

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

**ORDER NO. 00-084  
NPDES NO. CA0001147**

**WASTE DISCHARGE REQUIREMENTS  
FOR  
EL SEGUNDO POWER, LLC  
(El Segundo Generating Station)**

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

1. El Segundo Power, LLC, (Discharger) discharges wastewaters from the El Segundo Generating Station (Plant) under waste discharge requirements contained in Order No. 94-129, adopted by this Regional Board on December 5, 1994. This Order serves as the National Pollutant Discharge Elimination System (NPDES) permit (CA0001147). The permit was originally issued to Southern California Edison (SCE), the previous owner of the facility. El Segundo Power, LLC, acquired the El Segundo Generating Station in April 1998.
2. The Discharger has filed a Report of Waste Discharge and has applied for renewal of its waste discharge requirements and NPDES permit.
3. The Discharger operates the El Segundo Generating Station, a plant consisting of four steam electric generating units (Units 1 through 4) with a design capacity of 1,020 megawatts, located at 301 Vista del Mar, El Segundo, California. The Plant discharges up to 607 million gallons per day (mgd) of wastes consisting of once-through cooling water, treated chemical metal cleaning wastes, storm water, non-chemical metal cleaning wastes, low volume inplant wastes, and treated sanitary wastes into the Pacific Ocean (Santa Monica Bay), a water of the United States.

Figure 1 shows the location map of the facility.

4. The wastes are discharged through two outfalls, Discharge Serial Nos. 001 and 002, described as follows:
  - a. Discharge Serial No. 001:                      Latitude: 33° 54' 30"  
(Units 1 and 2)                                              Longitude: 118° 25' 50"

Discharge Serial No. 001 consists of two conduits, each approximately 1,900 feet long which terminate at a depth of 20 feet Mean Lower Low Water (MLLW).

- b. Discharge Serial No. 002: Latitude: 33° 54' 27"  
(Units 3 and 4) Longitude: 118° 25' 50"

Discharge Serial No. 002 consists of one conduit that extends approximately 2,100 feet long that terminate at a depth of 20 feet MLLW.

The cooling water intake structure consists of two conduits (Nos. 003 and 004), each providing cooling water for two generating units and extends about 2,600 feet offshore drawing water from a depth of 20 feet MLLW. The 003 and 004 conduits become the discharge points during heat treatment as described below in Finding No. 6.

The Outfalls and the nature of wastes discharged are summarized in Table 1.

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TABLE 1  
 Outfalls and Nature of Wastes Discharged

Discharge Serial No.		001	002
Generating Units Served		1 & 2	3 & 4
Diameter		10 feet	11 feet
Distance Offshore (feet)		1,900	2,100
Depth of Terminus, (feet below Mean Lower Low Water)		20	20
Latitude		33° 54' 30"	33° 54' 27"
Longitude		118° 25' 50"	118° 25' 50"
Maximum Temperature, (°F)	Winter (October to April)	79	86
	Summer (May to September)	88	100
	Heat Treatment/Gate Adjustment	125/135	125/135
Waste Streams (maximum volume, mgd)	Once-through Cooling Water	207.00	398.00
	Chemical Metal Cleaning Wastes <sup>[1]</sup> (Units 1 to 4)		0.06
	Low Volume Wastes <sup>[1]</sup>		
	• Floor Drain Wastes		0.10
	• Boiler Blowdown	0.013 (Units 1 & 2)	0.013 (Units 3&4)
	• Fireside and Air Preheater Wastes		0.6
	• Fuel Pipeline Hydrostatic Test Water		0.8
	• Condenser Sump		0.015
	• Storm Water Runoff	Negligible	Negligible
	• Chemical Laboratory Drains		Negligible
Secondary Treated Sanitary Wastes	0.001 (Plant 1)	0.001 (Plant 2)	
Total Maximum Flow, MGD		207.01	399.59

[1] These flows are intermittent.

5. The chemical metal cleaning wastes from all the units are collected in portable storage tanks and treated to remove metals through a contractor-owned mobile lime treatment unit. The contractor maintains a tiered treatment unit (TTU) permit from the Department of Toxic Substances Control that allows for treatment of hazardous wastes on-site. The chemical metal cleaning operations occur approximately once every five years per generating Unit and discharge occurs every two years. The duration of discharge is normally approximately thirty-six to forty-eight hours per generating unit. The treated metal cleaning wastes and other low volume wastes are stored in a retention basin prior to discharge to the Pacific Ocean through Discharge Serial No. 002.

Storm water runoff and floor drain wastes are passed through oil/water separators before combining with the cooling water and treated sanitary wastes prior to discharge to the Pacific Ocean through Discharge Serial Nos. 001 and 002. However, stormwater runoff from upslope of the facility flows into an easement conveyance then to the beach without commingling with the industrial activity's associated run-off.

Residues in the basins, pretreatment wastes, and oil sludges from oil/water separators are periodically hauled away to legal disposal sites.

Figure 2 shows the Schematic Diagram of the Wastewater Flow.

6. The Discharger controls marine fouling of the cooling water conduits (intake and discharge) by temporarily recirculating (thus increasing the temperature) and reversing the flow of the once-through cooling water alternately in each offshore conduit (i.e., the discharge point becomes the intake point, and the intake point becomes the discharge point). This procedure (referred to as "heat treatment") is typically conducted every six (6) weeks and lasts for about six hours per conduit, with the high temperature lasting for one hour during gate adjustment. During the heat treatment, the temperature of the water discharged through the intake conduit must be raised to 125<sup>0</sup>F (except during gate adjustment) for two hours to kill the fouling organisms. During gate adjustments, the discharge temperature is allowed to reach 135<sup>0</sup>F for no more than 30 minutes. Gate adjustments control the temperature of the water recirculated in the intake and discharge points during heat treatment.

Calcareous shell debris accumulates in the intake structure as a result of heat treatments. Approximately once a year, this shell debris is physically removed and disposed in the Ocean.

7. To control biological growths (defouling), the condenser tubes (arranged in two banks per generating unit, each bank is called condenser half) are treated by intermittently injecting chlorine (in the form of sodium hypochlorite), for a maximum of two (2) hours per generating unit per day, into the cooling water stream.

8. Section 316(b) of the Federal Clean Water Act (Clean Water Act) requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impacts. The U.S. Environmental Protection Agency (USEPA) is in the process of promulgating specific requirements for intake structures.

In accordance with Federal and State guidelines, SCE conducted a study (completed in 1982) that addressed the important ecological and engineering factors specified in Section 316(b) guidelines. The study demonstrated that the ecological impacts of the intake system were of an environmentally acceptable order, and provided sufficient evidence that no modification for the location, design, construction or capacity of the existing systems was required. The design, construction, and operation of the intake structure was then considered Best Available Technology Economically Achievable (BAT) as required by Section 316(b) of the Clean Water Act (CWA).

9. On November 19, 1982, the USEPA promulgated Effluent Guidelines and Standards for "Steam Electric Power Generating Point Source Category" (40 CFR Part 423). These regulations prescribe effluent limitation guidelines for once-through cooling water and various inplant waste streams.

40 CFR 423.12(a) provides that effluent limitations, either more or less stringent than the USEPA standards, may be prescribed if factors relating to the equipment or facilities involved, the process applied, or other such factors are found to be fundamentally different from the factors considered in the establishment of the standards.

10. On June 13, 1994, the Regional Board adopted a revised *Water Quality Control Plan for the Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan). The Basin Plan incorporates by reference the State Water Resources Control Board's Water Quality Control Plans and policies on ocean waters [*Water Quality Control Plan for Ocean Waters In California*, March 22, 1990], temperature [*Water Quality Control Plan for Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California*, amended September 18, 1975], and the antidegradation [*Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Board Water Resources Control Board (State Board) Resolution No. 68-16, October 28, 1968].

11. The Basin Plan contains water quality objectives for and lists the following beneficial uses of waterbodies in the El Segundo/LAX sub-watershed area:

Dockweiler Beaches (Hydrologic Unit 405.12)

Existing: industrial service supply, navigation, water contact recreation, non-contact

water recreation, commercial and sport fishing, marine habitat, and wild habitat.

Potential: spawning, reproduction, and/or early development.

#### Nearshore Zone

Existing: industrial service supply, navigation, water contact recreation, non-contact water recreation, commercial and sport fishing, marine habitat, wild habitat, preservation of biological habitats, rare, threatened, or endangered species, and migration of aquatic organisms.

#### Offshore Zone

Existing: industrial service supply, navigation, water contact recreation, non-contact water recreation, commercial and sport fishing, marine habitat, wild habitat, migration of aquatic organisms, and spawning, reproduction, and/or early development.

12. The Santa Monica Bay Restoration Project (*SMBRP*) (1994) identified the pollutants of concern for the El Segundo sub-watershed to include heavy metals (cadmium, chromium, copper, lead, nickel, silver, zinc), debris, pathogens, oil and grease, and polycyclic aromatic hydrocarbons (PAHs).
13. The 1998 California 303(d) List of impaired water bodies, approved by the USEPA on May 1999, identified Santa Monica Bay (Offshore, Nearshore, and Dockweiler Beach) as impaired with regards to the following pollutants: dichloro-diphenyl trichloroethane (DDT), polychlorinated biphenyls (PCBs), PAHs, chlordane, heavy metals (cadmium, copper, lead, mercury, nickel, silver, zinc), debris, beach closure, and high coliform count.
14. In July 23, 1997, the State Board adopted a revised Water Quality Control Plan for the Ocean Waters of California (Ocean Plan). The revised plan contains water quality objectives for coastal waters of California. This Order includes effluent and receiving water limitations, prohibitions, and provisions that implement the objectives of the Ocean Plan.
15. On May 18, 1972 (amended on September 18, 1975), the State Board adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan). The Thermal Plan contains temperature objectives for the Pacific Ocean. The narrative objectives of the Thermal Plan state that elevated temperature of wastes discharged shall comply with limitations necessary to assure protection of the beneficial uses.

16. To determine compliance with the Thermal Plan and in accordance with Regional Board specifications, SCE conducted a thermal effect study that was completed in 1975. The study demonstrated that wastes discharged at temperature levels prescribed in this Order have no adverse impacts on the beneficial uses of the receiving waters. Thus, the power plant with temperature discharges prescribed in this Order is in compliance with the Thermal Plan.
17. This Regional Board has implemented a Watershed Management Approach to address water quality protection in the region. The objective is to provide a comprehensive and integrated strategy towards water resource protection, enhancement, and restoration while balancing economic and environmental impacts within a hydrologically-defined drainage basin or watershed. It emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with the resources available. This Order fosters the implementation of this approach.
18. The SMBRP developed the *Santa Monica Bay Restoration Plan*, 1994, (Plan) that serves as a blueprint for the restoration and enhancement of the Bay. The Regional Board plays a leading role in the implementation of the Plan. Two of the proposed priorities of the Plan are reduction of pollutants of concern at the source (which include power plants) and implementation of mass emission approach.
19. Several efforts are underway to develop and implement a comprehensive regional monitoring program for the Southern California Bight, in particular, the Santa Monica Bay. These efforts have the support and participation from regulatory agencies, dischargers and environmental groups. The goal is to establish a regional program to address public health concerns, monitor trends in natural resources and nearshore habitats, and assess regional impacts from all contaminant sources, at the same time assess compliance with the NPDES permit. The regional monitoring is projected to be completed in 2002.

The monitoring program in this Order has not been changed from that of the 1994 permit. The Regional Board will conduct a comprehensive review of this monitoring program in conjunction with other monitoring efforts (e.g., Southern California Coastal Water Research Project, Santa Monica Bay Restoration Project, Los Angeles County Municipal Storm Water permit renewal) in 2001/2002. This review will be coordinated with the completion of the regional monitoring program for the Southern California Bight. To incorporate the results of this review and the regional program elements, the monitoring program in this Order will be revised.

20. At times of peak demand during defouling treatment, total residual chlorine (TRC) levels in the once-through cooling water have exceeded effluent limitations based on 40 CFR Part 423 guidelines (0.20 mg/L) and the 1983 Ocean Plan objectives (0.533 mg/L and 0.780

mg/L for Discharge Serial Nos. 001 and 002, respectively. The current Ocean Plan objectives are more stringent. However, chlorination bioassay studies (1988) performed by the Discharger showed no significant adverse impact on the receiving waters as a result of the discharge from the plant.

In 1983, SCE submitted an application for a variance under Section 301(g) of the CWA from the BAT requirements of TRC. In 1984, SCE also applied for a variance for TRC limitations from the 1983 Ocean Plan objectives. In July 1988, the State Board adopted Resolution No. 88-80 that granted an exception from the 1983 Ocean Plan for TRC. The Regional Board and the State Board approved the variance request for TRC and forwarded it to the USEPA in August 1988, for concurrence, pursuant to Section 301(g) of CWA.

21. In May 1996, the USEPA approved the Discharger's request for a variance from BAT for TRC pursuant to Section 301(g) of the CWA with the following conditions:
  - a) The effluent from Discharge Serial Nos. 001 and 002 must meet an alternate proposed modified effluent limitations (PMEL) of 0.4 mg/L TRC (instantaneous maximum) based on daily sampling at Discharge Serial Nos. 001 and 002 during periods of chlorination.
  - b) The effluent from Discharge Serial Nos. 001 and 002 must meet chronic toxicity daily maximum limits of 13 and 19 TUc, respectively. The chronic toxicity tests must be representative of actual discharge conditions (at a minimum) or of the alternate PMEL of 0.4 mg/L. This means that, at a minimum, the effluent samples must be chlorinated in the laboratory to levels consistent with the maximum TRC effluent concentration measured during the previous 3 months' chlorination events. This requirement to chlorinate samples in the laboratory applies only if the recorded effluent chlorine concentrations exceed the BAT limit of 0.2 mg/L during the previous 3 months.
  - c) In the event the effluent chronic toxicity limitations are exceeded at either Discharge Serial Nos. 001 or 002, the Discharger shall increase the monitoring frequency at the subject outfalls to monthly in accordance with the NPDES permit. If the chronic toxicity limit is exceeded again during the accelerated monitoring period, the Discharger shall conduct a toxicity reduction evaluation (TRE). The TRE shall be conducted in accordance with USEPA's most current TRE/toxicity identification evaluation (TIE) manuals.

- d) The Discharger was required to conduct a chlorine residual receiving water study, as set forth in the NPDES permit (December 5, 1994), to assess the impacts of chlorine and chlorine byproducts within the receiving waters during periods of maximum chlorination.
  - e) The variance can be reviewed and revised by USEPA at any time if subsequent information indicates that the alternate PMEL will not result in compliance with all 301(g) criteria. This information includes but is not limited to subsequent chronic toxicity test results, receiving water monitoring data, and TIE/TRE findings indicating that the discharge of TRC at concentrations greater than the BAT limit of 0.2 mg/L results in exceedance of toxicity limit.
22. Before exercising the 301(g) variance, in 1996, the Discharger conducted chronic toxicity testing of effluent samples artificially spiked with chlorine in the laboratory for both the BAT level (0.2 mg/L) and the maximum chlorine level (0.4 mg/L) allowed by the 301(g) variance. The toxicity levels did not differ between the BAT and 301(g) spiked samples (3.25 TUc) and were below the Ocean Plan based limits of 13 and 19 TUc for Discharge Serial Nos. 001 and 002, respectively. In 1997 to 1999, the Discharger's average exceedance of the BAT limit was twice a month based on daily monitoring.
- In 1987 in coordination with the City of Los Angeles Department of Water and Power, SCE conducted a study on the concentrations of chlorine measured in the receiving water during chlorination of the condensers. The study was done in response to State Board's concerns prior to the issuance of State Board's Resolution 88-80 (see Finding No. 20, paragraph 2). The study showed that chlorine was not detected outside the zone of initial dilution during a chlorination event.
23. Based on the 1996 chronic tests results, the infrequent exceedance of the BAT limit for TRC, and findings of the 1987 study on chlorine concentrations in the receiving water (all mentioned in Finding No. 23), the receiving water study on the impact of chlorine discharge required in the December 5, 1994 permit was determined to be no longer necessary.
24. In accordance with the December 5, 1994, NPDES permit (Footnote No. 3., Item II.A.1., Monitoring and Reporting Program CI-4667), the Discharger conducted a study on November 23, 1994, to determine the time during the chlorination cycle that the peak residual chlorine concentration occurs in the ocean discharge to ensure that compliance monitoring samples for TRC are collected at the time of highest chlorine level in the stations' combined effluent. The study indicated that the maximum (peak) levels of chlorine in the effluent occur about 35 minutes from the start of chlorination. After the study, the Discharger modified their sampling procedures in accordance with the above-

mentioned results to ensure that compliance monitoring samples are collected at or near (within few minutes of) the time of peak chlorine levels in the effluent.

However, subsequent testing done by the Discharger from the end of March to June 2000, indicates that at Discharge Serial No. 001, the highest chlorine level occurs between 20 to 30 minutes from the start of chlorination and at Discharge Serial No. 002, the highest chlorine level occurs between 25 to 35 minutes from the start of chlorination. The peak chlorine level can vary from day to day.

25. Effluent limitations based on Ocean Plan objectives were calculated using a minimum dilution ratio (i.e., parts seawater to one part effluent) of 12 to 1 for Discharge Serial No. 001, and 18 to 1 for Discharge Serial No. 002; except for residual chlorine which is 13 to 1 and 19 to 1 for Discharge Serial Nos. 001 and 002, respectively. These ratios were based on calculations made by SCE and approved by the State Board (transmitted to the Regional Board in a State Board memorandum dated February 4, 1985).
26. For toxic constituents regulated in the Ocean Plan (Table B) that the Discharger does not add or produce in the treatment process and/or waste streams, no numerical limits are prescribed. Also, no numerical limits are prescribed for toxic constituents that are added, but whose usage has shown that there is very low probability of causing, or contributing to exceedance of the water quality standards. However, a narrative limit to comply with all Ocean Plan objectives is provided. Also, the Discharger is required to monitor for all the priority pollutants once during the term of the permit.
27. Acute toxicity monitoring conducted over five years (1990 through 1994) demonstrated consistent compliance with, and no reasonable potential for exceeding the Ocean Plan objectives. As such, no numerical limits were prescribed for acute toxicity after 1994. However, a narrative limit to comply with all Ocean Plan objectives is provided.
28. Pursuant to Section 402(p) of the Clean Water Act and 40 CFR Parts 122, 123, and 124, the State Board adopted a general NPDES permit to regulate stormwater discharges associated with industrial activity (State Board Order No. 91-13-DWQ adopted in November 1991, amended by Order No. 92-12-DWQ adopted in September 1992, and renewed by Order No. 97-03-DWQ adopted on April 17, 1997). Storm water discharges from power plants are subject to requirements under this general permit. The Discharger has developed and implemented a Storm Water Pollution Prevention Plan (SWPPP) since 1992.
29. Effluent limitations and guidelines, national standards of performance, and toxic effluent standards established pursuant to Sections 208, 301, 302, 303, 304, 306, 307, and 316 of the Federal Clean Water Act, and amendments thereto, are applicable to the discharge.

30. The requirements contained in this Order, as they are met, will be in conformance or in compliance with the goals of the aforementioned water quality control plans and statutes.
31. Pursuant to California Water Code Section 13320, any aggrieved party may seek review of this Order by filing a petition to the State Board. A petition must be sent to the State Water Resources Control Board, P.O. Box 100, 901 P. Street, Sacramento, CA 95812, within 30 days of adoption of this Order.
32. 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.

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

The Regional 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, USEPA Region 9, has no objections.

IT IS HEREBY ORDERED that El Segundo Power, LLC, 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. DISCHARGE LIMITATIONS

A. EFFLUENT LIMITATIONS

1. Wastes discharged shall be limited to those described in the findings only, as proposed.
2. The temperature of wastes discharged shall not exceed 105<sup>0</sup>F during normal operation of the facility. During heat treatment, the temperature of wastes discharged shall not exceed 125<sup>0</sup>F except during adjustment of the recirculation gate at which time the temperature of wastes discharged shall not exceed 135<sup>0</sup>F. Temperature fluctuations during gate adjustment above 125<sup>0</sup>F shall not last for more than 30 minutes.
3. The effluent pH shall at all times be within the range of 6.0 to 9.0 pH units.

4. The discharged of wastes from Discharge Serial Nos. 001 and 002 with constituents in excess of the following limits is prohibited:

a. Discharge Serial No. 001:

DISCHARGE LIMITATIONS<sup>[1]</sup>

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
Arsenic	µg/L	68	380
Cadmium	µg/L	13	52
Chromium <sup>[2]</sup> (hexavalent)	µg/L	26	104
Copper	µg/L	15	132
Lead	µg/L	26	104
Mercury	µg/L	0.51	2.07
Nickel	µg/L	65	260
Selenium	µg/L	195	780

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For footnotes, see page 13

a. Discharge Serial No. 001: (continued)

		<u>DISCHARGE LIMITATIONS<sup>[1]</sup></u>	
<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
Silver	µg/L	7	35
Zinc	µg/L	164	944
Chronic toxicity <sup>[3]</sup>	TUc	---	13
Radioactivity	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30269 of the California Code of Regulations.		

[1] Concentration limits are based on Ocean Plan objectives using a dilution ratio of 12 parts of seawater to 1 part effluent. Metals limits are for total recoverable form.

[2] The Discharger has the option to meet the hexavalent chromium limitations with a total chromium analysis. However, if the total chromium level exceeds the hexavalent chromium limitation, it will be considered a violation unless an analysis has been made for hexavalent chromium in a replicate sample and the result is in compliance with the hexavalent chromium limits.

[3] Expressed as Chronic Toxicity Units (TU<sub>c</sub>)

$$TU_c = 100/NOEC$$

where: NOEC (No Observed Effect Concentration) is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism as determined by the result of a critical life stage toxicity test listed in Appendix II of the Ocean Plan adopted and effective on July 23, 1997, pages 23-24.

NOEC shall be determined based on toxicity tests having chronic endpoints.

b. Discharge Serial No. 002:

		<u>DISCHARGE LIMITATIONS</u> <sup>[4]</sup>	
<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
Arsenic	µg/L	98	554
Cadmium	µg/L	19	76
Chromium <sup>[5]</sup> (hexavalent)	µg/L	38	152
Copper	µg/L	21	192
Lead	µg/L	38	152
Mercury	µg/L	0.75	3.03
Nickel	µg/L	95	380
Selenium	µg/L	285	1,140
Silver	µg/L	10.4	50.3
Zinc	µg/L	236	1,376
Chronic toxicity <sup>[6]</sup>	TU <sub>c</sub>	---	19

Radioactivity Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30269 of the California Code of Regulations.

[4] Concentration limits are based on Ocean Plan objectives using a dilution ratio of 18 parts of seawater to 1 part effluent. Metals limits are for total recoverable form.

[5] The discharger has the option to meet the hexavalent chromium limitations with a total chromium analysis. However, if the total chromium level exceeds the hexavalent chromium limitation, it will be considered a violation unless an analysis has been made for hexavalent chromium in a replicate sample and the result is in compliance with the hexavalent chromium limits.

[6] Expressed as Chronic Toxicity Units (TU<sub>c</sub>)

$$TU_c = 100/NOEC$$

where: NOEC (No Observed Effect Concentration) is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism as determined by the result of a critical life stage toxicity test listed in Appendix II of the Ocean Plan adopted and effective on July 23, 1997, pages 23-24.

NOEC shall be determined based on toxicity tests having chronic endpoints.

5. The discharge of wastes from Discharge Serial Nos. 001 and 002 with constituents in excess of the following concentration limits is prohibited:

DISCHARGE LIMITATIONS

<u>Constituent</u>	<u>Units</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
Total residual chlorine <sup>[7,8]</sup>	mg/L	---	0.4
Free available chlorine	mg/L	0.2	0.5

[7] Based on the U. S. EPA approved variance from BAT for TRC pursuant to Section 301(g) of the CWA based on daily sampling at Discharge Serial Nos. 001 and 002 during periods of chlorination. Total residual chlorine may not be discharged from any single generating unit for more than 30 minutes per condenser half per shift. For chlorine discharges of up to 30 minutes for Discharge Serial No. 001, and up to 35 minutes for Discharge Serial No. 002, the daily maximum limit is 0.4 mg/l. For chlorine discharges exceeding 30 minutes (Discharge Serial No. 001) and 35 minutes (Discharge Serial No. 002), the applicable total residual chlorine limitations shall be calculated using the same methodology as was used to support the State Ocean Plan exception (1983 Ocean Plan).

[8] If other oxidants are used, this shall be the total of all oxidants reported as residual chlorine.

6. Effluent Limitations for Inplant Waste Streams:

- a. The discharge of Chemical Metal Cleaning Wastes<sup>[9]</sup> with constituents in excess of the following limits is prohibited:

DISCHARGE LIMITATIONS

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
Suspended solids	mg/L	30	100
Oil and grease	mg/L	15	20
Copper, total	mg/L	1.0	1.0
Iron, total	mg/L	1.0	1.0

[9] For the purpose of these limitations, metal cleaning wastes shall mean any wastewater resulting from chemical cleaning of any metal process equipment including, but not limited to, boiler tube, boiler fireside, and air preheaters.

- b. The discharge of Low Volume Wastes with constituents in excess of the following limits is prohibited:

DISCHARGE LIMITATIONS

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
Suspended solids	mg/L	30	100
Oil and grease	mg/L	15	20

- c. The discharge of an effluent from the Sanitary Wastewater Treatment Plant Nos. 1 and 2 with constituents in excess of the following limits is prohibited:

<u>DISCHARGE LIMITATIONS</u>			
<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
BOD <sub>5</sub> 20 <sup>o</sup> C	mg/L	30	45
Suspended solids	mg/L	30	45
Settleable solids	ml/L	0.1	0.3
Oil and grease	mg/L	10	15

- d. In the event that waste streams from various sources (6-a and 6-b) are combined for treatment or discharge, the quantity of each pollutant property attributable to each controlled waste source shall not exceed the specified limitation for that waste source.

**B. RECEIVING WATER LIMITATIONS**

1. Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Regional Board, but including all kelp beds, the discharge shall not cause the following bacterial objectives through out the water column to be exceeded:
  - a. Samples of water from each sampling station shall have a density of total coliform organisms less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at any sampling station, in any Monthly period, may exceed 1,000 per 100 ml (10 per ml); and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml).

- b. The fecal coliform density based on a minimum of not less than five samples for any Monthly period, shall not exceed a geometric mean of 200 per 100 ml, nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100 ml.
2. At all areas where shellfish may be harvested for human consumption, as determined by the Regional Board, the discharge shall not cause the following bacteriological objectives throughout the water column to be exceeded:  
  
The median total coliform concentration for any 6-month period shall not exceed 70 per 100 ml, and not more than 10 percent of the samples during any 60-day period shall exceed 230 per 100 ml.
3. If a shore station consistently exceeds a total or fecal coliform objective or exceeds a geometric mean enterococcus density of 24 organisms per 100 ml for a Monthly period, or 12 organisms per 100 ml for a six-month period, the discharger shall conduct a sanitary survey to determine if the discharge is the source of the contamination.
4. Floating particulates and oil and grease shall not be visible as a result of wastes discharged.
5. Wastes discharged shall not alter the color of the receiving waters; create a visual contrast with the natural appearance of the water; nor cause aesthetically undesirable discoloration of the ocean surface.
6. The transmittance of natural light shall not be significantly reduced at any point outside the zone of initial dilution as a result of wastes discharged.
7. The rate of deposition and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded as a result of wastes discharged.
8. The wastes discharged shall not depress the dissolved oxygen concentration outside the zone of initial dilution at any time by more than 10 percent from that which occurs naturally, excluding effects of naturally induced upwelling.
9. The wastes discharged shall not change the pH of the receiving waters at any time by more than 0.2 units from that which occurs naturally outside the zone of initial dilution.

10. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions as a result of wastes discharged.
11. The wastes discharged shall not increase the concentrations, in marine sediments of toxic substances listed in Table B of the Ocean Plan, to levels that would degrade indigenous biota.
12. The concentration of organic materials in marine sediments shall not be increased above that which would degrade marine life as result of wastes discharged.
13. The wastes discharged shall not cause objectionable aquatic growths or degrade indigenous biota.
14. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded as a result of wastes discharged.
15. The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health as a result of wastes discharged.
16. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered as a result of wastes discharged.
17. The wastes discharged shall not cause objectionable odors to emanate from the receiving waters.
18. The wastes discharged shall not cause receiving waters to contain any substance in concentrations toxic to human, animal, plant, or fish life.
19. No physical evidence of wastes discharged shall be visible at any time in the water or on beaches, shores, rocks, or structures.
20. The salinity of the receiving waters shall not be changed by the wastes discharged to an extent such as to be harmful to marine biota.
21. The wastes discharged shall not contain an individual pesticide or combination of pesticides in concentrations that adversely affect beneficial uses.

II. REQUIREMENTS AND PROVISIONS

- A. Discharge of unpermitted wastes to any point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.
- B. The Discharger shall comply with all applicable effluent limitations, national standards of performance, and all federal regulations established pursuant to Sections 301, 302, 303(d), 304, 306, 307, and 316 of the Federal Clean Water Act, and 50 CFR 423, and amendments thereto.
- C. In the determination of compliance with the monthly average limitations, the following provisions shall apply to all constituents:
1. If the analytical result of a single sample, monitored monthly or at a lesser frequency, does not exceed the monthly average limit for that constituent, the Discharger will have demonstrated compliance with the monthly average limit for that month.
  2. If the analytical result of a single sample, monitored monthly or at a lesser frequency, exceeds the Monthly average limit for any constituent, the Discharger shall collect three additional samples at approximately equal intervals during the month. All four analytical results shall be reported in the monitoring report for that month, or 45 days after the sample was obtained, whichever is later.  
  
If the numerical average of the analytical results of these four samples does not exceed the monthly average limit for that constituent, compliance with the Monthly average limit has been demonstrated for that month. Otherwise, the monthly average limit has been violated.
  3. If Item II.C.2. has not been implemented, and the result of one sample (Item II.C.1) exceeds the monthly average, then the Discharger is in violation of the monthly average limit.
  4. In the event of noncompliance with a monthly average effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the monthly average effluent limitation has been demonstrated.
- D. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction, including applicable

requirements in municipal storm water management programs developed to comply with NPDES permits issued by this Regional Board to local agencies.

- E. This Order includes the attached "Standard Provisions and General Monitoring and Reporting Requirements (March 1, 1999)" (Standard Provisions, Attachment N). If there is any conflict between provisions stated hereinbefore and the attached "Standard Provisions", those provisions stated hereinbefore prevail.
- F. This Order includes the attached Monitoring and Reporting Program (Attachment T). If there is any conflict between provisions stated in the Monitoring and Reporting Program and the Standard Provisions, those provisions stated in the Monitoring and Reporting Program prevail.
- G. The Discharger shall comply with the applicable requirements, such as the SWPPP updates and Monitoring and Reporting Program, of State Board' s general permit for Discharges of Storm Water Associated with Industrial Activities (State Water Resources Control Board Order No. 97-03-DWQ adopted on April 17, 1997).
- H. The Discharger shall provide standby or emergency power facilities and/or wastewater storage capacity or other means at its sanitary water treatment plants so that in the event of a power outage due to power failure or other cause, discharge of raw or inadequately treated waste does not occur.
- I. The wastes discharged shall comply with all Ocean Plan objectives.
- J. The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States is prohibited unless specifically authorized elsewhere in this permit. This requirement is not applicable to products used for lawn and agricultural purposes. Discharge of chlorine for disinfection in plant potable and service water systems and in sewage treatment is authorized.
- K. The Discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this Order.
- L. There shall be no discharge of polychlorinated biphenyl compounds such as those once commonly used for transformer fluid.

M. The Discharger shall notify the Executive Officer in writing no later than six months prior to planned discharge of any chemical, other than chlorine or other product previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

- ◆ Name and general composition of the chemical,
- ◆ Frequency of use,
- ◆ Quantities to be used,
- ◆ Proposed discharge concentrations, and
- ◆ USEPA registration number, if applicable.

No discharge of such chemical shall be made prior to obtaining approval from the Executive Officer.

N. The Regional Board and USEPA shall be notified immediately by telephone, but no later than 24-hours, of the presence of adverse conditions in the receiving waters or on beaches and shores as a result of wastes discharge. Written confirmation shall follow as soon as possible but not later than five working days after the Discharger became aware of the incident.

O. This Order may be modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR Parts 122.44, 122.62, 122.63, 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to: failure to comply with any condition of this Order and permit, endangerment to human health or the environment resulting from the permitted activity; or acquisition of newly obtained information which would have justified the application of different conditions if known at the time of Order adoption and issuance.

Following submission of the intake benthic monitoring study, the Executive Officer shall either (1) propose to the Regional Board modifications to this permit, as appropriate, or (2) provide a report to the Board summarizing the results of the study and indicating why modifications to the permit are not proposed.

The filing of a request by the Discharger for an Order and permit modification, revocation and issuance, or termination; or a notification of planned changes or anticipated noncompliances does not stay any condition of this Order and permit.

III. EXPIRATION DATE

This Order expires on May 10, 2005.

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 expiration date as application for issuance of new waste discharge requirements.

V. RESCISSION

Order No. 94-129, adopted by this Board on December 5, 1994, is hereby rescinded, except for enforcement purposes.

I, Dennis A Dickerson, 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 June 29, 2000.

Dennis A. Dickerson  
Executive Officer