

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

**ORDER NO. 01-079  
NPDES NO. CA0001171**

**WASTE DISCHARGE REQUIREMENTS  
FOR  
LONG BEACH GENERATION LLC  
(Long Beach Generating Station)**

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

**Background**

1. Long Beach Generation LLC (Discharger) discharges wastes from its Long Beach Generating Station under waste discharge requirements contained in Order No. 94-130, adopted by this Board on December 5, 1994. This Order serves as a permit under the National Pollutant Discharge Elimination System (NPDES No. CA0001171).
2. The Discharger has filed a Report of Waste Discharge and has applied for renewal of its waste discharge requirements and NPDES permit.

**Purpose of Order**

3. This NPDES permit regulates the discharges of wastewater consisting of once-through cooling water, and low volume wastes<sup>1</sup> into the Long Beach Harbor, a water of the United State. These discharges were previously permitted by Waste Discharge Requirements contained in Order No. 94-130, adopted by this Regional Board on December 5, 1994. The purpose of this order is to renew Waste Discharge Requirements for Long Beach Generating Station.

**Description of Facility Operations**

4. The Discharger operates the Long Beach Generating Station, with 560 megawatts design capacity, at 2665 West Seaside Boulevard, Long Beach, California. The Long Beach Generating Station discharges up to 265 million gallons per day (mgd) of wastes consisting of once-through cooling water from two steam electric generating units, and low volume wastes into the Long Beach Harbor, a water of the United States. The wastes are discharged through a channel bank outfall structure at Berth 114 (Discharge Serial No. 001) (Latitude: 33° 45' 53", Longitude: 118° 13' 17"). Groundwater system wastes are collected and flow through a floatation type oil/water separator before being discharged into the retention basin. The oil recovery system processes oily wastes

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<sup>1</sup> consisting of boiler and evaporator blowdown, water softener regeneration wastes, groundwater well point system wastes, yard drains, tank farm drains, plant drains, laboratory drains, and oil recovery system wastes.

skimmed from the retention basins. Low volume wastes from the facility flow into the retention basin and are then discharged along with the once-through cooling water to the Long Beach Harbor through the same outfall point. However, during maintenance of the retention basin or the once-through cooling system, low volume wastes are discharged directly to the Long Beach Harbor through the same outfall point. Residues in the basins are periodically hauled away to a legal disposal site. Figures 1 shows the location map of the facility.

5. The cooling water intake structure is located northeast of the plant at the west bank of Back Channel and draws water from an opening which is between 12 and 42 feet below the surface of the water.
6. The operations contributing to flow at the Long Beach Generating Station includes:

<u>Operation</u>	<u>Flow<sup>2</sup></u> (mgd)	<u>Treatment Description</u>
Once-through Cooling Water	261	Ocean Discharge
Boiler Blowdown	0.3	Retention & Ocean Discharge
Yard Drains	1.2	Retention & Ocean Discharge
Plant Drains	0.07	Oil Removal, Retention, & Ocean Discharge
Groundwater Well Point System	1.44	Oil Removal, Retention, & Ocean Discharge
Softener Regeneration	0.05	Retention & Ocean Discharge
Oil Recovery System	0.156	Oil Removal, Retention, & Ocean Discharge
Fuel Storage Ground Water Well Point (Tank Farm Drains)	0.504	Oil Removal, Retention, & Ocean Discharge
Chemical Laboratory Drains	Negligible	Ocean Discharge
Fuel Storage Yard Drains	Negligible	Oil Removal, Retention, & Ocean Discharge

Figure 2 shows the schematic diagram of the wastewater flow.

### **Description of Waste Discharges**

7. The waste are discharged through the outfall 001 and wastewater characteristics are described as follows:
  - A. Discharge Serial No. 001:
 

Latitude 33° 45' 53" and Longitude 118° 13'17"

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<sup>2</sup> Flows are estimates based on maximum pump capacities.

8. The waste streams consist of once through cooling water (steam condensers), and low volume wastes.
9. The effluent characteristics as reported in the permit application follows:

<u>Constituent</u>	<u>Units</u>	<u>30-Day Average</u>	<u>Daily Maximum</u>
Flow	mgd	----	264.7
Temperature			
Winter (Oct. - April)	°F	97.5	NA
Summer (May - Sept.)	°F	99.6	108.2 <sup>3</sup>
pH	pH units	----	7.7-8.25
BOD <sub>5</sub> 20°C	mg/L	----	<1.0
COD	mg/L	----	28
Total suspended solids	mg/L	----	86
Bromide	mg/L	----	48
Total residual chlorine	mg/L	----	0.2
Fecal coliform	MPN/100ml	----	<2
Fluoride	mg/L	----	0.8
Nitrate-Nitrite (as Nitrogen)	mg/L	----	0.2
Nitrogen (Total organic)	mg/L	----	<0.5
Oil and grease	mg/L	----	4.0
Phosphorous	mg/L	----	0.1
Aluminum	mg/L	----	0.159
Barium	mg/L	----	<0.01
Boron	mg/L	----	4.27
Iron	mg/L	----	0.28
Magnesium	mg/L	----	985
Arsenic	mg/L	----	<0.02
Beryllium	mg/L	----	<0.02
Cadmium	mg/L	----	<0.003
Chromium (Total)	mg/L	----	<0.02
Copper	mg/L	----	0.016
Lead	mg/L	----	<0.007
Mercury	mg/L	----	<0.0001
Nickel	mg/L	----	<0.015
Selenium	mg/L	----	<0.05
Silver	mg/L	----	<0.002
Zinc	mg/L	----	<0.05
Cyanide	mg/L	----	<0.02
Phenols	mg/L	----	<0.1
Alpha, Total	pCi/L	----	1

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<sup>3</sup> During heat treatment

<u>Constituent</u>	<u>Units</u>	<u>30-Day Average</u>	<u>Daily Maximum</u>
Beta, Total	pCi/L	----	967
Radium, Total	pCi/L	----	0.3
Sulfate (as SO <sub>4</sub> )	mg/L	----	1960
Sulfite (as SO <sub>3</sub> )	mg/L	----	<2.0

All other priority pollutants were not reported or reported as non-detected.

10. Over the five-year period between December 1994 and August 2000, the Discharger had eight exceedances of the 30-day average for total suspended solid, total residual chlorine, temperature, and copper. Exceedances were recorded in November and December of 1996, June of 1998, March, April, October and December of 1999, and January of 2000. Non-compliance issues have been referred to the Enforcement Unit.

11. The Discharger controls marine fouling of the cooling water conduits (intake and discharge) by temporarily recirculating and reversing the flow through the once-through cooling water intake system and by increasing temperature of the circulating water to 125°F (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 weeks and lasts for about two hours per conduit .

Intermittently, each of the condenser tubes is treated for control of biological growth by injection of chlorine (in the form of sodium hypochlorite) into the cooling water stream for a maximum of two hours per generating unit per day.

12. Calcareous shell debris accumulates in the intake structure as a result of the heat treatment. Approximately once a year, these shell debris may be physically removed from the intake structure for disposal in the Back Channel.

**Storm Water Management**

13. Long Beach Generating Station currently does not separate process wastewater from storm water runoff. The storm water is collected in a holding retention basin and discharged to the Long Beach Harbor via Discharge Serial No. 001. During major storm events the storm water runoff is discharged directly to the ocean.

14. Pursuant to Section 402(p) of the Clean Water Act and 40 CFR Parts 122, 123, and 124, the State Water Resource Control Board (State Board) adopted a general NPDES permit to regulate storm water 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, NPDES Permit No. CAS000001 adopted on April 17, 1997). Storm water discharges from power plants are subject to requirements under this general permit. The Discharger has implemented

a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the general NPDES permit for storm water discharges.

### **Applicable Plans, Policies, and Regulations**

15. 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.
16. In accordance with Federal and State guidelines for Section 316(b) of the Clean Water Act, the Discharger conducted a study to determine whether the cooling water intake structures are in compliance with regulations established pursuant to Section 316(b) of the Clean Water Act. The study, adequately addressed the important ecological and engineering factors specified in the guidelines, demonstrated that the ecological impacts of the intake system are environmentally acceptable, and determined that no modification of the intake structure is required. The design, construction and operation of the intake structure represents Best Available Technology as required by Section 316(b) of the Clean Water Act.
17. On November 19, 1982, the U.S. Environmental Protection Agency (USEPA) promulgated *Effluent Guidelines and Standards for the 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) includes provisions to adjust the limitations in 40 CFR Part 423 for in-plant waste streams for certain plants where the factors used in developing the limitations are significantly different from those associated with the equipment or facilities involved.
18. On July 23, 1997, the State Board adopted the revised *Water Quality Control Plan for the Ocean Waters of California* (Ocean Plan). The Ocean plan contains water quality objectives for the coastal waters of California. This Order includes effluent and receiving water limitations, prohibitions, and provisions which implement the objectives of the Ocean Plan.
19. On May 18, 1972, (amended on September 18, 1975), the State Board adopted the *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 Long Beach Harbor.

In compliance with Implementation Provision 3 of the Thermal Plan and in accordance with Regional Board specification, the Discharger conducted a thermal effects study. The study demonstrated that waste discharges from the power plant are in compliance with the Thermal Plan and beneficial uses of the receiving waters are protected, as required by Section 316 (a) of the Clean Water Act.

20. On June 13, 1994, the Regional Board adopted a revised *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) as amended on January 27, 1997 by Regional Board Resolution No. 97-02. The Basin Plan (i) designates beneficial uses for surface and groundwaters, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state antidegradation policy (*Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Board Resolution No. 68-16, October 28, 1968), and (iii) describes implementation programs to protect all waters in the Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The 1994 update of the Basin Plan has been prepared to be consistent with all State and Regional Board plans and policies adopted to date. This Order implements the plans, policies and provisions of the Regional Board's Basin Plan.
21. The beneficial uses of the receiving water (Long Beach Harbor) are: industrial service supply; non-contact water recreation; ocean commercial and sport fishing; preservation of rare and endangered species; navigation; marine habitat; and saline water habitat.

The requirements in this Order are intended to protect designated beneficial uses and enhance the water quality of the watershed.

22. **Watershed Approach.** The Regional Board has implemented a Watershed Management Approach, in accordance with *Watershed Protection: A Project Focus* (EPA841-R-95-003, August 1995), to address water quality protection in the Los Angeles Region. Programs covered under the Watershed Management Initiative include regulatory (e.g., NPDES), monitoring and assessment, basin planning and water quality standards, watershed management, wetlands, total maximum daily loads (TMDLs), 401 certifications, groundwater (as appropriate), and nonpoint source management activities. The Watershed Management Approach integrates the Regional Board's many diverse programs, particularly, permitting, planning, and other surface-water oriented programs. 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 approach facilitates a more accurate assessment of cumulative impacts of pollutants from both point and nonpoint sources.

The Los Angeles Region encompasses ten Watershed Management Areas (WMA) which are the geographically defined watershed areas where the Regional Board implements the watershed approach. The Board has enumerated significant issues in each of the WMAs. Significant watershed issues in the Los Angeles/Long Beach Harbors Watershed Management Area for the coastal waters are:

- Historic deposits of DDT and PCBs in sediment;
- Discharges from POTW & refineries;
- Spills from ships and industrial facilities;

- Leaching of contaminated groundwater; and
- Impairments: from historic pesticides and from dredge material.

Pursuant to this Regional Board's Watershed Initiative Chapter January 2000, the Los Angeles/Long Beach Harbors Watershed areas are targeted for the 2001-2002 fiscal year.

23. **Executive Order D-22-01.** On February 8, 2001, the State and Regional Boards received the Governor's Executive Order D-22-01 concerning the California electricity supply shortage that requires that all existing power plants increase their generation output. The Governor's Executive Order provides, in part, that "power plants in the State of California are not precluded from operating as a result of thermal limits in waste discharge requirements."

This permit is consistent with the Governor's Executive Order D-22-01 to responsibly address the energy emergency and is consistent with the objectives of environmental protection.

24. 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.
25. The Ocean Plan exception granted via State Board Resolution 88-80 on July 21, 1988 allowed for the discharge of total residual chlorine (TRC) at levels above the 40 CFR Part 423 guidelines (0.20 mg/L) and 1983 Ocean Plan objectives (0.533 mg/L for the 30-day average and 0.780 mg/L for the maximum) for Discharge Series No. 001. The current Ocean Plan objectives for TRC are more stringent. However, chlorination bioassay studies performed by the Discharger showed no significant adverse impact on the receiving waters as a result of the chlorine levels in the discharge.
26. In September 1984, the Discharger submitted an application for variance under Section 301 (g) of the Clean Water Act from the Best Available Technology (BAT) requirements of Section 301 (b) (2) (F) for the nonconventional pollutant chlorine in accordance with the USEPA draft guidelines for the Clean Water act 301 (g) variance, and requested for variance from the effluent limitations for total chlorine residual based on the California Ocean Plan objectives.

The Discharger rescinded the application for a 301(g) variance from BAT for chlorine prior to action by USEPA.

27. On October 3, 1994, this Board issued a letter approving the use of chlorine and/or bromine as a microfouling biocide for the cooling water system. If chlorine is not used by itself, the Discharger is instructed to report the total residual oxidants, instead of total residual chlorine, in the monitoring report. Method of analysis should be Amperometric Titration Method.

28. The requirements contained in this Order, as they are met, will be in conformance or in compliance with the goals of the aforementioned water control plans and statutes.
29. Effluent limitations based on the California Ocean Plan numerical objectives were calculated using a minimum dilution ratio (i.e., parts sea water to one part effluent) of 3.2 to 1 for Discharge Serial No. 001. This ratio is based on calculations made by the Discharger and approved by the State Board (transmitted to the Regional Board in a State Board memorandum dated February 4, 1985).
30. For toxic constituents regulated in the Ocean Plan (Table B) which the Discharger does not add into or produce in the treatment process and/or waste streams, no numerical limits are prescribed. Also, no numerical limits are prescribed for toxic constituents which are added but usage has been determined that there is very low probability of causing or contributing to excursions in 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.
31. Acute toxicity monitoring conducted during the previous permit cycle (1990 through 1994) demonstrated consistent compliance with, and no reasonable potential for exceeding the Ocean Plan objectives. Hence, no numerical limits are prescribed for acute toxicity; the constituent is covered with a narrative limit to comply with all Ocean Plan objectives provided.
32. 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.
33. 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 (California Environmental Quality Act) in accordance with Water Code Section 13389.

#### **Notification**

34. The Regional Board has notified the Discharger and interested agencies and persons of its intent to issue waste discharge requirements for this discharge and has provided them with an opportunity to submit their written views and recommendations.
35. The Regional Board, in a public hearing, heard and considered all comments pertaining to the discharge and to the tentative requirements.
36. 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, has no objections.

37. Pursuant to California Water Code Section 13320, any aggrieved party may seek review of this Order by filing a petition with the State Board. A petition must be sent to the State Water Resources Control Board, P.O. Box 100, 1001, I Street, Sacramento, California, 95812, within 30 days of adoption of the Order.

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, has no objections.

**IT IS HEREBY ORDERED** that the Long Beach Generation 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 thirty minutes.
3. The effluent pH shall at all times be within the range of 6.0 to 9.0 pH units.
4. The wastes discharged from Discharge Serial No. 001, with constituents in excess of the following limits are prohibited:

<u>Constituent</u>	<u>Unit of Measurement</u>	<u>DISCHARGE LIMITATIONS<sup>[1]</sup></u>	
		<u>Monthly Average</u>	<u>Daily Maximum</u>
Arsenic	µg/L	24	125
	lbs/day	53	276
Cadmium	µg/L	4.2	17
	lbs/day	9.3	37.6
Chromium(VI) <sup>[2]</sup>	µg/L	8.4	34
	lbs/day	18.6	75.1
Copper	µg/L	6.2	44
	lbs/day	13.7	97.2
Lead	µg/L	8.4	34
	lbs/day	18.6	75.1
Mercury	µg/L	0.17	0.67
	lbs/day	0.38	1.48
Nickel	µg/L	21	84
	lbs/day	46.4	185.6
Selenium	µg/L	63	252
	lbs/day	139	557
Silver	µg/L	2.4	11
	lbs/day	5.3	24.3
Zinc	µg/L	58	310
	lbs/day	128	685
Chronic Toxicity <sup>[3]</sup>	Tu <sub>c</sub>	---	4.2
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 or subsequent revisions.		

<sup>[1]</sup> Based on California Ocean Plan Criteria using a minimum initial dilution of 3.2 to 1

(Receiving Water : Effluent). The discharge mass limitations (in lbs/day) for the discharge point (Discharge Serial No. 001) shall be determined using the tabulated concentration limits and maximum flow rate of the discharge point. The maximum discharge flow rate for outfall 001 is 265 mgd.

<sup>[2]</sup> The discharger has the option to meet the chromium (VI) limitation with a total chromium analysis. However, if the total chromium level exceeds the chromium (VI) limitation, it will be considered a violation unless an analysis has been made for chromium (VI) in a replicate sample and the result show within the chromium (VI) limits.

<sup>[3]</sup> The chronic toxicity of the effluent shall be expressed and reported in Chronic Toxicity Units (TU<sub>c</sub>), where:

$$TU_c = 100/NOEC$$

The No Observed Effect Concentration (NOEC) 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 on page 24 in Appendix II of the California Ocean Plan, adopted and effective on March 20, 1997. NOEC shall be determined based on toxicity tests having chronic endpoints.

#### 5. Preparation of an Initial Investigation TRE Workplan

The Discharger shall prepare and submit a copy of the Discharger's initial investigation TRE workplan to the Executive Officer of the Regional Board for approval within 180 days of the effective date of this permit. If the Regional Board Executive Officer does not disapprove the workplan within 60 days, the workplan shall become effective. The Discharger shall use USEPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance. This workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at a minimum:

- a. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency;
- b. A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the facility; and,
- c. If a TIE is necessary, an indication of the person who would conduct the TIE (i.e., an in-house expert or an outside contractor). See MRP No. 5764, Section III.B.4.b for the guidance manuals.

#### 6. Chlorine Limitations:

The discharge of an effluent from Discharge Serial No. 001 in excess of the following limits is prohibited :

<u>Constituents</u>	<u>Units</u>	<u>Discharge Limitation<sup>[4]</sup></u>	
		<u>Daily Average</u>	<u>Instantaneous Maximum</u>
Total residual chlorine <sup>[5], [5a]</sup>	mg/L	----	0.2
	lbs/day	----	442
Free available chlorine <sup>[6]</sup>	mg/L	0.2	0.5
	lbs/day	442	1105

<sup>[4]</sup> The daily mass emission limits (lbs/day) is determined using the tabulated concentration limits and the permitted maximum flow (265 mgd). For daily discharges where the total flow is not equal to the maximum permitted flow the mass emission limits shall be determined using the following equation:

$$\text{Mass (lbs/day)} = \text{concentration (mg/L)} * 8.34 * \text{flow (million gallons per day)}$$

<sup>[5]</sup> Based on the State Board approved Ocean Plan exception using a minimum initial dilution of 3.2. Total residual chlorine may not be discharged from any single generating unit for more than 2 hours per day. For chlorine discharges of up to 15 minutes, the instantaneous maximum limit is 0.2 mg/l. For chlorine discharges exceeding 15 minutes, the applicable total residual chlorine limitations shall be calculated using the same methodology as was used to support the State Ocean Plan exception.

<sup>[5a]</sup> If other oxidants are used, this shall be the total of all oxidants reported as residual chlorine.

<sup>[6]</sup> Chlorine may not be discharged from any single generating unit for more than two hours per day at any one time.

7. Limitations for In-Plant Waste Streams:

a. The discharge of an effluent from low volume wastes with constituents in excess of the following limits is prohibited:

<u>Discharge Limitation<sup>[7]</sup></u>	
<u>Monthly</u>	<u>Daily</u>

<u>Constituents</u>	<u>Units</u>	<u>Average</u>	<u>Maximum</u>
Suspended solids	mg/L	30	100
	lbs/day	931	3103
Oil and grease	mg/L	15	20
	lbs/day	465	621

<sup>71</sup> The daily mass limitation (in lbs/day) has been determined using the tabulated concentration limits and reported flow rate for low volume wastes (3.72 mgd).

b. The discharge of an effluent from the oil recovery system with constituents in excess of the following limits is prohibited :

<u>Constituents</u>	<u>Units</u>	Discharge Limitation <sup>[8]</sup>	
		<u>Monthly Average</u>	<u>Daily Maximum</u>
Settleable solids	ml/L	0.1	0.3
	lbs/day	---	---
Suspended solids	mg/L	20	60
	lbs/day	26	78
BOD <sub>5</sub> 20°C	mg/L	20	60
	lbs/day	26	78
Oil and grease	mg/L	10	15
	lbs/day	13	19.5
Surfactants (as MBAS)	mg/L	---	0.5
	lbs/day	---	0.65
Phenols	mg/L	---	0.5
	lbs/day	---	0.65
Arsenic	µg/L	24	125
	lbs/day	0.031	0.163
Cadmium	µg/L	4.2	17
	lbs/day	0.005	0.022
		Discharge Limitation <sup>[8]</sup>	
		Monthly	Daily

<u>Constituents</u>	<u>Units</u>	<u>Average</u>	<u>Maximum</u>
Chromium (VI)	µg/L	8.4	34
	lbs/day	0.011	0.044
Lead	µg/L	8.4	34
	lbs/day	0.011	0.044

<sup>[8]</sup> The daily mass limitation (in lbs/day) has been determined using the tabulated concentration limits and reported flow rate for oil recovery system wastes (0.156 mgd).

## **B. Receiving Water Limitations**

1. At all areas where shellfish may be harvested for human consumption, as determined by the Regional Board, the following bacterial objectives throughout the water column shall not be exceeded:

The median total coliform density shall not exceed 70 per 100 ml, and not more than 10 percent of the samples shall exceed 230 per 100 ml.

2. If a receiving water monitoring location consistently exceeds a coliform objective or exceeds a geometric mean enterococcus density of 24 organisms per 100 ml for a 30-day 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.
3. Floating particulates and oil and grease shall not be visible as a result of wastes discharged.
4. Wastes discharged shall not alter the color of the receiving waters; create a visual contrast with the natural appearance of the water; nor cause esthetically undesirable discoloration of the ocean surface.
5. 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.
6. 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.
7. The wastes discharged shall not depress the dissolved oxygen concentrations 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.
8. The wastes discharged shall not change the pH of the receiving waters at any time more than 0.2 pH units from that which occurs naturally outside the zone of initial

dilution.

9. 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.
10. The wastes discharged shall not increase the concentrations, in marine sediments, of toxic substances listed in Table B of the Ocean Plan, to levels which would degrade indigenous biota.
11. The concentration of organic materials in marine sediments shall not be increased above that which would degrade marine life as a result of waste discharged.
12. The wastes discharged shall not cause objectionable aquatic growths or degrade indigenous biota.
13. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded as a result of wastes discharged.
14. 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.
15. 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.
16. The wastes discharged shall not cause objectionable odors to emanate from the receiving waters.
17. The wastes discharged shall not cause receiving waters to contain any substance in concentrations toxic to human, animal, plant, or fish life.
18. No physical evidence of wastes discharged shall be visible at any time in the water or on beaches, shores, rocks, or structures.
19. 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.
20. The wastes discharged shall not contain 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 must comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to Sections 301, 302, 303(d), 304, 306, 307, 316, and 423 of the Federal Clean Water Act 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 shall comply with all applicable requirements, such as the Storm Water Pollution Prevention Plan (SWPPP) updates and Monitoring and Reporting Program, of State Board's general permit for *Discharges of Storm Water Associated with Industrial Activities* (State Board Order No. 97-03-DWQ adopted on April 17, 1997).
- E. 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 the Regional Board to local agencies.

- F. The wastes discharged shall comply with all Ocean Plan objectives.
- G. 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.
- H. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream which ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this Order.
- I. There shall be no discharge of polychlorinated biphenyl compounds such as those once commonly used for transformer fluid.
- J. 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:
  - 1. Name and general composition of the chemical,
  - 2. Frequency of use,
  - 3. Quantities to be used,
  - 4. Proposed discharge concentrations, and
  - 5. USEPA registration number, if applicable.

No discharge of such chemical shall be made prior to receiving the Executive Officer's approval.

- K. The Regional Board and USEPA shall be notified immediately, by telephone, 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 occurrence.
- L. This Order may be modified, revoked and reissued, or terminated in accordance with the provisions of 40 CFR Parts 122.44, 122.62 to 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 fish impingement, benthic and mussel studies the Executive Officer shall either (1) propose to the Regional Board modifications to this permit, as appropriate, or (2) provide a report to the Regional Board summarizing the results of those studies 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 non-compliance does not stay any condition of this Order and permit.

- M. This Order may also be modified, in accordance with the provisions set forth in 40 CFR, Parts 122 and 124, to include requirements for the implementation of the watershed protection management approach.
- N. In the event that the State Board determines that this discharge should be regulated under the California Toxics Rule (CTR) and State Implementation Plan (SIP) instead of the Ocean Plan, the Regional Board may reopen this Order.
- O. This Order includes the attached (*Standard Provisions and General Monitoring and Reporting Requirements*) (Standard Provisions, Attachment N). If there is any conflict between provisions stated hereinbefore and said Standard Provisions, those provisions stated hereinbefore prevail.

### **III. Expiration Date**

This Order expires on April 10, 2006.

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

### **IV. Rescission**

Order No. 94-130, 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

Long Beach Generation LLC  
Long Beach Generating Station

CA0001171

correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region on May 24, 2001.

Dennis A. Dickerson  
Executive Officer