

November 12, 2004

Mr. Jonathan Bishop, Executive Officer
California Regional Water Quality
Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Dear Mr. Bishop:

**SUBJECT: RENEWAL OF WASTE DISCHARGE REQUIREMENTS/NPDES PERMIT—
AES REDONDO BEACH, L.L.C. – REDONDO BEACH GENERATING STATION
LOCATED AT 1100 N. HARBOR DRIVE, REDONDO BEACH (ORDER NO. CA0001201,
CI 0536)**

Enclosed are two copies of the completed NPDES Permit Application Forms 1 and 2C for renewal of NPDES Permit and Waste Discharge Requirements (Order No. CA0001201, CI 0536) for AES Redondo Beach L.L.C. The application includes exhibits providing additional information on Form C items II.B.3.a, II. C and V. Since annual fees are paid for this facility, no application fees are enclosed.

Please be advised that, since the issuance of Order No. 00-085 the Chemical Cleaning Retention Basin has been removed from service and cleaned. Precipitation that falls into this basin is retained and evaporated. As a result, no industrial activity occurs in the area tributary to the storm drain inlet on the Northeast corner of the facility. All storm water that does fall on the portions of the facility where industrial activity occurs is collected by yard drains and is discharged via Outfalls 001 and 002.

Requested Permit Revisions

1. As noted above, all storm water runoff that falls on portions of the facility conducting industrial activities is collected by yard drains and is discharged via Outfall Nos. 001 and 002. Therefore, it is requested that storm water compliance requirements be incorporated into NPDES CA0001201 in the same manner as requirement II.A of the NPDES permit for the Alamitos Generating Station (Order No. 00-082, NPDES Permit No. CA 0001139).
2. USEPA and the Regional Board have determined that the discharge from the retention basin is an in-plant waste stream. It is requested that the specific pH limits for the Retention Basin (2.0-12.0) be included in requirement I.A.7 (Effluent Limitations for Inplant Waste Stream) so that the EPA DMR forms can be corrected.
3. Provide for intake credits for metals to avoid assessment of violations where concentrations in the intake water exceeds discharge limits.

4. Provision III.A.1 of Monitoring and Reporting Program requires quarterly chronic toxicity monitoring. However, AES Redondo Beach generally operates infrequently and for relatively short periods during the winter months. In addition, little notice of the need to operate is provided by the Independent System Operator. The infrequent operations and the lack of lead time makes toxicity monitoring during the winter months extremely difficult. To meet this requirement the Generating Station is required to start the pumps and discharge specifically to perform a chronic toxicity test. Therefore, we request that the Chronic Toxicity monitoring requirement be modified to specify monitoring at the beginning and end of the summer and delete the requirement to monitor during the winter months. In addition, chronic toxicity is consistently within compliance.
5. Frequently, AES Redondo Beach is not operating and is not discharging through either outfall or is only discharging through one outfall. As noted in item 4 above, the Generating Station operates infrequently during the winter months. However, provision III.A.1 of Monitoring and Reporting Program CI-0536 requires weekly pH measurements at the Outfalls. As a result, pH is frequently measured at the Outfalls during weeks when there is no discharge. It is requested that this provision be revised to only require weekly monitoring of either Outfall during weeks when Circulating Water Pumps are running.
6. Provision III.A of Monitoring and Reporting Program CI-0536 also requires daily monitoring of total and free available chlorine. It is requested that monitoring be limited to total chlorine. If total chlorine is below the limit, than residual chlorine will also be below the limit.

A more effective chlorine limitation would be to require addition of chlorine by mass based on the number of operating circulating water pumps. This is possible because a fixed mass of chlorine (i.e. 4 gallons of 12.5% bleach at 1 GPM for each circulating water pump that is operating) will give a fixed concentration based on the number of operating pumps. This is a more restrictive limit and would eliminate any error and provide more effective protection of water quality.
7. Submit the reports in one mailing per month. The August 11, 2000 cover letter for the current permit states "do not combine your discharge monitoring reports with other reports". Subsequently, we have been instructed by the board to submit one envelope containing all due reports.
8. It is requested that the Regional Board coordinate with USEPA to determine if the requirement for submittal of DMRs can be met by the submittal of electronic data to the Regional Board. This will save considerable paperwork and time.


URS Corporation is assisting AES Redondo Beach, L.L.C. in the renewal of the NPDES permit. Please contact either Gary Leckonby at (310)-318-7441, RaNae Loveland at (310) 318-7418 or

Mr. Jonathan Bishop, Executive Officer
California Regional Water Quality
Control Board, Los Angeles Region
November 12, 2004
Page 3

Robert Collacott of URS (714.648.2726) regarding information in the attached permit application, facility operations and other coordination related to the renewal of the permit.

Please call if you should have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Clement J. Thompson', written in a cursive style.

Clement J. Thompson, President

Enclosures

FORM 1 GENERAL	U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permits Program (Read the "General Instructions" before starting.)	I. EPA I.D. NUMBER <div style="border: 1px solid black; padding: 5px; text-align: center;"> CAR000038893 </div>
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II. LABEL ITEMS I. EPA I.D. NUMBER III. FACILITY NAME V. FACILITY MAILING ADDRESS VI. FACILITY LOCATION	PLEASE PLACE LABEL IN THIS SPACE	GENERAL INSTRUCTIONS If a preprinted label has been provided, affix in the designated space. Review the information carefully. If any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Absence of the preprinted data is absent (the area of the fill-in label space lists the information that should appear). Please provide a "Y" for proper fill-in area(s) below. If the label is complete and correct, you need not complete items 1-6. (Example: V-E which must be completed regardless.) Complete items 1-6 if a label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which the label is collected.
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III. OPERATIONAL CHARACTERISTICS

IV. OPERATIONS

NOTE: This information is required for all permit applications to the EPA. If you have any questions, consult the permit application manual and the supplemental information provided in the permit application manual. For more information, refer to the instructions for permit applications in the permit application manual. For more information, refer to the instructions for permit applications in the permit application manual.

SPECD QUESTIONS	MARK X			SPECD QUESTIONS	MARK X		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED
1. Is the proposed activity a new or modified activity? (See EPA FORM 224)		X		1. Does the proposed activity involve the production of a solid waste? (See EPA FORM 224)		X	
2. Will the proposed activity discharge pollutants to surface waters? (See EPA FORM 224)	X		X	2. Does the proposed activity involve the discharge of pollutants to surface waters? (See EPA FORM 224)		X	
3. Is the proposed activity a hazardous waste activity? (See EPA FORM 224)		X		3. Do you or will you need a permit to discharge pollutants to surface waters? (See EPA FORM 224)		X	
4. Is the proposed activity a new or modified activity? (See EPA FORM 224)		X		4. Do you or will you need a permit to discharge pollutants to surface waters? (See EPA FORM 224)		X	
5. Is the proposed activity a new or modified activity? (See EPA FORM 224)		X		5. Do you or will you need a permit to discharge pollutants to surface waters? (See EPA FORM 224)		X	

III. NAME OF FACILITY
AES Redondo Beach, L.L.C.

IV. FACILITY CONTACT

A. NAME & TITLE (last, first & title) RaNae P. Loveland Station Support	B. PHONE (area code & no.) 3103187418
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V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX 1100 North Harbor Drive			
B. CITY OR TOWN Redondo Beach		C. STATE CA	D. ZIP CODE 90277

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER 1100 Harbor Drive			
B. COUNTY NAME Los Angeles			
C. CITY OR TOWN Redondo Beach	D. STATE CA	E. ZIP CODE 90277	F. COUNTY CODE (if known)

VIII. SIC CODES (Enter in order of priority)			
A. FIRST		B. SECOND	
4911	(specify) Steam Electric Generation		(specify)
C. THIRD		D. FOURTH	
	(specify)		(specify)

IX. OPERATOR INFORMATION	
A. NAME	B. Is the name listed in Item VIII-A also the owner?
AES Redondo Beach, L.L.C.	Yes

X. STATUS OF OPERATOR (Enter the appropriate letter into the answer box. If Other, specify.)		D. PHONE (area code & no.)
F=FEDERAL S=STATE P=PRIVATE	M=PUBLIC (other than federal or state) O=OTHER (specify)	3103187442

E. STREET OR P.O. BOX
1100 North Harbor Drive

F. CITY OR TOWN	G. STATE	H. ZIP CODE	IX. INDIAN LAND
Redondo Beach	CA	90277	Is the facility located on Indian lands? No

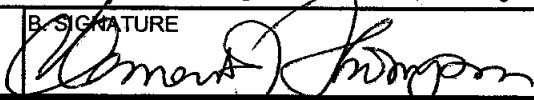
EXISTING ENVIRONMENTAL PERMITS	
A. NPDES (Discharges to Surface Water)	D. PSD (Air Emissions from Proposed Sources)
CA0001201	
B. UIC (Underground Injection of Fluids)	E. OTHER
	(specify)
C. RCRA (Hazardous Wastes)	E. OTHER
	(specify)

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

XI. NATURE OF BUSINESS (provide a brief description)
Steam Electric Power Generation

RECEIVED
 JAN 12 AM 11:15
 AIR TOXIC REGIONAL WATER
 QUALITY CONTROL DIVISION
 LOS ANGELES REGION

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

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Clement J. Thompson President		11/11/04

COMMENTS FOR OFFICIAL USE ONLY

FORM 2C NPDES		U.S. ENVIRONMENTAL PROTECTION AGENCY	
		APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS Consolidated Permits Program	

I. OUTFALL LOCATION

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

OUTFALL NUMBER (15)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG	2. MIN	3. SEC	1. DEG	2. MIN	3. SEC	
001	33.00	50.00	58.00	118.00	24.00	8.00	Pacific Ocean
002	33.00	50.00	53.00	118.00	23.00	34.00	Pacific Ocean

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing of water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g. for certain mining activities), provide a textual 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 NUMBER (15)	2. OPERATIONS CONTRIBUTING FLOW		3. TREATMENT	
	a. OPERATION (16)	b. AVERAGE FLOW (Include units)	c. DESCRIPTION	d. USE CODES (FROM TABLE 2C-1)
001	Condenser Cooling	70 MGD	Ocean Discharge	4-B
	Well Point System	1.5 MGD	Ocean Discharge	4-B
	Yard Drains (storm water runoff)	150 gpd	Ocean Discharge	4-B
	Condensate Overboard (intermittent)	275 gpd	Ocean Discharge	4-B
	Condensate Demineralizers Regeneration Wastes (intermittent)	2000 gpd	Retention & Ocean Discharge	4-B
	Floor Drains (intermittent)	85 gpd	Retention & Ocean Discharge	4-B
	Units 1 - 6 Fireside and Air Preheater Washes (potential maintenance)	0.77 MGD (if this occurs)	Retention & Ocean Discharge	4-B
	Boiler Blowdown (intermittent)	4100 gpd	Retention & Ocean Discharge	4-B
	Units 7 & 8 Fireside & Air Preheater Washes (potential maintenance)	0.87 MGD (if this occurs)	Retention & Ocean Discharge	4-B
	Units 5 - 8 Metal Chemical Cleaning Wastes (may occur every 3 years)	0.12 MGD (during maintenance activity)	Lime Precipitation, Retention, Sludge Disposal & Ocean Discharge	2-C
002	Condenser Cooling	140 MGD	Ocean Discharge	4-B
	Condensate Overboard (intermittent)	275 gpd	Ocean Discharge	4-B
	Yard Drains (storm water runoff)	150 gpd	Ocean Discharge	4-B

OFFICIAL USE ONLY (emission guidelines sub-categories)

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

C. Except for storm 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)

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?
 YES (complete Item III-B) NO (go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of production)?
 YES (complete Item III-C) NO (go to Section IV)

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

IV. IMPROVEMENTS

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading, or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative enforcement orders, enforcement compliance schedule orders, stipulations, court orders, and credit or loan conditions.
 YES (complete the following table) NO (go to Item IV-B)

IV. IMPROVEMENTS (cont.)

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

MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED.

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.

D. In this space only, list any of the pollutants listed in Table 20-3 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 provide analytical data in your possession.

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in item V.C a substance or a component of a substance which you currently use or manufacture as an immediate or indirect product or byproduct?

YES (list all pollutants below)

NO (go to item V.B)

VII. BIOLOGICAL TOXICITY TESTING DATA

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

YES (Identify the test(s) and their purposes below) **NO** (go to Item VIII)

1. TEST NAME	2. TEST DESCRIPTION
USEPA/600/R-95/136 with Giant Kelp (Macrocystis py)	Quarterly chronic toxicity testing

VIII. CONTRACT ANALYSIS INFORMATION

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

YES (Provide address and telephone number of pollutants analyzed by each facility) **NO** (go to Item VII-B)

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (list)
Calscience Environmental Laboratories	7440 Lincoln Way Garden Grove CA 92841	(714) 895-5494	Metals, Oil & Grease, TSS, Settleable Solids, BOD, pH
CRG Laboratories	2020 Del Amo Blvd., Suite 200 Torrance CA 90501	(310) 533-5190	CTR quarterly samples; trace metals, chlorinated pesticides, Arochlor, polynuclear aromatic hydrocarbons, acid extractable compounds, base extractable compounds, priority pollutants
Silliker Inc., Southern California Laboratory	1139 E. Dominguez, Suite I Carson CA 90746	(310) 637-7121	Coliform
Edison Chemical Services	7301 Fenwick Lane, 2nd Floor Westminster CA 92683	(714) 895-0525	Oil & Grease, pH, TSS
Caltest	1885 North Kelly Road Napa CA 94558	(707) 226-1001	VOCs for CTR - quarterly samples
AES Redondo Beach Laboratory	1100 Harbor Drive Redondo Beach CA 90277	(310) 318-7441	Chlorine, Free Chlorine, pH
MBC Applied Environmental Sciences	3000 Redhill Avenue Costa Mesa CA 92626	(714) 850-4830	Chronic Toxicity

CAR000038893

CERTIFICATION

I certify under penalty of perjury 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.

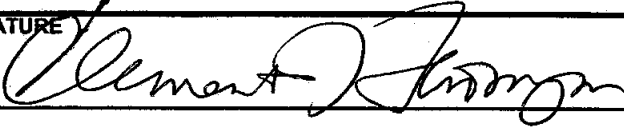
A. NAME & OFFICIAL TITLE

Clement J. Thompson
President

B. PHONE NO. (area code & no.)

(310) 318-7442

C. SIGNATURE



D. DATE SIGNED

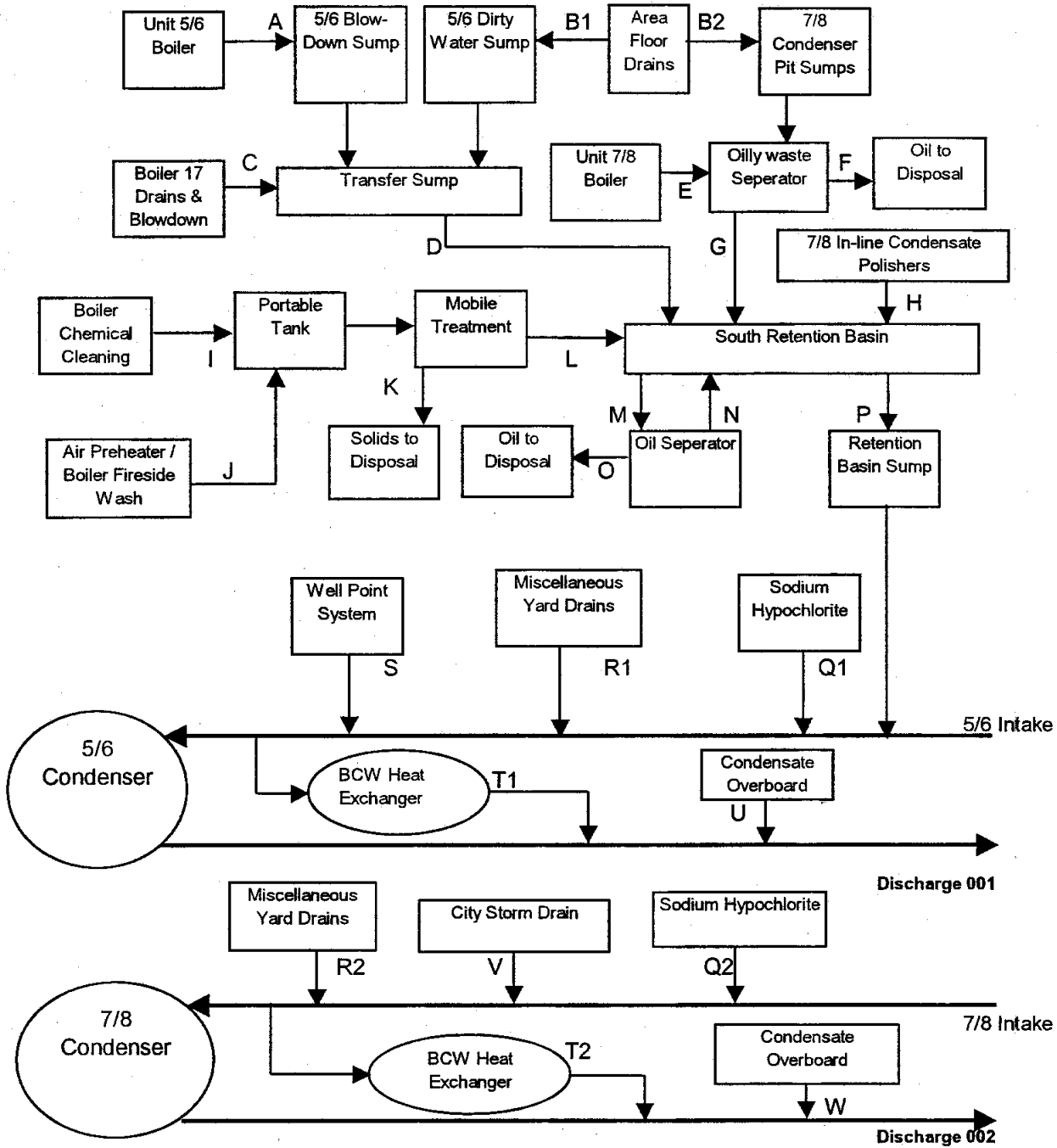
11/11/04

CALIFORNIA REGIONAL WATER
QUALITY CONTROL BOARD
LOS ANGELES REGION

2004 NOV 12 AM 11:15

RECEIVED

SCHEMATIC OF WATER FLOW
 AES Redondo Beach L.L.C.
 November, 2004



Refer to the attached description and flow characterization for each labeled process stream.

REDONDO GENERATING STATION
2004 FORM 2C Item II.B.3.a. – Further Explanation
EXHIBIT A

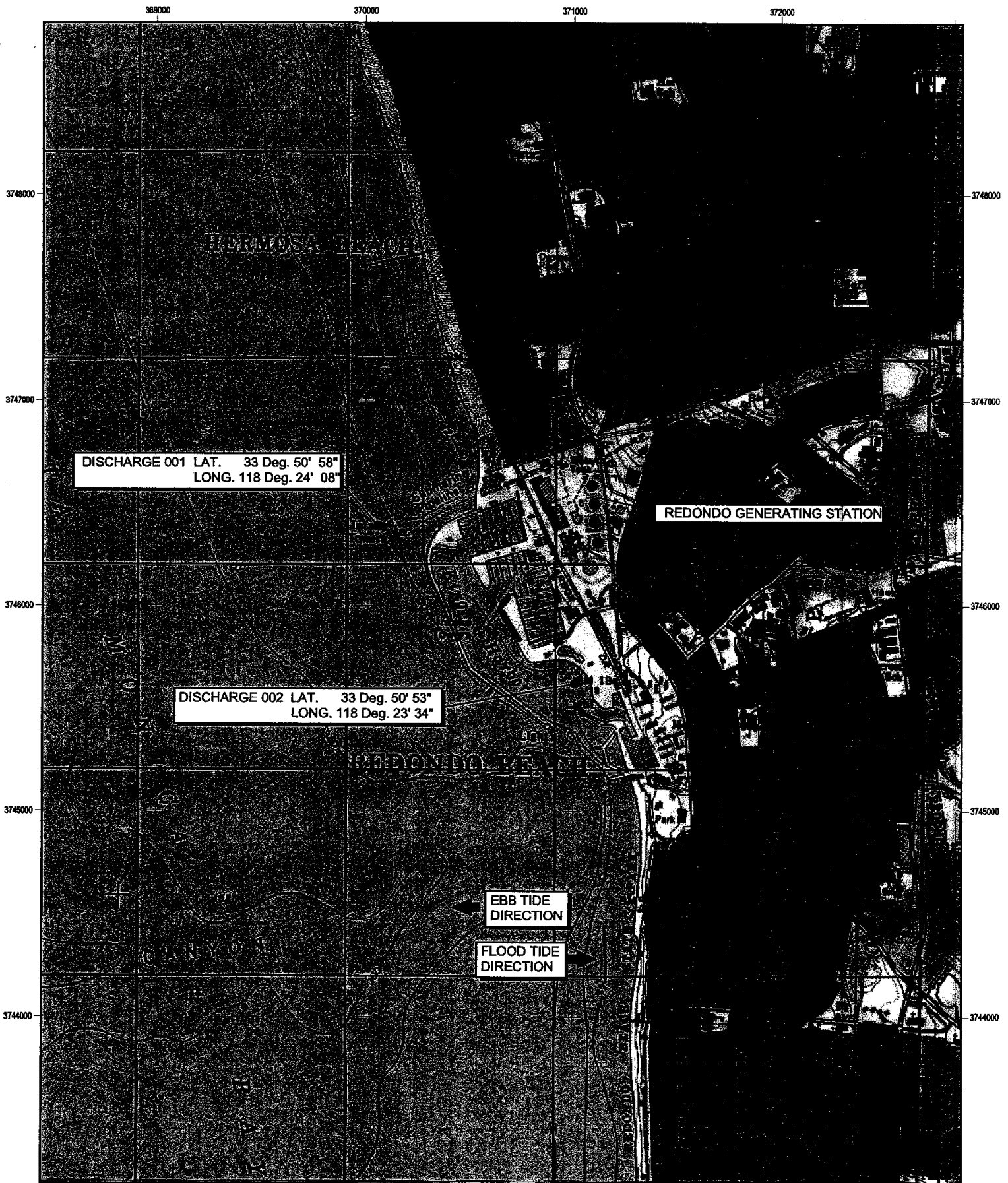
Operation	Treatment Process	Explanation
Outfall Nos. 001 and 002	Ocean Discharge	All waste streams listed under Outfall Nos. 001 and 002 are discharged through two outfall structures located in the Pacific Ocean.
Condensate Demineralizer Regeneration Wastes, Unit 5 – 8 Fireside and Air Preheater Washes, Boiler Blowdown, Misc. Plant Drains, Unit 5 – 8 Metal Chemical Cleaning Wastes, Reverse Osmosis Regeneration and Backwash Wastes.	Retention	All waste streams listed are sent to a retention basin prior to discharge through Outfall No. 001.
Units 7 & 8 Plant Drains	Oil Removal	These waste streams are routed through a floatation-type oil/water separator prior to discharge to the retention basin.
Units 5 – 8 Metal Chemical Cleaning Wastes	Lime Precipitation and Sludge Disposal	The metal chemical cleaning wastes are routed to portable tanks. These wastes are then processed through a contractor-owned mobile lime treatment unit, which discharges to the retention basin. The sludge generated from this process is disposed of an approved offsite disposal facility.

REDONDO GENERATING STATION
2004 FORM 2C Item II.C. – Further Explanation
EXHIBIT B

Outfall No.	Operation Contributing Flow	Explanation
001	Condensate Overboard	During normal operation, this discharge is not present. This discharge may be necessary during unit start-up or abnormal operation and the frequency and duration of the discharge may vary considerably. This discharge is primarily treated condensate that has been slightly contaminated with seawater.
	Condensate Demineralizer Regeneration Wastes	Duration of this discharge may range from eight to twenty-four hours and occurs approximately every other day.
	Unit 5-8 Fireside and Air Preheater Washes	These operations occur approximately four times per year per unit and are usually done concurrently one unit at a time. Each operation lasts approximately sixteen hours.
	Units 5 & 6 Boiler Blowdown	This operation is necessary to control the buildup of solids in the steam cycle. The frequency and duration of this discharge vary greatly.
	Units 5 – 8 Metal Chemical Cleaning Wastes	These operations occur approximately once every two years per unit. The duration of the discharge is approximately thirty-six to forty-eight hours for Units 5 & 6 and twenty-four hours for Units 7 & 8.
002	Condensate Overboard	During normal operation, this discharge is not present. This discharge may be necessary during unit start-up or abnormal operation and the frequency and duration of the discharge may vary considerably. This discharge is primarily treated condensate which has been slightly contaminated with seawater.

<u>Footnote</u>	<u>Description</u>	<u>Flow Characterization</u>
5/6 Intake	5/6 Intake	Each of the four circulating water pumps are designed at 37,000 GPM.
7/8 Intake	7/8 Intake	Each of the four circulating water pump are designed at 117,000 GPM.
Discharge 001	Discharge 001	The maximum discharge flow is 215 MGD
Discharge 002	Discharge 002	The maximum discharge flow is 674 MGD
A	5/6 Boiler	Discharges from the boiler are boiler drains and blowdown. Approximately 50,000 gallons of water is drained from the boiler each shut down. Blowdown occurs during start-up and other operating times when the boiler water and/or steam parameters are exceeded. On average there may be 10,000 gallons of blowdown per operating run.
B1	Area floor drains to 5/6	Drains exist throughout the operating units. Minimal flow.
B2	Area floor drains to 7/8	Drains exist throughout the operating units. Minimal flow.
C	Boiler 17 Blowdown and Drains	Boiler 17 operates approximately six times per year. Blowdown is unusual and less than 10,000 gallons per year. The boiler is drained after a shutdown - approximately 10,000 gallons.
D	Water from Transfer Sump	Water collected from within the operating units is collected here before being pumped to the Retention Basin.
E	Unit 7/8 Boiler	The 7/8 Drains are used to drain the boiler after a shutdown - approximately 30,000 gallons; 15 times per year
F	Oil from 7/8 Sump	Oil separated by specific gravity - removed with a vacuum truck as required. Approximately 100 gallons of oil/water mix per year.
G	Water from 7/8 Sump	Water from Unit 7/8 sumps and rain.
H	Polisher Regeneration	The 7/8 in-line polishers are regenerated approximately 1.5 times per start-up. The flow is approximately 30,000 gallons per regeneration .
I	Boiler Chemical Cleaning	We expect that 5/6 each have a cleaning within in the next five years at approximately 120,000 gallons per cleaning. 7/8 are not expected to need a chemical cleaning although an extreme upset in the water system would create the need.
J	Boiler Fireside Wash	Boiler fireside washes (including Air PreHeater washes) are unlikely to be needed since oil is no longer fired. An extreme upset condition would be necessary to initiate a fireside wash.
K	Solids from Chemical Cleaning or Fireside Wash	In the event metal is removed from the boiler (either chemical cleaning or fireside wash) lime will be added to precipitate dissolved metals. Disposal will be contracted. The disposal amount will vary.
L	Liquid from Chemical Cleaning or Fireside Wash	The treated liquid is discharged to the retention basin after checking pH and the metals concentration. The flow will be approximately 120,000 gallons.

M	Retention Basin Surface water	The surface of the retention basin is skimmed to remove floating oil at a rate of approximately 1 GPM.
N	Water from Oil Separator	The water from the oil separator is returned to the retention basin.
O	Oil from Oil Separator	Approximately 3,000 gallons of oil/water mix is removed annually.
P	Water from the Retention Basin	Water is discharged after allowing sufficient time for separation. The flow is pumped to the forebay of Units 5/6 at an average rate of approximately 0.2MGD determined by the operating hours of the retention basin sump pump.
Q1	5/6 Chlorination	Maximum of 3 gallons of 12.5 wt% sodium hypochlorite per operating pump per day. Approximately 500 gallons per year.
Q2	7/8 Chlorination	Maximum of 9 gallons of 12.5 wt% sodium hypochlorite per operating pump per day. Approximately 4,000 gallons per year.
R1	Miscellaneous Yard Drains	Drains that will collect water from rain events.
R2	Miscellaneous Yard Drains	Drains that will collect water from rain events.
S	Well Point System	Dewatering pumps operate continuously to keep groundwater stable. The water is a mixture of saltwater, groundwater, and barrier injection water from the West Coast Basin Barrier Project and is removed at an average rate of 1.5 MGD.
T1	5/6 BCW Heat Exchanger	This is once-through non-contact water used to cool the bearing cooling water.
T2	7/8 BCW Heat Exchanger	This is once-through non-contact water used to cool the bearing cooling water.
U	5/6 Condensate Overboard	During start-ups at 5/6 the initial water that comes through the cycle (i.e is condensed in the hotwell) is not pumped back into the system and is sent to the discharge. This is approximately 4,000 gallons per start and less than 100,000 gallons per year.
V	City Storm Drain	Storm water run-off from the city's streets enters the property on the SE side of the plant and, if not evaporated, will combine with the 7/8 intake.
W	7/8 Condensate Overboard	Used only in an event when the condensate needs to be discharged rather than circulated through the unit. This is approximately 20,000 gallons per event and less than 100,000 gallons per year.



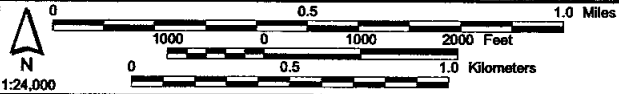
DISCHARGE 001 LAT. 33 Deg. 50' 58"
LONG. 118 Deg. 24' 08"

REDONDO GENERATING STATION

DISCHARGE 002 LAT. 33 Deg. 50' 53"
LONG. 118 Deg. 23' 34"

EBB TIDE
DIRECTION

FLOOD TIDE
DIRECTION



LOCATION MAP
REDONDO GENERATING STATION
AES REDONDO BEACH, LLC.

USGS Redondo Beach Quadrangle
7.5 Minute Series (Topographic)

NOVEMBER 2004

REDONDO BEACH, LOS ANGELES COUNTY, CALIFORNIA

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 2-c)

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		d. NO. OF ANALYSES	e. CONCENTRATION	f. LONG TERM AVERAGE VALUE	g. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				
a. Biochemical Oxygen Demand (BOD)	< 1.0				1	mg/L		
b. Chemical Oxygen Demand (COD)	200				1	mg/L		
c. Total Organic Carbon (TOC)	< 5				1	mg/L		
d. Total Suspended Solids (TSS)	22.4				1	mg/L		
e. Ammonia (as N)	< 0.10				1	mg/L		
f. Flow	VALUE	213.1 MGD	VALUE	197.1 MGD	30	MGD	VALUE	
g. Temperature (winter)	VALUE		VALUE	30	35	°C	VALUE	
h. Temperature (summer)	VALUE		VALUE	34	35	°C	VALUE	
i. pH	MINIMUM	7.4	MAXIMUM	8.7		STANDARD UNITS		

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

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT 2004				4. UNITS		5. INTAKE (optional)	
	a. PRESENT	b. ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE		d. NO. OF ANALYSES	e. CONCENTRATION	f. LONG TERM AVERAGE VALUE	g. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				
a. Bromide (2499-87-9)	X		59				1	mg/L		
b. Chlorine, Total Residual	X		< 5	0.98			12	mg/L		
c. Color	X		< 5				1	Color Unit		
d. Fecal Coliform	X		11				9	mpn/100 ml		
e. Fluoride (14800-6-00-9)	X		0.87				1	mg/L		
f. Nitrate-Nitrite (as N)	X		< 1				1	mg/L		

ITEM Y-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X' a. RECEIVED b. TESTED c. SENT	3. EFFLUENT				4. UNITS				5. INTAKE (optional)			
		a. MAXIMUM DAILY VALUE (1) (2)		b. MAXIMUM 30 DAY VALUE (1) (2)		c. LONG TERM AVERAGE VALUE (1) (2)		d. NO. OF ANALYSES		e. AVERAGE VALUE (1) (2)		f. NO. OF ANALYSES	
		CONCENTRATION	(g) MASS	CONCENTRATION	(g) MASS	CONCENTRATION	(g) MASS			CONCENTRATION	(g) MASS		
g. Nitrogen, Total Organic (as N)	X	< 0.50								mg/L			
h. Oil and Grease	X	< 1.4					< 1.4			mg/L			
i. Phosphorus (as P), Total (7723-14-0)	X	0.22								mg/L			
j. Reactivity													
(1) Alpha, Total	X	3+ 1.5								pCi/L			
(2) Beta, Total	X	149 ± 32								pCi/L			
(3) Radium, Total	X	0.14 ± 0.45								pCi/L			
(4) Radium 226, Total	X	0.30 ± 0.43								pCi/L			
k. Sulfate (as SO ₄) (14808-79-8)	X	2420								mg/L			
l. Sulfide (as S)	X	< 0.02								mg/L			
m. Sulfite (as SO ₃) (14265-45-3)	X	< 1								mg/L			
n. Surfactants	X	0.10								mg/L			
o. Aluminum, Total (7429-90-5)	X	21.0								ug/L			
p. Barium, Total (7440-39-3)	X	8.18								ug/L			
q. Boron, Total (7440-42-8)	X	4.51								mg/L			
r. Cobalt, Total (7440-48-4)	X	0.04								ug/L			
s. Iron, Total (7439-89-8)	X	24.9								ug/L			
t. Magnesium, Total (7439-95-4)	X	1300								mg/L			
u. Molybdenum, Total (7439-98-7)	X	10.2								ug/L			
v. Manganese, Total (7439-96-5)	X	9.67								ug/L			
w. Tin, Total (7440-31-5)	X	0.06								ug/L			
x. Titanium, Total (7440-32-6)	X	2.12								ug/L			

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CONTINUED FROM PAGE 3 OF FORM 2-C

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

I. POLLUTANT NUMBER (if applicable)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)		
	A. TEST RESULTS PRESENT	B. C. BE-SENT	D. MAXIMUM DAILY VALUE (1) CONCENTRATION	E. MAXIMUM 30-DAY VALUE (1) CONCENTRATION	F. LONG TERM AVG. VALUE (1) CONCENTRATION	G. CONCENTRATION	H. NO. OF ANALYSES	I. LONG TERM AVERAGE VALUE (1) CONCENTRATION	J. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS									
1M. Antimony, Total (7440-36-0)	✓		110	12.2	0.10	ug/L	9		
2M. Arsenic, Total (7440-38-2)	✓		6980	780	0.92	ug/L	9		
3M. Beryllium, Total (7440-41-7)	✓		<0.005	<0.005	<0.005	ug/L	9		
4M. Cadmium, Total (7440-43-9)	✓		50	5.56	0.04	ug/L	9		
5M. Chromium, Total (7440-47-3)	✓		0.80			ug/L	1		
6M. Copper, Total (7440-50-9)	✓		7650	852	1.02	ug/L	9		
7M. Lead, Total (7439-92-1)	✓		1240	138	0.32	ug/L	9		
8M. Mercury, Total (7439-97-6)	✓		3	0.333	<0.005	ug/L	9		
9M. Nickel, Total (7440-02-0)	✓		2310	260	0.27	ug/L	9		
10M. Selenium, Total (7782-49-2)	✓		93	12.6	<0.01	ug/L	9		
11M. Silver, Total (7440-22-4)	✓		1000	111	<0.005	ug/L	9		
12M. Thallium, Total (7440-28-0)	✓		71	9.00	0.0035	ug/L	9		
13M. Zinc, Total (7440-66-6)	✓		30	8.14	16.2	ug/L	9		
14M. Cyanide, Total (57-12-6)	✓		<0.05	<0.05	<0.05	ug/L	9		
15M. Phenols, Total	✓		<0.10	<0.10	<0.10	ug/L	9		

DIQXIN			
2.3.1.1. Total: Chlorobenzene-P-Dioxin (1784-91-8)	✓	4.8542	1 pg/L

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	A. USE OF EQUIPMENT	B. MAXIMUM DAILY VALUE (1) CONCENTRATION (2) MASS	C. LONG TERM AVERAGE VALUE (1) CONCENTRATION (2) MASS	D. NO. OF ANALYSES	E. CONCENTRATION	F. MASS	G. LONG TERM AVERAGE VALUE (1) CONCENTRATION (2) MASS	
							(1) CONCENTRATION	(2) MASS
GC/MS FRACTION - VOLATILE COMPOUNDS								
1V. Acrolein (107-02-8)	✓	< 12	< 12	5	ug/L			
2V. Acrylonitrile (107-13-1)	✓	< 10	< 10	5	ug/L			
3V. Benzene (71-43-2)	✓	< 0.3	< 0.3	5	ug/L			
4V. Bis (Chloromethyl) Ether (542-88-1)	✓	< 1.0	< 1.0	5	ug/L			
5V. Bromoform (75-28-2)	✓	< 0.3	< 0.3	5	ug/L			
6V. Carbon Tetrachloride (58-23-5)	✓	< 0.3	< 0.3	5	ug/L			
7V. Chlorobenzene (108-90-7)	✓	< 0.3	< 0.3	5	ug/L			
8V. Chlorodibromomethane (124-48-1)	✓	< 0.4	< 0.4	5	ug/L			
9V. Chloroethane (78-00-3)	✓	< 0.3	< 0.3	5	ug/L			
10V. 2-Chloroethylvinyl Ether (110-75-8)	✓	< 2.0	< 2.0	5	ug/L			
11V. Chloroform (67-68-3)	✓	< 0.3	< 0.3	5	ug/L			
12V. Dichlorobromomethane (75-27-4)	✓	< 0.3	< 0.3	5	ug/L			
13V. Dichlorodifluoromethane (75-71-8)	✓	< 0.4	< 0.4	5	ug/L			
14V. 1,1-Dichloroethane (75-34-3)	✓	< 0.2	< 0.2	5	ug/L			
15V. 1,2-Dichloroethane (107-06-2)	✓	< 0.4	< 0.4	5	ug/L			
16V. 1,1-Dichloroethylene (75-35-4)	✓	< 0.3	< 0.3	5	ug/L			
17V. 1,2-Dichloropropane (78-87-5)	✓	< 0.3	< 0.3	5	ug/L			
18V. 1,3-Dichloropropane (542-75-8)	✓	< 0.5	< 0.5	5	ug/L			
19V. Ethylbenzene (100-41-4)	✓	< 0.2	< 0.2	5	ug/L			
20V. Methyl Bromide (74-83-9)	✓	< 1.0	< 1.0	5	ug/L			
21V. Methyl Chloride (74-87-3)	✓	< 0.3	< 0.3	5	ug/L			

CONTINUE ON PAGE V-1

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)		D. NO. OF ANAL. YRS
	A. ANAL. INQUIRY	B. SEC. INVESTIGATION	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	B. MAXIMUM 30 DAY VALUE (2) MASS	C. LONG TERM AVG. VALUE (1) CONCENTRATION	D. MASS	(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)									
22V. Methylene Chloride (75-09-2)	✓		< 0.3	< 0.3	< 0.3	ug/L			5
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	✓		< 0.4	< 0.4	< 0.4	ug/L			5
24V. Tetrachloroethylene (127-18-4)	✓		< 0.4	< 0.4	< 0.4	ug/L			5
26V. Toluene (108-88-3)	✓		< 0.3	< 0.3	< 0.3	ug/L			5
28V. 1,2-Dichloroethylene (186-90-5)	✓		< 0.3	< 0.3	< 0.3	ug/L			5
27V. 1,1,1-Trichloroethane (71-85-6)	✓		< 0.2	< 0.2	< 0.2	ug/L			5
28V. 1,1,2-Trichloroethane (78-00-5)	✓		< 0.3	< 0.3	< 0.3	ug/L			5
29V. Trichloroethylene (79-01-6)	✓		< 0.3	< 0.3	< 0.3	ug/L			5
30V. Trichlorofluoromethane (75-68-4)	✓		< 0.3	< 0.3	< 0.3	ug/L			5
31V. Vinyl Chloride (75-01-4)	✓		< 0.3	< 0.3	< 0.3	ug/L			5
GC/MS FRACTION - ACID COMPOUNDS									
1A. 2-Chloropheno (95-47-8)	✓		< 3.0			ug/L			1
2A. 2,4-Dichlorophenol (120-83-2)	✓		< 5.0			ug/L			1
3A. 2,4-Dimethylphenol (106-87-9)	✓		< 5.0			ug/L			1
4A. 4,6-Dinitro-Cresol (834-52-1)	✓		< 10			ug/L			1
5A. 2,4-Dinitrophenol (81-28-5)	✓		< 15			ug/L			1
6A. 2-Nitrophenol (88-75-8)	✓		< 4.0			ug/L			1
7A. 4-Nitrophenol (100-02-7)	✓		< 10			ug/L			1
8A. P-Chloro-M-Cresol (88-90-7)	✓		< 2.0			ug/L			1
9A. Parachlorophenol (87-86-5)	✓		< 10			ug/L			1
10A. Phenol (108-95-2)	✓		< 2.0			ug/L			1
11A. 2,4,6-Trichlorophenol (88-06-2)	✓		< 2.0			ug/L			1

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' AT THE FOLLOWING LOCATIONS: AIR, WATER, SOIL, SEDIMENT, SLUDGE	3. EFFLUENT				4. UNITS		5. INTAKE (optional)		6. NO. OF ANALYSES
		A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE	D. MASS CONCENTRATION	E. LONG TERM AVERAGE VALUE	F. MASS CONCENTRATION	
		(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS										
1B. Acenaphthene (83-32-9)	X		< 3.0				ug/L			1
2B. Acenaphthylene (208-96-8)	X		< 2.0				ug/L			1
3B. Anthracene (120-12-7)	X		< 10				ug/L			1
4B. Benzidine (92-87-5)	X		< 13				ug/L			1
5B. Benzo (a) Anthracene (96-96-3)	X		< 2.0				ug/L			1
6B. Benzo (e) Pyrene (80-32-8)	X		< 2.0				ug/L			1
7B. 3,4-Benzo-fluoranthene (208-99-2)	X		< 5.0				ug/L			1
8B. Benzo (ghi) Perylene (191-24-2)	X		< 2.0				ug/L			1
9B. Benzo (h) Fluoranthene (207-08-9)	X		< 5.0				ug/L			1
10B. Bis (3-Chloroethoxy) Methane (111-91-1)	X		< 2.0				ug/L			1
11B. Bis (2-Chloroethyl) Ether (111-44-4)	X		< 3.0				ug/L			1
12B. Bis (2-Chloropropyl) Ether (103-90-1)	X		< 4.0				ug/L			1
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	X		< 4.0				ug/L			1
14B. 4-Bromo-2-chlorophenyl Phosphate (101-35-3)	X		< 2.0				ug/L			1
15B. Butyl Benzyl Phosphate (85-98-7)	X		< 4.0				ug/L			1
16B. 1-Chloro-2-naphthylene (91-58-7)	X		< 3.0				ug/L			1
17B. 1-Chloro-2-naphthyl Phosphate (7008-72-3)	X		< 2.0				ug/L			1
18B. Chrysenes (218-91-6)	X		< 2.0				ug/L			1
19B. 1,2-Dibenz (a,h) Anthracene (83-10-3)	X		< 5.0				ug/L			1
20B. 1,2-Dichlorobenzene (98-90-1)	X		< 3.0				ug/L			1
21B. 1,3-Dichlorobenzene (841-73-1)	X		< 2.0				ug/L			1

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT				4. UNITS		5. INTAKE (optional)		b. NO. OF ANAL. YSES	
	a. TEST METHOD	b. SE-TEST	c. SE-TEST	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE		c. LONG TERM AVG. VALUE	d. NO. OF ANAL. YSES	e. CONCENTRATION		f. MASS
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					
GC/MS FRACTION -- BASE/NEUTRAL COMPOUNDS (continued)												
21B. 1,4-Dichlorobenzene (106-46-7)	X			< 3.0					1	ug/L		
22B. 1,3-Dichlorobenzene (95-47-6)	X			< 5.0					1	ug/L		
24B. Diethyl Phthalate (84-66-2)	X			< 2.0					1	ug/L		
25B. Diethyl Phthalate (84-66-2)	X			< 2.0					1	ug/L		
26B. Diethyl Phthalate (84-66-2)	X			< 2.0					1	ug/L		
27B. 2,4-Dinitrophenol (121-14-2)	X			< 2.0					1	ug/L		
28B. 2,5-Dinitrophenol (609-20-2)	X			< 2.0					1	ug/L		
29B. Di-N-Octyl Phthalate (117-94-0)	X			< 4.0					1	ug/L		
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	X			< 2.0					1	ug/L		
31B. Fluoranthene (206-44-0)	X			< 2.0					1	ug/L		
32B. Fluorene (89-3-7)	X			< 2.0					1	ug/L		
33B. Hexachlorobenzene (118-74-1)	X			< 5.0					1	ug/L		
34B. Hexachlorobutadiene (87-68-3)	X			< 2.0					1	ug/L		
35B. Hexachlorocyclopentadiene (77-47-4)	X			< 6.0					1	ug/L		
36B. Hexachloroethane (67-72-1)	X			< 3.0					1	ug/L		
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	X			< 2.0					1	ug/L		
38B. Isophorone (78-59-1)	X			< 3.0					1	ug/L		
39B. Naphthalene (91-20-3)	X			< 3.0					1	ug/L		
40B. Nitrobenzene (98-95-3)	X			< 5.0					1	ug/L		
41B. N-Nitrosodimethylamine (62-76-9)	X			< 7.0					1	ug/L		
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X			< 4.0					1	ug/L		

CONTINUED FROM THE FRONT

1. POLLUTANT AND GAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT				4. UNITS		5. INTAKE (optional)	
	a. TESTING EQUIPMENT	b. SECTORS	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE		c. LONG TERM (1/yr) CONCENTRATION	d. NO. OF ANALYSES	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	b. MASS
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				
GC/MS FRACTION -- BASE/NEUTRAL COMPOUNDS (continued)										
43B. N-Nitrosodiphenylamine (86-30-6)	X		< 2.0				1	ug/L		
44B. Phenanthrene (85-01-8)	X		< 2.0				1	ug/L		
45B. Pyrene (129-00-0)	X		< 3.0				1	ug/L		
46B. 1,2,4-Trifluorobenzene (120-33-3)	X		< 5.0				1	ug/L		
GC/MS FRACTION -- PESTICIDES										
7P. A, A'-DDT (50-28-9)	X		< 0.10				1	ug/L		
8P. D-BHC (319-84-9)	X		< 0.10				1	ug/L		
9P. E-BHC (319-85-7)	X		< 0.10				1	ug/L		
10P. G-BHC (88-89-9)	X		< 0.10				1	ug/L		
11P. D-BHC (319-86-8)	X		< 0.10				1	ug/L		
12P. Chlordane (87-74-9)	X		< 1.0				1	ug/L		
13P. A, A'-DDT (50-28-9)	X		< 0.10				1	ug/L		
14P. A, A'-DDE (72-88-8)	X		< 0.10				1	ug/L		
15P. A, A'-DDD (72-84-8)	X		< 0.10				1	ug/L		
16P. Dieldrin (60-87-1)	X		< 0.10				1	ug/L		
17P. G-Endosulfan (116-29-7)	X		< 0.10				1	ug/L		
18P. B-Endosulfan (116-29-7)	X		< 0.10				1	ug/L		
19P. Endosulfan Sulfate (1031-07-8)	X		< 0.10				1	ug/L		
20P. Endrin (72-20-8)	X		< 0.10				1	ug/L		
21P. Endrin Aldehyde (7421-93-4)	X		< 0.10				1	ug/L		
22P. Heptachlor (76-44-8)	X		< 0.10				1	ug/L		

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CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT				4. UNITS		5. INTAKE (optional)		
	A. TESTING EQUIPMENT	B. SE. COVERED	C. MAXIMUM DAILY VALUE		D. LONG TERM AVG. VALUE (if available)		E. CONCEN- TRATION	F. MASS	G. LONG TERM AVERAGE VALUE	H. NO. OF ANAL. YES	
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					(1) CONCEN- TRATION
GC/MS FRACTION - PESTICIDES (continued)											
17P. Heptachlor Epoxide (1024-87-3)	X		< 0.10				1	ug/L			
18P. PCB-1242 (83469-21-8)	X		< 1.0				1	ug/L			
19P. PCB-1254 (11097-89-1)	X		< 1.0				1	ug/L			
20P. PCB-1221 (11104-28-2)	X		< 1.0				1	ug/L			
21P. PCB-1232 (11141-16-8)	X		< 1.0				1	ug/L			
22P. PCB-1248 (12672-29-6)	X		< 1.0				1	ug/L			
23P. PCB-1260 (11096-82-5)	X		< 1.0				1	ug/L			
24P. PCB-1016 (12674-11-2)	X		< 1.0				1	ug/L			
25P. Toxaphene (8001-35-2)	X		< 1.0				1	ug/L			

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.

EPA I.D. NUMBER (copy from Item 1 of Form 1)
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V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO.
002

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

1. POLLUTANT	2. EFFLUENT		3. UNITS (specify if Mass)		4. INTAKE (optional)	5. NO. OF ANALYSES
	a. MAXIMUM DAILY VALUE (i) CONCENTRATION (ii) MASS	b. MAXIMUM 30 DAY VALUE (i) CONCENTRATION (ii) MASS	a. CONCENTRATION	b. MASS		
a. Biochemical Oxygen Demand (BOD)	<1.0		mg/L			1
b. Chemical Oxygen Demand (COD)	150		mg/L			1
c. Total Organic Carbon (TOC)	<5		mg/L			1
d. Total Suspended Solids (TSS)	19.9		mg/L			1
e. Ammonia (as N)	<0.10		mg/L			1
f. Flow	VALUE 673	VALUE 672	mgd		VALUE	63
g. Temperature (winter)	VALUE 29.8	VALUE 33.9	°C		VALUE	36
h. Temperature (summer)	VALUE 40.5	VALUE 36.5	°C		VALUE	36
i. pH	MINIMUM 7.23	MINIMUM 7.0	STANDARD UNITS		MINIMUM 8.46	60
		MAXIMUM 8.6				

PART B - Mark "X" in column 2-3 for each pollutant you know or have reason to believe is present. Mark "X" in column 2-4 for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is listed either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND GAS NO. (if applicable)	2. MARK 'X'	3. EFFLUENT		4. UNITS		5. INTAKE (optional)	6. NO. OF ANALYSES
		a. MAXIMUM DAILY VALUE (i) CONCENTRATION (ii) MASS	b. MAXIMUM 30 DAY VALUE (i) CONCENTRATION (ii) MASS	a. CONCENTRATION	b. MASS		
1. Bromide 24999-67-9	X	65		mg/L			1
2. Chlorine, Total Residual	X		0.29	mg/L			5
3. Color	X	<5		color unit			1
4. Fecal Coliform	X	<20		mpn/100ml			9
5. Fluoride 14800-00-0	X	0.85		mg/L			1
6. Nitrate-Nitrite (as N)	X	<1		mg/L			1

ITEM V-3 CONTINUED FROM FRONT

POLLUTANT AND GAS NO. (7-50-80)	2. MARK 'X' (8-50-80)	3. EFFLUENT				4. UNITS				5. INTAKE (optional)			
		4. MAXIMUM DAILY VALUE		5. MAXIMUM 30 DAY VALUE		6. LONG TERM (90 DAYS) VALUE		7. CONCENTRATION	8. MASS	9. AVERAGE VALUE		10. NO. OF ANAL. YRS	
		(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			(1) CONCENTRATION	(2) MASS		
a. Nitrogen, Total Organic (as N)	X	<0.50						mg/L			1		
b. Oil and Grease	X	<1.4				<1.4		mg/L			9		
c. Phosphorus (as P), Total (7753-14-0)	X	<0.10						mg/L			1		
d. Radioactivity													
(1) Alpha, Total	X	1.9±1.2						pCi/L			1		
(2) Beta, Total	X	136±29						pCi/L			1		
(3) Radium, Total	X	-0.15±0.3						pCi/L			1		
(4) Radium 226, Total	X	0.24±0.39						pCi/L			1		
e. Sulfate (as SO ₄) (14808-79-8)	X	2,520						mg/L			1		
f. Sulfide (as S)	X	<0.02						mg/L			1		
g. Sulfite (as SO ₃) (14266-45-3)	X	<1						mg/L			1		
h. Surfactants	X	0.16						mg/L			1		
i. Aluminum, Total (7429-90-8)	X	6.28						ug/L			1		
j. Barium, Total (7440-39-3)	X	6.59						ug/L			1		
k. Boron, Total (7440-42-8)	X	4.58						ug/L			1		
l. Cobalt, Total (7440-48-4)	X	0.04						ug/L			1		
m. Iron, Total (7439-89-6)	X	5.97						ug/L			1		
n. Magnesium, Total (7439-96-4)	X	1,290						mg/L			1		
o. Molybdenum, Total (7439-98-7)	X	10.5						ug/L			1		
p. Manganese, Total (7439-96-8)	X	0.95						ug/L			1		
q. Tin, Total (7440-31-5)	X	0.006						ug/L			1		
r. Titanium, Total (7440-32-8)	X	0.66						ug/L			1		

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

I. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT				4. UNITS				B. INTAKE (optional)			
	TEST FOR TOXIC METALS	GC/MS FRACTIONS	8. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANAL. YES	E. CONCEN- TRATION	b. MASS	A. LONG TERM AVERAGE VALUE		D. NO. OF ANAL. YES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-0)	X		0.15		0.019		0.075		8	ug/L				
2M. Arsenic, Total (7440-38-2)	X		20		3.91		0.655		8	ug/L				
3M. Beryllium, Total, 7440-41-7	X		<0.005		<0.005		<0.005		8	ug/L				
4M. Cadmium, Total (7440-43-0)	X		0.03		0.0038		0.015		8	ug/L				
5M. Chromium, Total (7440-47-3)	X		0.82						1	ug/L				
6M. Copper, Total (7440-50-9)	X		10		2.56		0.675		8	ug/L				
7M. Lead, Total (7439-92-1)	X		0.69		0.086		0.345		8	ug/L				
8M. Mercury, Total (7439-97-6)	X		5.7		0.713		<0.005		8	ug/L				
9M. Nickel, Total (7440-02-0)	X		10		1.71		0.235		8	ug/L				
10M. Selenium, Total (7782-49-2)	X		<0.01		<0.01		<0.01		8	ug/L				
11M. Silver, Total (7440-37-4)	X		<0.005		<0.005		<0.005		8	ug/L				
12M. Thallium, Total (7440-28-0)	X		0.004		0.001		0.004		8	ug/L				
13M. Zinc, Total (7440-66-6)	X		50		10.6		2.46		8	ug/L				
14M. Cyanide, Total (57-12-8)	X		<0.05		<0.05		<0.05		9	ug/L				
15M. Phenols, Total	X		<0.10		<0.10		<0.10		9	ug/L				
DIOXIN														
2,3,7,8-Tetra-chlorodibenzo-p-Dioxin (1784-01-8)	X		4.27						1	pg/L				

DESCRIBE RESULTS
4.27

CONTINUED FROM THE FRONT

1. POLLUTANT AND GAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	TEST NO.	DATE	(a) CONCENTRATION	(b) MASS	(c) CONCENTRATION	(d) MASS	(1) CONCENTRATION	(2) MASS
GC/MS FRACTION - VOLATILE COMPOUNDS	X		3. MAXIMUM DAILY VALUE		3. LONG TERM AVG. VALUE		3. LONG TERM AVERAGE VALUE	
			(a) CONCENTRATION	(b) MASS	(c) CONCENTRATION	(d) MASS	(1) CONCENTRATION	(2) MASS
1V. Acrolein (107-02-8)	X		<12		<12		ug/L	
2V. Acrylonitrile (107-13-1)	X		<10		<10		ug/L	
3V. Benzene (71-43-2)	X		<0.3		<0.3		ug/L	
4V. Bis (Chloromethyl) Ether (542-86-1)	X		<1.0		<1.0		ug/L	
5V. Bromoform (78-28-2)	X		<0.3		<0.3		ug/L	
6V. Carbon Tetrachloride (56-23-6)	X		<0.3		<0.3		ug/L	
7V. Chlorobenzene (108-90-7)	X		<0.3		<0.3		ug/L	
8V. Chlorodibromomethane (124-48-1)	X		<0.4		<0.4		ug/L	
9V. Chloroethane (78-00-3)	X		<0.3		<0.3		ug/L	
10V. 2-Chloroethylvinyl Ether (110-75-6)	X		<2.0		<2.0		ug/L	
11V. Chloroform (67-66-3)	X		<0.3		<0.3		ug/L	
12V. Dichlorobromomethane (78-27-4)	X		<0.3		<0.3		ug/L	
13V. Dichlorodifluoromethane (78-71-8)	X		<0.4		<0.4		ug/L	
14V. 1,1-Dichloroethane (78-34-3)	X		<0.2		<0.2		ug/L	
15V. 1,2-Dichloroethane (107-06-2)	X		<0.4		<0.4		ug/L	
16V. 1,1-Dichloroethane (78-36-4)	X		<0.3		<0.3		ug/L	
17V. 1,2-Dichloropropane (78-57-9)	X		<0.3		<0.3		ug/L	
18V. 1,2-Dichloropropane (542-76-8)	X		<0.5		<0.5		ug/L	
19V. Ethylbenzene (100-41-4)	X		<0.02		<0.02		ug/L	
20V. Methyl Bromide (74-83-9)	X		<1.0		<1.0		ug/L	
21V. Methyl Chloride (74-87-3)	X		<0.3		<0.3		ug/L	

CONTINUE ON PAGE V-1

PAGE V-4

EPA Form 3510-2C (8-80)

1. POLLUTANT AND GAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)		
	A. TEST UNIT	B. SEVERITY	B. MAXIMUM DAILY VALUE		C. CONCENTRATION	D. MASS	6. LONG TERM AVERAGE VALUE		
			(1) CONCENTRATION	(2) MASS			(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)									
22V. Methylene Chloride (75-09-2)	X		<0.3		<0.3		ug/L	5	
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		<0.4		<0.4		ug/L	5	
24V. Tetrachloroethylene (127-18-4)	X		<0.4		<0.4		ug/L	5	
25V. Toluene (108-98-3)	X		<0.3		<0.3		ug/L	5	
26V. 1,2-Trichloroethylene (186-60-5)	X		<0.3		<0.3		ug/L	5	
27V. 1,1,1-Trichloroethane (71-98-9)	X		<0.2		<0.2		ug/L	5	
28V. 1,1,2-Trichloroethane (79-00-3)	X		<0.3		<0.3		ug/L	5	
29V. Trichloroethylene (79-01-6)	X		<0.3		<0.3		ug/L	5	
30V. Trichlorofluoromethane (75-95-4)	X		<0.3		<0.3		ug/L	5	
31V. Vinyl Chloride (75-01-4)	X		<0.3		<0.3		ug/L	5	
GC/MS FRACTION - ACID COMPOUNDS									
1A. 2-Chloropheno (95-87-9)	X		<3.0				ug/L	1	
2A. 2,4-Dichloropheno (120-83-2)	X		<5.0				ug/L	1	
3A. 2,4-Dimethylpheno (105-67-9)	X		<5.0				ug/L	1	
4A. 4,6-Dinitro-Cresol (834-83-1)	X		<10				ug/L	1	
5A. 2,4-Dinitrophenol (89-75-4)	X		<15				ug/L	1	
6A. 2-Nitrophenol (89-75-4)	X		<4.0				ug/L	1	
7A. 4-Nitrophenol (105-09-7)	X		<10				ug/L	1	
8A. 2-Chloro-N-Cresol (89-50-7)	X		<2.0				ug/L	1	
9A. 3-Chloro-N-Cresol (87-86-3)	X		<10				ug/L	1	
10A. Phenol (108-95-3)	X		<2.0				ug/L	1	
11A. 2,4,6-Trichloropheno (87-86-3)	X		<2.0				ug/L	1	

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'	3. EFFLUENT				4. UNITS				5. INTAKE (optional)							
		a. MAXIMUM DAILY VALUE		b. MAXIMUM 3-DAY VALUE		c. LONG TERM AVERAGE VALUE		d. NO. OF ANALYSES		e. LONG TERM AVERAGE VALUE		f. NO. OF ANALYSES					
		(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) ANALYSES	(2) ANALYSES	(1) CONCENTRATION	(2) MASS	(1) ANALYSES	(2) ANALYSES				
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS																	
18. Acenaphthene (83-32-9)	X		<3.0									1					
28. Acenaphthylene (208-96-8)	X		<2.0									1					
28. Anthracene (120-12-7)	X		<10									1					
48. Benzidine (82-47-6)	X		<13									1					
58. Benzo (a) Anthracene (86-95-3)	X		<2.0									1					
68. Benzo (a) Pyrene (50-32-8)	X		<2.0									1					
78. 3,4-Benzo-fluoranthene (205-99-2)	X		<5.0									1					
88. Benzo (ghi) Perylene (191-24-2)	X		<2.0									1					
98. Benzo (h) Fluoranthene (207-08-8)	X		<5.0									1					
108. Bis (2-Chloroethoxy) Methane (111-91-1)	X		<2.0									1					
118. Bis (2-Chloroethyl) Ether (111-44-4)	X		<3.0									1					
128. Bis (2-Oxopropyl) Ether (102-60-1)	X		<4.0									1					
138. Bis (2-Ethylhexyl) Phthalate (117-81-7)	X		<4.0									1					
148. 2-Bromoethoxy Ethyl Phenoxy Ethyl Ether (101-95-3)	X		<2.0									1					
158. Butyl Benzyl Phosphate (85-88-7)	X		<4.0									1					
168. 3-Chloro-1,2,3-trichlorobenzene (81-59-7)	X		<3.0									1					
178. 2-Chloro-1,2,3-trichlorobenzene (9005-72-3)	X		<2.0									1					
188. Chlorobenzene (218-01-4)	X		<2.0									1					
198. Dibenzo (a,h) Anthracene (83-79-3)	X		<5.0									1					
208. 1,2-Dichlorobenzene (86-60-1)	X		<3.0									1					
218. 1,3-Dichlorobenzene (841-73-1)	X		<2.0									1					

CONTINUE ON PAGE V-7

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EPA Form 5610-2C (8-90)

I. POLLUTANT AND GAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT				4. UNITS		5. INTAKE (optional)		b. NO. OF ANAL-YSES
	a. SE-TEST	b. SE-TEST	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE		a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			(1) CONCENTRATION	(2) MASS	
OCAMS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)											
22A. 1,4-Dichlorobenzene (109-48-7)	X		<3.0					ug/L			1
23B. 3,5-Dichlorobenzene (106-47-1)	X		<5.0					ug/L			1
24B. Dimethyl Phthalate (131-17-3)	X		<2.0					ug/L			1
25B. Ethyl Phthalate (101-86-2)	X		<2.0					ug/L			1
26B. Diethyl Phthalate (131-17-3)	X		<2.0					ug/L			1
27B. 2,4-Dinitrochlorobenzene (121-14-2)	X		<2.0					ug/L			1
28B. 2,6-Dinitrochlorobenzene (98-20-2)	X		<2.0					ug/L			1
29B. Di-N-Octyl Phthalate (117-84-0)	X		<4.0					ug/L			1
30B. 1,2-Diphenylbenzene (as Azo-benzene) (122-66-7)	X		<2.0					ug/L			1
31B. Fluorethene (208-44-0)	X		<2.0					ug/L			1
32B. Fluorene (99-83-7)	X		<2.0					ug/L			1
33B. Hexachlorobenzene (118-74-1)	X		<5.0					ug/L			1
34B. Hexachlorobutadiene (87-68-3)	X		<2.0					ug/L			1
35B. Hexachlorocyclopentadiene (77-47-4)	X		<6.0					ug/L			1
36B. Hexachloroethane (67-72-1)	X		<3.0					ug/L			1
37B. Indene (1,2,3-od) Pyrene (193-39-5)	X		<2.0					ug/L			1
38B. Isophorone (78-99-1)	X		<3.0					ug/L			1
39B. Naphthalene (81-20-3)	X		<3.0					ug/L			1
40B. Nitrobenzene (98-96-3)	X		<5.0					ug/L			1
41B. N-Nitrosodimethylamine (62-78-9)	X		<7.0					ug/L			1
42B. N-Nitrosodimethyl-N-Propylamine (621-64-7)	X		<4.0					ug/L			1

I. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT				4. UNITS		5. INTAKE (optional)		D. NO. OF ANAL. YSES
	A. USE-RELATED CONC. (1)	B. USE-RELATED CONC. (2)	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		A. CONCEN- TRATION	B. MASS	A. LONG TERM AVERAGE VALUE		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			(1) CONCEN- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)											
43B. N-Nitro-iodobenzylamine (88-50-8)	X		<2.0					ug/L			1
44E. Phenanthrene (85-01-8)	X		<2.0					ug/L			1
45B. Pyrene (129-0-0)	X		<3.0					ug/L			1
46F. 1,2,4-Trifluorobenzene (128-01-1)	X		<5.0					ug/L			1
GC/MS FRACTION - PESTICIDES											
77. Aldrin (50-11-8)	X		<0.10					ug/L			1
82. Dieldrin (50-11-8)			N/A								
85. 2-BHC (50-11-8)	X		<0.10					ug/L			1
86. 1-BHC (50-11-8)	X		<0.10					ug/L			1
89. 5-BHC (518-98-8)	X		<0.10					ug/L			1
89. CisDieldrin (57-74-8)	X		<1.0					ug/L			1
77. 4,4'-DDT (50-29-3)	X		<0.10					ug/L			1
89. 4,4'-DDE (72-86-8)	X		<0.10					ug/L			1
89. 4,4'-DDD (72-84-8)	X		<0.10					ug/L			1
10P. Dieldrin (50-37-1)	X		<0.10					ug/L			1
11P. 0-Endosulfen (116-28-7)	X		<0.10					ug/L			1
12P. ̢-Endosulfen (116-28-7)	X		<0.10					ug/L			1
13P. Endosulfen Sulfate (1031-67-8)	X		<0.10					ug/L			1
14P. Endrin (72-20-8)	X		<0.10					ug/L			1
18P. Endrin Aldehyde (7421-93-4)	X		<0.10					ug/L			1
18P. Heptachlor (76-44-8)	X		<0.10					ug/L			1

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)		
	a. TESTING EQUIPMENT	b. SEC. INVENTORY	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) CONCENTRATION	a. CONCENTRATION (1) MASS	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	b. NO. OF ANAL. YSES	
GC/MS FRACTION - PESTICIDES (continued)									
17P. Heptachlor Epoxide (1024-57-3)	X		<0.10						
18P. PCB-1242 (53469-21-9)	X		<0.10						
19P. PCB-1254 (11087-99-1)	X		<1.0						
20P. PCB-1221 (11104-28-2)	X		<1.0						
21P. PCB-1232 (11141-16-5)	X		<1.0						
22P. PCB-1248 (12672-29-6)	X		<1.0						
23P. PCB-1260 (11096-82-6)	X		<1.0						
24P. PCB-1016 (12674-11-2)	X		<1.0						
25P. Toxaphene (8001-35-2)	X		<2.0						