.	Dichlone	141.	Ferric sulfate	172.	Lithium chromate
111.	Dichlorobenzene	142.	Ferrous ammonium sulfate	173.	Malathion
112.	Dichloropropane	143.	Ferrous chloride	174.	Maleic acid
113.	Dichloropropene	144.	Ferrous sulfate	175.	Maleic anhydride
114.	Dichloropropene-dichloropropane mix	145.	Formaldehyde	176.	Mercaptodimethur
115.	2,2-Dichloropropionic acid	146.	Formic acid	177.	Mercuric cyanide
116.	Dichlorvos	147.	Fumaric acid	178.	Mercuric nitrate
117.	Dieldrin	148.	Furfural	179.	Mercuric sulfate
118.	Diethylamine	149.	Guthion	180.	Mercuric thiocyanate
119.	Dimethylamine	150.	Heptachlor	181.	Mercurous nitrate
120.	Dinitrobenzene	151.	Hexachlorocyclopentadiene	182.	Methoxychlor
121.	Dinitrophenol	152.	Hydrochloric acid	183.	Methyl mercaptan
122.	Dinitrotoluene	153.	Hydrofluoric acid	184.	Methyl methacrylate
123.	Diquat	154.	Hydrogen cyanide	185.	Methyl parathion
124.	Disulfoton	155.	Hydrogen sulfite	186.	Mevinphos
125.	Diuron	156.	Isoprene	187.	Mexacarbate
126.	Dodecylbenzesulfonic acid	157.	Isopropanolamine dodecylbenzenesulfonate	188.	Monoethylamine
127.	Endosulfan	158.	Kelthane	189.	Monomethylamine
128.	Endrin	159.	Kepone	190.	Naled
129.	Epichlorohydrin	160.	Lead acetate	191.	Naphthalene
130.	Ethion	161.	Lead arsenate	192.	Naphthenic acid
131.	Ethylbenzene	162.	Lead chloride	193.	Nickel ammonium sulfate
132.	Ethylenediamine	163.	Lead fluoborate	194.	Nickel chloride
133.	Ethylene dibromide	164.	Lead fluorite	195.	Nickel hydroxide

HAZARDOUS SUBSTANCES (continued)

196.	Nickel nitrate	221.	Propargite	246.	Sodium phosphate (tribasic)
197.	Nickel sulfate	222.	Propionic acid	247.	Sodium selenite
198.	Nitric acid	223.	Propionic anhydride	248.	Strontium choromate
199.	Nitrobenzene	224.	Propylene oxide	249.	Strychnine
200.	Nitrogen dioxide	225.	Pyrethrins	250.	Styrene
201.	Nitrophenol	226.	Quinoline	251.	Sulfuric acid
202.	Nitrotoluene	227.	Resorcinol	252.	Sulfur monochloride
203.	Paraformaldehyde	228.	Selenium oxide	253.	2,4,5-T acid (2,4,5-Trichlorophenoxy acetic acid)
204.	Parathion	229.	Silver nitrate	254.	2,4,5-T amines (2,4,5-Trichlorophenoxy acetic acid amines)
205.	Pentachlorophenol	230.	Sodium	255.	2,4,5-T esters (2,4,5-Trichlorophenoxy acetic acid esters)
206.	Phenol	231.	Sodium arsenate	256.	2,4,5-salts (2,4,5-Trichlorophenoxy acetic acid salts)
207.	Phosgene	232.	Sodium arsenite	257.	2,4,5-TP acid (2,4,5-Trichlorophenoxy propanoic acid)
208.	Phosphoric acid	233.	Sodium bichromate	258.	2,4,5-TP acid esters (2,4,5-Trichlorophenoxy propanoic acid esters)
209.	Phosphorus	234.	Sodium bifluoride	259.	TDE (Tetrachlorodiphenyl ethane)
210.	Phosphorus oxychloride	235.	Sodium bisulfite	260.	Tetraethyl lead
211.	Phosphorus pentasulfide	236.	Sodium chromate	261.	Tetraethyl pyrophosphate
212.	Phosphorus trichloride	237.	Sodium cyanide	262.	Thallium sulfate
213.	Polychlorinated biphenyls (PCB)	238.	Sodium dodecylbenzenesulfonate	263.	Toluene
214.	Potassium arsenate	239.	Sodium fluoride	264.	Toxaphene
215.	Potassium arsenite	240.	Sodium hydrosulfide	265.	Trichlorofon
216.	Potassium bichromate	241.	Sodium hydroxide	266.	Trichloroethylene
217.	Potassium chromate	242.	Sodium hypochlorite	267.	Trichlorophenol
218.	Potassium cyanide	243.	Sodium methylate	268.	Triethanolamine dodecylbenzenesulfonate
219.	Potassium hydroxide	244.	Sodium nitrate	269.	Triethylamine
220.	Potassium permanganate	245.	Sodium phosphate (dibasic)	270.	Trimethylamine
271.	Uranyl acetate	280.	Zinc ammonium chloride	289.	Zinc nitrate
272.	Uranyl nitrate	281.	Zinc borate	290.	Zinc phenolsulfonate
273.	Vanadium pentoxide	282.	Zinc bromide	291.	Zinc phosphate
274.	Vanadyl sulfate	283.	Zinc carbonate	292.	Zinc silicofluoride
275.	Vinyl acetate	284.	Zinc chloride	293.	Zinc sulfate
276.	Vinylidene chloride	285.	Zinc cyanide	294.	Zirconium nitrate
277.	Xylene	286.	Zinc fluoride	295.	Zirconium potassium fluoride
278.	Xylenol	287.	Zinc formate	296.	Zirconium sulfate
279.	Zinc acetate	288.	Zinc hydrosulfonate	297.	Zirconium tetrachloride

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ALDEN RESOURCES, LLC
HWY 459 SFC. MINE KDSMRE 861-0496
332 West Cumberland Gap Pkwy, Ste 100
Corbin, KY 40701

DATE: 05-01-09
DRAWN BY: KTB
CHECKED BY: KTB
Scale: 1"=600'

SHEET
Water Drainage Flow

ALDEN RESOURCES
KDSMRE PERMIT NO. 861-0496
KPDES FORM C

APPENDIX A

Outfall No. (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
SS1	36	49	42	83	57	43	UT to Big Indian Creek (Engle Hollow)
SS2	36	49	36	83	57	46	Cumberland River
SS3	36	49	29	83	57	32	Cumberland River
SS4	36	49	20	83	57	36	Cumberland River
SS5	36	49	17	83	57	21	Cumberland River
SS6	36	49	19	83	57	15	Cumberland River
SS7	36	49	16	83	57	7	Cumberland River
SS8	36	49	19	83	57	00	Cumberland River
SS9	36	49	23	83	56	50	Cumberland River
SS10	36	49	31	83	56	49	Cumberland River
SS11	36	49	15	83	56	43	Cumberland River
SS12	36	49	38	83	56	35	Bull Run
SS13	36	49	38	83	56	51	Bull Run
SS14	36	49	44	83	56	50	Bull Run
SS15	36	49	49	83	56	55	UT to Bull Run
SS16	36	49	51	83	57	3	UT to Bull Run
SS17	36	49	49	83	57	15	UT to Bull Run

ALDEN RESOURCES
KDSMRE PERMIT NO. 861-0496
KPDES FORM C

APPENDIX B

OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING TO FLOW		TREATMENT	
	OPERATION (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1
SS1	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS2	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS3	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS4	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS5	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS6	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS7	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS8	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS9	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS10	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS11	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS12	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS13	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS14	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS15	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS16	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U
SS17	SEDIMENT POND	2.485 acre/feet	Onsite distribution	1-U