

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 96-112
NPDES NO. CA0005096

WASTE DISCHARGE REQUIREMENTS FOR:

PACIFIC REFINING COMPANY
HERCULES, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board), finds that:

1. Pacific Refining Company, hereinafter called the Discharger, submitted an NPDES Permit application (Report of Waste Discharge) dated May 1, 1996 for reissuance of NPDES Permit No. CA0005096.
2. The discharge of wastewater from the Hercules refinery is currently governed by Waste Discharge Requirements specified in Order No. 90-104, adopted by the Board on July 18, 1990, and amended three times with Order No. 91-026, Order No. 91-099, and Order No. 92-100. Order No. 90-104 expired on July 18, 1995, and the Executive Officer administratively extended it on February 1, 1996.
3. The Discharger operates an asphalt refinery and petroleum terminal with a maximum average crude-run throughput of 57,700 barrels per stream day. Manufactured products may include asphalt, jet fuels, diesel, and fuel oil. The Discharger is classified as a topping refinery as defined by the U.S. Environmental Protection Agency (USEPA) in 40 CFR 419.10. Pacific discharges treated process wastewater, cooling water, stormwater runoff, and other wastes to San Pablo Bay.
4. In 1995, the Discharger suspended its process refining operations indefinitely. Currently, Pacific operates as a terminal storing petroleum materials in existing tankage, and as an asphalt refinery. Other activities include blending asphalt components on-site, and selling the finished asphalt product.
5. The USEPA and the Board have classified this discharger as a major discharger.
6. The Report of Waste Discharge and recent self-monitoring reports describe the discharges as follows:
 - a. Waste 001 averages approximately 0.143 million gallons per day (MGD), and may include process wastes, boiler blowdown, cooling tower blowdown, ballast water, sanitary wastes, and storm water runoff. Wastewater treatment consists of API separation, Dissolved Air Flotation, pH adjustment, aeration, biological treatment, and settling prior to discharge. The treated effluent is discharged through a deep water diffuser into San Pablo Bay (lat. 38°02'28", long. 122°16'30") at a depth of 10 feet about 2000 feet offshore.
 - b. Waste 002 consists of uncontaminated storm water runoff from the refinery property, and is discharged from a collection pond (lat. 38°01'57", long. 122°16'24") located approximately 2500 feet south of the outfall line for Waste 001. Contaminated storm water from the pond is routed for treatment at the wastewater treatment plant.

- c. Waste 003 consists of uncontaminated storm water runoff from the refinery property, and is discharged from a catch basin (lat. 38°01'45", long. 122°16'18") located approximately 1000 feet south of the outfall line for Waste 001. Contaminated storm water from the basin is routed for treatment at the wastewater treatment plant.
7. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995, and approved by the State Water Resources Control Board (State Board) and the Office of Administrative Law on July 21 and November 13, respectively, of 1995. The Basin Plan identifies beneficial uses and water quality objectives for surface waters in the region, as well as effluent limitations and discharge prohibitions intended to protect those uses. This Order implements the plans, policies, and provisions of the Board's Basin Plan.
8. The beneficial uses of San Pablo Bay include:
 - a. Water contact recreation
 - b. Non-contact water recreation
 - c. Navigation
 - d. Ocean commercial and sport fishing
 - e. Wildlife habitat
 - f. Estuarine habitat
 - g. Fish spawning and migration
 - h. Industrial service supply
 - i. Preservation of rare and endangered species
 - j. Shell fishing
9. On April 15, 1992, The Regional Board adopted Resolution 92-043 directing the Executive Officer to implement the Regional Monitoring Plan (RMP) for San Francisco Bay. The RMP collects information from industrial and municipal dischargers on concentrations of pollutants in water, sediment and biota from throughout the estuary. The Regional Board agreed to reduce the monitoring frequency of certain constituents discharged by Pacific Refining Company in return for its participation in the RMP.
10. The reissuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21000 of Division 13) of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.
11. Effluent limitations and toxic effluent standards established pursuant to Sections 208(b), 301, 304, and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharge.
12. Effluent limitation guidelines requiring the application of best available technology economically achievable (BAT) have been promulgated by the USEPA for the Topping Subcategory of the Petroleum Refining Point Source Category 40 CFR Part 419 on October 18, 1982 and amended on July 12, 1985. Process wastewater and storm water runoff effluent limitations of this Order are based on these guidelines, the Basin Plan, other State plans and policies, current plant performance, and best professional judgement. The limitations are considered to be those attainable by BAT in the judgement of the Board, the national toxics rule (40 CFR 131.36), and the narrative water quality objectives contained in the Basin Plan.

13. Pursuant to 40 CFR 122.44, "Establishing Limitations, Standards, and Other Permit Conditions," NPDES permits should also include toxic pollutant limitations if the discharger uses or manufactures a toxic pollutant as an intermediate or final product or byproduct. This permit may be modified prior to the expiration date, pursuant to 40 CFR 122.62 and 124.5, to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as a part of this Order.
14. This Order contains effluent limitations based on maximum daily average throughputs achieved in any 12 month period during the last five years at this facility. The Board is aware that production can vary and will expedite reissuance of a new permit pursuant to 40 CFR 122.62 and 124.5 upon receipt of an application with new production data.
18. The Board notified the discharger and interested agencies and persons of its intent to reissue waste discharge requirements, and provided them with an opportunity for a public hearing and to submit their written views and recommendations.
19. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, 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 Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Effluent Limitations

1. The discharge of Waste 001 containing constituents in excess of any of the following mass loading limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
BOD (5-day @ 20°C)	lb/day	176	332
	kg/day	80	151
TSS	lb/day	149	232
	kg/day	68	105
	mg/l	60	80
COD	lb/day	884	1710
	kg/day	402	777
Oil & Grease	lb/day	54	104
	kg/day	25	47
	mg/l	8	15
Phenolic Compounds	lb/day	0.40	1.74
	kg/day	0.18	0.79
Ammonia as N	lb/day	19	41

	kg/day	8.6	19
Sulfide	lb/day	1.00	2.20
	kg/day	0.45	1.00
Total Chromium	lb/day	0.54	1.47
	kg/day	0.25	0.67
Hexavalent Chromium	lb/day	0.04	0.09
	kg/day	0.02	0.04
Settleable Solids	ml/l-hr	0.1	0.2

Running Annual Average^[1]

Selenium	lb/day	0.05
	kg/day	0.02
Copper	lb/day	No net increase above influent raw
	kg/day	water sources ^[2]

[1] Running annual averages shall be calculated by taking the arithmetic average of the current daily mass loading value, and all values for the previous twelve months.

[2] The Discharger shall comply with a baseline copper mass loading limit of 10 lb/yr in Waste 001. If the data do not show compliance with the baseline limit, the copper mass discharge rater shall be less than or equal to the rate of copper from influent raw water sources. Compliance with the copper loading limit shall commence one year after the date of adoption of this Order.

2. In addition to the monthly average and daily maximum pollutant weight allowances shown in A.1, allocations for pollutants attributable to storm water runoff discharged as a part of Waste 001 are permitted in accordance with the following schedules:

STORM WATER RUNOFF ALLOCATION

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
BOD (5-day @ 20°C)	mg/l	26	48
TSS	mg/l	21	33
COD	mg/l	180	360
Oil & Grease	mg/l	8	15
Phenolic Compounds	mg/l	0.17	0.35
Total Chromium	mg/l	0.21	0.60
Hexavalent Chromium	mg/l	0.028	0.062

BALLAST WATER ALLOCATION

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
BOD (5-day @ 20°C)	mg/l	26	48
TSS	mg/l	21	33
COD	mg/l	240	470
Oil & Grease	mg/l	8	15
pH	std units	within the range of 6.0 to 9.0	

The total effluent limitation is the sum of the storm water runoff allocation, the ballast water allocation and the mass limits contained in A.1. The Discharger shall compute the total effluent limitation (both maximum and average) on a monthly basis as shown in Part B of the Self-Monitoring Program.

3. The discharge of Waste 001 containing constituents in excess of the following concentration limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Average</u>
Arsenic	µg/l		200
Cadmium	µg/l		30
Chromium, hexavalent ^[1]	µg/l		110
Copper	µg/l		37
Lead	µg/l		53
Mercury	µg/l	0.21	1
Nickel	µg/l		65
Silver	µg/l		23
Selenium	µg/l		50
Zinc	µg/l		580
Cyanide ^[2]	µg/l		25
PAHs ^[3]	µg/l	0.49	150
Benzene	mg/l	0.21	
Toluene	mg/l	3,000	
Phenol	µg/l	500	
PCBs, total ^[3]	µg/l	0.0007	0.3
TCDD Equivalents ^[3]	pg/l	0.14	

[1] The Discharger may, at their option, meet the limit for hexavalent chromium as total chromium.

[2] The Discharger may, at their option, meet the limit for cyanide as free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanides. These forms of cyanide shall be measured using the Weak Acid Dissociable Cyanide method described in the most recent edition of Standard Methods, or another method approved by the Executive Officer.

[3] See Attachment A for definition of terms.

4. The discharge of Waste 002 and Waste 003 shall not have a pH less than 6.5 nor greater than 8.5.
5. The discharge of Waste 001 shall not contain a residual chlorine concentration greater than 0.0 mg/l.
6. Waste 001 shall not be discharged with a pH outside the range of 6.0 to 9.0.
7. Waste 001 shall meet the following acute toxicity limitation:

The survival of test fishes in a 96-hour static renewal bioassay of the effluent as discharged shall not be less than 70 percent survival, with a 3-sample median^[1] value of not less than 90 percent survival. Static bioassays may be used to satisfy this limitation upon approval by the Executive Officer.

[1] A 3-sample median is defined as follows: If one of the past two or fewer samples shows less than 90 percent survival, then survival of less than 90 percent on the next sample represents a violation of the effluent limitation.

8. Waste 001, as discharged shall meet both of the following chronic toxicity limitations:
 - a. an eleven sample median value^[1] of 10 TUC^[2]; and
 - b. a 90 percentile value^[3] of 20 TUC^[2].

[1] A test sample showing chronic toxicity greater than 10 TUC represents consistent toxicity and a violation of this limitation, if five or more of the past ten or less tests show toxicity greater than 10 TUC.

[2] A TUC equals 100/NOEL. The NOEL is the no observable effect level, determined from IC, EC, or NOEC values. These terms and their usage in determining compliance with the limitations are defined in Attachment A of this Order. The NOEL shall be based on a critical life stage test using the most sensitive test species as specified by the Executive Officer. The Executive Officer may specify two compliance species if test data indicate that there is alternating sensitivity between the two species. If two compliance test species are specified, compliance shall be based on the maximum TUC value for that discharge sample based on a comparison of TUC values obtained through concurrent testing of the two species.

[3] A test sample showing chronic toxicity greater than 20 TUC represents consistent toxicity and a violation of this limitation, if one or more of the past ten or less tests shows toxicity greater than 20 TUC.

9. Total coliform bacteria in Waste 001 shall not exceed a five sample median of 240 MPN/100 ml nor a single sample maximum of 10,000 MPN/100 ml.
10. The discharge of Waste 002 and/or Waste 003 containing constituents in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>Limitation</u>
Oil & Grease	mg/l	daily maximum of 15
TOC	mg/l	daily maximum of 110
pH	std units	6.5 to 8.5
visible oil		none observed
visible color		none observed

B. Receiving Water Limitations

1. The discharge of wastes shall not cause the following conditions to exist in waters of the State at any place at levels that cause nuisance or adversely affect beneficial uses:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
 - a. Dissolved oxygen: 5.0 mg/l minimum. The median dissolved oxygen concentrations for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation.
 - b. Dissolved sulfide: 0.1 mg/l maximum.

c. pH: The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.

d. Un-ionized ammonia (as N): 0.025 mg/l Annual Median, and 0.16 mg/l Maximum at any time.

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 or the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.
4. The discharges of Waste 001, Waste 002, and Waste 003 shall not cause a surface water temperature rise greater than 4°F above the natural temperature of San Pablo Bay.

C. Discharge Prohibitions

1. The discharge of Waste 001 at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1 is prohibited.
2. The discharge of all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, is prohibited.
3. The discharge of Waste 001 at average dry weather flowrates of 1.0 MGD or greater is prohibited without authorization from the Executive Officer.

D. Provisions

1. The Discharger shall comply with the limitations, prohibitions, and other provisions of this Order immediately upon its adoption by the Board.
2. The Discharger shall install a system to continuously monitor and record the temperature of its treated Waste 001 stream no later than December 1, 1996.
3. The Discharger shall develop and implement a Storm Water Pollution Prevention Plan acceptable to the Executive Officer pursuant to Section A of the General Storm water Permit no later than November 1, 1996.
4. The Discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. Discharging pollutants in violation of this Order where the Discharger failed to develop and/or implement a current contingency plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

5. The Discharger shall develop and submit a Best Management Practices (BMP) program to the Board no later than December 1, 1996. The BMP program shall be consistent with the USEPA regulations 40 CFR 125, Subpart K, and the general guidance contained in the "NPDES Best Management Guidance Document", USEPA Report No. 600/9-79-045, December 1979 (revised June 1981). A BMP program acceptable to the Executive Officer shall be implemented by April 1, 1995.
6. TRE for Chronic Toxicity: If there is a violation of the chronic toxicity effluent limitation, the Discharger shall conduct a chronic toxicity reduction evaluation (TRE), which shall initially involve a toxicity identification evaluation (TIE). The TIE shall be in accordance with a work plan acceptable to the Executive Officer. The TIE shall be initiated within 30 days of the date of violation. The objective of the TIE shall be to identify the chemical or combination of chemicals that are causing the observed toxicity. Every effort using currently available TIE methodologies shall be employed by the Discharger. As toxic constituents are identified or characterized, the discharger shall continue the TRE by determining the source(s) of the toxic constituent(s) and evaluating alternative strategies for reducing or eliminating the constituent(s) from the discharge. All reasonable steps shall be taken to reduce toxicity to the required level. The Board recognizes that identification of causes of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Board will be based in part on the discharger's actions in identifying and reducing sources of consistent toxicity.
7. Screening Phase for Chronic Toxicity: The Discharger shall conduct screening phase compliance monitoring under either of these two conditions:
 - a. Subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to pretreatment, source control, and waste minimization efforts; or
 - b. Prior to Permit reissuance, except when the Discharger is conducting a TIE and/or TRE. Screening phase monitoring data shall be included in the NPDES Permit application for reissuance. The information shall be as recent as possible, but may be based on screening phase monitoring conducted within 5 years before the permit expiration date.

The Discharger shall conduct screening phase compliance monitoring in accordance with a proposal submitted to and acceptable to the Executive Officer. The proposal shall contain, at a minimum, the elements specified in Attachment B of this Order. The purpose of the screening is to determine the most sensitive test species for subsequent routine compliance monitoring for chronic toxicity.

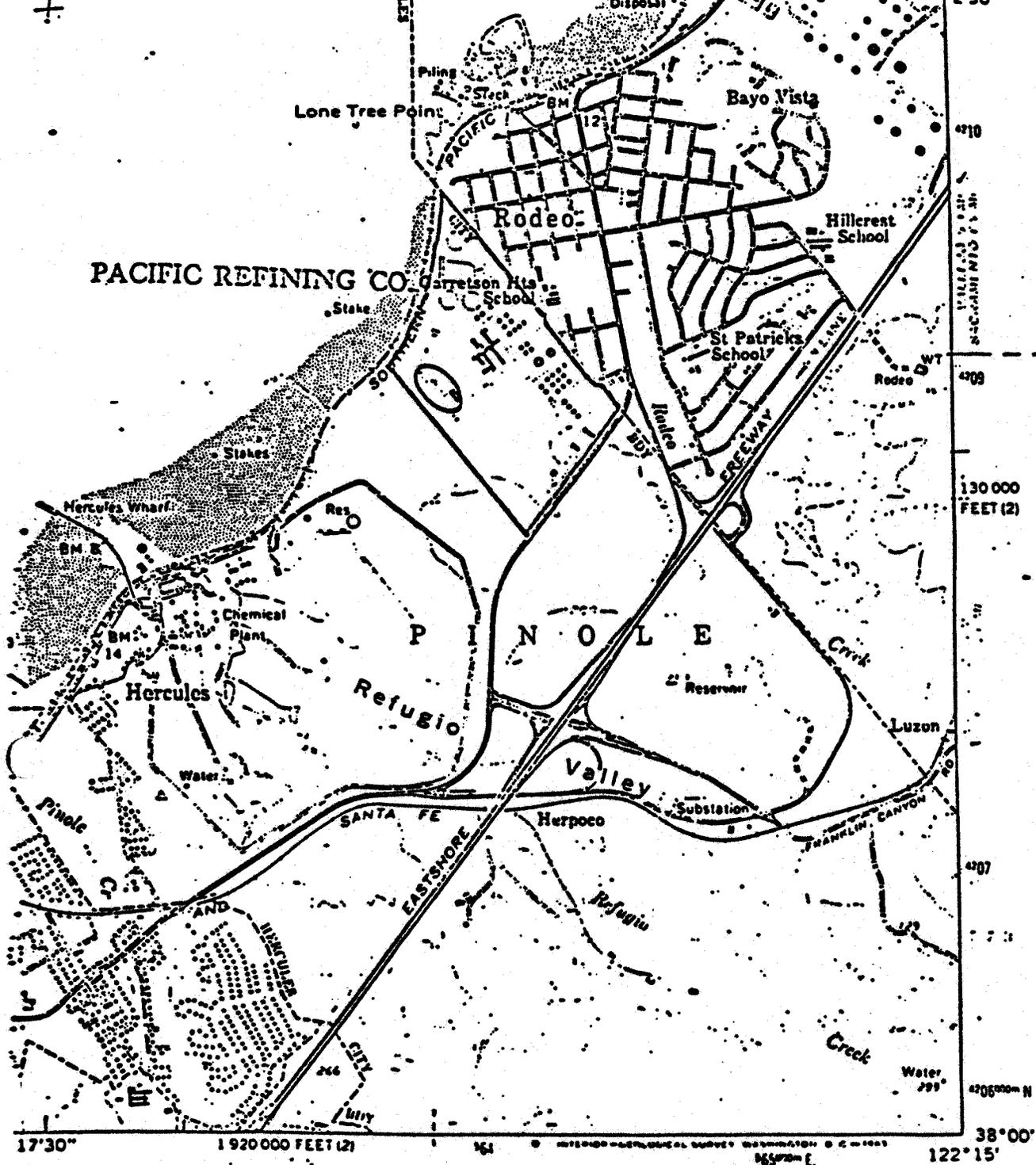
8. This Order shall serve as National Pollutant Discharge Elimination System permits pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall become effective on the date of adoption provided the Regional Administrator, USEPA, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

9. The Discharger shall comply with the attached Self-Monitoring Program as adopted by the Board, and as may be amended by the Executive Officer pursuant to USEPA regulations 40 CFR 122.62, 122.63, and 124.5.
10. Pursuant to USEPA regulations 40 CFR 122.44, 122.62, and 124.5, this permit may be modified prior to the expiration date to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as part of this Order.
11. Pursuant to 40 CFR 122.44, 122.62, and 124.5, the definition of the NOEL contained in Attachment A of this Order may be modified based on guidance issued by the State Board, prior to the Permit expiration date.
12. All applications, reports, or information submitted to the Board shall be signed and certified pursuant to USEPA regulations 40 CFR 122.41(k).
13. Pursuant to USEPA regulations, 40 CFR 122.41(a), the Discharger shall notify the Board as soon as it knows or has reason to believe (1) that they have begun or expect to begin, use or manufacture of a toxic pollutant not reported in the permit application, or (2) a discharge of a toxic pollutant not limited by this permit has occurred, or will occur, in concentrations that exceed the specified limits in 40 CFR 122.42(a).
14. This Order includes all items of the attached "Standard Provisions, Reporting Requirements" dated August 1993.
15. The requirements prescribed by this Order supersede those prescribed by Order No. 90-104, Order No. 91-026, Order No. 91-099, and Order No. 91-100. Order No. 90-104, Order No. 91-026, Order No. 91-099, and Order No. 92-100 are hereby rescinded.
16. This Order expires on August 21, 2001. The Discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Code of Regulations, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

I, Loretta K. Barsamian, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on August 21, 1996.

Attachments:

Facility Map	 Loretta K. Barsamian Executive Officer
Treatment Plant Schematic	
Attachment A - Definition of Terms	
Attachment B - Chronic Toxicity Requirements	
Standard Provisions & Reporting Requirements, August 1993	
Self-Monitoring Program	
General Industrial Stormwater Permit - Section A	



17°30" 1 920 000 FEET (2) 164 122°15' 38°00'

ROAD CLASSIFICATION

- Heavy-duty Light-duty
- Medium-duty Unimproved dirt
- Interstate Route State Route

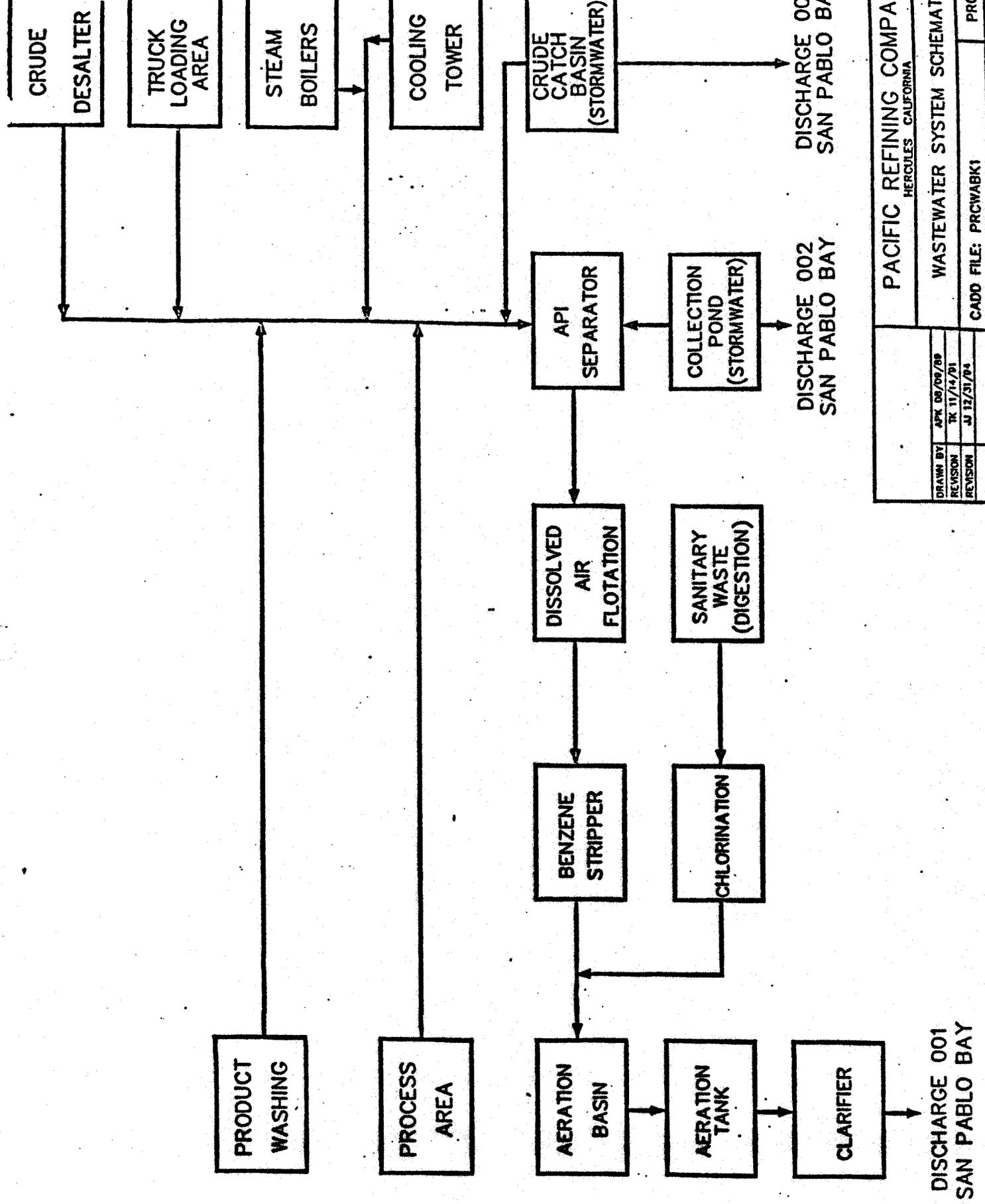


MARE ISLAND, CALIF.
 SE 4 MARE ISLAND 15' QUADRANGLE
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AMS 1560 III SE—SERIES.V895

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REVISION		TK 11/14/91
REVISION		JJ 12/31/94
PACIFIC REFINING COMP HERCULES CALIFORNIA		
WASTEWATER SYSTEM SCHEMAT		
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ATTACHMENT A

DEFINITION OF TERMS FOR CHEMICAL CONSTITUENTS

PAHs (polynuclear aromatic hydrocarbons) shall mean the following constituents. Each constituent shall be limited individually at 0.49 µg/l as indicated below.

<u>Constituent</u>	<u>Unit</u>	<u>Monthly Average Effluent Limit</u>
Benz(a)Anthracene	µg/l	0.49
3,4-Benzo(b)Fluoranthene	µg/l	0.49
Benzo(k)Fluoranthene	µg/l	0.49
Benzo(g,h,i)Perylene	µg/l	0.49
Benzo(a)Pyrene	µg/l	0.49
Chrysene	µg/l	0.49
Dibenz(a,h)Anthracene	µg/l	0.49
Indeno(1,2,3-cd)pyrene	µg/l	0.49

PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

TCDD Equivalents shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity equivalence factors, as shown in the table below.

<u>Isomer Group</u>	<u>Toxicity Equivalence Factor</u>
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8-tetra CDF	0.1
1,2,3,7,8-penta CDF	0.05
2,3,4,7,8-penta CDF	0.5
2,3,7,8-hexa CDFs	0.1
2,3,7,8-hepta CDFs	0.01
octa CDF	0.001

ATTACHMENT B

CHRONIC TOXICITY

I. DEFINITION OF NO OBSERVED EFFECT LEVEL

- A. No observed effect level (NOEL) for compliance determination is equal to IC_{25} or EC_{25} . If the IC_{25} or EC_{25} cannot be statistically determined, the NOEL shall be equal to the NOEC derived using hypothesis testing.
- B. Effective concentration (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Kärber. EC_{25} is the concentration of toxicant (in percent effluent) that causes a response in 25% of the test organisms.
- C. Inhibition Concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal, non-quantal biological measurement, such as growth. For example, an IC_{25} is the estimated concentration of toxicant that would cause a 25% reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as USEPA's Bootstrap Procedure.
- D. No observed effect concentration (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

II. SCREENING PHASE MONITORING REQUIREMENTS

- A. The discharger shall perform screening phase compliance monitoring:
1. subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to pretreatment, source control, and waste minimization efforts, or
 2. prior to Permit reissuance. Screening phase monitoring data shall be included in the NPDES Permit application for reissuance. The information shall be as recent as possible, but may be based on screening phase monitoring conducted within 5 years before the permit expiration date.

B. Design of the screening phase shall, at a minimum, consist of the following elements:

- Use of test species specified in Table B-1 and B-2 (attached), and use of the protocols referenced in those tables, or as approved by the Executive Officer;

- Two stages:

Stage 1 shall consist of a minimum of one battery of tests conducted concurrently. Selection of the type of test species and minimum number of tests shall be based on Table B-3 (attached); and

Stage 2 shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results and as approved by the Executive Officer.

- Appropriate controls; and
- Concurrent reference toxicant tests.

C. The discharger shall submit a screening phase proposal to the Executive Officer for approval. The proposal shall address each of the elements listed above.

**TABLE B-1
CRITICAL LIFE STAGE TOXICITY TESTS FOR ESTUARINE WATERS**

SPECIES	EFFECT	TEST DURATION	REFERENCE
algae (<i>Skeletonema costatum</i>) (<i>Thalassiosira pseudonana</i>)	growth rate	4 days	1
red algae (<i>Champia parvula</i>)	number of cystocarps	7-9 days	3
giant kelp (<i>Macrocystis pyrifera</i>)	percent germination; germ tube length	48 hours	2
abalone (<i>Haliotis rufescens</i>)	abnormal shell development	48 hours	2
oyster (<i>Crassostrea nigra</i>) mussel (<i>Mytilus edulis</i>)	abnormal shell development; percent survival	48 hours	2
Echinoderms (urchins - <i>Strongylocentrotus purpuratus</i>); (sand dollar - <i>Dendraster excentricus</i>)	percent fertilization	1 hour	2
shrimp (<i>Myadopsis bahia</i>)	percent survival; growth	7 days	3
shrimp (<i>Holmesimysis costata</i>)	percent survival; growth	7 days	2
Topomak (<i>Atherinops affinis</i>)	percent survival; growth	7 days	2
silverides (<i>Menidia beryllina</i>)	larval growth rate; percent survival	7 days	3

TOXICITY TEST REFERENCES

1. American Society for Testing Materials (ASTM). 1990. Standard Guide for conducting static 96-hour toxicity tests with microalgae. Procedure E 1218-90. ASTM, Philadelphia, PA.
2. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms. EPA/600/R-95/136. August 1995
3. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA-600/4-90/003. July 1994

**TABLE B-2
CRITICAL LIFE STAGE TOXICITY TESTS FOR FRESH WATERS**

SPECIES	EFFECT	TEST DURATION	REFERENCE
fathead minnow (<i>Pimephales promelas</i>)	survival; growth rate	7 days	4
water flea (<i>Cariodaphnia dubia</i>)	survival; number of young	7 days	4
alga (<i>Selenastrium capricornutum</i>)	cell division rate	4 days	4

TOXICITY TEST REFERENCE

4. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. Third edition. EPA/600/4-91/002. July 1994

**TABLE B-3
TOXICITY TEST REQUIREMENTS FOR STAGE ONE SCREENING PHASE**

REQUIREMENTS	RECEIVING WATER CHARACTERISTICS		
	DISCHARGES TO COAST	DISCHARGES TO SAN FRANCISCO BAY ‡	
	Ocean	Marine	Freshwater
Taxonomic Diversity	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish
Number of tests of each salinity type			
Freshwater†	0	1 or 2	3
Marine	4	3 or 4	0
Total number of tests	4	5	3

† The fresh water species may be substituted with marine species if:

- 1) the salinity of the effluent is above 5 parts per thousand (ppt) greater than 75% of the time, or
- 2) the ionic strength (TDS or conductivity) of the effluent at the test concentration used to determine compliance is documented to be toxic to the test species.

‡ Marine refers to receiving water salinities greater than 5 ppt at least 75% of the time during a normal water year. Fresh refers to receiving water with salinities less than 5 ppt at least 75% of the time during a normal water year.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

**SELF-MONITORING PROGRAM
FOR**

**PACIFIC REFINING COMPANY
HERCULES
CONTRA COSTA COUNTY**

NPDES NO. CA0005096

ORDER NO. 96-112

CONSISTS OF

PART A (dated August 1993)

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the water in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present.
E-001D	At any point in the disinfection facilities for Waste 001, at which point all sewage tributary there is present and adequate contact with the disinfectant is assured (may be the same as E-001).
E-002	At the point of discharge of Waste 002
E-003	At the point of discharge of Waste 003

C. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
C-R-0	Background station, 100 feet upstream of diffuser section.
C-R	At a point in San Pablo Bay, located approximately 50 feet downstream of center port.

II. SCHEDULE OF SAMPLING AND ANALYSIS

- A. The schedule of sampling and analysis shall be that given in Table 1 (attached).
- B. Sample collection, storage, and analyses shall be performed according to requirements in the latest 40 CFR 136, in the Permit, or as specified by the Executive Officer.

III. MODIFICATIONS TO PART A

- A. Paragraph C.2.a. is modified as follows:

Composite samples of effluent shall be collected on random weekdays and on any day when substantial changes in flow occur during dry weather conditions.

IV. CHRONIC TOXICITY MONITORING REQUIREMENT

- A. Test Species and Frequency: The Discharger shall collect 24-hour composite samples at E-001 on consecutive days for critical life stage toxicity testing as indicated below:

<u>Test Species</u>	<u>Frequency</u> ¹
<i>Menidia beryllina</i>	semi-annually

- B. Conditions for Accelerated Monitoring: The Discharger shall accelerate the frequency of monitoring to quarterly (or as otherwise specified by the Executive Officer) when there is an exceedance of either of the following conditions:

1. three sample median value of 10 TUc, or
2. single sample maximum value of 20 TUc

- C. Methodology: Sample collection, handling and preservation shall be in accordance with EPA protocols. The test methodology used shall be in accordance with the references cited in the Permit, or as approved by the Executive Officer. A concurrent reference toxicant test shall be performed for each test.

- D. Dilution Series: The Discharger shall conduct tests at 100%, 50%, 25%, 10%, 5%, and 2.5%. The "%" represents percent effluent as discharged. The 100% dilution may be omitted if the marine test species specified is sensitive to artificial sea salts.

V. CHRONIC TOXICITY REPORTING REQUIREMENTS

- A. Routine Reporting: Toxicity test results for the current reporting period shall include at a minimum, for each test

- a. Sample date(s)
- b. Test initiation date
- c. Test species
- d. End point values for each dilution (e.g. number of young, growth rate, percent survival)
- e. NOEC value(s) in percent effluent
- f. IC₁₅, IC₂₅, IC₄₀, and IC₅₀ values (or EC₁₅, EC₂₅ ... etc.) in percent effluent
- g. TUc values (100/NOEC, 100/IC₂₅, and 100/EC₂₅)
- h. Mean percent mortality (\pm s.d.) after 96 hours in 100% effluent
- i. NOEC and LOEC values for reference toxicant test(s)
- j. IC₅₀ or EC₅₀ value(s) for reference toxicant test(s)

¹ After at least twelve test rounds, the discharger may request the Executive Officer to decrease the required frequency of testing, and/or to reduce the number of compliance species to one. Such a request may be made only if toxicity exceeding the TUc values specified in the effluent limitations was never observed using that test species.

- k. Available water quality measurements for each test (ex. pH, D.O., temperature, conductivity, hardness, salinity, ammonia)
- B. Compliance Summary: Each self-monitoring report shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The information in the table shall include items a, c, e, f (IC₂₅ or EC₂₅), g, and h from Section A.
- C. Reporting Raw Data in Electronic Format: On a semi-annual basis, by February 15 and August 15 of each year, the Discharger shall report all chronic toxicity data for the previous semi-annual report in the format specified in "Suggested Standardized Reporting Requirements for Monitoring Chronic Toxicity," August 1993, SWRCB. The data shall be submitted in either high or low density, double sided 3.5-inch floppy diskettes.

VI. MISCELLANEOUS REPORTING

- A. The Discharger shall record the rainfall on each day of the month.
- B. The Discharger shall conduct visual observations of the stormwater discharge locations on at least one storm event per month that produces a significant stormwater discharge to observe the presence of floating and suspended materials, oil and grease discolorations, turbidity, and odor. A "significant stormwater discharge" is a continuous discharge of stormwater for a minimum of one hour, or an intermittent discharge of stormwater for a minimum of three hours in a 12-hour period.
- C. The Discharger shall determine the stormwater runoff/ballast water allocation (daily & monthly) for its discharge using the method described in attached Form A. Form A shall be submitted with the monthly self-monitoring report. The daily maximum allocation must be computed for each day Waste 001 is monitored.
- D. The Discharger shall retain and submit (when required by the Executive Officer) the following information concerning the monitoring program for organic and metallic pollutants.
 - a. Description of sample stations, times, and procedures.
 - b. Description of sample containers, storage, and holding time prior to analysis.
 - c. Quality assurance procedures together with any test results for replicate samples, sample blanks, and any quality assurance tests, and the recovery percentages for the internal surrogate standard.
- E. The Discharger shall submit in the monthly self-monitoring report the metallic & organic test results together with the detection limits (including unidentified peaks). All unidentified (non-Priority Pollutant) peaks detected in the EPA 624, 625 test methods shall be identified and semi-quantified. Hydrocarbons detected at < 10 Φ g/l based on the nearest internal standard may be appropriately grouped and identified together as aliphatic,

aromatic and unsaturated hydrocarbons. All other hydrocarbons detected at $> 10 \text{ } \Phi\text{g/l}$ based on the nearest internal standard shall be identified and semi-quantified.

- F. Ballast water treated and discharged as part of Waste 001 shall be metered and the volume recorded in attached Form A for each calendar day. The 30-day average shall be the sum of the daily values in a calendar month divided by the number of days in that month. Ballast-water allocations shall be calculated by multiplying the volume of ballast water, determined above by the appropriate volume of ballast water, determined above by the appropriate concentration listed under Effluent Limitation A.2. in the permit.

I, Loretta K. Barsamian, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Order No. 96-112.
2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer, pursuant to 40 CFR 122.62 and 124.4.

Loretta K. Barsamian
Executive Officer

Effective Date:

Loretta K. Barsamian

Attachments:

Table 1 - Schedule of Sampling, Measurement and Analysis
Form A - Stormwater/Ballast Water Allocation Procedure

TABLE 1

SCHEDULE OF SAMPLING, MEASUREMENT, AND ANALYSIS

<u>Station</u>	<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Frequency of Analysis</u>
E-001	Flow Rate	MGD	Continuous	Continuous
	Temperature	°F	Continuous	Continuous
	BOD, 5-day, @ 20°C	mg/l kg/day	Composite	Monthly
	Chlorine Residual	mg/l	Grab	Weekly
	pH [1]	Standard Units	Continuous	Continuous
	Total Coliform [2]	MPN/ 100 ml	Grab	Weekly
	Oil & Grease	mg/l kg/day	Grab [3,4]	Weekly
	Settleable Matter	ml/l/hr	Grab [4]	Weekly
	Ammonia as N [5]	mg/l kg/day	Composite	Monthly
	TSS	mg/l kg/day	Composite	Weekly
	Total Sulfides	mg/l	Grab [4]	Quarterly
	TOC	mg/l	Composite	Monthly
	Acute Fish Toxicity [6]	Survival	Composite	Weekly
	Crit. Life Stage Tox. Test [7]		Composite	Semi-annually
	Arsenic [8]	µg/l kg/day	Composite	Monthly
	Cadmium	µg/l kg/day	Composite	Monthly
	Chromium Total	µg/l kg/day	Composite	Monthly
	Chromium Hexavalent	µg/l kg/day	Composite	Monthly
	Copper	"	"	"
	Cyanide [9]	"	"	"
	Lead	"	"	"
	Mercury	"	"	"
	Nickel	"	"	"
Silver	"	"	"	
Selenium [10]	"	"	Monthly	
Zinc	µg/l kg/day	Composite	Monthly	

<u>Station</u>	<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Frequency of Analysis</u>
E-001	Phenols	"	"	Quarterly
	PAH's [11]	"	"	Quarterly
	EPA 608 [12]	ug/l	Grab [4]	Once/year
	EPA 624 [13]	"	Grab [4]	Once/year
	EPA 625 [13]	"	Grab [4]	Once/year
	EPA 1613 [14]	pg/l	Grab [4]	Once/year
E-002 & E-003	Oil & Grease	mg/l	Grab [4]	Each Occurrence
	pH	Standard Units	"	"
	TOC	mg/l	"	"
	Visible Oil		Observation	"
	Visible Color		Observation	"
All C Stations	pH	Standard Units	Grab [4]	Quarterly
	D.O.	mg/l	"	"
	Temperature	°F	"	"
	Sulfides [15]	mg/l	"	"
	Ammonia (as N)	mg/l	"	"
	Salinity	ppt	"	"

Footnotes for Table 1:

- Daily minimum and maximum shall be reported.
- When replicate analyses are made of a coliform sample, the reported result shall be the arithmetic mean of the replicate analysis values.
- Oil and grease sampling shall consist of 3 grab samples taken at 2 hour intervals during the sampling day, with each grab being collected in a glass container. The entire volume of each sample shall be composited prior to analysis. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite wastewater sample for extraction and analysis.
- Grab Samples shall be collected coincident with samples collected for the analysis of regulated parameters. In addition, the grab samples must be collected in glass containers. Polycarbonate containers may be used to store tributyltin samples.
- Ammonia (as N) shall be measured as Total Ammonia; the unionized fraction shall be calculated based on the total ammonia, pH, TDS or salinity, and temperature.
- Rainbow trout and fathead minnow (or three-spine stickleback) shall be tested pursuant to Effluent Limitation A.7.

7. Critical Life Stage Toxicity Test shall be performed and reported in accordance with the Chronic Toxicity Requirements specified in Sections IV and V of this Self-Monitoring Program.
8. Arsenic must be analyzed for by the atomic absorption, gaseous hydride procedure (EPA method No. 206.3/Standard Method No. 303E). Alternative methods of analysis must be approved by the Executive Officer.
9. The Discharger may, at their option, analyze for cyanide as Weak Acid Dissociable Cyanide using protocols specified in Standard Method No. 4500-CN-I, latest edition.
10. Selenium must be analyzed for only by the atomic absorption, gaseous hydride procedure (EPA method No. 270.3/ Standard Method No. 303E). Alternative methods of analysis must be approved by the Executive Officer.
11. Polynuclear aromatic hydrocarbons PAHs shall be analyzed using the latest version of USEPA Method 610 (8100 or 8310). The Discharger shall attempt to achieve the lowest detection limits commercially available. If an analysis cannot achieve a quantification limit for a particular sample at or below the effluent limits for PAHs, the Discharger shall provide an explanation in its self-monitoring report. Note that the samples must be collected in amber glass containers. These samples shall be collected for the analysis of the regulated parameters. An automatic sampler which incorporates glass sample containers, and keeps the samples refrigerated at 4°C and protected from light during compositing may be used. The 24-hour composite samples may consist of eight grab samples collected at 3-hour intervals. The analytical laboratory shall remove flow-proportioned volumes from each sample vial or container for the analysis.
12. The latest versions of USEPA Methods 608 (or 8080) shall be used to determine compliance with the limits for Total PCBs. The Discharger shall attempt to achieve the lowest detection limits commercially available using this method.
13. The latest versions of USEPA Methods 624 (or 8240), and 625 (or 8270) shall be used. The results from USEPA Method 624 shall be used to determine compliance with the effluent limits for benzene and toluene. Additionally, all data results from these analyses shall be reported as specified under Section IV.D. of the Self-Monitoring Program.
14. The latest version of USEPA Method 1613 shall be used to determine compliance with the limit for TCDD Equivalents, and the Discharger shall attempt to achieve the lowest detection limits commercially available. Analysis results at or below the quantification limits listed below may be considered zero for use in the calculations for compliance determination with the TCDD Equivalents limit.

<u>Isomer Group</u>	<u>Quantification Limit</u>
2,3,7,8-tetra CDD	5 pg/l
2,3,7,8-penta CDD	5 pg/l
2,3,7,8-hexa CDDs	10 pg/l
2,3,7,8-hepta CDD	10 pg/l
octa CDD	25 pg/l
2,3,7,8-tetra CDF	5 pg/l
1,2,3,7,8-penta CDF	5 pg/l

Isomer Group

Quantification Limit

2,3,4,7,8-penta CDF	5 pg/l
2,3,7,8-hexa CDFs	10 pg/l
2,3,7,8-hepta CDFs	10 pg/l
octa CDF	25 pg/l

If the analysis performed cannot achieve the quantification limits specified above, the Discharger shall provide an explanation in its self-monitoring report. Another sample shall be analyzed if the reported quantification limits are significantly above the limits specified above.

15. Receiving water analysis for sulfides should be run when dissolved oxygen is less than 5.0 mg/l.

FORM A

STORMWATER/BALLAST WATER ALLOCATION PROCEDURE

This procedure uses a benchmark to inventory stormwater. Any stormwater in excess of the estimated processed stormwater is inventoried. Stormwater allocations are calculated using the actual processed stormwater developed in the attached table.

Definitions:

Dry Weather Season - The months of June to September exclusive of a one-week period following any rainstorm.

Estimated Dry Weather Process Wastewater Flow - The average effluent flowrate during the previous dry weather season.

Stormwater Runoff - The product of the inches of rainfall and the runoff factor.

Estimated Processed Stormwater - The difference between the actual effluent flowrate and the ballast water plus dry weather flowrate.

Stormwater Benchmark - Calculated inventoried stormwater.

Actual Process Stormwater - If the stormwater benchmark is not zero, the actual processed stormwater equals the estimated flow. If the benchmark is zero, the actual processed stormwater is equal to the stormwater runoff for that day plus the benchmark for the previous day.

STORMWATER/BALLAST WATER ALLOCATION PROCEDURE

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
Rainfall. (in.)	Stormwater Runoff (MGal/D)	Effluent Flow (MGal/D)	Dry Weather Effluent Flow (MGal/D)	Estimated Processed Stormwater (MGal/D)	Stormwater Bankbook (MGal)	Actual Processed Stormwater (MGal/D)	Ballast Water (MGal/D)

Previous Month's Bankbook =

1
2
3
.
.
.
30
TOTAL
AVERAGE
MAXIMUM

Column (D) = (Dry-Weather Effluent Flow)

Column (B) = Column (A) x Runoff Factor

Column (E) = Column (C) - Column (D) - Column (H)

Column (F): Column (F) = Column (E) (Previous Day) + Column (B) - Column (E).
 Column (F) = 0 if Column (F) < 0.

Column (G): If Column (F) > 0, then Column (G) = Column (E).
 If Column (F) = 0, then Column (G) = Column (B) + Column (F) previous day.

(Documented Process Water Increment)

MAXIMUM DAILY LIMITS							
DATE	BOD (MG/D)	TSS (MG/D)	NO ₃ (MG/D)	DOC (MG/D)	PHENOL (MG/D)	TOTAL CHROME (MG/D)	HEX. CHROME (MG/D)

Maximum Daily Limit = Effluent Limit 0.1. + Stormwater Allocation
 (Daily Max in kg/day) (Daily Max)

Stormwater Allocation = Effluent Limit 0.2. * Daily Processed Stormwater * 3.785 1/gal
 (Daily Max in mg/l) (in mg)

Date	Rainfall (Inches)	Storm Runoff Flow (Inches x Runoff Factor) Gallons	Ballast Flow in gallons
1-2			
2-3			
3-4			
4-5			
5-6			
6-7			
7-8			
8-9			
9-10			
10-11			
11-12			
12-13			
13-14			
14-15			
15-16			
16-17			
17-18			
18-19			
19-20			
20-21			
21-22			
22-23			
23-24			
24-25			
25-26			
26-27			
27-28			
28-29			
29-30			
30-31			
31-1			
Total Monthly Average			

YEAR:	
Allocation	Total Effluent
Monthly Average Storm Runoff+Ballast Water Flow Factor (expressed in thousand gallons) = (kg/day)	Effluent Limit = Limit (kg/day)
30-Day Average DOB ₅ = 0.098	0
Limit- TSS = 0.079	0
Limit- TOC = 0.72	0
(kg/ cuo day) = 0.60	0
CSC = 0.03	0
PHENOL = 0.00064	0
TOTAL CHARGE = 0.00079	0
NET CHARGE = 0.0001	0

Section A: GENERAL INDUSTRIAL STORMWATER PERMIT

C

1. A stormwater pollution prevention plan (SWPPP) shall be developed and implemented for each facility covered by this general permit. The SWPPP shall be designed to comply with BAT/BCT and be certified in accordance with the signatory requirements of Standard Provision C.9. The SWPPP shall be retained onsite and made available upon request of a representative of the Regional Water Board and/or local stormwater management agency (local agency) which receives the stormwater discharge.
2. The Regional Water Board and/or local agency may notify the discharger when the SWPPP does not meet one or more of the minimum requirements of this Section. Within 30 days of notice, the discharger shall submit a time schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the changes. After making the required changes, the discharger shall provide written certification that the changes have been made.
3. The discharger shall amend the SWPPP whenever there is a change in construction, operation, or maintenance which may affect the discharge of significant quantities of pollutants to surface water, ground waters, or the local agency's storm drain system. The SWPPP should also be amended if it is in violation of any conditions of this general permit, or has not achieved the general objectives of controlling pollutants in stormwater discharges.
4. The SWPPP shall provide a description of potential sources which may be expected to add significant quantities of pollutants to stormwater discharges, or which may result in non-stormwater discharges from the facility. The SWPPP shall include, at a minimum, the following items:
 - a. A map extending approximately one-quarter mile beyond the property boundaries of the facility, showing: the facility, general topography surface water bodies (including known springs and wells), and the discharge point where the facility's stormwater discharges to a municipal storm drain system or other water body. The requirements of this paragraph may be included in the site map required under the following paragraph if appropriate.
 - b. A site map showing:
 - i. The stormwater conveyance and discharge structures;
 - ii. An outline of the stormwater drainage areas for each stormwater discharge point;
 - iii. Paved areas and buildings;
 - iv. Areas of pollutant contact, actual or potential;
 - v. Location of existing stormwater structural control measures (i.e., berms, coverings, etc.);
 - vi. Surface water locations;
 - vii. Areas of existing and potential soil erosion; and
 - viii. Vehicle service areas.
 - c. A narrative description of the following:

- i. Significant materials that have been treated, stored, disposed, spilled, or leaked in significant quantities in stormwater discharge after November 19, 1988;
 - ii. Materials, equipment, and vehicle management practices employed to minimize contact of significant materials with stormwater discharge;
 - iii. Material loading, unloading, and access areas;
 - iv. Existing structural and non-structural control measures (if any) to reduce pollutants in stormwater discharge;
 - v. Industrial stormwater discharge treatment facilities (if any);
 - vi. Methods of on-site storage and disposal of significant materials; and
 - vii. Outdoor storage, manufacturing, and processing activities including activities that generate significant quantities of dust or particulates.
- d. A list of pollutants that are likely to be present in stormwater discharge in significant quantities, and an estimate of the annual quantities of these pollutants in stormwater discharge.
- e. An estimate of the size of the facility (in acres or square feet), and the percent of the facility that has impervious areas (i.e. pavement, buildings, etc.).
- f. A list of significant spills or leaks of toxic or hazardous pollutants to stormwater that have occurred after November 19, 1988. This shall include:
- i. Toxic chemicals (listed in 40 CFR Part 372) that have been discharged to stormwater as reported on USEPA Form R.
 - ii. Oil or hazardous substances in excess of reportable quantities (see 40 CFR Part 110, 117, or 302).
- g. A summary of existing sampling data (if any) describing pollutants in stormwater discharge.
5. The SWPPP shall describe the stormwater management controls appropriate for the facility. The appropriate controls shall reflect identified potential sources of pollutants at the facility. The description of the stormwater management controls shall include:
- a. Stormwater Pollution Prevention Personnel. Identify specific individuals (and job titles) who are responsible for developing, implementing, and revising the SWPPP.
 - b. Preventive Maintenance. Preventive maintenance involves inspection and maintenance of stormwater conveyance system devices (i.e., oil/water separators, catch basins, etc.) and inspection and testing of plant equipment and systems that could fail and result in discharges of pollutants to stormwater.
 - c. Good Housekeeping. Good housekeeping requires the maintenance of clean, orderly facility areas that discharge stormwater. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the stormwater conveyance system.
 - d. Spill Prevention and Response. Identification of areas where significant materials can

spill into or otherwise enter the stormwater conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, and clean-up equipment and procedures for spills of significant materials shall be established.

- e. **Stormwater Management Practices.** Stormwater management practices are practices other than those which control the source of pollutants. They include measures such as installing oil and grit separators, diverting stormwater into retention basins, etc. Based on assessment of the potential of various sources to contribute pollutants to stormwater discharges in significant quantities, additional stormwater management practices to remove pollutants from stormwater discharge shall be implemented.
 - f. **Erosion and Sediment Controls.** The SWPPP shall identify measures to reduce sediment in stormwater discharges.
 - g. **Employee Training.** Employee training programs shall inform all personnel responsible for implementing the SWPPP. Training should address spill response, good housekeeping, and material management practices. Periodic dates for training should be identified.
 - h. **Inspections.** All inspections, visual observations and sampling as required by Section B, shall be done by trained personnel. A tracking or follow-up procedure shall be used to ensure appropriate response has been taken in response to these activities.
6. Non-stormwater discharges to stormwater conveyance systems shall be eliminated prior to implementation of this SWPPP. The SWPPP shall include a certification that non-stormwater discharges have been eliminated and a description of any tests for the presence of non-stormwater discharges, the methods used, the dates of the testing, and any onsite drainage points that were observed during the testing. Such certification may not always be feasible if the discharger a) must make significant structural changes to eliminate the discharge of non-stormwater discharges to the industrial stormwater conveyance system, or b) has applied for, but not yet received, and NPDES general permit for the non-stormwater discharges. In such cases, the discharger must notify the appropriate Regional Water Board prior to implementation of the SWPPP that non-stormwater discharges cannot be eliminated. The notification shall include justification for a time extension and a schedule, subject to modification by the Regional Water Board, indicating when non-stormwater discharges will be eliminated. In no case shall the elimination of non-stormwater discharges exceed three years from the NOI submittal date.
7. The SWPPP may incorporate, by reference, the appropriate elements of other program requirements (i.e., Spill Prevention Control and Countermeasures (SPCC) plans under Section 311 of the CWA, Best Management Programs under 40 CFR 125.100, etc.).
8. The SWPPP is considered a report that shall be available to the public under Section 308(b) of the CWA.
9. The SWPPP shall include the signature and title of the person responsible for preparation of the SWPPP, and include the date of initial preparation and each amendment, thereto.