

94-124 *ONE*

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

CENTRE PLAZA DRIVE
MONTREY PARK, CA 91754-2156
(213) 266-7500
FAX: (213) 266-7600



December 7, 1994

Mr. Albert L. Gualtieri
Senior Vice President
Powerine Oil Company
12354 Lakeland Road
Santa Fe Springs, California 90670-9883

Attn: June M. Christman, Environmental Engineering
Matt Winefield, Environmental Engineering

**WASTE DISCHARGE REQUIREMENTS - Santa Fe Springs Refinery
(NPDES PERMIT NO. CA0057177)**

Our letter dated November 21, 1994, transmitted revised tentative waste discharge requirements for your discharge of wastewaters from the subject facility to Coyote Creek.

Pursuant to Division 7 of the California Water Code, this Regional Board at a public hearing held on December 5, 1994, reviewed the tentative requirements, considered all factors in the case, and adopted Order No. 94-124 (copy attached) relative to this waste discharge. This Order serves as a permit under the National Pollutant Discharge Elimination System (NPDES), and expires on November 10, 1997. Section 13376 of the California Water Code requires that an application for a new permit must be filed at least 180 days before the expiration date.

Please note that the Board adopted the tentative requirements with some changes in Provision II-3 on pages 7 to 9 of Order NO.94-124.

The "Monitoring and Reporting Program" requires you to implement the monitoring program on the effective date of this Order. Your first monitoring report is due by April 15, 1995. All monitoring reports should be sent to the Regional Board, ATTN: Technical Support Unit.

Please reference all technical and monitoring reports to our Compliance File No. 6154. We would appreciate it if you would not combine other reports, such as progress or technical, with your monitoring reports but would submit each type of report as a separate document.

To save printing and postage costs, the Standard Provisions are being sent only to the discharger as it has previously been mailed to those on the mailing list. These documents may be reviewed in our office or a copy will be mailed upon request.

Mr. Albert L. Gualtieri
Powerine Oil Company
Page 2 of 2

If you have any questions, please contact Harry Nguyen at (213) 266-7618.

JOSHUA M. WORKMAN
Chief, Watershed I Regulatory

Enclosure(s)

/hdn

cc: John Youngerman, State Water Resources Control Board,
Division of Water Quality
Jorge Leon, State Water Resources Control Board,
Office of Chief Counsel
Department of Fish and Game, Region 5
Department of Health Services, Public Water Supply Branch
Department of Water Resources

Environmental Protection Agency, Region 9,
Permits/Pretreatment Section (W-5-1)
U.S. Army Corps of Engineers
NOAA, National Marine Fisheries Service
Department of Interior, U.S. Fish and Wildlife Service

Los Angeles County, Department of Public Works,
Waste Management Division
Los Angeles County, Department of Health Services

South Coast Air Quality Management District

City of Santa Fe Springs, Department of Public Works

State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. 94-124

NPDES NO. CA0057177

WASTE DISCHARGE REQUIREMENTS
for
POWERINE OIL COMPANY

The California Regional Water Quality Control Board, Los Angeles Region, finds:

1. Powerine Oil Company, a corporation, discharges wastes under waste discharge requirements contained in Order No. 89-110, adopted by this Board on October 30, 1989.
2. Powerine Oil Company has filed a Report of Waste Discharge and has applied for renewal of its waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permit.
3. Powerine Oil Company operates a petroleum refinery (integrated petroleum refiner) at 12354 Lakeland Road, Santa Fe Springs, California. The plant has a throughput of 49,500 barrels per day of crude oil. The refinery processes include crude distillation, fluid catalytic cracking, hydrocracking, coking, hydrotreating, catalytic reforming, and acid alkylation.
4. Powerine Oil Company discharges up to 4.76 million gallons per day (mgd) of wastewaters to a storm drain in Lakeland Road, adjacent to the premises (latitude 33°55'54", longitude 118°03'50") through two discharge points described as follows:

Discharge Serial No. 001 - discharges up to 4.28 million gallons per day of storm runoff which may pick up pollutants from the tank farms and other open areas of the refinery. The storm runoff is treated with oil/water separators and a settling basin prior to discharge. Carbon adsorption is also used for treatment, if needed. In an emergency, 5,000 gallons per minute of hydrofluoric acid alkylation water deluge may be discharged through Outfall 001 for 30 minutes. However, this situation has never occurred.

Discharge Serial No. 002 - discharges up to 480,000 gallons per day of cooling tower bleedoff, boiler blowdown, and water softening wastes. These wastes are not considered as process wastes. The boiler intake water is treated with reverse osmosis.

Revised December 5, 1994

These wastes then flow to North Fork Coyote Creek at Rosecrans Avenue. Coyote Creek is tributary to San Gabriel River at Stearns Street, a water of the United States, within the tidal prism.

5. Chemicals which are used in the boiler feed water treatment and cooling tower are listed below:

Boiler feed water treatment:

Alum - approximately 500 lbs/year
Sodium chloride - approximately 4000 lbs/year
Sodium hypochlorite - 0.3 lbs/day
Sulfuric acid - as needed to maintain pH
Hydrochloric acid - 30 lbs/month
Sodium hydroxide - 30 lbs/month
HPC 303 (Citric acid based cleaner) - 1000 lbs/year
IPA 411 (Detergent) - 500 lbs/year
Flo-Size 189 - 10 gallons/year
Sodium bisulfite or sodium metabisulfite - 12 lbs/year
Glutaraldehyde - 1500 ml/year

Cooling tower:

Betz Continuum - 10 gallons/day
Betz 35K - 50 gallons/day
Betz 40K - 300 gallons/year
Betz 2023 - as needed in emergency pH situations
Bromine + chlorine - 35 lbs/day
Sulfuric acid - as needed to maintain pH - 80 lbs/day

6. On October 18, 1982, EPA issued 40 CFR Part 419, Effluent Limitations Guidelines for Petroleum Refining Point Source Category, and subsequently issued amendment thereto on July 1, 1993.
7. On February 25, 1985, this Regional Board adopted Order No. 85-17 requiring operators of petrochemical facilities to conduct a subsurface investigation of their facilities to detect and assess any groundwater pollution which might be present. Powerine conducted the required investigation and found that ground water underlying the site had been contaminated with petroleum hydrocarbon. Subsequent investigations in 1986 identified free-phase petroleum hydrocarbon floating on the ground water underlying the site. A report defining the full extent of the off-site contamination is scheduled to be submitted to the Regional Board by December 30, 1994. Recovery of the free phase petroleum hydrocarbon was initiated in 1988. To date, 520 gallons of the free phase petroleum hydrocarbon have been

recovered. All recovered water was used in the Crude Unit desalters.

8. On October 30, 1989, the Board adopted Cease and Desist Order No. 89-114 requiring Powerine Oil Company to achieve full compliance with the phenol limitations (30-day average: 170 $\mu\text{g}/\text{l}$, daily maximum: 350 $\mu\text{g}/\text{l}$) contained in Order 89-110 by October 1, 1992. Full compliance with the effluent limitations has been achieved since the company implemented a refinery wide source control program and installed a carbon adsorption system.
9. Analytical results of the samples taken during 1990-1994 rainy seasons indicated that Powerine will not be able to immediately meet the proposed effluent limitations for some hydrocarbons and heavy metals. Powerine requested time to obtain additional discharge data, to evaluate the discharge, and to design and construct a water treatment system, if needed.
10. The Board adopted a revised Water Quality Control Plan for the Los Angeles River Basin (4B) on June 3, 1991. The Plan contains water quality objectives for the San Gabriel River and tributaries. The requirements contained in this Order, as they are met, will be in conformance with the goals of the Water Quality Control Plan.
11. The beneficial uses of the receiving water are: Coyote Creek - (potential) water contact and non-contact recreation, warm freshwater and wildlife habitat; and San Gabriel River (within the tidal prism) - industrial service supply, ocean commercial and sport fishing, preservation of rare and endangered species, marine habitat, and saline water habitat.
12. The discharge flows directly to a lined and low flow flood control channel (Coyote Creek). Aquatic habitat is severely limited by the physical nature of the lined channel.
13. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code in accordance with Water Code Section 13389.
14. Effluent limitation standards established pursuant to Section 301 of the Federal Clean Water Act and amendments thereto are applicable to the discharge.

The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written views and recommendations.

The Board in a public hearing heard and considered all comments pertaining to the discharge and to the tentative requirements.

This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Clean Water Act or amendments thereto, and shall take effect at the end of ten days from the date of its adoption, provided the Regional Administrator of the Environmental Protection Agency, EPA, has no objections.

IT IS HEREBY ORDERED, that Powerine Oil Company, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

I. Effluent Limitations

1. Wastes discharged shall be limited to cooling tower bleedoff, boiler blowdown, demineralizer regeneration wastes, and storm runoff only, as proposed.
2. The discharge of an effluent with constituents in excess of the following limits is prohibited:
 - a. Discharge Serial No. 001:

<u>Constituent</u>	<u>Units</u>	<u>Discharge Limitations^{1/}</u>	
		<u>30-Day Average</u>	<u>Daily Maximum</u>
Suspended solids	mg/l	50	75
Oil and grease	mg/l	10	15
BOD ₅ 20°C	mg/l	26	48
Total organic carbon	mg/l	---	110

^{1/} The mass discharge rate (in lbs/day) shall be tabulated using the concentration limits and the actual flow rate.

<u>Constituent</u>	<u>Units</u>	<u>Discharge Limitations^{1/}</u>	
		<u>30-Day Average</u>	<u>Daily Maximum</u>
Chemical oxygen demand	mg/l	180	360
Phenolic compounds	µg/l	170	350
Tetrachloroethylene	µg/l	---	5.0
Trichloroethylene	µg/l	---	5.0
Copper	mg/l	---	1.0
Zinc	mg/l	---	1.0

b. Discharge Serial No. 002:

<u>Constituent</u>	<u>Units</u>	<u>Discharge Limitations^{1/}</u>	
		<u>30-Day Average</u>	<u>Daily Maximum</u>
Chlorine residual	mg/l	---	0.5
Settleable solids	ml/l	0.1	0.3
Suspended solids	mg/l	21	33
Oil and grease	mg/l	10	15
BOD ₅ 20oC	mg/l	26	48
Total organic carbon	mg/l	---	110
Chemical oxygen demand	mg/l	180	360
Phenolic compounds	µg/l	170	350
Chromium (VI) ^{2/}	µg/l	---	50
Zinc	mg/l	---	1.0

^{1/} The mass discharge rate (in lbs/day) shall be tabulated using the concentration limits and the actual flow rate.

^{2/} Discharger may, at his option, meet this limitation as total chromium.

c. Discharge of hydrofluoric acid alkylation water deluge:

<u>Constituent</u>	<u>Discharge Limitations</u>		
	<u>lbs/day</u>	<u>mg/l^{3/}</u>	<u>µg/l^{3/}</u>
Settleable solids, ml/l	----	0.3	----
Suspended Solids	49.4	39	----
Chemical oxygen demand	530	424	----
BOD ₅ 20oC	70.9	57	----
Oil and grease	21.5	17	----
Ammonia (as N)	47.2	38	----
Sulfide	0.466	----	373
Phenolic compounds	0.530	----	424
Total chromium	0.699	----	559
Chromium (VI)	0.0532	----	43

3/ Based on the maximum discharge flow rate of 150,000 gpd.

3. Toxicity Requirements:

The acute toxicity of the effluent shall be such that the average survival in undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test producing less than 70% survival.

II. Requirements and Provisions

1. This Order includes the attached "Standard Provisions and General Monitoring and Reporting Requirements". If there is any conflict between provisions stated hereinbefore and the attached "Standard Provisions", those provisions stated hereinbefore prevail.
2. The discharger must develop and implement, within 60 days from the effective date of this Order, a Storm Water Pollution Prevention Plan (SWPPP) in accordance with Attachment A.

3. Pursuant to Section 13300 of the California Water Code, Powerine shall:

a. Make reasonable efforts to meet the following additional effluent quality goals by October 1, 1998, for wet weather discharges from Discharge Serial No. 001:

<u>Constituent</u>	<u>Effluent Quality Goal^{1/}</u>	
	<u>Units</u>	<u>Daily Maximum</u>
Phenolic compounds (chlorinated)	µg/l	1.0
Benzene	µg/l	1.0
Toluene	µg/l	10
Xylene	µg/l	10
Ethylbenzene	µg/l	10
Carbon tetrachloride	µg/l	0.5
Vinyl chloride	µg/l	0.5
1,4-Dichlorobenzene	µg/l	5.0
1,1-Dichloroethane	µg/l	5.0
1,2-Dichloroethane	µg/l	5.0
1,1-Dichloroethylene	µg/l	6.0
Arsenic	µg/l	50
Cadmium	µg/l	10
Chromium (VI) ^{2/}	µg/l	50
Lead	µg/l	50
Mercury	µg/l	2.0
Selenium	µg/l	10
Silver	µg/l	5.0

^{1/}, ^{2/} See footnotes ^{1/}, ^{2/}, respectively, on page 5.

- b. By July 1, 1995, submit a report detailing measures to be taken, together with a timetable, to fully achieve compliance with Item II-3(a) above.
- c. Submit quarterly reports of progress by the 15th day of the second month following the reporting period. The first progress report will be due May 15, 1995.
- d. By June 10, 1997, Powerine shall submit a report analyzing whether Powerine can technically and/or economically achieve the effluent quality goals listed in II-3(a) for wet weather discharges from Discharge Serial No. 001.
- e. The Discharger shall comply with the following interim additional effluent limitations for wet weather discharges from Discharge Serial No. 001 during the term of this permit:

<u>Constituent</u>	<u>Discharge Limitation^{1/}</u>	
	<u>Units</u>	<u>Daily Maximum</u>
Phenolic compounds (chlorinated)	µg/l	123
Benzene	µg/l	700
Toluene	µg/l	1,500
Xylene	µg/l	1,500
Ethylbenzene	µg/l	1,500
Carbon tetrachloride	µg/l	12
Vinyl chloride	µg/l	65
1,4-Dichlorobenzene	µg/l	37
1,1-Dichloroethane	µg/l	12
1,2-Dichloroethane	µg/l	12
1,1-Dichloroethylene	µg/l	5

^{1/} See footnote ^{1/} on page 5.

<u>Constituent</u>	<u>Discharge Limitation^{1/}</u>	
	<u>Units</u>	<u>Daily Maximum</u>
Arsenic	µg/l	142
Cadmium	µg/l	275
Chromium (VI) ^{2/}	µg/l	137
Lead	µg/l	269
Mercury	µg/l	175
Selenium	µg/l	133
Silver	µg/l	276

^{1/}, ^{2/} See footnotes ^{1/}, ^{2/}, respectively, on page 5.

III. Expiration Date

This Order expires on November 10, 1997.

The discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

IV. Rescission

Order Nos. 89-110 and 89-114, adopted by this Board on October 30, 1989, are hereby rescinded.

I, Robert P. Ghirelli, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on December 5, 1994.


ROBERT P. GHIRELLI, D.Env.
Executive Officer

/hdn

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARDy
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. 6154
for
POWERINE OIL COMPANY
(CA0057177)

I. REPORTING REQUIREMENTS

The discharger shall implement this monitoring program on the effective date of this Order. Effluent monitoring reports shall be submitted monthly by the first day of the second month following each monthly sampling period. The first monitoring report under this program is due by February 1, 1995.

If no flow occurred during any day, the report shall so state.

II. EFFLUENT MONITORING REQUIREMENTS

- A. A sampling station shall be established for each point of discharge and shall be located where representative samples of that effluent can be obtained. In the event that waste streams from sources are combined for treatment or discharge, representative sampling stations shall be at that place to ensure that the quantity of each pollutant or pollutant property attributable to each waste source regulated by effluent limitations can be determined.
- B. The detection limits employed for effluent analyses shall be lower than the permit limits established for a given parameter, unless the discharger can demonstrate that a particular detection limit is not attainable and obtains approval for a higher detection limit from the Executive Officer. At least once a year, the discharger shall submit a list of the analytical methods employed for each test and associated laboratory quality assurance/quality control procedures.
- C. This Regional Board shall be notified in writing of any change in the sampling stations once established or in the methods for determining the quantities of pollutants in the individual waste streams.

Revised October 28, 1994

D. Quarterly effluent analyses shall be performed during the months of February, May, August and November. Semiannual effluent analyses shall be performed during the months of February and August. Annual effluent analyses shall be performed during the month of February. Results of quarterly, semiannual and annual analyses shall be reported in the appropriate monthly monitoring report.

E. **Effluent Monitoring Program**

The following shall constitute the effluent monitoring program for the final effluent:

1. Discharge Serial No. 001:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis^{1/}</u>
Total waste flow	gal/day	----	once per discharge event
Temperature	°F	grab	once per discharge event
pH	pH units	grab	once per discharge event
Conductivity	µmohs/cm	grab	once per discharge event
Suspended solids	mg/l	grab	once per discharge event
Settleable solids	ml/l	grab	once per discharge event
Total organic carbon	mg/l	grab	once per discharge event
Chemical oxygen demand	mg/l	grab	once per discharge event
BOD ₅ 20°C	mg/l	grab	once per discharge event
Oil and grease	mg/l	grab	once per discharge event
Ammonia	mg/l	grab	once per discharge event
Phenolic compounds	µg/l	grab	once per discharge event
Sulfide	µg/l	grab	once per discharge event
Phenolic compounds (Chlorinated)	µg/l	grab	once per discharge event
Benzene	µg/l	grab	once per discharge event
Toluene	µg/l	grab	once per discharge event
Xylene	µg/l	grab	once per discharge event
Ethylbenzene	µg/l	grab	once per discharge event
Tetrachloroethylene	µg/l	grab	once per discharge event
Trichloroethylene	µg/l	grab	once per discharge event
Carbon tetrachloride	µg/l	grab	once per discharge event
Vinyl chloride	µg/l	grab	once per discharge event
1,4-Dichlorobenzene	µg/l	grab	once per discharge event
1,1-Dichloroethane	µg/l	grab	once per discharge event
1,2-Dichloroethane	µg/l	grab	once per discharge event
1,1-Dichloroethene	µg/l	grab	once per discharge event

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis^{1/}</u>
Arsenic	µg/l	grab	once per discharge event
Cadmium	µg/l	grab	once per discharge event
Chromium (VI)	µg/l	grab	once per discharge event
Copper	mg/l	grab	once per discharge event
Lead	µg/l	grab	once per discharge event
Mercury	µg/l	grab	once per discharge event
Selenium	µg/l	grab	once per discharge event
Silver	µg/l	grab	once per discharge event
Zinc	mg/l	grab	once per discharge event
Toxicity - Acute ^{2/}	% survival	grab	once per discharge event ^{3/}
Priority pollutants (list attached)	µg/l	grab	once per discharge event

2. Discharge Serial No. 002:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Total waste flow	gal/day	----	weekly
Temperature	°F	grab	weekly
pH	pH units	grab	weekly
Chlorine residual	mg/l	grab	weekly
Oil and grease	mg/l	grab	weekly
Suspended solids	mg/l	grab	weekly
Settleable solids	ml/l	grab	monthly
Phenolic compounds	mg/l	grab	monthly
BOD ₅ 20°C	mg/l	grab	monthly
Chromium (VI)	µg/l	grab	quarterly
Zinc	mg/l	grab	quarterly
Toxicity - Acute ^{2/}	% survival	grab	quarterly ^{4/}
Priority pollutants ^{5/}	µg/l	grab	quarterly

3. Discharge of Hydrofluoric Acid Alkylation Water Deluge:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis^{1/}</u>
Total waste flow	gal/day	----	once per discharge event
Temperature	°F	grab	once per discharge event
pH	pH units	grab	once per discharge event

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis^{1/}</u>
Suspended solids	mg/l	grab	once per discharge event
Settleable solids	ml/l	grab	once per discharge event
Total organic carbon	mg/l	grab	once per discharge event
Chemical oxygen demand	mg/l	grab	once per discharge event
BOD ₅ 20°C	mg/l	grab	once per discharge event
Oil and grease	mg/l	grab	once per discharge event
Zinc	mg/l	grab	once per discharge event
Phenolic compounds	µg/l	grab	once per discharge event
Total chromium	µg/l	grab	once per discharge event
Hexavalent chromium	µg/l	grab	once per discharge event
Sulfide	µg/l	grab	once per discharge event
Ammonia	mg/l	grab	once per discharge event
Toxicity - Acute ^{2/}	% survival	grab	once per discharge event
Priority pollutants (Copy attached)	µg/l	grab	once per discharge event

^{1/} During periods of extended discharges or rainfalls, no more than one sample per week need be obtained. Sampling shall be during the first hour of discharge. If, for safety reasons, a sample cannot be obtained during the first hour of discharge, a sample shall be obtained at the first safe opportunity and the reason for the delay shall be included in the monitoring report.

^{2/} By the method specified in "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms" - March 1985 (EPA/600/4-85/013). Submission of bioassay results should include the information noted on pages 45-49 of the "Methods". The fathead minnow (Pimephales promelas) shall be used as the test species. Ammonia shall not be removed from bioassay sample prior to the Executive Officer's notification and authorization. The wastewater used for the toxicity test shall be analyzed for ammonia, and the result along with an interpretation submitted with the toxicity data. If the test result is less than 70%, parallel tests on 100% effluent and 100% effluent with ammonia removed shall be conducted.

^{3/} If the results of at least 3 consecutive toxicity tests yield full compliance with the acute toxicity limitation, then the frequency of analysis may be reduced to a minimum of annually (the first significant discharge of the season). However, if the result of any annual toxicity test yields a survival rate of less than 90%, then the frequency of analysis shall revert to once per discharge event until at least three consecutive test results have been obtained and full compliance with the acute toxicity limitation has been demonstrated, after which the frequency of analysis shall revert to annually. Results of toxicity tests shall be included in the first monitoring report following sampling.

If the effluent consistently exceeds acute toxicity limitation, the Discharger shall conduct an investigation/assessment to identify the source(s) of toxicity and shall take all actions necessary to comply with the toxicity limitation.

4/ If the toxicity tests yield a result of non-compliance with the acute toxicity limitation, then the frequency of analysis shall increase to monthly until at least three consecutive test results have been obtained and full compliance with the limitations have been demonstrated, after which the frequency of analysis shall revert to quarterly. Results of toxicity tests shall be included in the first monitoring report following sampling.

If the effluent exceeds the acute toxicity limitation, the discharger shall conduct an investigation/assessment to identify the source(s) of toxicity and shall take all actions necessary to comply with the toxicity limitation.

5/ Applied to priority pollutants contained in chemicals added for cooling tower and boiler maintenance and water treatment. A statement that no priority pollutants contained in chemicals added for water treatment and/or for cooling tower and boiler maintenance can be submitted in lieu of analyses.

Ordered by: Robert P. Ghirelli
ROBERT P. GHIRELLI, D.Env.
Executive Officer

Date: December 5, 1994

/hdn

PRIORITY POLLUTANTS

Metals

Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Thallium
Zinc

Miscellaneous

Cyanide
Asbestos (only if specifically required)

Pesticides

Aldrin
Chlordane
Dieldrin
4,4'-DDT
4,4'-DDE
4,4'-DDD
Alpha endosulfan
Beta endosulfan
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
Alpha BHC
Beta BHC
Gamma BHC
Delta BHC
Toxaphene
PCB 1016
PCB 1221
PCB 1232
PCB 1242
PCB 1248
PCB 1254
PCB 1260

Base/Neutral Extractibles

Acenaphthene
Benzidine
1,2,4-Trichlorobenzene
Hexachlorobenzene
Hexachloroethane
Bis (2-Chloroethyl) ether
2-Chloronaphthalene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
3,3'-Dichlorobenzidine
2,4-Dinitrotoluene
2,6-Dinitrotoluene
1,2-Diphenylhydrazine
Fluoranthene
4-Chlorophenyl phenyl ether
4-Bromophenyl phenyl ether
Bis (2-Chloroisopropyl) ether
Bis (2-Chloroethoxy) methane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
N-Nitrosodimethylamine
N-Nitrosodi-N-propylamine
M-Nitrosodiphenylamine
Bis (2-Ethylhexyl) phthalate
Butyl benzyl phthalate
Di-N-Butyl phthalate
Di-N-Octyl phthalate
Diethyl phthalate
Dimethyl phthalate
Benzo (A) anthracene
Benzo (A) pyrene
Benzo (B) fluoranthene
Benzo (K) fluoranthene
Chrysene
Acenaphthylene
Anthracene
1,12-Benzoperylene
Fluorene
Phenanthrene
1,2,5,6-Dibenzanthracene
Indeno (1,2,3-CD) pyrene
Pyrene
TCDD

Acid Extractibles

2,4,6-Trichlorophenol
P-Chloro-M-cresol
2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2-Nitrophenol
4-Nitrophenol
2,4-Dinitrophenol
4,6-Dinitro-O-cresol
Pentachlorophenol
Phenol

Volatile Organics

Acrolein
Acrylonitrile
Benzene
Carbon tetrachloride
Chlorobenzene
1,2-Dichloroethane
1,1,1-Trichloroethane
1,1-Dichloroethane
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
Chloroethane
Chloroform
1,1-Dichloroethylene
1,2-Transdichloroethylene
1,2-Dichloropropane
1,2-Dichloropropylene
Ethylbenzene
Methylene chloride
Methyl chloride
Methyl bromide
Bromoform
Bromodichloromethane
Dibromochloromethane
Tetrachloroethylene
Toluene
Trichloroethylene
Vinyl chloride
2-Chloroethyl vinyl ether