CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

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ORDER R4-2015-XXXX
NPDES NO. CA0001147

WASTE DISCHARGE REQUIREMENTS FOR EL SEGUNDO POWER, LLC EL SEGUNDO GENERATING STATION

T E N T A T I V E

The following Discharger is subject to waste discharge requirements (WDR's) set forth in this Order:

Table 1. Discharger Information

Discharger	El Segundo Power, LLC
Name of Facility	El Segundo Generating Station
Facility Address	301 Vista del Mar
	El Segundo, CA 90245
	Los Angeles County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
002	Once-through cooling water, storm water, and low volume wastewaters	33.9075º	-118.4306º	Pacific Ocean

Table 3. Administrative Information

This Order was adopted on:	**February 12, 2015**
This Order shall become effective on:	**April 1, 2015**
This Order shall expire on:	**March 31, 2020**
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDR's in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	**180 days prior to the Order expiration date**
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	**Major discharge**

I, Samuel Unger, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on the date indicated above.

_____
Samuel Unger, P.E., Executive Officer

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I. FACILITY INFORMATION

Information describing the El Segundo Generating Station (Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

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

A. **Legal Authorities.** This Order serves as WDR's pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters.

B. **Background and Rationale for Requirements.** The Los Angeles Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E and G through H are also incorporated into this Order.

C. **Provisions and Requirements Implementing State Law.** Some provisions/requirements in this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

D. **Notification of Interested Parties.** The Los Angeles Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDR's for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

E. **Consideration of Public Comment.** The Los Angeles Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

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THEREFORE, IT IS HEREBY ORDERED, that this Order supersedes Order No. 00-084 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger is authorized to discharge from the identified facility and outfalls into waters of the United States and shall comply with the requirements in this Order. This action in no way prevents the Los Angeles Water Board from taking enforcement action for past violations of the previous Order.

III. DISCHARGE PROHIBITIONS

A. Wastes discharged at Discharge Point 002 shall be limited to a maximum of 200.08 MGD of once-through cooling water, low volume wastewater, and storm water as described in the Fact Sheet (Attachment F). The discharge of wastes from accidental spills or other sources is prohibited.

B. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, the Pacific Ocean, or other waters of the State, are prohibited.

C. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or a nuisance as defined by Section 13050 of the Water Code.

D. Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.

E. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Los Angeles Water Board or the State Water Resources Control Board (State Water Board) as required by the Federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Federal CWA, and amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

F. Discharge of oil or any residuary product of petroleum to waters of the State, except in accordance with waste discharge requirements or other provisions of Division 7 of the CWC, is prohibited.

G. The discharge of any radiological, chemical, or biological warfare agent into the waters of the state is prohibited under Water Code section 13375.

H. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.

I. There shall be no discharge of polychlorinated biphenyl compounds (PCBs).

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Final Effluent Limitations – Discharge Point 002

1. Final Effluent Limitations – Combined Effluent Through Discharge Point 002

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 002, with compliance measured at Monitoring Location EFF-002 as described in the Monitoring and Reporting Program, Attachment E:

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Table 4. Effluent Limitations at Discharge Point 002 (Monitoring Location EFF-002)

Parameter	Units	Effluent Limitations				
		6-Month Median	Average Monthly	Maximum Daily	Instantaneous Minimum[1]	Instantaneous Maximum[1]
pH	pH Units	--	--	--	6.0	9.0
Cadmium, Total Recoverable	µg/L	--	--	--	--	190
	lbs/day	--	--	--	--	--
Chromium (VI)[2]	µg/L	--	--	--	--	380
	lbs/day	--	--	--	--	--
Chronic Toxicity[3]	Pass or Fail, % Effect	--	Pass[4]	Pass or % Effect <50	--	--
DDT	µg/L	--	0.00017	--	--	--
	lbs/day	--	0.00028[5]	--	--	--
Mercury, Total Recoverable	µg/L	--	--	--	--	7.6
	lbs/day	--	--	--	--	--
Selenium, Total Recoverable	µg/L	--	--	--	--	2,850
	lbs/day	--	--	--	--	--
Silver, Total Recoverable	µg/L	--	--	--	--	130
	lbs/day	--	--	--	--	--
Total Residual Chlorine[6]	mg/L	--	--	--	--	0.4[7]
Free Available Chlorine	mg/L	--	--	0.2[8]	--	0.5

1. The instantaneous maximum/minumum shall apply to grab sample determination.
2. The Discharger may at their option meet this limitation as a total chromium limitation.
3. "Pass" or "Fail" for Median Monthly Effluent Limitation (MMEL). "Pass" or "Fail" and "% Effect" for Maximum Daily Effluent Limitation (MDEL). The MMEL for chronic toxicity shall only apply when there is a discharge more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests are required when one toxicity test results in "Fail".
4. This is a Median Monthly Effluent Limitation.
5. The mass-based effluent limitation is calculated using the following formula:

   Mass-based effluent limitation = C * Q * 0.00834

   Where:

   C = Concentration-based effluent limitation (µg/L)

   Q = Maximum discharge flow rate (MGD) = 200.08 MGD
6. If other oxidants are used, this shall be the total of all oxidants reported as residual chlorine.
7. This limit is applicable to the sampling during periods of chlorination. Each condenser half (two in a single unit) is chlorinated for up to 30 minutes per chlorination cycle, and there is a maximum of one chlorination cycle per 24-hour period. For chlorine discharges of up to 30 minutes per condenser half, the instantaneous maximum limit is 0.4 mg/l. For chlorine discharges exceeding 30 minutes, the maximum total residual chlorine limitation shall be the BAT limitation of 0.2 mg/L
8. Applied as an average of analyses over a single period of chlorine release which does not exceed two hours.

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b. Temperature. The temperature of wastes discharged shall not exceed 105°F during normal operation of the Facility. During heat treatment, the temperature of wastes discharged shall not exceed 125°F except during adjustment of the recirculation gate at which time the temperature of wastes discharged shall not exceed 135°F. Temperature fluctuations during gate adjustment above 125°F shall not last for more than 30 minutes.

B. Final Effluent Limitations – Low Volume Wastewater

1. Final Effluent Limitations – Low Volume Wastewater

a. The Discharger shall maintain compliance with the following effluent limitations for low volume wastes, with compliance measured at Monitoring Location INT-001 as described in the Monitoring and Reporting Program, Attachment E:

Table 5. Effluent Limitations for Low Volume Wastes (Monitoring Location INT-001)

Parameter	Units	Effluent Limitations				
		6-Month Median	Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	pH Units	--	--	--	6.0	9.0
TSS	mg/L	--	30.0	100.0	--	--
	lbs/day	--	38[1]	125[1]	--	--
Oil and Grease	mg/L	--	15.0	20.0	--	--
	lbs/day	--	19[1]	25[1]	--	--
Cadmium, Total Recoverable	lbs/day	0.024[1]	--	0.095[1]	--	--
Chromium (VI)[2]	lbs/day	0.048[1]	--	0.19[1]	--	--
Mercury, Total Recoverable	lbs/day	0.00094[1]	--	0.0038[1]	--	--
Selenium, Total Recoverable	lbs/day	0.36[1]	--	1.4[1]	--	--
Silver, Total Recoverable	lbs/day	0.013[1]	--	0.063[1]	--	--

1. The mass-based limitations are based on a maximum low volume waste flow of 0.15 MGD and are calculated as follows:

   Mass-based limitation (lb/day) = C x Q_m x 0.00834

   Where:

   C = Concentration-based limitations (µg/L) calculated in the combined discharge (cooling water and in-plant wastes) except for TSS and oil and grease whose concentration-based limitatations are shown in the table.

   Q_m = 0.15 MGD, the maximum flow for low volume wastes commingled at Discharge Point 002.

2. The Discharger may at their option meet this limitation as a total chromium limitation.

b. PCBs. There shall be no discharge of PCBs.

C. Land Discharge Specifications – Not Applicable

D. Recycling Specifications – Not Applicable

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V. RECEIVING WATER LIMITATIONS

Receiving water limitations are based on water quality objectives contained in the California Ocean Plan, as most recently amended effective August 19, 2013 ("Ocean Plan"), and are a required part of this Order. Unless specifically excepted by this Order, the discharge, by itself or jointly with any other discharge(s), shall not cause violations of the following water quality objectives. Compliance with these objectives shall be determined by samples collected at stations representative of the area within the waste field where initial dilution is completed (i.e., outside the zone of initial dilution).

A. Bacterial Characteristics

1. Water-Contact Standards

Both the State Water Board and the California Department of Public Health (CDPH) have established standards to protect water contact recreation in coastal waters from bacterial contamination. Subsection a of this section contains bacterial objectives adopted by the State Water Board for ocean waters used for water contact recreation. Subsection b describes the bacteriological standards adopted by CDPH for coastal waters adjacent to public beaches and public water contact sports areas in ocean waters.

a. State/Regional Water Board Water Contact Standards

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 Los Angeles Water Board (i.e, waters designated as REC-1), but including all kelp beds, the discharge shall not cause the following bacterial objectives throughout the water column to be exceeded:

<u>30-day Geometric Mean Limits</u> – the following standards are based on the geometric mean of the five most recent samples from each site:

i. Total coliform density shall not exceed 1,000 per 100 ml;

ii. Fecal coliform density shall not exceed 200 per 100 ml; and

iii. *Enterococcus* density shall not exceed 35 per 100 ml.

<u>Single Sample Maximum (SSM)</u>

i. Total coliform density shall not exceed 10,000 per 100 ml

ii. Fecal coliform density shall not exceed 400 per 100 ml;

iii. Enterococcus density shall not exceed 104 per 100 ml; and

iv. Total coliform density shall not exceed 1,000 per 100 m l when the fecal coliform/total coliform ratio exceeds 0.1.

The Initial Dilution Zone for any wastewater outfall shall be excluded from designation as kelp beds for purposes of bacterial standards. Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacterial standards.

b. CDPH Standards

CDPH has established minimum protective bacteriological standards for coast water adjacent to public beaches and for public water-contact sports areas in ocean waters. These standards are found in the California Code of Regulations, title 17, section 7958, and they are identical to the objectives contained in subsection a.

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above. When a public beach or public water-contact sports area fails to meet these standards, CDPH or the local public health officer may post with warning signs or otherwise restrict use of the public beach or public water-contact sports area until the standards are met. The CDPH regulations impose more frequent monitoring and more stringent posting and closure requirements on certain high-use public beaches that are located adjacent to a storm drain that flows in the summer.

For beaches not covered under AB 411 regulations, CDPH imposes the same standards as contained in Title 17 and requires weekly sampling but allows the county health officer more discretion in making posting and closure decisions.

2. **Shellfish Harvesting Standards**

At all areas where shellfish may be harvested for human consumption, as determined by the Los Angeles Water Board, the waste discharged shall not cause the following bacterial standards to be exceeded throughout the water column:

a. 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.

B. Physical Characteristics

1. Floating particulates and grease and oil shall not be visible as a result of wastes discharged.
2. The discharge of waste 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.
3. Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.
4. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded

C. Chemical Characteristics

1. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials; excluding effects of naturally induced upwelling.
2. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.
3. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.
4. The concentration of substances set forth in Chapter II, Table 1 of the Ocean Plan, shall not be increased in marine sediments to levels that would degrade indigenous biota.
5. The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.
6. Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.
7. Numerical water quality objectives established in Chapter II, Table 1 of the California Ocean Plan shall not be exceeded outside of the zone of initial dilution as a result of discharges from the Facility.

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D. Biological Characteristics

1. Marine communities, including vertebrate, invertebrate,and plant species, shall not be degraded.
2. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.
3. 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.

E. Radioactivity

1. Discharge of radioactive waste shall not degrade marine life.

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D.
2. **Regional Water Board Standard Provisions.** The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:

   a. This Order may be modified, revoked, reissued, or terminated in accordance with the provisions of 40 C.F.R. sections 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; 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. The filing of a request by the Discharger for an Order modification, revocation, and issuance of termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

   b. 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 the municipal storm water management program developed to comply with NPDES permits issued by the Los Angeles Water Board to local agencies.

   c. Discharge of wastes to any point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.

   d. The Discharger shall 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, 318, 405, and 423 of the federal CWA and amendments thereto.

   e. These requirements do not exempt the operator of the waste disposal Facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal Facility, and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.

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f. Oil or oily material, chemicals, refuse, or other pollutionable materials shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.

g. A copy of these waste discharge specifications shall be maintained at the discharge Facility so as to be available at all times to operating personnel.

h. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

i. Violation of any term or condition contained in this Order;

ii. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;

iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

i. If there is any storage of hazardous or toxic materials or hydrocarbons at this Facility and if the Facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

j. The Discharger shall notify the Los Angeles Water Board not later than 120 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing or processing Facility by more than ten percent. Such notification shall include estimates of proposed production rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge with the appropriate filing fee.

k. The Discharger shall file with the Los Angeles Water Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.

l. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Los Angeles Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture an intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.

m. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify this Los Angeles Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Los Angeles Water Board.

n. The Water Code provides that any person who violates a waste discharge requirement or a provision of the Water Code is subject to civil penalties of up to $5,000 per day, $10,000 per day, or $25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to $10 per gallon per day or $25 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.

o. Violation of any of the provisions of the NPDES program or of any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.

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p. 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 or another NPDES permit. This requirement is not applicable to products used for lawn and agricultural purposes.

q. 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 permit.

r. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to the planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

i. Name and general composition of the chemical,
ii. Frequency of use,
iii. Quantities to be used,
iv. Proposed discharge concentrations, and
v. USEPA registration number, if applicable.

s. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this Facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

t. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, average monthly effluent limitation, instantaneous maximum or instantaneous minimum effluent limitation, six-month median limitation, or receiving water limitation of this Order, the Discharger shall notify the Los Angeles Water Board by telephone (213) 576-6600 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Los Angeles Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E.

C. Special Provisions

1. Reopener Provisions

a. This Order may be reopened for modification to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above a California Ocean Plan (Ocean Plan) Table 1 water quality objective.

b. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal CWA, and amendments thereto, the Los

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Angeles Water Board will revise and modify this Order in accordance with such more stringent standards.

c. This Order may be reopened and modified, in accordance with the provisions set forth in 40 C.F.R. sections 122 and 124, to include requirements for the implementation of the watershed management approach or to include new ML's.

d. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments, such as an update of an objective or the adoption of a TMDL.

e. This Order may be reopened upon submission by the Discharger of adequate information, as determined by the Los Angeles Water Board, to provide for dilution credits or a mixing zone, as may be appropriate.

f. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

g. This Order may be reopened for modification, or revocation and reissuance, if the Discharger does not comply with the OTC Policy by ceasing operations of Unit 4, which is currently scheduled to occur by December 31, 2015 or if a suspension of the final compliance date for Unit 4 is granted to the Discharger.

h. This Order may be modified, or revoked and reissued, based on the results of Magnuson-Stevens Conservation and Management Act and/or Endangered Species Act section 7 consultations with the National Marine Fisheries Service and/or the U.S. Fish and Wildlife Service.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan. The Discharger shall submit to the Los Angeles Water Board an Initial Investigation TRE workplan (1-2 pages) within 90 days of the effective date of this permit. This plan shall describe the steps the permittee intends to follow in the event that toxicity is detected. See section V of the Monitoring and Reporting Program (Attachment E) for an overview of TRE requirements.

3. Best Management Practices and Pollution Prevention

a. Storm Water Pollution Prevention, Best Management Practices, and Spill Contingency Plans.

The Discharger shall submit, within 90 days of the effective date of this Order:

i. A Storm Water Pollution Prevention Plan (SWPPP) that describes site-specific management practices for minimizing contamination of storm water runoff and for preventing contaminated storm water runoff from being discharged directly to waters of the State. The SWPPP shall be developed in accordance with the requirements in Attachment G.

ii. A Best Management Practices Plan (BMPP), that include site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the State. The BMPs shall

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be consistent with the general guidance contained in the *USEPA Guidance Manual for Developing Best Management Practices* (BMPs) (EPA 833-B-93-004). In particular, a risk assessment of each area identified by the Discharger shall be performed to determine the potential for hazardous or toxic waste/material discharge to surface waters.

iii. A Spill Control Plan (SCP), that describes the preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events.

Each plan shall cover all areas of the Facility and shall include an updated drainage map for the Facility. The Discharger shall identify on a map of appropriate scale the areas that contribute runoff to the permitted discharge point; describe the activities in each area and the potential for contamination of storm water runoff and the discharge of hazardous waste/material; and address the feasibility of containment and/or treatment of storm water.

The Discharger shall implement the SWPPP, BMPP, and SCP (or SPCC) within 10 days of the approval by the Executive Officer or no later than 90 days after submission to the Los Angeles Water Board, whichever comes first. The plans shall be reviewed annually and at the same time. Updated information shall be submitted to the Los Angeles Water Board within 30 days of revisions.

4. Construction, Operation and Maintenance Specifications

a. The Discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this Order.

5. Special Provisions for Municipal Facilities (POTW's Only) – Not Applicable

6. Other Special Provisions

a. Discharges of Storm Water

Except for storm water authorized under this Order to be discharged through Discharge Points 002, the Discharger shall maintain coverage under General Permit No. CAS000001 and, except as otherwise authorized by this Order, shall meet the requirements of that general permit for the control of storm water discharges from the Facility.

b. Once-Through Cooling Water Compliance Schedule

i. **Compliance Date and Alternatives.** The Discharger submitted an implementation plan for compliance with the State Water Board's Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (OTC Policy) on March 30, 2011. According to its implementation plan, the Facility consisted of four natural gas fired steam electric generating units (1, 2, 3, and 4). As of October 2014, Units 1 and 2 have been demolished and discharge from these units ceased on May 2010. Unit 3 was also retired on July 22, 2013, and discharges from the unit ceased. Units 1, 2, and 3 have come into compliance, under Track 1 alternative of the OTC Policy, with the construction and completion of El Segundo Energy Center (ESEC). Construction of the new ESEC units (5, 6, 7, and 8) began in June 2011 and became available for commercial operation on August 1, 2013. Therefore, the Discharger only needs to bring Unit 4 into compliance. The Discharger shall comply with the OTC Policy in accordance with the following schedule:

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Table 6. Schedule of Compliance with OTC Policy

Task	Compliance Date
Achieve full compliance with Unit 4.	December 31, 2015

Based on the need for continued operation to maintain the reliability of the electric system, the Los Angeles Water Board or State Water Board may reopen this Order to suspend the compliance date under the circumstances set forth in OTC Policy section 2.B(2).

The Discharger requested an extention of the final compliance date with the OTS Policy for Unit 4 in 2011. The Statewide Advisory Committee for Cooling Water Intake System – the advisory board of state agencies including the State Water Board – responded in their 2012 report that there was no basis for extending El Segundo's compliance date. In a later communication, the Discharger indicated that the Facility will achieve full compliance with the OTC Policy under the Track 1 alternative according to the current schedule by ceasing operations of Units 1 through 4.

ii. **Immediate and Interim Requirements.** The Discharger shall implement the following immediate and interim actions:

(a) As of October 1, 2011, any unit that is not directly engaged in power-generating activities or critical system maintenance shall cease intake flows unless it has been demonstrated to the State Water Board that a reduced minimum flow is necessary for operations.

(b) Commencing on October 1, 2015, if after evaluation of the previously funded projects done by the Santa Monica Bay Restoration Commission, further mitigation is still needed, then continue to implement measures to mitigate interim impingement and entrainment impacts until full compliance is achieved by December 31, 2015.

7. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

A. Compliance with Effluent Limitations expressed as Single Constituents

If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (see Reporting Requirement I.G. of the MRP), then the Discharger is out of compliance.

B. Compliance with Effluent Limitations Expressed as Sum of Several Constituents

Dischargers are out of compliance with an effluent limitation which applies to the sum of a group of chemicals (e.g., PCB's) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as "Not Detected" (ND) or "Detected, but Not Quantified" (DNQ).

C. Multiple Sample Data Reduction.

The concentration of the pollutant in the effluent may be estimated from the result of a single sample analysis or by a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses when all sample results are quantifiable (i.e., greater than or equal to the reported Minimum* Level). When one or more sample results are

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reported as ND or DNQ, the central tendency concentration of the pollutant shall be the median (middle) value of the multiple samples. If, in an even number of samples, one or both of the middle values is ND or DNQ, the median will be the lower of the two middle values.

D. Mass-Based Effluent Limitations.

Compliance with mass effluent will be estimated based on flow and concentration. When the concentration for the parameter in a sample is reported as Not Detected (ND) or Detected, but Not Quantified (DNQ), the corresponding mass emission rate determined using that sample concentration shall also be reported as ND or DNQ.

E. Average Monthly Effluent Limitation (AMEL).

If the average (or when applicable, the median determined by subsection C above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). However, an alleged violation of the AMEL will be considered one violation for the purpose of assessing mandatory minimum penalties. The average of daily discharges over a calendar month that exceeds the AMEL for a parameter will be considered out of compliance for that month only. If only a single sample (daily discharge) is taken over a calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that month. If no sample (daily discharge) is taken over a calendar month, no compliance determination can be made for that month with respect to effluent violation determination, but compliance determination can be made for that month with respect to reporting violation determination.

In determining compliance with the AMEL, the following provisions shall also apply to all constituents:

1. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for that constituent, the Discharger has demonstrated compliance with the AMEL for that month;

2. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any constituent, the Discharger shall collect four additional samples at approximately equal intervals during the month. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results of the additional samples were received, whichever is later.

   When all sample results are greater than or equal to the reported Minimum Level (see Reporting Requirement I.G. of the MRP), the numerical average of the analytical results of these five samples will be used for compliance determination.

   When one or more sample results are reported as “Not-Detected (ND)” or “Detected, but Not Quantified (DNQ)” (see Reporting Requirement I.G. of the MRP), the median value of these four samples shall be used for compliance determination. If one or both of the middle values is ND or DNQ, the median shall be the lower of the two middle values.

   In the event of noncompliance with an AMEL, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the AMEL has been demonstrated.

3. If only one sample was obtained for the month or more than a monthly period and the result exceeds the AMEL, then the Discharger is in violation of the AMEL.

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F. Maximum Daily Eflfuent Limitation (MDEL)

If a daily discharge on a calendar day exceeds the MDEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that day for that parameter. If no sample (daily discharge) is taken over a calendar day, no compliance determination can be made for that day with respect to an effluent violation determination, but compliance determination can be made for that day with respect to reporting violation determination.

G. Instantaneous Minimum Effluent Limitation

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that single sample for that parameter. Non-compliance for each single grab sample will be considered separately (e.g., the analytical results of two grab samples taken over a calendar day that are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

H. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample exceeds (is higher than) the instantaneous maximum effluent limitation for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that single sample for that parameter. Non-compliance for each single grab sample will be considered separately (e.g., the analytical results of two grab samples taken over a calendar day that both are higher than the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

I. Six-Month Median Effluent Limitation

If the median of daily discharges over any 180-day period exceeds the six-month median effluent limitation for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that 180-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 180-day period and the analytical result for that sample exceeds the six-month median, the discharger will be considered out of compliance for the 180-day period. For any 180-day period during which no sample is taken, no compliance determination can be made for the six-month median limitation.

The six-month median shall apply as a moving median of daily values for any 180-day period in which daily values represent flow weighted average concentrations within a 24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred. If only one sample is collected during the time period associated with the 6-month median water quality objective, the single measurement shall be used to determine compliance with the effluent limitation for the entire time period.

J. Median Monthly Effluent Limitation (MMEL)

If the median of daily discharges over a calendar month exceeds the MMEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of noncompliance in a 31-day month). However, an alleged violation of the MMEL will be considered one violation for the purpose of assessing State mandatory minimum penalties. If no sample (daily discharge) is taken over a calendar month, no compliance determination can

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be made for that month with respect to effluent violation determination, but compliance determination can be made for that month with respect to reporting violation determination.

K. Chronic Toxicity

The discharge is subject to determination of “Pass” or “Fail” and “Percent Effect” from a single-effluent concentration chronic toxicity test at the discharge IWC using the Test of Significant Toxicity (TST) approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis (Ho) for the TST approach is: Mean discharge IWC response ≤0.75 × Mean control response. A test result that rejects this null hypothesis is reported as “Pass”. A test result that does not reject this null hypothesis is reported as “Fail”. The relative “Percent Effect” at the discharge IWC is defined and reported as ((Mean control response - Mean discharge IWC response) ÷ Mean control response)) × 100.

The Maximum Daily Effluent Limitation (MDEL) for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST approach, results in “Fail” and the “Percent Effect” is ≥0.50.

The Median Monthly Effluent Limitation (MMEL) for chronic toxicity is exceeded and a violation will be flagged when the median of no more than three independent chronic toxicity tests, conducted within the same calendar month and analyzed using the TST approach, results in “Fail”. The MMEL for chronic toxicity shall only apply when there is a discharge more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests are required when one toxicity test results in “Fail”.

L. Bacterial Standards and Analyses.

The geometric mean used for determining compliance with bacterial standards is calculated using the following equation:

$$\text{Geometric Mean} = (C_1 \times C_2 \times \ldots \times C_n)^{1/n}$$

where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 mL or CFU/100 mL) found on each day of sampling. For bacterial analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 ml for total and fecal coliform, at a minimum, and 1 to 1000 per 100 ml for *Enterococcus*). The detection method used for each analysis shall be reported with the results of the analysis.

Detection methods used for coliforms (total and fecal) and *Enterococcus* shall be those presented in Table 1A of Part 136 (revised May 18, 2012), unless alternate methods have been approved by USEPA pursuant to Part 136 or improved methods have been determined by the Executive Officer and/or USEPA.

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ATTACHMENT A – DEFINITIONS

Areas of Special Biological Significance (ASBS)
Those areas designated by the State Water Resources Control Board (State Water Board) as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of STATE WATER QUALITY PROTECTION AREAS.

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)
The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs)
BMPs are methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges including storm water. BMPs include structural and non-structural control, and operation maintenance procedures, which can be applied before, during, and/or after pollution-producing activities.

Bioaccumulative
Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Blowdown
The term blowdown means the minimum discharge of recirculating water for the purpose of discharging materials contained in the water, the further buildup of which would cause concentration in amounts exceeding limits established by best engineering practices.

Carcinogenic
Pollutants are substances that are known to cause cancer in living organisms.

Chemical Metal Cleaning Wastes
The term chemical metal cleaning waste means any wastewater resulting from the cleaning of any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning.

Chlordane
Shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

Chlorinated Phenolic Compounds
Chlorinated phenolic compounds mean the sum of 2-chlorophenol, 2,4-dichlorophenol, 4-chloro-3-methylphenol, 2,4,6-trichlorophenol, and pentachlorophenol.

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Coefficient of Variation (CV)
CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Composite Sample
Composite Sample, for flow rate measurements, means the arithmetic mean of no fewer than eight individual measurements taken at equal intervals for 24 hours or for the duration of discharge, whichever is shorter.

Composite sample, for other than flow rate measurement, means:

a No fewer than eight individual sample portions taken at equal time intervals for 24 hours, or the duration of the discharge, whichever is shorter. The volume of each individual sample portion shall be directly proportional to the discharge flow rate at the time of sampling; or,

b No fewer than eight individual sample portions taken of equal time volume taken over a 24 hour period. The time interval between each individual sample portion shall vary such that the volume of the discharge between each individual sample portion remains constant.

The compositing period shall equal the specified sampling period, or 24 hours, if no period is specified.

For a composite sample, if the duration of the discharge is less than 24 hours but greater than 8 hours, at least eight flow-weighted individual sample portions shall be taken during the duration of the discharge and composited. For a discharge duration of 8 hours or less, eight individual “grab samples” may be substituted and composited.

The composite sample result shall be reported for the calendar day during which composite sampling ends.

Daily Discharge
Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

DDTs
Shall mean the sum of 4,4’DDT, 2,4’DDT, 4,4’DDE, 2,4’DDE, 4,4’DDD, and 2,4’DDD.

Degrade (Degradation)
Degradation shall be determined by comparison of the waste field and reference site(s) for characteristic species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

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Detected, but Not Quantified (DNQ)
Sample results that are less than the reported Minimum Level, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dichlorobenzenes
Shall mean the sum of 1,2- and 1,3-dichlorobenzene.

Downstream Ocean Waters
Waters downstream with respect to ocean currents.

Dredged Material
Any material excavated or dredged from the navigable waters of the United States, including material otherwise referred to as "spoil."

Enclosed Bays
Indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

Endosulfan
The sum of endosulfan-alpha and -beta and endosulfan sulfate.

Estuaries and Coastal Lagoons
are waters at the mouths of streams that serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams that are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by Section 12220 of the California Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

Grab Sample
Grab Sample means an individual sample collected during a period of time not to exceed 15 minutes. Grab samples shall be collected during normal peak loading conditions for the parameter of interest, which may or may not occur during hydraulic peaks.

Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

HCH shall mean the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

Initial Dilution
The process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act

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together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and non-buoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Water Board, whichever results in the lower estimate for initial dilution.

Instantaneous Maximum Effluent Limitation
The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation
The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Kelp Beds
For purposes of the bacteriological standards of the Ocean Plan, are significant aggregations of marine algae of the genera Macrocystis and Nereocystis. Kelp beds include the total foliage canopy of Macrocystis and Nereocystis plants throughout the water column.

Low Volume Waste
The term low volume waste sources means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations are otherwise established 40 C.F.R part 423. Low volume wastes sources include, but are not limited to: wastewaters from wet scrubber air pollution control systems, ion exchange water treatment system, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, and recirculating house service water systems. Sanitary and air conditioning wastes are not included.

Mariculture
The culture of plants and animals in marine waters independent of any pollution source.

Material
(a) In common usage: (1) the substance or substances of which a thing is made or composed (2) substantial; (b) For purposes of the Ocean Plan relating to waste disposal, dredging and the disposal of dredged material and fill, MATERIAL means matter of any kind or description which is subject to regulation as waste, or any material dredged from the navigable waters of the United States. See also, DREDGED MATERIAL.

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant.

Median
The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

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Metal Cleaning Waste
The term metal cleaning waste means any wastewater resulting from cleaning—with or without chemical cleaning compounds—any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.

Method Detection Limit (MDL)
The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 C.F.R. part 136, Attachment B.

Minimum Level (ML)
The concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone
Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Natural Light
Reduction of natural light may be determined by the Regional Water Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Regional Water Board.

Non-Chlorinated Phenolics
Non-chlorinated phenolic compounds shall mean the sum of phenol, 2,4-dimethylphenol, 2-nitrophenol, 4-nitrophenol, 2,4-dinitrophenol, and 2-methyl-4,6-dinitrophenol.

Not Detected (ND)
Those sample results less than the laboratory's MDL.

Ocean Waters
The territorial marine waters of the state as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the state could affect the quality of the waters of the state, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

Once-Through Cooling Water
The term once-through cooling water means water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat.

PAHs (polynuclear aromatic hydrocarbons)
The sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

PCBs (polychlorinated biphenyls)
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.

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Persistent Pollutants
Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of Ocean Plan Table 1 pollutants through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Reported Minimum Level
The reported ML (also known as the Reporting Level or RL) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the ML's included in this Order, including an additional factor if applicable as discussed herein. The ML's included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Los Angeles Regional Water Board either from Appendix II of the Ocean Plan in accordance with section III.C.5.a. of the Ocean Plan or established in accordance with section III.C.5.b. of the Ocean Plan. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the reported ML.

Shellfish
Organisms identified by the California Department of Public Health as shellfish for public health purposes (i.e., mussels, clams and oysters).

Significant Difference
Defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

Six-Month Median Effluent Limitation
The highest allowable moving median of all daily discharges for any 180-day period.

State Water Quality Protection Areas (SWQPA's)
Non-terrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE (ASBS) that were previously designated by the State Water Board in Resolutions 74-28, 74-32, and 75-61 are now also classified as a subset of State Water Quality Protection Areas and require special protections afforded by the Ocean Plan.

TCDD Equivalents
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 factors, as shown in the table below.

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Isomer Group	Toxicity Equivalence Factor
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

Toxicity Reduction Evaluation (TRE)
A study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

Waste
As used in the Ocean Plan, waste includes a Discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

Water Quality-Based Effluent Limit (WQBEL)
A value determined by selecting the most stringent of the effluent limits calculated using all applicable water quality criteria (e.g., aquatic life, human health, and wildlife) for a specific point source to a specific receiving water for a given pollutant.

Water Quality Criteria
Comprised of numeric and narrative criteria. Numeric criteria are scientifically derived ambient concentrations developed by USEPA or States for various pollutants of concern to protect human health and aquatic life. Narrative criteria are statements that describe the desired water quality goal.

Water Quality Standard
A law or regulation that consists of the beneficial use or uses of a waterbody, the numeric and narrative water quality criteria that are necessary to protect the use or uses of that particular waterbody, and an antidegradation statement.

Whole Effluent Toxicity (WET)
The total toxic effect of an effluent measured directly with a toxicity test.

Zone of Initial Dilution (ZID)
Zone of Initial Dilution (ZID) means, for purposes of designating monitoring stations, the region within a horizontal distance equal to a specified water depth (usually depth of outfall or average depth of diffu-

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ser) from any point of the diffuser or end of the outfall and the water column above and below that region, including the underlying seabed.

Water Recycling
The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

TENTATIVE

ATTACHMENT B – MAP

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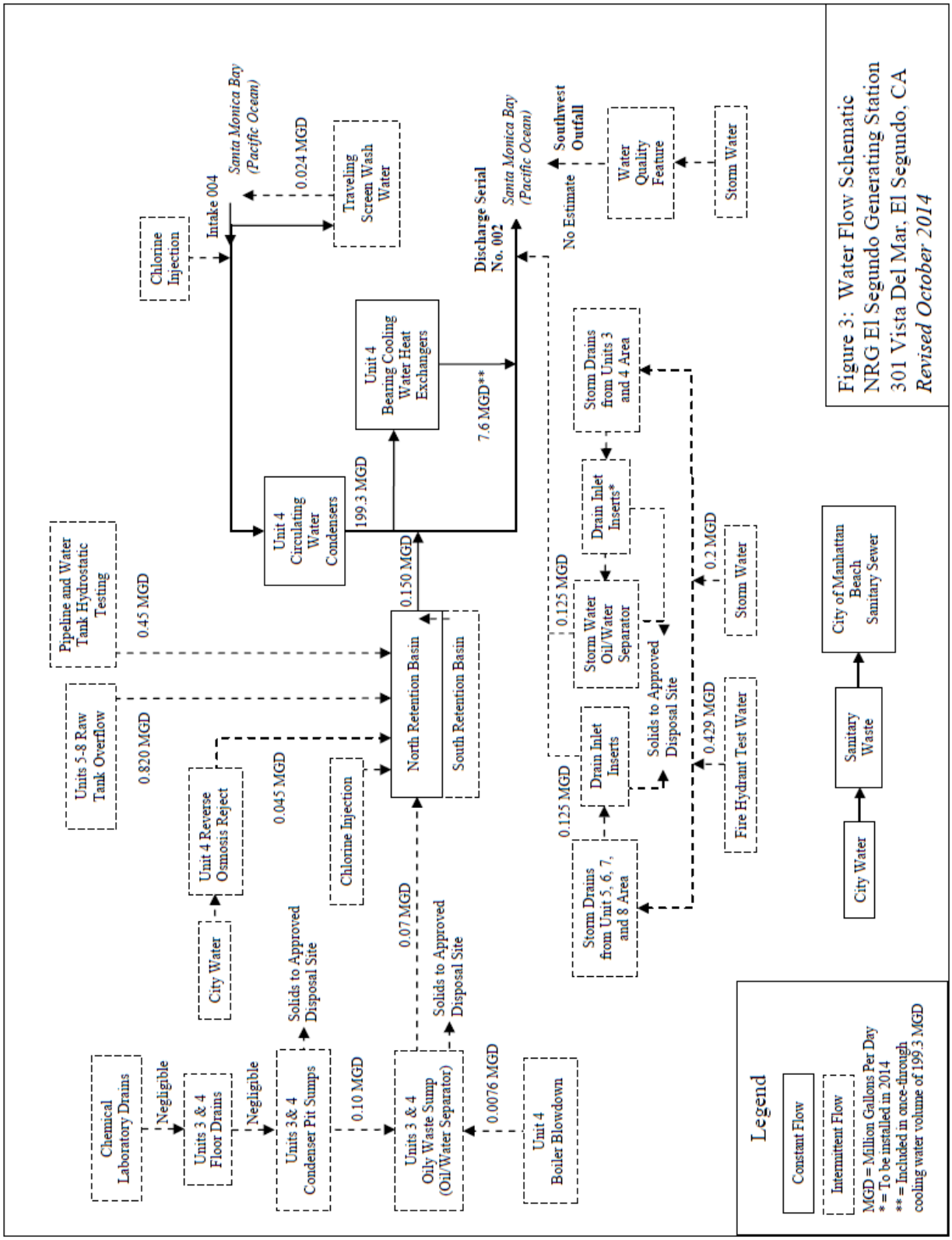
ATTACHMENT C – FLOW SCHEMATIC



T E N T A T I V E

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Los Angeles Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(b); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

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1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(b)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(b); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

G. Bypass

1. Definitions
   - **a.** “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
   - **b.** “Severe property damage” means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
   - **a.** Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
   - **b.** There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
   - **c.** The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three

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conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

5. Notice

   a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i).)

   b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));

   b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));

   c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

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B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Los Angeles Water Board. The Los Angeles Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. §§ 122.41(l)(3), 122.61.)

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)

B. Monitoring results must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. subchapters N or O. In the case of pollutants for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants. (40 C.F.R. §§ 122.41(j)(4), 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Los Angeles Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and

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2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Los Angeles Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Los Angeles Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Los Angeles Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, §§ 13267, 13383.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)

2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

   c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall

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operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):

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a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)

b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R.§ 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 C.F.R. § 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

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VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):

   a. 100 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(1)(i));

   b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));

   c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or

   d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels" (40 C.F.R. § 122.42(a)(2)):

   a. 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));

   b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));

   c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or

   d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Section 308 of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 C.F.R.) require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Los Angeles Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

I. GENERAL MONITORING PROVISIONS

A. Effluent sampling stations shall be established for the points of discharge (Discharge Point 002 [Latitude 33.9075°, Longitude -118.4306º] and Low Volume Wastes Discharge Point) and shall be located where representative samples of that effluent can be obtained.

B. Effluent samples shall be taken downstream of any addition to treatment works and prior to mixing with the receiving waters.

C. The Los Angeles Water Board shall be notified in writing of any change in the sampling stations once established or in the methods for determining the quantities of pollutants in the individual waste streams.

D. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. sections 136.3, 136.4, and 136.5 (revised May 18, 2012); or, where no methods are specified for a given pollutant, by methods approved by this Los Angeles Water Board or the State Water Resources Control Board (State Water Board).

Laboratory Certification. Laboratories analyzing effluent samples and receiving water samples shall be certified by the State Water Board, Drinking Water Division, Environmental Laboratory Accreditation Program (ELAP), in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports. A copy of the laboratory certification shall be provided each time a new certification and/or renewal of the certification is obtained from ELAP.

E. For any analyses performed for which no procedure is specified in the USEPA guidelines or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.

F. Each monitoring report must affirm in writing that “all analyses were conducted at a laboratory certified for such analyses by the State Water Board or approved by the Executive Officer and in accordance with current U.S.EPA guideline procedures or as specified in this MRP”.

G. The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), and the Minimum Level (ML) for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported by one of the following methods, as appropriate:

1. An actual numerical value for sample results greater than or equal to the ML; or
2. “Detected, but Not Quantified (DNQ)” if results are greater than or equal to the laboratory’s MDL but less than the ML; or,
3. “Not-Detected (ND)” for sample results less than the laboratory’s MDL with the MDL indicated for the analytical method used.

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Analytical data reported as “less than” for the purpose of reporting compliance with permit limitations shall be the same or lower than the permit limit(s) established for the given parameter.

Current ML’s (Attachment H) are those listed in Appendix II of the California Ocean Plan (Ocean Plan).

H. Where possible, the ML’s employed for effluent analyses to determine compliance with effluent limitations shall be lower than the effluent limitations established in this order for a given parameter. If the ML value is not below the effluent limitation, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory QA/QC procedures.

I. Where possible, the ML’s employed for effluent analyses not associated with determining compliance with effluent limitations in this order shall be lower than the lowest applicable water quality objective, for a given parameter. Water quality objectives for parameters may be found in Table 1 of the Ocean Plan. If the ML value is not below the water quality objective, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test, the associated laboratory QA/QC procedures, reporting levels (RL’s), and method detection limits (MDL’s)

The Los Angeles Water Board, in consultation with the State Water Board Quality Assurance Program, shall establish a ML that is not contained in Attachment H to be included in the Discharger’s permit in any of the following situations:

1. When the pollutant under consideration is not included in Attachment H;
2. When the Discharger and Regional Water Board agree to include in the permit a test method that is more sensitive than that specified in Part 136 (revised May 18, 2012);
3. When the Discharger agrees to use an ML that is lower than that listed in Attachment H;
4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment H, and proposes an appropriate ML for their matrix; or,
5. When the Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the USEPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Regional Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

J. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 C.F.R. section 136.3. All QA/QC items must be run on the same dates the samples were actually analyzed, and the results shall be reported in the Regional Water Board format, when it becomes available, and submitted with the laboratory reports. Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the report.

K. For analyses with short sample holding time such as pH and total residual chlorine, the analyses may be concucted by a field technician or chemist from an ELAP certified laboratory provided that the personnel receives proper training and follows laboratory SOPs for field’s

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sampling and analysis. Documentation for calibration of instruments and records of analysis shall be clearly noted and included in the monitoring report.

L. All analyses shall be accompanied by the chain of custody, including but not limited to data and time of sampling, sample identification, and name of person who performed sampling, date of analysis, name of person who performed analysis, QA/QC data, method detection limits, analytical methods, copy of laboratory certification, and a perjury statement executed by the person responsible for the laboratory.

M. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to insure accuracy of measurements, or shall insure that both equipment activities will be conducted.

N. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Unless otherwise specified in the analytical method, duplicate samples must be analyzed at a frequency of 5% (1 in 20 samples) with at least one if there is fewer than 20 samples in a batch. A batch is defined as a single analytical run encompassing no more than 24 hours from start to finish. A similar frequency shall be maintained for analyzing spiked samples.

O. When requested by the Regional Water Board or USEPA, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger must have a success rate equal to or greater than 80%.

P. For parameters that both average monthly and daily maximum limits are specified and the monitoring frequency is less than four times a month, the following shall apply. If an analytical result is greater than the average monthly limit, the Discharger shall collect four additional samples at approximately equal intervals during the month, until compliance with the average monthly limit has been demonstrated. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later. In the event of noncompliance with an average monthly effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the average monthly effluent limitation has been demonstrated. The Discharger shall provide for the approval by the Executive Officer a program to ensure future compliance with the average monthly limit.

Q. In the event wastes are transported to a different disposal site during the reporting period, the following shall be reported in the monitoring report:

6. Types of wastes and quantity of each type;
7. Name and address for each hauler of wastes (or method of transport if other than by hauling); and
8. Location of the final point(s) of disposal for each type of waste.

If no wastes are transported off-site during the reporting period, a statement to that effect shall be submitted.

R. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.

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II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
Effluent and Low Volume Wastes Monitoring Stations		
002	EFF-002	At a location where a representative sample of the commingled wastewater can be obtained after treatment but prior to discharge to the Pacific Ocean via Discharge Point 002.
--	INT-001	At a location within the retention basin outfall where a representative sample of all low volume wastes can be obtained after treatment but prior to commingling with other internal process waste streams or once-through cooling water.
Receiving Water Monitoring Stations		
• **Nearshore/Offshore Stations for Water Quality Monitoring**		
--	RSW-001	7,875 feet upcoast of the Scattergood Generating Station discharge terminus, at a depth of 20 feet. (Formerly RW1) Latitude: 33°56.22' Longitude: 118° 26.59'
--	RSW-002	1,000 feet upcoast of the Scattergood Generating Station discharge terminus, at a depth of 20 feet. (Formerly RW2) Latitude: 33° 55.21' Longitude: 118° 26.13'
--	RSW-003	1 ,750 feet downcoast of the El Segundo Generating Station discharge terminus, at a depth of 20 feet. (Formerly RW3) Latitude: 33° 54.28' Longitude: 118° 25.59
--	RSW-004	9,900 feet downcoast of the El Segundo Generating Station discharge terminus, at a depth of 20 feet. (Formerly RW4) Latitude: 33° 53.68' Longitude: 118° 25.33
--	RSW-005	Directly offshore of station RSW-001, at a depth of 40 feet. (Formerly RW5) Latitude: 33° 56.13' Longitude: 118° 27.03
--	RSW-006	Directly offshore of station RSW-002, at a depth of 40 feet. (Formerly RW6) Latitude: 33° 55.09' Longitude: 118° 26.62'
--	RSW-007	Directly offshore of station RSW-003, at a depth of 40 feet. (Formerly RW7) Latitude: 33° 54.06' Longitude: 118° 26.16'
--	RSW-008	Directly offshore of station RSW-004, at a depth of 40 feet. (Formerly RW8) Latitude: 33° 53.53' Longitude: 118° 25.82'
--	RSW-009	Directly offshore of station RSW-001, at a depth of 60 feet. (Formerly RW9) Latitude: 33° 55.97' Longitude: 118° 27.48'
--	RSW-010	Directly offshore of station RSW-002, at a depth of 60 feet. (Formerly RW10) Latitude: 33° 54.93' Longitude: 118° 27.07'
--	RSW-011	Directly offshore of station RSW-003, at a depth of 60 feet. (Formerly RW11) Latitude: 33° 53.82' Longitude: 118° 26.65'

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Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	RSW-012	Directly offshore of station RSW-004, at a depth of 60 feet. (Formerly RW12) Latitude: 33° 53.40' Longitude: 118° 26.22'
• **Bottom Stations for Benthic Sediments Monitoring**		
--	BEN-001	Directly beneath station RSW-001. (Formerly B1) Latitude: 33°56.22' Longitude: 118° 26.59'
--	BEN-002	Directly beneath station RSW-002. (Formerly B2) Latitude: 33° 55.21' Longitude: 118° 26.13'
--	BEN-003	Directly beneath station RSW-003. (Formerly B3) Latitude: 33° 54.28' Longitude: 118° 25.59
--	BEN-004	Directly beneath station RSW-004. (Formerly B4) Latitude: 33° 53.68' Longitude: 118° 25.33
--	BEN-005	Directly beneath station RSW-005. (Formerly B5) Latitude: 33° 56.13' Longitude: 118° 27.03
--	BEN-006	Directly beneath stations RSW-006. (Formerly B6) Latitude: 33° 55.09' Longitude: 118° 26.62'
--	BEN-007	Directly beneath station RSW-007. (Formerly B7) Latitude: 33° 54.06' Longitude: 118° 26.16'
--	BEN-008	Directly beneath station RSW-008. (Formerly B8) Latitude: 33° 53.53' Longitude: 118° 25.82'
• **Mussel Station for Bioaccumulation Monitoring**		
--	MUS-001	Within the Pacific Ocean, at the Discharge Point 002 conduit, as close to the point of discharge as possible
• **Sampling Station for Impingement Survey**		
--	IMP-001	At the cooling water intake system (Intake 004) for Unit 004.

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III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-002

1. The Discharger shall monitor the commingled wastewater (composed of storm water, internal process waters, and once-through cooling water) at Monitoring Location EFF-002 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-2. Effluent Monitoring at Monitoring Location EFF-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Meter	Continuous[1]	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Temperature	°F	Meter	Continuous[3]	[2]
pH	pH Unit	Grab	1/Week	[2]
Total Residual Chlorine	mg/L	Grab	1/Day[4]	[2]
Free Available Chlorine	mg/L	Grab	1/Day[4]	[2]
Chronic Toxicity[5]	Pass or Fail, % Effect	Grab	1/Quarter[6]	[2]
Cadmium, Total Recoverable	µg/L	Grab	1/Month	[2]
Chromium (VI)[7]	µg/L	Grab	1/Month	[2]
DDT[8]	µg/L	Grab	1/Month	[2]
Mercury, Total Recoverable	µg/L	Grab	1/Month	[2]
PCBs (as Aroclors)[9]	µg/L	Grab	1/Month	[2]
PCBs (as 41 individual congeners)	µg/L	Grab	1/Year	[10]
Selenium, Total Recoverable	µg/L	Grab	1/Month	[2]
Silver, Total Recoverable	µg/L	Grab	1/Month	[2]
Total Coliform	MPN/100 ml	Grab	1/Quarter	
Fecal Coliform	MPN/100 ml	Grab	1/Quarter	
Enterococcus	MPN/100 ml	Grab	1/Quarter	
Ammonia (as N)	µg/L as N	Grab	1/Year	[2]
Nitrate (as N)	µg/L as N	Grab	1/Year	[2]
TCDD Equivalents[11]	µg/L	Grab	1/Year	[2]
Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 and uranium)	pCi/L	Grab	1/Year	[12]
Remaining Ocean Plan Table 1 Pollutants	µg/L	Grab	1/Year	[2]

1. When continuous monitoring is required, the total daily flow (24-hour basis) shall be reported.
2. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. section 136. For priority pollutants, the methods must meet the lowest minimum levels (MLs) specified in Appendix II of the Ocean Plan (2012) that is required to demonstrate compliance. Where no methods are specified for a given pollutant, the methods must be approved by the Los Angeles Water Board or the State Water Board.
3. Only the maximum temperature for each calendar day shall be reported, except when temperature exceeds 105º F, in which case the reason(s), duration, and time of day of the events of elevated temperature shall be reported.
4. Monitoring is only applicable during periods of chlorine addition. A statement certifying that chlorination did not occur during the day may be submitted in lieu of an analysis. Multiple grab samples shall be collected at 25, 30, and 35 minutes following the start of chlorination and the highest value of the three measurements shall be reported.

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5. Refer to section V, Whole Effluent Toxicity Testing Requirements. “Pass” or “Fail” for Median Monthly Effluent Limitation (MMEL). “Pass” or “Fail” and “% Effect” for Maximum Daily Effluent Limitation (MDEL). The MMEL for chronic toxicity shall only apply when there is a discharge more than one day in a calendar month period. During such calendar months, exactly three independent toxicity tests are required when one toxicity test results in “Fail”.

6. Monthly sampling is required in the first three months. Species sensitivity screening shall be conducted during first three monthly monitorings. The species that exhibit the highest “Percent Effect” at the discharge IWC during species sensitivity screening shall be used for the routine quarterly monitoring.

7. The Discharger may at their option meet this requirement as total chromium.

8. The mass emission (lbs/day) for the discharge shall be calculated and reported using the actual concentration and the actual flow rate measured at the time of discharge, using the formula:

$$M\ (\text{lb/day}) = C \times Q \times 0.00834$$

Where:

M = mass discharge for a pollutant, lbs/day
C = actual concentration for a pollutant, µg/L
Q = actual discharge flow rate, MGD

9. The results of PCB analyses using Method 608 shall be reported in Discharge Monitoring Reports and used for assessing compliance with effluent limitations. Using USEPA Method 608, PCBs (as Aroclors) shall mean the sum of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260. Non-detected and/or estimated values shall be treated as zeros in the summation of PCBs as Aroclor.

10. In addition to monitoring PCBs as Aroclors, PCBs shall be analyzed using USEPA proposed Method 1668c and individually quantified and reported. Using proposed Method 1668c, PCBs (as 41 individual congeners) means the sum of 41 congeners: PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105,110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206. Until the proposed method 1668c for PCBs is incorporated into 40 CFR Part 136, the results of PCB analyses using proposed Method 1668c shall be used for informational purposes for the Santa Monica Bay TMDL and shall not be used to assess compliance with effluent limitations.

11. 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 factors, as shown in the table below. USEPA method 1613 may be used to analyze dioxin and furan congeners.

$$\text{Dioxin-TEQ (TCDD Equivalents)} = \Sigma\ (C_x \times TEF_x)$$

Where:

C_x = concentration of dioxin or furan congener x
TEF_x = TEF for congener x

Toxicity Equivalence Factors

Isomer Group	Toxicity Equivalence Factor (TEF)
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

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12. Analyze these radiochemicals by the following USEPA methods:

Method 900.0 for gross alpha and gross beta;
Method 903.0 or 903.1 for radium-226;
Method 904.0 for radium-228;
Method 906.0 for tritium;
Method 905.0 for strontium-90;
Method 908.0 for uranium.

Analysis for combined radium-226 & 228 shall be conducted only if gross alpha results for the same sample exceed 15 pCi/L or beta greater than 50 pCi/L. If radium-226 & 228 exceeds 5 pCi/L, analyze for tritium, strontium-90 and uranium.

A statement certifying that radioactive pollutants were not added to the discharge may be submitted in lieu of monitoring.

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B. Monitoring Location INT-001

1. The Discharger shall monitor low volume wastes prior to commingling with other internal process waste streams at Monitoring Location INT-001 as follows:

Table E-3. Low Volume Wastes Monitoring at Monitoring Location INT-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	--	1/Month[1]	[2]
pH	pH Units	Grab	1/Month[1]	[2]
TSS[3]	mg/L	24-hr composite	1/Month[1]	[2]
Oil and Grease[3]	mg/L	Grab	1/Month[1]	[2]
Cadmium, Total Recoverable[3]	µg/L	24-hr composite	1/Month[1]	[2]
Chromium (VI) [3, 4]	µg/L	Grab	1/Month[1]	[2]
Mercury, Total Recoverable[3]	µg/L	24-hr composite	1/Month[1]	[2]
Selenium, Total Recoverable[3]	µg/L	24-hr composite	1/Month[1]	[2]
Silver, Total Recoverable[3]	µg/L	24-hr composite	1/Month[1]	[2]
PCBs (as Aroclors)[5]	µg/L	24-hr composite	1/Month[1]	[2]
Remaining Ocean Plan Table 1 Pollutants (excluding toxicity)	µg/L	Grab / 24-hr composite	1/Year	[2]

1. If no discharge occurred during the month, the report shall so state.
2. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. section 136. For priority pollutants, the methods must meet the lowest minimum levels (MLs) specified in Appendix II of the Ocean Plan (2012) that is required to demonstrate compliance. Where no methods are specified for a given pollutant, the methods must be approved by the Los Angeles Water Board or the State Water Board.
3. The mass emission (lbs/day) for the discharge shall be calculated and reported using the actual concentration and the actual flow rate measured at the time of discharge, using the formula:

$$M \text{ (lb/day)} = C \times Q \times 0.00834$$

Where:

M = mass discharge for a pollutant, lbs/day
C = actual concentration for a pollutant, µg/L
Q = actual discharge flow rate, MGD

4. The Discharger may at their option meet this limitation as a total chromium limitation.

5. The results of PCB analyses using Method 608 shall be reported in Discharge Monitoring Reports and used for assessing compliance with effluent limitations. Using USEPA Method 608, PCBs (as Aroclors) shall mean the sum of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260. Non-detected and/or estimated values shall be treated as zeros in the summation of PCBs as Aroclor

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Chronic Toxicity Testing

1. Chronic Toxicity of Chlorine Variance Conditions

The chronic toxicity test must be representative of actual discharge conditions (at a minimum) or of the alternate Proposed Modified Effluent Limit (PMEL) of 0.4 mg/L total residual chlorine (TRC). 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. Alternatively, the sample may be chlorinated to the alternate PMEL (unless the maximum TRC concentration from the previous 3 months exceeds this limit). 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.

2. Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity

The chronic toxicity IWC for this discharge is 5.26 percent [1/(18+1)] effluent.

3. Sample Volume and Holding Time

The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation**.**

4. Chronic Marine and Estuarine Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity ≥1 ppt, the Discharger shall conduct the following chronic toxicity tests on effluent samples—at the in-stream waste concentration for the discharge—in accordance with species and test methods in 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, 1995). Artificial sea salts shall be used to increase sample salinity. In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

a. A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01).

b. A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, and the sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0), or a static non-renewal toxicity test with the red abalone, *Haliotis rufescens* (Larval Shell Development Test Method).

c. A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0).

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5. **Species Sensitivity Screening**

Species sensitivity screening shall be conducted during this permit's first three monthly monitorings. For each monthly sampling event, the Discharger shall collect a single effluent sample and concurrently conduct three toxicity tests using the fish, an invertebrate, and the alga species previously referenced. The species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for the routine quarterly monitoring.

Species sensitivity rescreening is required every 24 months. The Discharger shall rescreen with the fish, an invertebrate, and the alga species previously referenced and continue to monitor with the most sensitive species. If the first suite of rescreening tests demonstrates that the same species is the most sensitive then the rescreening does not need to include more than one suit of tests. If a different species is the most sensitive or if there is ambiguity, then the Discharger shall proceed with suites of screening tests for a minimum of three (monthly testing), but not to exceed five suites.

6. **Quality Assurance and Additional Requirements**

Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.

a. The discharge is subject to determination of "Pass" or "Fail" and "Percent Effect" from a single-effluent concentration chronic toxicity test at the discharge IWC using the Test of Significant Toxicity (TST) approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis (Ho) for the TST approach is: Mean discharge IWC response ≤0.75 × Mean control response. A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". The relative "Percent Effect" at the discharge IWC is defined and reported as: ((Mean control response – Mean discharge IWC response) ÷ Mean control response)) × 100.

b. The Median Monthly Effluent Limit (MMEL) for chronic toxicity only applies when there is a discharge more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests are required when one toxicity test results in "Fail".

c. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method, then the Discharger must re-sample and re-test within 14 days.

d. Dilution water and control water, including brine controls, shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.

e. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.). Monthly reference toxicant testing is sufficient.

f. All reference toxicant test results should be reviewed and reported according to EPA guidance on the evaluation of concentration-response relationships found in *Method*

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Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 C.F.R. section 136) (EPA 821-B-00-004, 2000).

g. The Discharger shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the Monitoring and Reporting Program and the rationale is explained in the Fact Sheet (Attachment F).

7. **Preparation of Initial Investigation TRE Work Plan**

The Discharger shall prepare or update and submit a generic Initial Investigation TRE Work Plan (1-2 pages) within **90 days** of the permit effective date, to be ready to respond to toxicity events. The Discharger shall review and update this work plan as necessary so it remains current and applicable to the discharge. At minimum, the work plan shall include:

a. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

b. A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the facility.

c. If a Toxicity Identification Evaluation (TIE) is necessary, an indication of who would conduct the TIEs (i.e., an in-house expert or outside contractor).

8. **Accelerated Monitoring Schedule for Median Monthly Summary Result: "Fail" (or Maximum Daily Single Result: "Fail and % Effect ≥50")**

The summary result shall be used when there is discharge more than one day in a calendar month. The single result shall be used when there is discharge of only one day in a calendar month.

Within 24 hours of the time the Discharger becomes aware of a failing result, the Discharger shall implement an accelerated monitoring schedule consisting of four, five-concentration (including IWC, two dilutions above and two dilutions below IWC) toxicity tests, conducted at approximately two week intervals, over an eight week period. If each of the accelerated toxicity tests at the discharge IWC results in "Pass", the Discharger shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests at the discharge IWC results in "Fail", the Discharger shall immediately implement the Toxicity Reduction Evaluation (TRE) Process conditions set forth below.

9. **Toxicity Reduction Evaluation (TRE) Process**

a. **Preparation and Implementation of Detailed TRE Work Plan.** The Discharger shall immediately initiate a TRE using, according to the type of treatment facility, EPA manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833/B-99/002, 1999) or EPA *manual Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, 1989) and, within 30 days, submit to the Executive Officer a Detailed TRE Work Plan, which shall follow the generic Initial Investigation TRE Work Plan revised as appropriate for this toxicity event. It shall include the following information, and comply with additional conditions set by the Executive Officer:

i. Further actions by the Discharger to investigate, identify, and correct the causes of toxicity.

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ii. Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.

iii. A schedule for these actions, progress reports, and the final report.

b. **TIE Implementation.** The Discharger may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test method and, as guidance, EPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.

c. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.

d. The Discharger shall conduct routine effluent monitoring for the duration of the TRE process. Additional accelerated monitoring and TRE work plans are not required once a TRE is begun.

e. The Regional Water Board recognizes that toxicity may be episodic and identification of causes and reduction of sources of toxicity may not be successful in all cases. The TRE may be ended at any stage if monitoring finds there is no longer toxicity.

10. **Reporting**

The Self Monitoring Report (SMR) shall include a full laboratory report for each toxicity test. This report shall be prepared using the format and content of the test methods manual chapter called Report Preparation, including:

a. The toxicity test results for the TST approach, reported as “Pass” or “Fail” and “Percent Effect” at the chronic toxicity IWC for the discharge.

b. Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).

c. TRE/TIE results. The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses.

d. Statistical program (e.g., TST calculator, CETIS, etc.) output results for each toxicity test.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

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VIII. RECEIVING WATER MONITORING REQUIREMENTS

The receiving water monitoring program (i.e., Surface Water Monitoring Requirements and Benthic Sediments Monitoring Requirements) shall consist of periodic biological surveys of the area surrounding the discharge, and shall include studies of those physical and chemical characteristics of the receiving waters which may be impacted by the discharge. This program may be performed as a joint effort with the City of Los Angeles Department of Water and Power in connection with the receiving water monitoring program for the Scattergood Generating Station.

A. Water Quality Monitoring at Monitoring Locations RSW-001 through RSW-012

1. The Discharger shall monitor the receiving water (Pacific Ocean) at RSW-001 through RSW-012 as follows:

Table E-4. Receiving Water Monitoring Requirements (RSW-001 through RSW-012)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Color (Chlorophyll A and/or Color Dissolved Organic Matter [CDOM])	µg/L, mV or fluorescence units	Profile[3]	2/Year[1]	[2]
Light transmittance	Percent	Profile[3]	2/Year[1]	[2]
Dissolved Oxygen	mg/L	Profile[3]	2/Year[1]	[2]
pH	pH units	Profile[3]	2/Year[1]	[2]
Salinity	psu	Profile[3]	2/Year[1]	[2]
Temperature	ºF	Profile[3]	2/Year[1]	[2]
Visual Observations	--	Visual	2/Year[1]	[4]

1. Summer and winter during both flood and ebb tides.
2. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. section 136. For priority pollutants, the methods must meet the lowest minimum levels (MLs) specified in Appendix II of the Ocean Plan (2012) that is required to demonstrate compliance. Where no methods are specified for a given pollutant, the methods must be approved by this Los Angeles Regional Water Board or the State Water Board.
3. Temperature shall be measured from surface to bottom at a minimum of one meter intervals at each station. Color, dissolved oxygen, light transmittance, pH, and salinity shall be measured at surface, mid-depth, and bottom at a minimum at each station.
4. The following general observations or measurements at the receiving water stations shall be reported:
   - Tidal stage and time of monitoring.
   - General water conditions.
   - Extent of visible turbidity or color patches.
   - Appearance of oil films or grease, or floatable material.
   - Depth at each station for each sampling period
   - Presence or absence of red tide.
   - Presence of marine life.
   - Presence and activity of the California least tern and the California brown pelican.

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B. Benthic Sediments Monitoring at Monitoring Locations BEN-001 through BEN-008

1. The Discharger shall collect and analyze benthic samples once per year during the summer at Monitoring Locations BEN-001 through BEN-008 as follows:

Table E-5. Benthic Sediment Monitoring Requirements (BEN-001 through BEN-008)

Parameter	Units	Sample Type	Minimum Sampling Frequency
Benthic Infauna Community[2]	--	0.1 square meter Van Veen grab	1/Year
Sediment Grain Size	Phi size	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Arsenic	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Beryllium	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Cadmium	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Copper	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Chromium (III)	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Chromium, Total	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Lead	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Mercury	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Nickel	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Selenium	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Silver	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Thallium	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Zinc	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Acid Soluble Sulfides	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
PAHs[4]	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Total DDT[5]	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
DDT derivatives[6]	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year

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Parameter	Units	Sample Type	Minimum Sampling Frequency
Total PCB[7]	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
PCB derivatives[8]	µg/kg[1]	0.1 square meter Van Veen grab (upper 2 centimeters)[3]	1/Year
Visual Observations[9]	--	Visual	1/Year

1. Dry weight basis.
2. One sample shall be taken at each station for benthic infaunal community analysis. The entire contents of each sample shall be passed through a 1.0 millimeter screen to retrieve the benthic organisms. Sampling methods and protocols shall follow those described in the most current edition of the *Field Operations Manual for Marine Water Column, Benthic and Trawl Monitoring in Southern California*. All organisms contained within the sample shall be identified to the lowest possible taxon and counted. The resulting data shall be used to describe community structure at each station.

   Procedures and test methods shall adhere to the following federal guidelines when applicable: Macroinvertebrate Field and Laboratory Methods for Evaluation the Biological Integrity of Surface Waters (1990) –EPA/600/4-90/030 (PB91-171363). This manual describes guidelines and standardized procedures for the use of macroinvertebrates in evaluating the biological integrity of surface waters.

   Community analysis of benthic infauna shall include number of species, number of individuals per species, total numerical abundance per station, benthic response index (BRI) and biological indices, plus utilize appropriate regression analyses, parametric and nonparametric statistics, and multivariate techniques or other appropriate analytical techniques.
3. A separate grab sample shall be collected at each station whenever a biological sample is collected. Sub-samples (upper two centimeters) shall be taken from the grab for sediment chemistry analyses.
4. PAHs shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4 benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.
5. Total DDT shall mean the sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD and 2,4'-DDD.
6. At a minimum, 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD and 2,4'-DDD.
7. Total PCB (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.
8. At a minimum, PCB congeners whose analytical characteristics resemble those of PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be individually quantified.
9. The following general observations or measurements at the benthic stations shall be reported:
   - Tidal stage and time of monitoring.
   - General water conditions.
   - Extent of visible turbidity or color patches.
   - Appearance of oil films or grease, or floatable material.
   - Depth at each station for each sampling period
   - Presence or absence of red tide.
   - Presence of marine life.
   - Presence and activity of the California least tern and the California brown pelican.

C. Bioaccumulation Monitoring at Monitoring Location MUS-001

1. Native California mussels (*Mytilus Californianus*) shall be collected during the summer from the discharge conduit, as close to the point of discharge as possible, for bioaccumulation monitoring. If mussels are unavailable near the discharge site, source

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mussels may be transplanted from nearby locations. Mussel tissue shall be analyzed for the parameters listed in the Table below.

Table E-6. Mussels Bioaccumulation Monitoring Requirements (MUS-001)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Arsenic	µg/kg	Tissue	1/Year	[1]
Beryllium	µg/kg	Tissue	1/Year	[1]
Cadmium	µg/kg	Tissue	1/Year	[1]
Copper	µg/kg	Tissue	1/Year	[1]
Chromium, Total	µg/kg	Tissue	1/Year	[1]
Lead	µg/kg	Tissue	1/Year	[1]
Mercury	µg/kg	Tissue	1/Year	[1]
Nickel	µg/kg	Tissue	1/Year	[1]
Selenium	µg/kg	Tissue	1/Year	[1]
Silver	µg/kg	Tissue	1/Year	[1]
Thallium	µg/kg	Tissue	1/Year	[1]
Zinc	µg/kg	Tissue	1/Year	[1]
PAHs[2]	µg/kg	Tissue	1/Year	[1]
Total DDT[3]	µg/kg	Tissue	1/Year	[1]
DDT derivatives[4]	µg/kg	Tissue	1/Year	[1]
PCB[5]	µg/kg	Tissue	1/Year	[1]
PCB derivatives[6]	µg/kg	Tissue	1/Year	[1]

1. Procedures used to determine compliance with bioaccumulation monitoring should use the *U.S. EPA. Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories* (November 2000, EPA 823-B-00-007), NOAA Technical Memorandum NOS ORCA 130, *Sampling and Analytical Methods of the National Status and Trends Program Mussel Watch Project* (1998 update), and/or State Mussel Watch Program, 1987-1993 Data Report, State Water Resources Control Board 94-1WQ.
2. PAHs shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4 benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.
3. Total DDT shall mean the sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD and 2,4'-DDD.
4. At a minimum, 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD and 2,4'-DDD.
5. Total PCB (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.
6. At a minimum, PCB congeners whose analytical characteristics resemble those of PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be individually quantified.

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D. Impingement Survey at Monitoring Location IMP-001

1. The Discharger shall collect fish and commercially important macroinvertebrates in the intake cooling water at Monitoring Location IMP-001 as follows:

Table E-7. Intake Monitoring at Monitoring Location IMP-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Fish & Macroinvertebrates	--	Grab	6/Year[1]	[2]

1. Impingement sampling for fish and commercially important macroinvertebrates shall be conducted at least once every two months at the intake system (Intake 004) for Unit 4. Impingement sampling shall coincide with heat treatment.
2. Fish and macroinverbrates shall be identified to the lowest possible taxon. Data reported shall include numerical abundance of each fish and macroinvertebrate species, wet weight of each species (when combined weight of individuals in each species exceeds 0.2 kg), number of individuals in each 1-centimeter size class (based on standard length) for each species and total number of species are collected. When large numbers of given species are collected, length/weight data need only be recorded for 50 individuals and total number and total weight may be estimated based on aliquots samples. Total fish impinged per heat treatment or sampling event shall be reported and data shall be expressed per unit volume water entrained.

E. Regional Monitoring Program

The Discharger shall participate in regional monitoring activities coordinated by the Southern California Coastal Water Research Project (SCCWRP), and other appropriate agencies approved by the Regional Water Board and USEPA. The intent of regional monitoring activities is to maximize the efforts of all monitoring partners using a cost-effective monitoring design and to best utilize the pooled scientific resources of the region. During these coordinated monitoring efforts, the Discharger's sampling and analytical effort may be reallocated to provide a regional assessment of the impact of wastewater discharges to the Southern California Bight; however, certain core elements shall remain unchanged. Thus, revisions to the routine compliance monitoring program may be made under the direction of the USEPA and Los Angeles Water Board as necessary to accomplish the goal of assessing regional impacts from all contaminant sources; and may include resources exchanges. The most recent bightwide regional monitoring program was conducted in 2013. The next bightwide regional monitoring survey is expected to occur in 2018. The Discharger is expected to participate at levels commensurate with participation in previous surveys

IX. OTHER MONITORING REQUIREMENTS

A. Storm Water Monitoring

For discharges of storm water other than at Discharge Point 002, the Discharger shall implement the Monitoring and Reporting Requirements for individual dischargers contained in the general permit for Dischargers of Storm Water Associated with Industrial Activities (State Board Order No. 97-030-DWQ, NPDES No. CAS000001, adopted on April 17, 1997).

B. Monitoring for Discharge of Calcareous Material

1. During the discharge of calcareous material (excluding heat treatment discharge) to the receiving waters, the following observations or measurements shall be recorded and reported in the next monitoring report:

   a. Date and times of discharge(s).

   b. Estimate of the volume and weight of discharge(s).

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c. Composition of discharge(s).

d. General water conditions and weather conditions.

e. Appearance and extent of any oil films or grease, floatable materials or odors.

f. Appearance and extent of visible turbidity or color patches.

g. Presence of marine life.

h. Presence and activity of the California least turn and the California brown pelican

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. If there is no discharge during any reporting period, the report shall so state.
3. Quarterly analyses shall be performed during the months of February, May, August, and November. Semiannual analyses shall be performed during the months of May and November. Annual analyses shall be performed during the month of August. Should there be instances when monitoring could not be done during these specified months, the Discharger must notify the Los Angeles Water Board, state the reason why the monitoring could not be conducted, and obtain approval from the Executive Officer for an alternate schedule.
4. If the Discharger monitors (other than for process/operational control, startup, research, or equipment testing) any influent, effluent, or receiving water constituent more frequently than required by this Order using approved analytical methods, the results of those analyses shall be included in the monitoring report. These results shall be reflected in the calculation of the average (or median) used in demonstrating compliance with this Order/Permit.
5. Each monitoring report shall contain a separate section titled “Summary of Non-Compliance” which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.
6. The Discharger shall inform the Los Angeles Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.
7. The Discharger shall report the results of chronic toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting, section V.

B. Self-Monitoring Reports (SMR’s)

1. The Discharger shall electronically submit SMR’s using the State Water Board’s California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS Web site will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.
2. The Discharger shall report in the SMR the results for all effluent monitoring specified in this MRP under sections III through IX. The Discharger shall submit quarterly SMR’s including the results of all required monitoring using U.S. EPA-approved test methods or

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other test methods specified in this Order. SMR's are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	April 1, 2015	All	Submit with quarterly SMR
Daily	April 1, 2015	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with quarterly SMR
Monthly	April 1, 2015	1st day of calendar month through last day of calendar month	Submit with quarterly SMR
Quarterly	April 1, 2015	January 1 – March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	May 1 August 1 November 1 February 1
Semiannually	April 1, 2015	January 1 – June 30 July 1 – December 31	August 1 February 1
Annually	April 1, 2015	January 1 through December 31	February 1

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable reported Minimum Level (reported ML, also known as the Reporting Level, or RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. section 136.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

   For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. **Compliance Determination.** Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined above and in Attachment A of this Order. For purposes of reporting and administrative enforcement by the Los Angeles Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the reportable pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (ML).

6. **Multiple Sample Data.** When determining compliance with a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses and the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND), the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

   a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

   b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

7. The Discharger shall submit SMR's in accordance with the following requirements:

   a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

   b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDR's; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

C. Discharge Monitoring Reports (DMR's)

1. At any time during the term of this permit, the State Water Board or Los Angeles Water Board may notify the Discharger to electronically submit DMR's. On October 1, 2014, notification was given specifically for the electronic submittal of DMRs by the Permittee.

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The Permittee shall submit DMRs electronically via CIWQS and will discontinue submitting paper DMRs.

D. Other Reports

1. The Discharger shall report the results of any special studies, acute and chronic toxicity testing, TRE/TIE, pollution prevention plans, and pollutant minimization program required by Special Provisions VI.C.2.a., VI.C.3.a., and VI.C.3.b. The Discharger shall report the progress with the compliance schedule dates specified in Special Provision VI.C.6.b. The Discharger shall submit reports in compliance with SMR reporting requirements described in subsection X.B.

2. Within **90 days** of the effective date of this permit, the Discharger is required to submit the following required by Special Provisions of this Order to the Regional Water Board:

   a. An Initial Investigation TRE workplan.
   b. An updated Storm Water Pollution Prevention Plan (SWPPP).
   c. An updated Best Management Practices Plan (BMPP).

3. The receiving water monitoring report containing the results of bimonthly, semiannual and annual monitoring shall be received at the Los Angeles Water Board by **March 1** of each year following the calendar year of data collection.

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ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section II.B of this Order, the Los Angeles Water Board incorporates this Fact Sheet as findings of the Regional Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

T E N T A T I V E

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	4B192111001
Discharger	El Segundo Power, LLC
Name of Facility	El Segundo Generating Station
Facility Address	301 Vista del Mar
	El Segundo, CA 90245
	Los Angeles
Facility Contact, Title and Phone	Ken Riesz, Sr., Plant Manager, (310) 615-6030
Authorized Person to Sign and Submit Reports	Same as above
Mailing Address	301 Vista del Mar, El Segundo, CA 90245
Billing Address	Same as above
Type of Facility	Industrial (Electric Services; SIC 4911)
Major or Minor Facility	Major
Threat to Water Quality	A
Complexity	1
Pretreatment Program	N/A
Recycling Requirements	N/A
Facility Permitted Flow	Discharge Point 002: 200.08 million gallons per day (MGD)
Facility Design Flow	Discharge Point 002: 200.08 MGD
Watershed	Santa Monica Bay
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean waters

A. El Segundo Power, LLC (hereinafter Discharger) is the owner and operator of the El Segundo Generating Station (hereinafter Facility), a steam-electric generating facility (SIC Code 4911).

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. The Facility discharges wastewater to the Pacific Ocean, a water of the United States. The Discharger was previously regulated by Order 00-084 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0001147 adopted on June 29, 2000 and expired on May 10, 2005. The terms and conditions of the current Order, as per 40 Code of Federal Regulations (CFR) section 122, have been continued and remain in effect until new Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. The State Water Board retains the jurisdictional authority to enforce such requirements under Water Code section 1211.

C. In accordance with Title 23, California Code of Regulations (CCR) and Title 40, Code of Federal Regulations (CFR), respectively, the Discharger is required to file ROWD at least 180 days prior to the expiration of the existing permit. The Discharger filed an ROWD and applied for renewal of its waste discharge requirements (WDRs) and NPDES permit on September 24, 2004. Subsequently, per State Water Board's request, the Discharger resubmitted an updated ROWD on May 31, 2011. The delay in renewal of the permits for coastal power plants is the result of efforts to develop and implement the Statewide Water Quality Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling. The Policy was adopted on October 1, 2010, and amended on June 18, 2013. Per Los Angeles Regional Board's request, the Discharger filed a report of waste discharge and resubmitted an application for reissuance of its WDR's and NPDES permit on April 22, 2014. The application was deemed complete on October 2, 2014. A site visit was conducted on March 12, 2014 to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

II. FACILITY DESCRIPTION

The Discharger owns and operates the Facility located at 301 Vista del Mar, El Segundo, California. The Facility had four natural gas fired steam electric generating units. Units 1 and 2 were each rated at 175 megawatts (MW) and were completely demolished on December 16, 2010. Units 3 and 4 are each rated at 335 MW. Units 3 and 4 employ the once-through cooling water system and withdraw water from Santa Monica Bay through a submerged offshore intake system equipped with a velocity cap. The velocity cap inlet is located approximately 2,600 feet from the onshore seawall. The bottom of the cooling water inlet is located at a depth of approximately 10 feet above the bottom of the Santa Monica Bay. The top of the velocity cap is located at a depth of approximately 16 feet below mean lower low water (MLLW). In October 2012, the inlet opening was modified to be covered by a series of 1 ½ inch diameter rods which are 10-inch on center. This leaves an opening between the rods of 8 ½ inches.

Cooling water is transported from the offshore intake to the onshore portion of the intake structure through a buried pipe which is 12 feet in diameter. The onshore portion of the intake structure includes two vertical traveling screens (3/8-inch mesh) for each operating unit. Each screen is equipped with one circulating water pump rated at 69,200 gallons per minute (gpm). The total design offshore cooling water flow for Unit 4 is 138,400 gpm (69,200 x 2), or 199.3 million gallons per day (mgd). The discharge of the Unit 4 once-through cooling water is via an outfall pipe, designated as Discharge Point 002.

During the service life of Units 1 and 2, the once-through cooling water associated with Units 1 and 2, low volume wastes, and other associated process waters were discharged to the receiving

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water at Discharge Point 001. The Discharger suspended discharge through Discharge Point 001 in May 2010 and the outfall was hydraulically sealed on July 7, 2011.

On December 21, 2000, the Discharger filed an Application for Certification (AFC) seeking approval from the California Energy Commission (CEC) to repower existing Units 1 and 2 which were shutdown in December 2002. The CEC in February 2005 issued a license approving the repowering project with conditions. On June 18, 2007, the Discharger filed a petition to amend the license with CEC to change the name of the project to El Segundo Energy Center (ESEC), which would consist of replacing Units 1 and 2 with two trains of fast start, highly efficient combined cycle generation, refered to as rapid response combined cycle, or "R2C2" (Units 5, 6, 7 and 8). CEC accepted the amendment and on June 30, 2010 approved the ESEC project. Demolition of Units 1 and 2 was completed in December 2010, and construction of Units 5, 6, 7, and 8 commenced in June 2011 and was completed by March 2013 with a commercial operation date of August 1, 2013. The ESEC consists of two combined cycle trains with each containing one gas turbine generator (i.e., Units 5 and 7), one heat recovery steam generator, and one steam turbine generator (i.e., Units 6 and 8). The repowered units have a total capacity of 560 MW and utilize air cooled condensers that do not use cooling water from the ocean, equivalent to that of dry cooling towers. Upon completion of the ESEC, the Discharger retired Unit 3 on July 22, 2013. Currently, Unit 4 is the only remaining unit that uses once-through cooling water.

T E N T A T I V E

A. Description of Wastewater and Biosolids Treatment and Controls

1. Once-Through Cooling Water

Once-through cooling water from Unit 4 (and Unit 3 when it was in service) and other process waters are discharged to the receiving water at Discharge Point 002. Since Unit 4 is the only remaining steam boiler utilizing once-through cooling water at the Facility, the once-through cooling water and all in-plant low volume wastes are discharged through Discharge Point 002.

Two types of treatment are applied to the once-through cooling water: sodium hypochlorite injection and heat treatment. To control biological growths, condenser tubes are treated intermittently by mechanically injecting chlorine in the form of sodium hypochlorite for a maximum of 2 hours per day into the cooling water stream.

Marine fouling of the intake and discharge cooling water conduits is controlled by temporarily recirculating, thus increasing the temperature in the once-through cooling water, and reversing the direction of flow through the 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 6 weeks and lasts for about 6 hours per conduit with the highest temperature lasting for 1 hour during gate adjustment. During heat treatment, the temperature of the water discharged through the intake conduit must be raised to 105 °F for 1 hour to remove the fouling organisms. Gate adjustments control the temperature of the water recirculated in the intake and discharge point during heat treatment. As a result of heat treatments, calcareous shell debris accumulates in the intake structure. This shell debris is physically removed and disposed of in the Pacific Ocean.

2. Low Volume Waste

The Facility generates a number of low volume wastes which are routed to a retention basin for storage and treatment prior to discharge to the Pacific Ocean through Discharge Point 002. These low volume wastes include wastewaters from intermittent floor drains, laboratory drains, boiler blowdown, reverse osmosis reject, Units 5-8 raw water tank overflow, fire hydrant test water, and hydrostatic test water.

The low volume waste treatment system at the Facility includes two asphalt and concrete retention basins, one oil-water separator, and sodium hypochlorite addition. During normal operations, only one of the two retention basins (the northernmost basin; storage volume of 669,600 gallons) is utilized for wastewater treatment—the second, southernmost basin (storage volume of 167,400 gallons) is reserved to provide firm capacity when the north basin must be removed from service. Typically, the north basin is removed from service once every four years for scheduled maintenance activities. During scheduled maintenance, solids are collected and disposed of at an offsite facility. Sodium hypochlorite is added on an as-needed basis to the retention basin for the control of biological growths.

3. Storm Water

Storm water in the industrial areas of the Facility (approximately 20.8 acres) is commingled with the cooling water prior to discharge via Discharge Point 002. The majority of the storm water generated in the area of Units 5–8 is collected by drop inlet storm water catch basins fitted with water quality filter inserts and conveyed directly to Discharge Point 002. The water flow rate with each insert is 65 gpm per square foot. A small amount of storm water generated in the vicinity of Units 5–8 is collected by floor drains and sumps, conveyed to the oily waste sump and then flows to the retention basin. Storm water generated in the remaining industrial portions of the Facility (i.e., in the vicinity of Units 3 and 4 south to the retention basins) is collected by drop inlet storm water catch basins and conveyed by underground piping that gravity-flows to the oil/water separator prior to discharge to Discharge Point 002. The oil/water separator has a gross capacity of 5,000 gallons. It is designed to separate the oil and water by gravity. A manually operated gate valve is used to control flow from the outlet. The gate valve remains closed except during a storm water discharge. Solids from the drain inlet inserts and the oil/water separator are disposed of periodically at an offsite facility.

Storm water generated in the non-industrial area (approximately 9.8 acres in the southern portion of the site located in the parking and landscape areas) is captured in catch basins and conveyed to a vegetated infiltration basin that provides flow attenuation through sedimentation and infiltration. In general, storm water generated in the southern portion of the site will flow into the infiltration basin where it will infiltrate into the ground. During storm events of high intensity or rainfall totals (e.g. 50- or 100-year storm events), storm water may overtop the weir located in the basin and discharge through the Southwest Storm Drain to Santa Monica Bay. The vegetated infiltration basin is a new treatment feature and construction was completed in November 2013. The discharge of storm water from the southern drainage area will be covered under the State Water Board Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001 (General Permit), WDR for Discharge of Storm Water Associated with Industrial Activities Excluding Construction Activities.

The previous Order (Order 00-084) included the discharge of chemical metal cleaning wastes and the secondary treated sanitary wastes in the description of waste streams discharged from the Facility. Currently, all discharges of chemical and non-chemical metal cleaning wastes to the receiving water have ceased. Instead, all metal cleaning wastes are collected and trucked off-site to a wastewater treatment plant for off-site treatment and disposal. The sanitary wastes are discharged to the local sewer system and the in-plant sanitary waste treatment plants have been demolished. Therefore, metal cleaning wastes and sanitary wastes are no longer considered a component of the discharge and the discharge of these wastes from the Facility to the receiving water via Discharge Point 002 is no longer permitted

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under this Order. This Order authorizes the discharge of up to 200.08 mgd of wastewaters into the Pacific Ocean, a water of the United States.

The following table summarizes waste streams and process waters contributing to the discharges at the Facility.

Table F-2. Waste Stream Information

Discharge Point	Contributory Waste Stream	Overall Treatment	Maximum Flow (MGD)	
				To Outfall
002	**Unit 4 Once-Through Cooling Water [1]**	Screening, Chlorination	--	199.3
	Low Volume Wastes [2]			
	• Condenser Pit Sumps (Floor Drains and Chemical Laboratory Drains) (Discharge to Oily Waste Sump)	Oil/Water Separator, Sedimentation, Chlorination	0.160	--
	• Unit 4 Boiler Blowdown (Discharge to Oily Waste Sump)	Filtration, Oil/Water Separator, Sedimentation, Chlorination	0.0076	--
	• Oily Waste Sump (Discharge to Retention Basin)	Water/Oil Separator, Sedimentation, Chlorination	0.07	-
	• Unit 4 Reverse Osmosis Reject (Discharge to Retention Basin)	Filtration, Chlorination	0.045	--
	• Pipeline and Water Tank Hydrostatic Test Water (Discharge to Retention Basin)	Sedimentation, Chlorination	0.450	--
	• Units 5-8 Raw Tank Overflow (Discharge to Retention Basin)	Sedimentation, Chlorination	0.82	--
	Fire Hydrant Test Water [2] (Discharge to Outfall)	Drain Inlet Filter Inserts, Oil/Water Separator	--	0.430
	Storm Water at Drainage Areas in the Vicinity of Units 3-8 [2] (Discharge to Outfall)	Drain Inlet Filter Inserts, Oil/Water Separator	--	0.200
	Retention Basin (Discharge to Outfall)	Sedimentation, Chlorination	--	0.150
		Total Maximum Flow (MGD)		**200.08 [3]**

1. Includes the discharge from Unit 4 bearing once-through cooling water heat exchangers and the treveling screen wash water.
2. These flows are intermittent.
3. Maximum discharge of commingled waste from Discharge Point 002 is 200.08 MGD. This is composed of 199.3 MGD of once-through cooling water, a maximum of 0.15 MGD of low volume wastes discharged from the retention basin (based on the hydraulic capacity of the retention basin outlet), 0.43 MGD of fire hydrant test water, and 0.2 MGD of storm water.

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B. Discharge Points and Receiving Waters

Wastewaters generated at the Facility are discharged to the Pacific Ocean at Santa Monica Bay via Discharge Point 002. Discharge Point 002 contains all wastes (once-through cooling water and low volume wastes) generated at Unit 4 and small quantities of storm water generated in the vicinity of Units 3-8. Discharge Point 002 consists of a surge tank and one 12-foot-diameter conduit pipe which terminates approximately 2,100 feet offshore at a depth of 20 feet below MLLW. The coordinates for the discharge terminus are 33.9075º N, -118.4306º W.

Order 00-084 permitted discharges of once-through cooling water and process wastes from Units 1 and 2 to the Pacific Ocean at Santa Monica Bay via Discharge Point 001. However, discharges at this location were discontinued in May 2010 in preparation for the demolition of Units 1 and 2. Demolition of Units 1 and 2 was completed on December 16, 2010. The Discharger initiated plugging of the intake and outfall conduits for Discharge Point 001 under a permit by the Army Corps of Engineers (Nationwide Permit No. 3) and under 401 Certification from the Los Angeles Water Board. The sealing of the North Tunnel (intake conduit) and the South Tunnel (discharge conduit) and draining of the forebay was completed on July 7, 2011. Since the discharge location has been retired, Discharge Point 001 has been eliminated from this Order.

Order 00-084 established an initial dilution ratio for discharges from Discharge Point 002 of 18 to 1 (receiving water to effluent). Dilution for the discharge was established on the basis of two technical memos submitted by Southern California Edison (SCE; previous owner of the Facility) and two memos by the State Water Board.

- **Memorandums from SCE dated January 1979 and April 13, 1979:** These two memos develop the technical basis for SCE's dilution ratio estimate. The estimate was developed on the basis of field estimates using eight sets of effluent and ambient temperature data in the immediate vicinity of the outfall, and further extrapolated on the basis of typical plume behavior for shallow water discharges of this type.
- **Memorandum from the State Water Board dated May 4, 1984:** In this memo, the State Water Board concurred with the approach proposed by SCE with several modifications.
- **Memorandum from the State Water Board dated February 4, 1985:** In this memo, the State Water Board approved a dilution ratio of 18.0 for the Facility's Discharge Point 002.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

1. Effluent limitations contained in the existing Order for discharges from Discharge Point 001 and representative monitoring data are as follows:

Table F-3. Historic Effluent Limitations and Monitoring Data at Discharge Point 001 (Units 1 and 2)

Parameter	Units	Effluent Limitation			Discharge Point 001 Monitoring Data (From January 2009 – May 2010)[1]		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
pH	pH units	--	--	6.0 – 9.0	--	--	7.2 – 8.4
Temperature	^{o}F	--	--	[2]	--	--	73

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Parameter	Units	Effluent Limitation			Discharge Point 001 Monitoring Data (From January 2009 – May 2010)[1]		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Arsenic, Total Recoverable	µg/L	68	--	380	1.7	--	1.7
Cadmium, Total Recoverable	µg/L	13	--	52	0.04	--	0.04
Chromium (VI)	µg/L	26	--	104	0.85[3]	--	0.85[3]
Copper, Total Recoverable	µg/L	15	--	132	17	--	17
Lead, Total Recoverable	µg/L	26	--	104	0.86[3]	--	0.86[3]
Mercury, Total Recoverable	µg/L	0.51	--	2.07	0.046[3]	--	0.046[3]
Nickel, Total Recoverable	µg/L	65	--	260	8.7	--	8.7
Selenium, Total Recoverable	µg/L	195	--	780	2.6[3]	--	2.6[3]
Silver, Total Recoverable	µg/L	7	--	35	0.23[3]	--	0.23[3]
Zinc, Total Recoverable	µg/L	164	--	944	200	--	200
Chronic Toxicity	TUc	--	--	13	--	--	16
Radioactivity	--	[4]			[5]		
Chlorine, Total Residual	mg/L	--	--	0.4	[5]		
Chlorine, Free Available	mg/L	0.2 (Daily Average)		0.5	[5]		

1. Discharges at Discharge Point 001 were discontinued in May 2010 and no discharges have occurred at that location since May 2010.
2. The temperature of wastes discharged shall not exceed 105°F during normal operation of the facility. During heat treatment, the temperature of wastes discharged shall not exceed 125°F except during adjustment of the recirculation gate, at which time the temperature of wastes discharged shall not exceed 135°F. Temperature fluctuations during gate adjustment above 125°F shall not last for more than 30 minutes.
3. Sample result was registered as: “detected, but not quantified”. The reported value is an estimated concentration result.
4. 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.

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5. Units 1 and 2 were shutdown in December 2002. The addition of sodium hypochlorite to the once-through cooling water is not required since there is no discharge of cooling water at Discharge Point 001. No monitoring data had been reported for this pollutant since January 2009.

2. Effluent limitations contained in the existing Order for discharges from Discharge Point 002 and representative monitoring data are as follows:

Table F-4. Historic Effluent Limitations and Monitoring Data at Discharge Point 002 (Units 3 and 4)

Parameter	Units	Effluent Limitation			Discharge Point 002 Monitoring Data (From January 2009 – March 2014)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
pH	pH units	--	--	6.0 – 9.0	--	--	7.3 – 8.8
Temperature	^{o}F	--	--	[1]	--	--	119
Arsenic, Total Recoverable	µg/L	98	--	554	1.97	--	1.97
Cadmium, Total Recoverable	µg/L	19	--	76	0.03	--	0.03
Chromium (VI)	µg/L	38	--	152	0.465	--	0.465
Copper, Total Recoverable	µg/L	21	--	192	11	--	11
Lead, Total Recoverable	µg/L	38	--	152	1.32	--	1.32
Mercury, Total Recoverable	µg/L	0.75	--	3.03	<0.01	--	<0.01
Nickel, Total Recoverable	µg/L	95	--	380	8.7[2]	--	8.7[2]
Selenium, Total Recoverable	µg/L	285	--	1,140	5.8[2]	--	5.8[2]
Silver, Total Recoverable	µg/L	10.4	--	50.3	1.97	--	1.97
Zinc, Total Recoverable	µg/L	236	--	1,376	100	--	100
Chronic Toxicity	TU_c	--	--	19	--	--	16
Radioactivity	--	[3]			[4]		
Chlorine, Total Residual	mg/L	--	--	0.4	--	--	0.33
Chlorine, Free Available	mg/L	0.2 (Daily Average)		0.5	0.19 (Daily Average)		0.19

1. The temperature of wastes discharged shall not exceed 105°F during normal operation of the facility. During heat treatment, the temperature of wastes discharged shall not exceed 125°F except during adjustment of the recirculation gate, at which time the temperature of wastes discharged shall not exceed 135°F. Temperature fluctuations during gate adjustment above 125°F shall not last for more than 30 minutes.

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2. Sample result was registered as: "detected, but not quantified". The reported value is an estimated concentration result.
3. 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. No monitoring data was reported for this pollutant since January 2009.

3. Effluent limitations contained in the existing Order for discharges of metal cleaning wastes from the Facility and representative monitoring data are as follows:

Table F-5. Historic Effluent Limitations and Monitoring Data for Metal Cleaning Wastes

Parameter	Units	Effluent Limitation (Metal Cleaning Wastes)[1]			Chemical Metal Cleaning Wastes Monitoring Data (From January 2009 – December 2013)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
pH	pH units	--	--	6.0 – 9.0	[2]		
Total Suspended Solids (TSS)	mg/L	30	--	100			
Oil and Grease	mg/L	15	--	20			
Copper, Total Recoverable	mg/L	1.0	--	1.0			
Iron, Total Recoverable	mg/L	1.0	--	1.0			

1. For the purposes 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.
2. No discharges of metal cleaning wastes (chemical and non-chemical) occurred since January 2009.

4. Effluent limitations contained in the existing Order for discharges of low volume wastes from the Facility and representative monitoring data are as follows:

Table F-6. Historic Effluent Limitations and Monitoring Data for Low Volume Wastes

Parameter	Units	Effluent Limitation (Low Volume Wastes)[1]			Low Volume Wastes Monitoring Data (From January 2009 – December 2013)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
pH	pH units	--	--	6.0 -9.0	--	--	8.0 – 10.0
TSS	mg/L	30	--	100	55	--	55
Oil and Grease	mg/L	15	--	20	9	--	9

1. Low volume wastes sources include, but are not limited to: wastewaters from wet scrubber air pollution control systems, ion exchange water treatment system, water treatment evaporator blowdown, laboratory and

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sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, and recirculating house service water systems. Sanitary and air conditioning wastes are not included.

5. Effluent limitations contained in the existing Order for discharges of sanitary wastes from the Facility and representative monitoring data are as follows:

Table F-7. Historic Effluent Limitations and Monitoring Data for Sanitary Wastes

Parameter	Units	Effluent Limitation (Sanitary Wastes)			Sanitary Wastewater Treatment Plant Nos. 1 and 2 Monitoring Data (From January 2009 To May 2011)[1]		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Biochemical Oxygen Demand (BOD)	mg/L	30	--	45	22	--	22
TSS	mg/L	30	--	45	18	--	18
Settleable Solids	mL/L	0.1	--	0.3	ND	--	ND
Oil and Grease	mg/L	10	--	15	1.6	--	1.6

ND = Not Detected

1. The two sanitary wastewater treatment plants were retired in May 2011 and discharges of sanitary wastes to the receiving water ceased. Subsequent to that date, all sanitary waste discharges have been piped to a municipal wastewater treatment plant.

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D. Compliance Summary

Data submitted to the Los Angeles Water Board between January 2009 and August 2014 indicate that the Discharger has not complied with effluent limitations as outlined in the table below:

Table F-8. Summary of Compliance History

Date	Monitoring Location	Violation Type	Pollutants	Reported Value	Permit Limitation	Units
5/1/2010	Discharge Point 001	Monthly Average	Copper, Total	17	15	µg/L
5/1/2010	Discharge Point 001	Monthly Average	Zinc, Total	200	164	µg/L

To address the copper and zinc violations the Los Angeles Water Board issued Settlement Offer No.R4-2011-0122-M on July 22, 2011. The Discharger signed an Acceptance of Conditional Resolution and Waiver of Right to Hearing for Settlement Offer No. R4-2011-0122-M on August 18, 2011. The Discharger accepted the Settlement Offer and submitted the penalty amount of $3,000 to the Los Angeles Water Board on October 10, 2011. After July 22, 2011, there were no violations of effluent limitations.

E. Planned Changes

The Discharger has retired Units 1, 2, and 3 from service and completed construction of the air-cooled ESEC. Subsequently, the Discharger filed a Petition to Amend (PTA) the California Energy Commission license for ESEC on April 28, 2013 (Docket # 00-AFC-14C) to replace

Unit 4 (the remaining operating steam boiler at the Facility). An approved PTA would result in the demolition of Units 3 and 4, and the construction of 435 MW of new generation. The PTA proposes to install another fast-start combined cycle train (Units 9 and 10) which would generate 325 MW, and two 55 MW simple cycle gas turbines (Units 11 and 12). This would result in the elimination of once-through cooling water discharges at the Facility. Demolition of Units 3 and 4 and construction of Units 9 through 12 would begin upon the retirement of Unit 4 and it is currently scheduled for completion by December 31, 2015.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters.

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code.

C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The Los Angeles Water Board adopted a Water Quality Control Plan for the Water Quality Control Plan for the Los Angeles Region (hereinafter Basin Plan) on June 13, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Pacific Ocean and all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Requirements in this Order implement the Basin Plan.

   Beneficial uses applicable to the Pacific Ocean at Dockweiler Beach are as follows:

Table F-9. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
002	**Dockweiler Beach** (Hydrologic Unit 405.12)	Existing Industrial service supply (IND), navigation (NAV), water contact recreation (REC-1), non-contact water recreation (REC-2), commercial and sport fishing (COMM), marine habitat (MAR), and wildlife habitat (WILD). Potential Spawning, reproduction, and/or early development (SPWN).

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Discharge Point	Receiving Water Name	Beneficial Use(s)
	Pacific Ocean Nearshore Zone (The zone bounded by the shoreline and a line 1000 feet from the shoreline or the 30-foot depth contours, whichever is further from the shoreline)	Existing: Industrial service supply (IND); navigation (NAV); water contact recreation (REC-1), non-contact water recreation (REC-2), commercial and sport fishing (COMM); marine habitat (MAR); wildlife habitat (WILD); preservation of biological habitats (BIOL)[1]; rare, threatened, or endangered species (RARE)[2]; migration of aquatic organisms (MIGR)[3]; spawning, reproduction, and/or early development (SPWN)[3]; and shellfish harvesting (SHELL)[4]
	Offshore Zone	Existing: Industrial service supply (IND); navigation (NAV); commercial and sport fishing (COMM); marine habitat (MAR); wildlife habitat (WILD); rare, threatened, or endangered species (RARE)[2]; migration of aquatic organisms (MIGR) [3]; spawning, reproduction, and/or early development (SPWN) [3]; and shellfish harvesting (SHELL)

1. Areas of Special Biological Significance (along coast from Latigo Point to Laguna Point) and Big Sycamore Canyon and Abalone Cove Ecological Reserves and Point Femin Marine Life Refuge.
2. One or more rare species utilizes all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.
3. Aquatic organisms utilize all bays, estuaries, lagoons, and coastal wetlands, to a certain extent, for spawning and early development. This may include migration into areas which are heavily influenced by freshwater inputs.
4. Areas exhibiting large shellfish populations include Malibu, Point Dume, Point Fermin, White Point and Zuma Beach.

2. **Thermal Plan.** The State Water 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) on January 7, 1971, and amended this plan on September 18, 1975. Requirements of this Order implement the Thermal Plan.

3. **California Ocean Plan.** The State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, and 2012. The State Water Board adopted the latest amendment on October 16, 2012, and it became effective on August 19, 2013. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the state to be protected as summarized below:

Table F-10. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
002	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish spawning and shellfish harvesting.

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In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan.

4. **Antidegradation Policy.** Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California"). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Los Angeles Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of section 131.12 and State Water Board Resolution 68-16.

5. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

6. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare and endangered species. The discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

7. **Clean Water Act Section 316(b) – Impingement and Entrainment**

   CWA section 316(b) requires that the location, design, construction, and capacity of cooling water intake structures reflect the Best Technology Available for minimizing adverse environmental impacts related to entrainment (drawing organisms into the cooling water system) and impingement (trapping organisms against the intake screens).

   On May 4, 2010 the State Water Board adopted a *Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling* (OTC Policy). The administrative record for the OTC Policy was approved by the Office of Administrative Law (OAL) on September 27, 2010. The OTC Policy became effective on October 1, 2010. Subsequently, the OTC Policy was amended by the State Water Board on July 19, 2011, and June 18, 2013. The amended OTC Policy became effective on April 2, 2014.

   The OTC Policy establishes technology-based standards to implement federal Clean Water Act section 316(b) and reduce the harmful effects associated with cooling water intake structures on marine and estuarine life. The OTC Policy applies to existing power plants that currently have the ability to withdraw water from the State's coastal and estuarine waters using a single-pass system, also known as once-through cooling. Closed-cycle wet cooling has been selected as Best Technology Available (BTA).

   The OTC Policy requires the owner or operator of an existing power plant comply with either Track 1 or Track 2, below.

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a. Track 1. An owner or operator of an *existing power plant* must reduce intake flow rate at each unit, at a minimum, to a level commensurate with that which can be attained by a closed-cycle wet cooling system. A minimum 93 percent reduction in intake flow rate for each unit is required for Track 1 compliance, compared to the unit's design intake flow rate. The through-screen intake velocity must not exceed 0.5 foot per second. The installation of closed cycle dry cooling systems meets the intent and minimum reduction requirements of this compliance alternative.

b. Track 2. If an owner or operator of an *existing power plant* demonstrates to the State Water Board's satisfaction that compliance with Track 1 is not feasible, the owner or operator of an *existing power plant* must reduce impingement mortality and entrainment of marine life for the facility, on a unit-by-unit basis, to a comparable level to that which would be achieved under Track 1, using operational or structural controls, or both.

The Discharger has come into compliance with the OTC Policy with regards to Units 1, 2, and 3 by retrofitting the power plant and building the ESEC while demolishing Units 1 and 2 and retiring Unit 3 as of July 2013. The OTC Policy established a time schedule for compliance for the Discharger by December 31, 2015. Unit 4 is the only unit left that is required to comply with the OTC Policy.

D. Impaired Water Bodies on CWA 303(d) List

Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d)-listed water bodies and pollutants, the Los Angeles Water Board plans to develop and adopt TMDLs that will specify waste load allocations (WLA) for point sources and load allocations (LAs) for non-point sources, as appropriate.

Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 2010 303(d) list and have been scheduled for TMDL development. On November 12, 2010, U.S.EPA approved California's 2010 Section 303(d) list of impaired waters and disapproved the omission of several water bodies and associated pollutants that meet federal listing requirements. U.S.EPA identified additional water bodies and pollutants for inclusion on the State's 303(d) list. On October 11, 2011, U.S.EPA issued its final decision regarding the waters U.S.EPA added to the State's 303(d) list.

The Facility discharges to Santa Monica Bay. The 2010 State Water Resources Control Board (State Water Board) California 303(d) List includes Santa Monica Bay (Offshore and Nearshore) as impaired waters. The pollutants of concern include DDT (tissue & sediment, centered on Palos Verdes Shelf), PCBs (tissue & sediment), sediment toxicity, debris, and fish consumption advisory.

Santa Monica Bay Debris TMDL: On November 4, 2010, the Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) adopted Resolution R10-010, a TMDL for debris in the nearshore and offshore areas of Santa Monica Bay. The Basin Plan amendment was adopted on May 2, 2011, and became effective on March 20, 2012. Control of debris is addressed through permits issued to the California Department of Transportation, Los Angeles County and the Cities in Los Angeles County (under Los Angeles County storm water MS4 NPDES Permit). This TMDL does not include requirements applicable to the Discharger.

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Santa Monica Bay Beach Bacteria TMDL: The Los Angeles Water Board has adopted two TMDLs to reduce bacteria at Santa Monica Bay beaches (including Dockweiler Beach) during dry and wet weather. The Regional Board adopted the Dry Weather and Wet Weather TMDLs on January 24, 2002, and December 12, 2002, respectively (Resolutions 2002-004 and 2002-022). These TMDLs were approved by the State Water Board, State OAL and USEPA Region 9 and became effective on July 15, 2003. Neither TMDL assigns WLAs to the Facility; rather load reductions are addressed through a list of responsible jurisdictions and responsible agencies. The Discharger is not included in this list.

Santa Monica Bay DDTs and PCBs TMDL: Consistent with 40 C.F.R. §§ 130.2 and 130.7, section 303(d) of the CWA and USEPA guidance for developing TMDLs in California (USEPA, 2000a), the USEPA issued the *Santa Monica Bay TMDLs for DDTs and PCBs* on March 26, 2012. The TMDL includes WLAs for DDT and PCBs for point sources, including the Facility that are given in Table 6-2 of the TMDL. This Order implements the requirements of the Santa Monica Bay TMDL for DDTs and PCBs.

E. Other Plans, Polices and Regulations – Not Applicable

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Discharge Prohibitions

Discharge Prohibitions in this Order are based on the Federal Clean Water Act, Basin Plan, Water Code, State Water Resources Control Board's plans and policies, California Ocean Plan, U.S. Environmental Protection Agency guidance and regulations, and previous permit provisions.

As discussed in Sections IV.B.3 and IV.C.5, the discharge of PCBs is prohibited based on the standards applicable to steam-electric generating facilities contained in 40 C.F.R. § 423.12(b)(2).

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category in 40 C.F.R. section 423.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or

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subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. section 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Los Angeles Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

2. Applicable Technology-Based Effluent Limitations

Pursuant to section 306(b)(1) of the CWA, USEPA has established standards of performance for the steam electric power point source category, for existing and new sources, at 40 C.F.R. section 423. These regulations apply to the Facility as "*an establishment primarily engaged in the generation of electricity for distribution and sale which results primarily from a process utilizing fossil-type fuel…in conjunction with a thermal cycle employing the steam water system as the thermodynamic medium.*" (40 C.F.R. § 423.10) Standards of performance for existing facilities (instead of New Source Performance Standards [NSPS]) are applicable to discharges originating from the Facility because its construction was completed or commenced prior to publication of regulations on November 19, 1982, which proposed standards of performance for the industry. The following are applicable technology based-standards of performance (BPT and BAT) applicable to the Facility from the effluent limitation guidelines for existing sources at 40 C.F.R. section 423. The guidelines do not include standards of performance based on BCT.

The table below lists the Facility's outfalls and the waste streams subject to the ELGs for steam electric power generating point sources.

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Table F-11. Plant Waste Streams Subject to Effluent Limitation Guidelines

Outfall	Waste Stream	ELG Classification
Discharge Point 001	None[1]	--
Discharge Point 002	Unit 4 once-through cooling water	Once-through cooling water
	Units 5 – 8 raw tank overflow[2]	Low volume waste source
	Oily waste sump	Low volume waste source
	Unit 4 boiler blowdown	Low volume waste source
	Unit 4 reverse osmosis reject	Low volume waste source
	Floor drains and chemical laboratory drains	Low volume waste source
	Pipeline and Waer Tank hydrostatic test water	Low volume waste source
	Fire hydrant test water	Low volume waste source
	Storm water (drainage areas in vicinity of Units 3-8)	Not Subject to ELG

1. As discussed in section II.B of the Fact Sheet, discharges through Discharge Point 001 have been discontinued.
2. Process waters originating from Units 5–8 are subject to New Source Performance Standards (NSPS).

ELGs at 40 C.F.R. section 423 contains standards applicable to the following process waters: low volume wastes, fly ash transport water, bottom ash transport water, metal cleaning wastes (both chemical and non-chemical), cooling tower blowdown, and discharges of coal pile runoff. Discharges from the Facility covered under 40 C.F.R. section 423 include low volume wastes and once-through cooling water at Discharge Point 002.

Order 00-084 included limitations for metal cleaning wastes which have not been included in this Order. As discussed in Section II.A of the Fact Sheet, metal cleaning wastes are no longer discharged from the Facility.

a. Standards of Performance Based on BPT

Applicable effluent limitations established on the basis of BPT are summarized as follows:

i. The pH of all discharges, except once-through cooling water, shall be within the range of 6.0 – 9.0 standard units [40 C.F.R. § 423.12(b)(1)].

ii. There shall be no discharge of polychlorinated biphenyl (PCB) compounds such as those commonly used for transformer fluid [40 C.F.R. § 423.12(b)(2)].

iii. Low volume wastes are defined as those non-cooling wastewater sources for which specific limitations are not established by the effluent limitation guidelines at 40 C.F.R. part 423. The quantity of pollutants discharged from low volume waste sources shall not exceed the quantity determined by multiplying the flow of the low volume waste sources times the concentration listed in the following table [40 C.F.R. § 423.12(b)(3)]:

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Table F-12. BPT Effluent Limitations for Low Volume Wastes

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
TSS	mg/L	30.0	100.0	--	--
Oil and Grease	mg/L	15.0	20.0	--	--

iv. Once-through cooling water is defined as water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat. The quantity of pollutants discharged in once-through cooling water shall not exceed the quantity determined by multiplying the flow of once-through cooling water sources times the concentration listed in the following table: [40 C.F.R. § 423.12(b)(6)]:

Table F-13. BPT Effluent Limitations for Once-Through Cooling Water

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Free Available Chlorine	mg/L	--	0.2[1]	--	0.5

1. Applied as an average of analyses over a single period of chlorine release which does not exceed two hours.

v. Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Los Angeles Water Board that the units in a particular location cannot operate at or below this level of chlorination [40 C.F.R. § 423.12(b)(8)].

b. Standards of Performance Based on BAT

i. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid [40 C.F.R. § 423.13(a)].

ii. For any plant with a total rated electric generating capacity of 25 or more megawatts, the quantity of pollutants discharged in once-through cooling water from each discharge point shall not exceed the quantity determined by multiplying the flow of once-through cooling water from each discharge point times the concentration listed in the following table [40 C.F.R. § 423.13(b)(1)]:

Table F-14. BAT Effluent Limitations for Once-Through Cooling Water

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Residual Chlorine	mg/L	--	--	--	0.2

iii. Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the Discharger demonstrates to the

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permitting authority that discharge for more than two hours per day is required for macroinvertebrate control [40 C.F.R. § 423.13(b)(2)].

c. Total Residual Chlorine Variance

In 1983, the then owner and operator of the Facility (Southern California Edison, or SCE) submitted an application for a variance under Section 301(g) of the CWA from BAT requirements for total residual chlorine (TRC). Then, in 1984, SCE also applied for an exception to the total residual chlorine effluent limitations based on the 1983 Ocean Plan objectives. In July 1988, the State Board adopted Resolution 88-80 which granted an exception from the total residual chlorine effluent limitations based on the 1983 Ocean Plan. EPA concurred with this exception on February 15, 1989.

In May 23, 1996, the USEPA approved the Discharger's request for a variance from BAT for TRC pursuant to Section 301(g) of the CWA and granted a variance of 0.4 mg/L for TRC at Discharge Point 002 with the following conditions:

i. The effluent from Discharge Point 002 must meet an alternate proposed modified effluent limitation (PMEL) of 0.4 mg/L total residual chlorine (instantaneous maximum) based on daily sampling at Discharge Point 002 during periods of chlorination.

ii. The effluent from Discharge Point 002 must meet chronic toxicity daily maximum limit of 19 TUc. The chronic toxicity tests must be representative of the 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 total residual chlorine effluent concentration measured during the previous 3 months' chlorination events. Altermatively, the sample may be chlorinated to the PMEL of 0.4 mg/L (unless the maximum TRC concentration from the previous 3 months exceeds this limit). 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.

iii. In the event effluent chronic toxicity limitations are exceeded at Discharge Point 002, the Discharger shall increase the monitoring frequency at Discharge Point 002 to biweekly in accordance with the NPDES permit. If the chronic toxicity limitation is exceeded again during the accelerated monitoring period, the Discharger shall initiate a toxicity reduction evaluation (TRE). The TRE shall be conducted in accordance with USEPA's most current TRE/toxicity identification evaluation (TIE) manuals.

iv. 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 tests, 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 the toxicity limitation.

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 a chlorination event at the condensers. The study showed that chlorine was not detected outside the zone of initial dilution during the chlorination event.

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The Discharger conducted a study on November 23, 1994 to determine the timing during the chlorination cycle at which the peak residual chlorine concentration occurs in the ocean discharge. The purpose of the study was to ensure that monitoring samples for total residual chlorine are collected at the times when the highest chlorine levels occur in the combined effluent. The study indicated that the maximum 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 the time of peak chlorine levels in the effluent. Subsequent testing by the Discharger from March to June 2000 indicated that, at Discharge Point 002, the highest chlorine level occurs between 25 and 35 minutes after the start of chlorination.

In 1996, the Discharger conducted chronic toxicity testing of effluent samples artificially spiked with chlorine in the laboratory for both the BAT level of 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 and were below the Ocean Plan limitation of 19 TUc for Discharge Point 002.

Monitoring data collected over the last 5 years of the permit term (January 2009 through December 2013) indicates that four exceedances of the BAT total residual chlorine level of 0.2 mg/L, and no exceedance of the total resicual chlorine variance of 0.4 mg/L have occurred. During the same period, there were no exceedances of the Ocean Plan chronic toxicity limitation of 19 TUc in the discharge.

As described in Section IV.B.2.3 of the Fact Sheet, Resolution 88-80 was approved based on biotoxicity data which indicated that the proposed modified effluent limitation of 0.820 mg/L for Discharge Point 002 would have a minimal impact on receiving waters and would be protective of beneficial uses. Because the total residual chlorine variance of 0.4 mg/L decided by USEPA is more stringent than the proposed limitation in the Resolution 88-80, USEPA indicated the incorporation of the evidence used for the adoption of the State Water Board Resolution 88-80 in their consideration. Resolution 88-80 granted to the Discharger was based on an uninterrupted chlorination duration of 30 minutes per condenser-half (two in a generating unit) per day. Therefore, the total residual chlorine limitation based on the 301(g) variance has only been prescribed for 30 minutes of chlorination per condenser-half in this Order. If exceeding 30 minutes of chlorination, the BAT limitation of 0.2 mg/L (as maximum concentration) shall be applied for the discharge. The total residual chlorine limitation based on the 301(g) variance is as follows:

Table F-15. Chlorine Limitations Based on Section 301(g) Variance

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Residual Chlorine[1]	mg/L	--	--	--	0.4[2]

1. If other oxidants are used, this shall be the total of all oxidants reported as residual chlorine.
2. This limit is applicable to the sampling during periods of chlorination. Each condenser half (two in a single unit) is chlorinated for up to 30 minutes per chlorination cycle, and there is a maximum of one chlorination cycle per 24-hour period. For chlorine discharges of up to 30 minutes, the instantaneous maximum limit is 0.4 mg/l. For chlorine discharges exceeding 30 minutes, the maximum total residual chlorine limitation shall be the BAT limitation of 0.2 mg/L.

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3. Summary of Technology-based Effluent Limitations (TBELs)

The Facility discharges once-through cooling water to the Pacific Ocean via Discharge Point 002. The total flow volume into the Pacific Ocean through Discharge Point 002 is a combination of once-through cooling water and in-plant waste streams that consist of low volume waste source wastewater, as defined in 40 C.F.R. section 423. Metal cleaning wastes and sanitary wastewater no longer contribute to the discharge to the receiving water as discussed in section II.A of the Fact Sheet. Consequently, TBELs for sanitary wastes and metal cleaning wastes have not been retained in this Order.

40 C.F.R. section 423.12(b)(12) and section 423.13(h) state that in the event that waste streams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property shall not exceed the limitations specified. In order to ensure that the discharge from each individual waste stream is in compliance with 40 C.F.R. section 423, effluent limitations have been established at the discharge of each waste stream before commingling with other waste streams and being discharged through Discharge Point 002.

Effluent limitations in 40 C.F.R. section 423.12(b)(11) and section 423.13(g) specify that, at the permitting authority's discretion, effluent limitations may be expressed as a concentration-based limitation instead of the mass-based limitations otherwise specified. Consistent with Order 00-084, technology-based effluent limitations in this Order are expressed as concentration-based limitations.

This Order establishes the following technology-based effluent limitations.

a. Discharge Point 002 (Monitoring Location EFF-002)

i. **PCBs.** There shall be no discharge of PCBs. This limitation is based on 40 C.F.R. section 423.12(b)(2). This limitation has been applied in this Order as a Discharge Prohibition.

ii. The Discharger shall maintain compliance with the effluent limitations contained in the following table. The limitation for total residual chlorine is based on the variance from BAT requirements for total residual chlorine approved by EPA pursuant to Section 301(g) of the CWA. The limitation for free available chlorine is based on 40 C.F.R. section 423.12(b)(6).

Table F-16. Effluent Limitations at Discharge Point 002 (Monitoring Location EFF-002)

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Residual Chlorine[1]	mg/L	--	--	--	0.4[2]
Free Available Chlorine	mg/L	--	0.2[3]	--	0.5

1. If other oxidants are used, this shall be the total of all oxidants reported as residual chlorine.
2. This limit is applicable to the sampling during periods of chlorination. Each condenser half (two in a single unit) is chlorinated for up to 30 minutes per chlorination cycle, and there is a maximum of one chlorination cycle per 24-hour period. For chlorine discharges of up to 30 minutes, the instantaneous maximum limit is 0.4 mg/l. For chlorine discharges exceeding 30 minutes, the maximum total residual chlorine limitation shall be the BAT limitation of 0.2 mg/L.
3. Applied as an average of analyses over a single period of chlorine release which does not exceed two hours.

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b. Low Volume Wastes (Monitoring Location INT-001)

i. **pH.** The pH shall be within the range of 6.0 - 9.0. This limitation is based on 40 C.F.R. section 423.12(b)(1).

ii. **PCBs.** There shall be no discharge of PCBs. This limitation is based on 40 C.F.R. sections 423.12(b)(2) and 423.13(a).

iii. The quantity of pollutants discharged from low volume waste sources shall not exceed the quantity determined by multiplying the flow of the low volume waste sources times the concentration listed in the following table. These limitations are based on 40 C.F.R. section 423.12(b)(3).

Table F-17. Effluent Limitations for Low Volume Wastes (Monitoring Location INT-001)

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
TSS	mg/L	30.0	100.0	--	--
Oil and Grease	mg/L	15.0	20.0	--	--

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C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

CWA Section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 C.F.R. requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the Ocean Plan.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan and Ocean Plan designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives for all waters.

a. Basin Plan. The beneficial uses specified in the Basin Plan applicable to the Pacific Ocean are summarized in section III.C.1 of this Fact Sheet. The Basin Plan incorporates by reference the requirements of the ocean plan whereby it states, "*The State Board's Water Quality Control Plan for Ocean Waters of California*

(Ocean Plan), and the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan), and any revisions thereto shall also apply to all ocean waters of the Region."

b. Ocean Plan. As noted in Section III.C of this Fact Sheet, the State Water Board adopted an Ocean Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Ocean Plan. The beneficial uses applicable to the Pacific Ocean are summarized in Section III.C.3 of this Fact Sheet. The Ocean Plan includes both narrative and numeric water quality objectives applicable to the receiving water.

Table 1 of the Ocean Plan (also known as Table B in previous editions of the Ocean Plan) includes the following water quality objectives for toxic pollutants and whole effluent toxicity:

i. 6-month median, daily maximum, and instantaneous maximum objectives for 21 chemicals and chemical characteristics, including total residual chlorine and chronic toxicity, for the protection of marine aquatic life.

ii. 30-day average objectives for 20 non-carcinogenic chemicals for the protection of human health.

iii. 30-day average objectives for 42 carcinogenic chemicals for the protection of human health.

iv. Daily maximum objectives for acute and chronic toxicity.

c. Thermal Plan. The State Water Board adopted the Thermal Plan on January 7, 1971. The Thermal Plan includes narrative water quality objectives for discharges of elevated temperature wastes for existing discharges (those discharges at least under construction prior to the adoption of the Plan) and for new discharges. A revised Thermal Plan was adopted by the State Board on September 18, 1975. The Facility, as presently operating, is considered an existing discharge per definition ten of the Thermal Plan.

Water Quality Objective 3.A.1 is applicable to existing thermal discharges to the coastal waters of California:

> *Elevated temperature wastes shall comply with limitations necessary to assure protection of the beneficial uses and areas of special biological significance.*

3. Determining the Need for WQBEL's

a. Reasonable Potential Analysis Methodology

The need for effluent limitations based on water quality objectives in Table 1 of the Ocean Plan was evaluated in accordance with section 122.44(d) and guidance for statistically determining the "reasonable potential" for a discharged pollutant to exceed an objective, as outlined in the California Ocean Plan Reasonable Potential Analysis (RPA) Amendment that was adopted by the State Water Board on April 21, 2005. The statistical approach combines knowledge of effluent variability (as estimated by a coefficient of variation) with the uncertainty due to a limited amount of effluent data to estimate a maximum effluent value at a high level of confidence. This estimated maximum effluent value is based on a lognormal distribution of daily effluent values. Projected receiving water values (based on the estimated maximum

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effluent value or the reported maximum effluent value and minimum probable initial dilution) can then be compared to the appropriate objective to determine the potential for an exceedance of that objective and the need for an effluent limitation.

The water quality objectives contained in the Ocean Plan are summarized in the table below for pollutants which were detected in effluent and/or possessed effluent limitations for Discharge Point 002 in Order 00-084.

Table F-18. Ocean Plan Water Quality Objectives[1]

Parameter	6-Month Median (µg/L)	Daily Maximum (µg/L)	Instantaneous Maximum (µg/L)	30-Day Average (µg/L)
Objectives for Protection of Marine Aquatic Life				
Arsenic	8	32	80	--
Cadmium	1	4	10	--
Chromium VI	2	8	20	--
Copper	3	12	30	--
Lead	2	8	20	--
Mercury	0.04	0.16	0.4	--
Nickel	5	20	50	--
Selenium	15	60	150	--
Silver	0.7	2.8	7	--
Zinc	20	80	200	--
Cyanide	1	4	10	--
Total Residual Chlorine	2	8	60	--
Ammonia (as N)	600	2400	6000	--
Acute Toxicity	--	0.3	--	--
Chronic Toxicity	--	1	--	--
Objectives for Protection of Human Health – Non-Carcinogens				
Antimony	--	--	--	1,200
Di-n-butyl-phthalate	--	--	--	3,500
Diethyl Phthalate	--	--	--	33,000
Objectives for Protection of Human Health – Carcinogens				
Halomethanes[2]	--	--	--	130

1. Water quality objectives for Ocean Plan Table 1 pollutants which were detected in effluent and/or possessed effluent limitations applicable at Discharge Point 002 in Order 00-084 are summarized in this table.
2. Halomethane shall mean the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

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According to the Ocean Plan (2012), the reasonable potential analysis (RPA) can yield three endpoints:

Endpoint 1: An effluent limitation is required and monitoring is required;

Endpoint 2: An effluent limitation is not required and the Los Angeles Water Board may require monitoring; and

Endpoint 3: The RPA is inconclusive, monitoring is required, and an existing effluent limitation may be retained or a permit reopener clause may be included to allow inclusion of an effluent limitation if future monitoring warrants the inclusion.

b. Minimum Initial Dilution

The implementation provisions for Table 1 in section III.C of the Ocean Plan specify that the minimum initial dilution is the lowest average initial dilution within any single month of the year. Dilution estimates are to be based on observed waste flow characteristics, observed receiving water density structure, and the assumption that no currents of sufficient strength to influence the initial dilution process flow across the discharge structure. Before establishing a dilution credit for a discharge, it must first be determined if, and how much, receiving water is available to dilute the discharge.

As discussed in Section II.B of the Fact Sheet, Order 00-084 established the minimum initial dilution factor (Dm) for discharges from the Facility at Discharge Point 002 to be 18 to 1 for all parameters, except total residual chlorine which was granted a dilution of 19 to 1. The Discharger has indicated that no additions or modifications to the Facility or the outfall at Discharge Point 002 have been proposed that would alter the previously determined dilution characteristics. Therefore, the dilution ratio for Discharge Point 002 established in Order 00-084 will be retained in this Order and applied to the RPA and WQBEL's established herein.

c. RPA for Ocean Plan Table 1 Pollutants

Effluent data submitted to the Los Angeles Water Board for the period from January 2009 through March 2014 for Discharge Point 002 was considered in the RPA. The dilution credits applicable to the ocean outfall (19:1 for total residual chlorine and 18:1 for all other parameters) were considered to evaluate reasonable potential in accordance with the procedures contained in the Ocean Plan. Based on the evaluation using the *RPcalc 2.2* software tool, which was developed by the State Water Board for the purpose of conducting RPAs of ocean discharges, the discharge demonstrates reasonable potential to cause or contribute to an excursion above an Ocean Plan Table 1 water quality objective for total residual chlorine. However, as discussed in Sections IV.B.2.d and IV.C.5 of the Fact Sheet, the Discharger has been granted an exception to the Ocean Plan under State Water Board Resolution 88-80 and is instead subject to alternate effluent limitations for total residual chlorine. As stated in the Ocean Plan exception (Resolution 88-80) "the alternative effluent limitation should result in meeting the numeric chlorine receiving water objectives at the edge of the zone of initial dilution allowed by the Ocean Plan".

The Los Angeles Water Board has determined that chronic toxicity demonstrates reasonable potential based on Step 13 of the RPA procedure described in Appendix VI of the Ocean Plan which states that one may conduct an RPA on the basis of best professional judgement. As discussed in Section IV.B.2.e of the Fact Sheet,

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State Water Board Resolution 88-80 and a 301(g) exception approved by EPA granted the Discharger a Proposed Modified Effluent Limit (PMEL) for total residual chlorine discharges from the Facility. The granting of the exception by EPA was contingent upon the Facility meeting a chronic toxicity effluent limitation of 19 TUc which demonstrates that application of the PMEL is not causing or contributing to an exceedance of water quality standards for chronic toxicity. Therefore, consistent with the findings of the May 1996 301(g) exception, the Los Angeles Water Board has determined that the discharge demonstrates reasonable potential to cause or contribute to an exceedance of water quality standards for chronic toxicity in the receiving water (Endpoint 1). An effluent limitation for this pollutant has been retained in this Order.

Based on the evaluation using the *RPcalc 2.2* software tool the discharge does not demonstrate reasonable potential for, arsenic, copper, lead, nickel, and zinc (Endpoint 2). Order 00-084 included effluent limitations for arsenic, copper, lead, nickel, and zinc. Thus, as specified in the Ocean Plan, effluent limitations for these pollutants have not been retained in this Order.

For many of the Table 1 parameters, most of the sampling events yielded non-detect results. Evaluation using the *RPcalc 2.2* software tool yielded Endpoint 3 result. This result means the RPA was inconclusive. The Ocean Plan indicates monitoring for the pollutant is required and also indicates any existing effluent limitation for a pollutant contained in Order 00-084 shall be retained in the permit. Order 00-084 included WQBEL's for cadmium, chromium (VI), mercury, selenium, and silver. These pollutants displayed Endpoint 3 and have been retained in this Order. Effluent limitations for all other pollutants displaying Endpoint 3 have not been included in this Order.

As discussed in Section II.A of the Fact Sheet, Discharge Point 001 has been retired from service and no longer contributes a discharge to the receiving water. Consequently, a RPA has not been performed for Discharge Point 001 and previously established effluent limitations for this location have not been retained in this Order.

A summary of the RPA results is provided below:

Table F-19. RPA Results Summary

Pollutant	Units	n[1]	MEC[2,3]	Most Stringent Criterion	Background	RPA Endpoint[4]
Objectives for Protection of Marine Aquatic Life						
Arsenic, Total Recoverable	µg/L	11	1.97	8	3	Endpoint 2
Cadmium, Total Recoverable	µg/L	11	0.03	1	0	Endpoint 3
Chromium (Hexavalent), Total Recoverable	µg/L	11	0.465	2	0	Endpoint 3
Copper, Total Recoverable	µg/L	11	11	3	2	Endpoint 2
Lead, Total Recoverable	µg/L	11	1.32	2	0	Endpoint 2
Mercury	µg/L	11	<0.01	0.04	0.0005	Endpoint 3
Nickel, Total Recoverable	µg/L	11	8.7	5	0	Endpoint 2
Selenium, Total Recoverable	µg/L	11	5.78	15	0	Endpoint 3

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Pollutant	Units	n[1]	MEC[2,3]	Most Stringent Criterion	Background	RPA Endpoint[4]
Silver, Total Recoverable	µg/L	11	1.97	0.7	0.16	Endpoint 3
Zinc, Total Recoverable	µg/L	11	100	20	8	Endpoint 2
Cyanide	µg/L	14	16	1	0	Endpoint 3
Total Chlorine Residual	µg/L	684	330	2	0	Endpoint 1
Ammonia	µg/L	6	410	600	0	Endpoint 3
Acute Toxicity	TUa	0	[5]	0.3	0	Endpoint 3
Chronic Toxicity	TUc	66	16	1	0	Endpoint 1[6]
Phenolic Compounds (non-chlorinated)[7]	µg/L	0	<2	30	0	Endpoint 3
Chlorinated Phenolics[8]	µg/L	0	<1	1	0	Endpoint 3
Endosulfan	µg/L	0	<0.01	0.009	0	Endpoint 3
Endrin	µg/L	6	<0.001	0.002	0	Endpoint 3
HCH[9]	µg/L	6	<0.001	0.004	0	Endpoint 3
Objectives for Protection of Human Health – Non-Carcinogens						
Acrolein	µg/L	10	<0.44	220	0	Endpoint 3
Antimony	µg/L	6	1.86	1200	0	Endpoint 2
Bis(2-chloroethoxy) methane	µg/L	6	<0.05	4.4	0	Endpoint 3
Bis(2-chloroisopropyl) ether	µg/L	6	<0.05	1200	0	Endpoint 3
Chlorobenzene	µg/L	10	<0.2	570	0	Endpoint 3
Chromium (III)	µg/L	0	[5]	190,000	0	Endpoint 3
Di-n-butyl-phthalate	µg/L	6	0.08255	3,500	0	Endpoint 3
Dichlorobenzenes	µg/L	6	<0.21	5,100	0	Endpoint 3
Diethyl phthalate	µg/L	6	0.04318	33,000	0	Endpoint 3
Dimethyl phthalate	µg/L	6	<0.01	820,000	0	Endpoint 3
4,6-dinitro-2-methylphenol	µg/L	6	<0.1	220	0	Endpoint 3
2,4-dinitrophenol	µg/L	6	<0.1	4.0	0	Endpoint 3
Ethylbenzene	µg/L	10	<0.12	4,100	0	Endpoint 3
Fluoranthene	µg/L	7	<0.0016	15	0	Endpoint 3
Hexachlorocyclopentadiene	µg/L	6	<0.05	58	0	Endpoint 3
Nitrobenzene	µg/L	6	<0.05	4.9	0	Endpoint 3
Thallium	µg/L	6	<0.001	2	0	Endpoint 3
Toluene	µg/L	7	<0.22	85,000	0	Endpoint 3
Tributyltin	µg/L	0	[5]	0.0014	0	Endpoint 3
1,1,1-trichloroethane	µg/L	10	<0.11	540,000	0	Endpoint 3

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Pollutant	Units	n[1]	MEC[2,3]	Most Stringent Criterion	Background	RPA Endpoint[4]
Objectives for Protection of Human Health – Carcinogens						
Acrylonitrile	µg/L	10	<0.27	0.10	0	Endpoint 3
Aldrin	µg/L	6	<0.001	0.000022	0	Endpoint 3
Benzene	µg/L	10	<0.1	5.9	0	Endpoint 3
Benzidine	µg/L	6	<0.05	0.000069	0	Endpoint 3
Beryllium	µg/L	11	<0.001	0.033	0	Endpoint 3
Bis(2-chloroethyl) ether	µg/L	6	<0.05	0.045	0	Endpoint 3
Bis(2-ethylhexyl) phthalate	µg/L	6	5	3.5	0	Endpoint 3
Carbon tetrachloride	µg/L	10	<0.19	0.90	0	Endpoint 3
Chlordane	µg/L	7	<0.001	0.000023	0	Endpoint 3
Chlorodibromomethane	µg/L	10	<0.13	8.6	0	Endpoint 3
Chloroform	µg/L	10	<0.074	130	0	Endpoint 3
DDT[10]	µg/L	6	<0.001	0.00017	0	Endpoint 3
1,4-dichlorobenzene	µg/L	10	<0.32	18	0	Endpoint 3
3,3'-dichlorobenzidine	µg/L	6	<0.05	0.0081	0	Endpoint 3
1,2-dichloroethane	µg/L	10	<0.21	28	0	Endpoint 3
1,1-dichloroethylene	µg/L	10	<0.2	0.9	0	Endpoint 3
Dichlorobromomethane	µg/L	10	<0.21	6.2	0	Endpoint 3
Dichloromethane	µg/L	9	<0.25	450	0	Endpoint 3
1,3-dichloropropene	µg/L	10	<0.22	8.9	0	Endpoint 3
Dieldrin	µg/L	6	<0.001	0.00004	0	Endpoint 3
2,4-dinitrotoluene	µg/L	6	<0.05	2.6	0	Endpoint 3
1,2-diphenylhydrazine	µg/L	6	<0.05	0.16	0	Endpoint 3
Halomethanes[11]	µg/L	7	3.8	130	0	Endpoint 3
Heptachlor	µg/L	6	<0.001	0.00005	0	Endpoint 3
Heptachlor epoxide	µg/L	6	<0.001	0.00002	0	Endpoint 3
Hexachlorobenzene	µg/L	6	<0.001	0.00021	0	Endpoint 3
Hexachlorobutadiene	µg/L	6	<0.05	14	0	Endpoint 3
Hexachloroethane	µg/L	6	<0.05	2.5	0	Endpoint 3
Isophorone	µg/L	6	<0.05	730	0	Endpoint 3
N-nitrosodimethylamine	µg/L	6	<0.05	7.3	0	Endpoint 3
N-nitrosodi-N-propylamine	µg/L	6	<0.05	0.38	0	Endpoint 3
N-nitrosodiphenylamine	µg/L	6	<0.05	2.5	0	Endpoint 3

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Pollutant	Units	n[1]	MEC[2,3]	Most Stringent Criterion	Background	RPA Endpoint[4]
PAHs[12]	µg/L	6	<0.001	0.0088	0	Endpoint 3
PCBs[13]	µg/L	6	<0.04	0.000019	0	Endpoint 3
TCDD equivalents[14]	µg/L	6	$<8.021 \times 10^{-9}$	3.9×10^{-9}	0	Endpoint 3
1,1,2,2-tetrachloroethane	µg/L	10	<0.18	2.3	0	Endpoint 3
Tetrachloroethylene	µg/L	10	<0.18	2.0	0	Endpoint 3
Toxaphene	µg/L	6	<0.01	0.00021	0	Endpoint 3
Trichloroethylene	µg/L	10	<0.24	27	0	Endpoint 3
1,1,2-trichloroethane	µg/L	10	<0.25	9.4	0	Endpoint 3
2,4,6-trichlorophenol	µg/L	6	<0.05	0.29	0	Endpoint 3
Vinyl chloride	µg/L	10	<0.17	36	0	Endpoint 3

1. Number of data points available for the RPA.
2. If there is a detected value, the highest reported value is summarized in the table. If there are no detected values, the lowest MDL is summarized in the table.
3. Note that the reported MEC does not account for dilution. The RPA does account for dilution; therefore it is possible for a parameter with an MEC in exceedance of the most stringent criteria not to present an Endpoint 1.
4. End Point 1 – RP determined, limit required, monitoring required.
   End Point 2 – Discharger determined not to have RP, monitoring may be established.
   End Point 3 – RPA was inconclusive, carry over previous limitations if applicable, and establish monitoring.
5. No monitoring data was collected for this pollutant during the term of Order 00-084.
6. Chronic toxicity possesses reasonable potential based on Step 13 (other available information) of Ocean Plan and the special terms and conditions required in the CWA 301(g) variance for chlorine, which is contingent upon the discharge at Discharge Point 002 meeting a chronic toxicity limits of 19 TUc as a daily maximum.
7. Non-chlorinated phenolic compounds represent the sum of 2-nitrophenol; phenol; 2,4-dimethylphenol; 2,4-dinitrophenol; 2-methyl-4,6-dinitrophenol; and 4-nitrophenol.
8. Chlorinated phenolic compounds represent the sum of 2-chlorophenol; 2,4-dichlorophenol; 2,4,6-trichlorophenol; 4-chloro-3-methylphenol; and pentachlorophenol.
9. HCH shall mean the sum of alpha, beta, gamma (lindane), and delta isomers of hexachlorocyclohexane.
10. DDT shall mean the sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD, and 2,4'-DDD.
11. Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide), and chloromethane (methyl chloride).
12. PAHs shall mean the sum of acenaphthylene; anthracene; 1,2-benzanthracene; 3,4-benzofluoranthene; benzo(k)fluoranthene; 1,12-benzoperylene; benzo(a)pyrene; chrysene; dibenzo(a,h)anthracene; fluorine; indeno(1,2,3-cd)pyrene; phenanthrene; and pyrene.
13. PCBs shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Arolclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.
14. 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 factors, as shown in the table below. USEPA method 1613 may be used to analyze dioxin and furan congeners.

    Dioxin-TEQ (TCDD Equivalents) = $\Sigma (C_x \times TEF_x)$

    Where:

T E N T A T I V E

C_x = concentration of dioxin or furan congener x

TEF_x = TEF for congener x

Toxicity Equivalency Factors

Isomer Group	Toxicity Equivalency Factor (TEF)
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

4. WQBEL Calculations

From the Table 1 water quality objectives of the Ocean Plan, effluent limitations are calculated according to Equation 1 of the Ocean Plan for all pollutants, except for acute toxicity (if applicable) and radioactivity:

$$Ce = Co + Dm(Co - Cs)$$

Where:

Ce = the effluent limitation (µg/L)
Co = the water quality objective to be met at the completion of initial dilution (µg/L)
Cs = background seawater concentration (µg/L)
Dm = minimum probable initial dilution expressed as parts seawater per part wastewater

As discussed in Sections II.B and IV.C.3 of the Fact Sheet, the Dm, approved by the State Water Board, is 18:1 for all pollutants except total residual chlorine, which is 19:1.

Table 3 of the Ocean Plan establishes background concentrations (represented as “Cs”) for some pollutants to be used when determining reasonable potential. In accordance with Table 1 implementation procedures, Cs equals zero for all pollutants that do not have background concentrations in Table 3. The background concentrations provided in Table 3 are summarized below:

Table F-20. Background Seawater Concentrations (Cs)

Parameter	Ocean Plan Table 3 Background Concentration (µg/L)
Arsenic	3
Copper	2
Mercury	0.0005
Silver	0.16

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Parameter	Ocean Plan Table 3 Background Concentration (µg/L)
Zinc	8

Section III.C.8.d of the Ocean Plan describes compliance determination for Table 1 pollutants for dischargers that use a large volume of ocean water for once-through cooling and states:

> *Effluent concentration values (C_e) shall be determined through the use of equation 1 considering the minimum probable initial dilution of the combined effluent (in-plant waste streams plus cooling water flow). These concentration values shall then be converted to mass emission limitations as indicated in equation 3. The mass emission limits will then serve as requirements applied to all in-plant waste streams taken together which discharge into the cooling water flow, except for total chlorine residual, acute [if applicable per Section 3 (c)] and chronic toxicity, and instantaneous maximum concentrations in Table 1 shall apply to, and be measured in, the combined final effluent, as adjusted for dilution with ocean water.*

In accordance with Ocean Plan implementation procedures for dischargers using a large volume of ocean water for once-through cooling, this Order establishes concentration-based WQBELs applicable to the combined discharge through Discharge Point 002 for total chlorine residual, free available chlorine, and for all Ocean Plan Table 1 parameters requiring instantaneous maximum limitations, and establishes mass emission limitations (applicable to the combined flow of low volume, in-plant wastes) for all other Ocean Plan Table 1 parameters requiring 6-month median, average monthly, and daily maximum effluent limitations.

The following demonstrates how the WQBELs, taking cadmium as an example, are established:

Cadmium

Compute effluent concentration limitations and values at Discharge Point 002:

C_e = 1 µg/L + 18 (1 µg/L – 0) = 19 µg/L (6-Month Median)
C_e = 4 µg/L + 18 (4 µg/L – 0) = 76 µg/L (Daily Maximum)
C_e = 10 µg/L + 18 (10 µg/L – 0) = 190 µg/L (Instantaneous Maximum)

Compute maximum mass emission limitations (L_t) for Low Volume Waste based on a maximum of 0.15 MGD (the hydraulic capacity of the retention basin outlet) of low volume wastes discharged from the retention basin at Monitoring Location INT-001:

L_t = 0.00834 x 19 µg/L x 0.15 MGD = 0.024 lbs/day (6-Month Median)
L_t = 0.00834 x 76 µg/L x 0.15 MGD = 0.095 lbs/day (Daily Maximum)

5. DDT and PCBs

Consistent with 40 C.F.R. 130.2 and 130.7, section 303(d) of the CWA and USEPA guidance for developing TMDLs in California, the USEPA issued the *Santa Monica Bay TMDL for DDTs and PCBs* on March 26, 2012. It includes WLAs for DDT and PCBs for point sources, including the Facility, that are described in Table 6-2 of the TMDL.

The Los Angeles Water Board developed WQBELs for DDTs and PCBs on the basis of the WLAs. The WQBELs were developed pursuant to 40 C.F.R. section 122.44(d)(1)(vii), which does not require or contemplate a reasonable potential analysis. Additionally, section 8 of the TMDL, (Implementation Recommendations) stipulates that “all discharges with WLAs identified in Table 6-2 are to be considered by NPDES permit

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writers to have reasonable potential under 40 C.F.R. 122.44(d) and require WQBELs following this TMDL."

The TMDL provides WLAs for the Discharger for DDT and PCBs equal to 0.00017 µg/L and 0.000019 µg/L, respectively, which are intended to meet the target concentrations within the receiving water. The WLAs are equal to the Ocean Plan objectives for the protection of human health.

As described in section 6.2 of the TMDL (Wasteload Allocations), the WLAs are to be translated to WQBELs with no further adjustment of dilution credit or background concentrations. In section 8.1, USEPA recommends the concentration-based WLAs be implemented as monthly average WQBELs in permits. As follows, the monthly average effluent limits for DDT and PCBs would be 0.00017 µg/L and 0.000019 µg/L, respectively; however, the more stringent TBEL for PCBs is "no discharge" and is included as an narrative effluent limitation, rather than an effluent limitation based on the WLA (see discussion in section IV.D.). The TBEL for PCBs in this Order has been applied as a Discharge Prohibition.

6. Total Chlorine Residual

As discussed in Section IV.B.2.e of the Fact Sheet, Order 00-084 contained a total residual chlorine Proposed Modified Effluent limit (PMEL) which was established on the basis of the Discharger's 301(g) variance and an exception to the Ocean Plan granted under State Board Resolution 88-80. The exception allows the Discharger to meet the PMEL of 0.4 mg/L as an instantaneous maximum. This Order retains the PMEL contained in Order 00-084 and changes the type of limitation from a daily maximum to an instantaneous maximum.

7. Temperature

The temperature limitations included in Order 00-084 were based on specific water quality objectives for existing coastal water dischargers in the Thermal Plan and are retained in this Order.

In compliance with the Thermal Plan and in accordance with Los Angeles Water Board specifications, a thermal effect study of the discharge was completed in 1975. The study demonstrated that wastes discharges from the power plant were in compliance with the Thermal Plan and beneficial uses of the receiving waters are protected, as required by Section 316(a) of the CWA. Thus the power plant with temperature discharges prescribed in the Order is in compliance with the Thermal Plan.

8. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative "no toxics in toxic amounts" criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

Although chronic toxicity data did not demonstrate statistical reasonable potential, Regional Water Board staff has determined that chronic toxicity possesses reasonable potential based on Step 13 (other available information) from the Ocean Plan and the special terms and conditions required in the CWA 301(g) variance for chlorine, which is

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contingent upon the discharge at Discharge Point 002 meeting a chronic toxicity limit of 19 TUc as a daily maximum. As mentioned below, the chronic toxicity limitation in this Order implements the USEPA's 2010 Test of Significant Toxicity (TST) hypothesis testing approach. The chronic toxicity effluent limittions in this Order are as stringent as necessary to protect the Ocean Plan Water Quality Objective for chronic toxicity.

The Ocean Plan establishes a daily maximum chronic toxicity objective of 1.0 TUc = 100/NOEC, using a 5-concentration hypothesis test. In 2010, USEPA endorsed the peer-reviewed Test of Significant Toxicity (TST) 2-concentration hypothesis testing approach in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010) as an improved hypothesis-testing tool to evaluate data from USEPA's toxicity test methods. The TST hypothesis testing approach more reliably identifies toxicity—in relation to the chronic (0.25 or more) and acute (0.20 or more) mean responses of regulatory management concern—than the current NOEC hypothesis-testing approach used in the Ocean Plan. TST results are also more transparent than the point estimate model approach used for acute toxicity in the Ocean Plan that is not designed to address the question of statistical uncertainty around the modeled toxicity test result in relation to the effect level of concern. The TST is the superior approach for addressing statistical uncertainty when used in combination with USEPA's toxicity test methods and is implemented in federal permits issued by USEPA Region 9.

The TST's null hypothesis (H_0) for chronic toxicity is:

H_0: Mean response In-stream Waste Concentration (IWC) in % effluent) ≤ 0.75 mean response (Control).

Results obtained from a single-concentration (IWC) chronic toxicity test are analyzed using the TST approach and an acceptable level of chronic toxicity is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

The chronic toxicity IWC for Discharge Point 002 is 100/(18+1) = 5.26 percent effluent.

D. Final Effluent Limitation Considerations

1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. The effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order, with the exception of all effluent limitations contained in Order 00-084 applicable at Discharge Point 001; effluent limitations for arsenic, copper, lead, nickel, and zinc applicable at Discharge Point 002; and all effluent limitations applicable to chemical metal cleaning wastes and for Sanitary Wastewater Treatment Plants Nos. 1 & 2. The effluent limitations for these pollutants have been removed from the Order. This relaxation of effluent limitations is consistent with the anti-backsliding exceptions of the CWA and federal regulations.

As previously described, discharges no longer occur at Discharge Point 001 and sanitary wastes and metal cleaning wastes are no longer discharged at Discharge Point 002. Section 402(o)(2) contains specific exceptions under which renewed, reissued, or modified permit may contain a less stringent effluent limitation, including instances where "*material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation*."

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Effluent limitations for Discharge Point 001 that have been removed from the permit, and limitations for sanitary wastes and metal cleaning wastes at Discharge Point 002 qualify under this exception because of the modifications to the permitted facility.

Section 402(o)(2)(B) states that effluent limitations may be less stringent in instances when information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. Parameters at Discharge Point 002 which displayed Endpoint 2 (i.e., did not display reasonable potential to cause or contribute to an excursion above water quality objectives) have been relaxed pursuant to this exception based on the most recent monitoring data, including arsenic, copper, lead, nickel, and zinc.

Effluent limitations for parameters which displayed Endpoint 3 have been retained in this Order. As discussed in Section VI.C.4 of the Fact Sheet and consistent with implementation procedures contained in the 2012 Ocean Plan, six-month median and maximum daily effluent limitations for these pollutants have been applied as mass-based effluent limitations. These mass-based limitations are equivalent to the concentration-based six-month median and maximum daily effluent limitations contained in Order 00-084 and, therefore, are consistent with anti-backsliding requirements and are at least as stringent as those in Order 00-084.

2. Antidegradation Policies

Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16. Resolution 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Los Angeles Water Board's Basin Plan and the Ocean Plan implement, and incorporate by reference, both the State and federal antidegradation policies.

This Order does not provide for an increase in the permitted design flow or allow for a reduction in the level of treatment. New low volume waste flows from Units 5-8 have been added to the discharge; however, sanitary waste flows, metal cleaning waste flows, and all flows from Discharge Point 001 no longer contribute to the discharge from the Facility. In addition, treatment at the Facility has not changed for the remaining waste streams relative to that contemplated under Order 00-084. Therfore, only a net decrease in the quantity of flow discharged is permitted under this Order. The final limitations in this Order hold the discharger to performance levels that will not cause or contribute to water quality impairment or degradation of water quality and compliance with the requirements in this Order will result in the best practicable treatment or control of the discharge. The removal of effluent limitations for arsenic, copper, lead, nickel, and zinc will not allow degradation of the receiving water because these pollutants are present in the effluent at levels below background concentrations or at very low concentrations after considering the allowable dilution factor and the volume of the discharge. Therefore, the permitted discharge is consistent with the antidegradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on free available chlorine, oil and grease, PCBs, pH, and TSS. Restrictions on these

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pollutants are discussed in Section IV.B of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The procedures for calculating the individual water quality-based effluent limitations are based on the Ocean Plan, most recently amended, effective August 19, 2013. All beneficial uses and water quality objectives contained in the Ocean Plan were approved under state law and submitted to and approved by USEPA and are applicable water quality standards pursuant to 40 C.F.R. section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

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Table F-21. Summary of Final Effluent Limitations for Discharge Point No. 002

Pollutant	Units	6-month median	Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Basis[1]
pH	pH Units	--	--	--	6.0	9.0	E, OP, ELG
Temperature	^{o}F	[2]					E, TP
PCBs[3]	µg/L	[4]					ELG
Cadmium, Total Recoverable	µg/L	--	--	--	--	190	E, OP
	lbs/day	--	--	--	--	--	OP
Chromium (VI)[5]	µg/L	--	--	--	--	380	E, OP
	lbs/day	--	--	--	--	--	OP
Chronic Toxicity[6]	Pass or Fail, % Effect	--	Pass[7]	Pass or % Efffect<50	--	--	BPJ, TST
DDT	µg/L	--	0.00017	--	--	--	TMDL
	lbs/day	--	0.00028[8]	--	--	--	
Mercury, Total Recoverable	µg/L	--	--	--	--	7.6	E, OP
	lbs/day	--	--	--	--	--	OP
Selenium, Total Recoverable	µg/L	--	--	--	--	2,850	E, OP
	lbs/day	--	--	--	--	--	OP
Silver, Total Recoverable	µg/L	--	--	--	--	130	E, OP
	lbs/day	--	--	--	--	--	OP
Total Residual Chlorine[9]	mg/L	--	--	--	--	0.4[10]	E, 301(g)
Free Available Chlorine	mg/L	--	--	0.2[11]	--	0.5	E, ELG

1. BPJ = Best Professional Judgment, E = Existing Order, OP = Ocean Plan (effective August 19, 2013), ELG = Effluent Limitation Guidelines and Standards (40 C.F.R. 423), TMDL = Santa Monica Bay TMDLs for DDTs and PCBs, TP = Thermal Plan, 301(g) = 301(g) Variance and State Water Board Resolution 88-80. TST = EPA Test of Significant Toxicity Approach
2. The temperature of wastes discharged shall not exceed 105°F during normal operation of the Facility. During heat treatment, the temperature of wastes discharged shall not exceed 125°F except during adjustment of the recirculation gate at which time the temperature of wastes discharged shall not exceed 135°F. Temperature fluctuations during gate adjustment above 125°F shall not last for more than 30 minutes.
3. PCBs mean the sum of Aroclor-1016, 1221, 1232, 2342, 1248, 1254, and 1260 when monitoring using USEPA method 608. PCBs mean the sum of 41 congeners when monitoring using USEPA proposed method 1668c. PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105,110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be individually quantified.
4. The Discharge of PCBs is prohibited (See Order Prohibitions section III.I).
5. The Dischargher may at their option meet this effluent limitation as a total chromium effluent limitation.

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6. "Pass" or "Fail" for Median Monthly Effluent Limitation (MMEL). "Pass" or "Fail" and "% Effect" for Maximum Daily Effluent Limitation (MDEL). The MMEL for chronic toxicity shall only apply when there is a discharge more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests are required when one toxicity test results in "Fail".
7. This is a Median Monthly Effluent Limitation.
8. These mass-based effluent limitations are calculated using the following formula:

   Mass-based effluent limitation = C * Q * 0.00834

   Where:

   C = Concentration-based effluent limitation (µg/L)

   Q = Maximum discharge flow rate (MGD) = 200.08 MGD
9. If other oxidants are used, this shall be the total of all oxidants reported as residual chlorine.
10. This limit is applicable to the sampling during periods of chlorination. Each condenser half (two in a single unit) is chlorinated for up to 30 minutes per chlorination cycle, and there is a maximum of one chlorination cycle per 24-hour period. For chlorine discharges of up to 30 minutes per condenser half, the instantaneous maximum limit is 0.4 mg/l. For chlorine discharges exceeding 30 minutes, the maximum total residual chlorine limitation shall be the BAT limitation of 0.2 mg/L.
11. Applied as an average of analyses over a single period of chlorine release which does not exceed two hours.

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Table F-22. Summary of Final Effluent Limitations for Monitoring Location INT-001

Pollutant	Units	6-month median	Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Basis[1]
pH	pH Units	--	--	--	6.0	9.0	E, ELG
PCBs[2]	µg/L	--	--	[3]	--	--	ELG
TSS	mg/L	--	30.0	100.0	--	--	E, ELG
	lbs/day	--	38[4]	125[4]	--	--	
Oil and Grease	mg/L	--	15.0	20.0	--	--	E, ELG
	lbs/day	--	19[4]	25[4]	--	--	
Cadmium, Total Recoverable	lbs/day	0.024[4]	--	0.095[4]	--	--	OP
Chromium (VI)[5]	lbs/day	0.048[4]	--	0.19[4]	--	--	OP
Mercury, Total Recoverable	lbs/day	0.00094[4]	--	0.0038[4]	--	--	OP
Selenium, Total Recoverable	lbs/day	0.36[4]	--	1.4[4]	--	--	OP
Silver, Total Recoverable	lbs/day	0.013[4]	--	0.063[4]	--	--	OP

1. E = Existing Order, OP = Ocean Plan (effective March 10, 2010), ELG = Effluent Limitation Guidelines and Standards (40 C.F.R. 423), TMDL = *Santa Monica Bay TMDLs for DDTs and PCBs*
2. PCBs mean the sum of Aroclor-1016, 1221, 1232, 2342, 1248, 1254, and 1260 when monitoring using USEPA method 608. PCBs mean the sum of 41 congeners when monitoring using USEPA proposed method 1668c. PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105,110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be individually quantified.
3. There shall be no discharge of PCBs (See Order Prohibitions section III.I).
4. The mass-based limitations are based on a maximum low volume waste flow of 0.15 MGD and are calculated as follows:
   Mass-based limitation (lb/day) = C x Q_m x 0.00834
   Where:
   C = Concentration-based limitations (µg/L) calculated in the combined discharge (cooling water and in-plant wastes) except for TSS and oil and grease whose concentration-based limitatations are shown in the table.
   Q_m = 0.15 MGD, the maximum flow for low volume wastes commingled at Discharge Point 002.
5. The Discharger may at their option meet this effluent limitation as a total chromium limitation.

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E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications – Not Applicable

G. Recycling Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Ocean Plan contains numeric and narrative water quality objectives applicable to the coastal waters of California. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (section 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water and are based on the water quality objectives contained in the Ocean Plan.

B. Groundwater – Not Applicable

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D to the order.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

The Los Angeles Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new federal regulations, modification in toxicity requirements, or adoption of new regulations by the State Water Board or Los Angeles Water Board, including revisions to the Basin Plan and/or Ocean Plan.

2. Special Studies and Additional Monitoring Requirements

a. Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan. This provision is based on section III.C.10 of the Ocean Plan.

3. Best Management Practices and Pollution Prevention

a. Storm Water Pollution Prevention, Best Management Practices, and Spill Contingency Plans

i. **Storm Water Pollution Prevention Plan (SWPPP).** This Order requires the Discharger to update, as necessary, and continue to implement a SWPPP. The SWPPP will outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff

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from being discharged directly into Santa Monica Bay. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with storm water. SWPPP requirements are included as Attachment G, based on 40 C.F.R. 122.44(k).

ii. **Best Management Practices Plan (BMPP).** This Order requires the Discharger to develop and implement the BMPP. The BMPP may be included as a component of the SWPPP. The purpose of the BMPP is to establish site-specific procedures that ensure proper operation and maintenance of equipment, to ensure that unauthorized non-storm water discharges (i.e., spills) do not occur at the Facility. The BMPP shall incorporate the requirements contained in Appendix G. Appendix G requires a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

iii. **Spill Contingency Plan (SCP).** This Order requires the Discharger to develop and implement a SCP to control the discharge of pollutants. The SCP shall include a technical report on the preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events at the site. This provision is included in this Order to minimize and control the amount of pollutants discharged in case of a spill. The SCP shall be site specific and shall cover all areas of the Facility.

4. Construction, Operation, and Maintenance Specifications

a. This provision is based on the requirements of 40 C.F.R. section 122.41(e).

5. Special Provisions for Municipal Facilities (POTW's Only) – Not Applicable

6. Other Special Provisions

a. Discharges of Storm Water

The Discharger shall maintain coverage under General Permit No. CAS000001 and, except as otherwise authorized by this Order, shall meet the requirements of that general permit for the control of storm water discharges from the Facility.

b. Once-Through Cooling Water Compliance Schedule

Under Track 1 of the State Water Board's *Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling* (OTC Policy), an existing power plant must reduce the intake flow rate to a level commensurate with closed-cycle wet cooling such that the through-screen intake velocity does not exceed 0.5 feet per second.

Track 2 is available to existing plants that demonstrate that Track 1 is infeasible, and such plants must reduce impingement and entrainment by 90 percent unless the California Independent System Operator, California Energy Commission, or Public Utilities Commission determines there is continued need for the plant, in which event the State Water Board will hold a hearing to consider suspension of the compliance date. In the interim, the OTC Policy requires plants to implement measures to mitigate impingement and entrainment impacts.

According to the Policy, an implementation plan identifying the selected compliance alternative was due on April 1, 2011. The Discharger submitted an implementation plan for compliance with the OTC Policy on March 30, 2011. According to its Implementation Plan, the Facility consisted of four natural gas fired steam electric

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generating units (1, 2, 3, and 4). Units 1 and 2 have been demolished and discharge from these units ceased on May 2010. Unit 3 was also retired on July 22, 2013 and the discharges from the unit have ceased. Units 1, 2, and 3 have come into compliance, under the Track 1 alternative, with the construction and completion of El Segundo Energy Center (ESEC). Construction of the new ESEC units (5, 6, 7, and 8) began in 2011 and became available for commercial operation on August 1, 2013. Therefore, the Discharger only needs to bring Unit 4 into compliance and shall comply with the OTC Policy in accordance with the following schedule:

Table F-23. Schedule of Compliance with OTC Policy

Task	Compliance Date
Achieve full compliance with Unit 4.	December 31, 2015

The OTC Policy requires the immediate and interim requirements:

i. As of October 1, 2011, the owner or operator of an existing power plant with an offshore intake shall install large organism exclusion devices having a distance between exclusion bars of no greater that nine inches, or install other exclusion devices, deemed equivalent by the State Water Board.

ii. As of October 1, 2011, any unit that is not directly engaged in power-generating activities or critical system maintenance shall cease intake flows unless it has been demonstrated to the State Water Board that a reduced minimum flow is necessary for operations

iii. Commencing on October 1, 2015 and continuing up and until achieving final compliance with the OTC Policy, the owner or operator of the existing power plant must implement measures to mitigate the interim impingement and entrainment impacts resulting from the discharge.

Per the Discharger's submitted implementation plan and subsequent correspondence, the Discharger has complied with the large organism exclusion device requirement by retrofitting its intake with bars with a minimum of 9 inch spacing. In addition any unit not directly engaged in power-generating activities or critical maintenance system has ceased intake flows. With regards to the mitigating measures (item iii above), the State Water Board has identified the preferred mitigation method as providing funding to the California Coastal Conservancy that will ultimately be used "for mitigation projects directed toward increases in marine life associated with the State's Marine Protected Areas in the geographic region of the facility." The Discharger has requested to consider the previous funding provided to the Santa Monica Bay Restoration Commission in the amount of $1 million as a prepayment against the interim mitigation requirement satisfying the interim mitigation fee for this time period. The State Water Board staff will evaluate the completed projects once submitted by the Discharger and determine if they are adequate projects and meet the mitigation requirements of the OTC Policy. However, if it is determined that further mitigation is still needed, then the Discharger shall continue to implement measures to mitigate interim impingement and entrainment impacts until full compliance is achieved by shuting down Unit 4 no later than December 31, 2015.

7. Compliance Schedules – Not Applicable

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VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 C.F.R. sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Los Angeles Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring

Order 00-084 contained semi-annual monitoring for a variety of metals in the intake water which has not been retained in the MRP (Attachment E). This monitoring was established for use in establishing background concentrations used in calculating effluent limitations for these pollutants. The Ocean Plan has prescribed default background pollutant concentrations for these parameters; therefore, monitoring for these metals in the intake water is no longer necessary.

B. Effluent Monitoring

1. Discharge Point 001

Order 00-084 contained monitoring requirements applicable to the discharge from Discharge Point 001 which have not been retained in the MRP (Attachment E). As discussed in Section II.B of the Fact Sheet, this conduit and discharge location has been retired from service and therefore monitoring at this location is no longer necessary.

2. Discharge Point 002 (Monitoring Location EFF-002)

a. Monthly monitoring at a minimum has been established for those pollutants where effluent limitations at Discharge Point 002 (Monitoring Location EFF-002) have been established in the Order (i.e., pH, temperature, cadmium, chromium (VI), mercury, selenium, silver, total residual chlorine, free available chlorine, PCBs and DDT). The quarterly monitoring for Chronic toxicity has been retained. These monitorings are necessary to determine compliance with effluent limitations and to provide data for evaluating reasonable potential for the discharge to cause or contribute to an exceedance of applicable water quality objectives contained in the Ocean Plan during future permit reissuances.

b. Monitoring for the remaining pollutants contained in Table 1 of the Ocean Plan which do not have effluent limitations have a monitoring frequency of once per year. Data generated from this monitoring is necessary for evaluating reasonable potential for the discharge to cause or contribute to an exceedance of applicable water quality objectives contained in the Ocean Plan during future permit reissuances.

c. Quarterly monitoring for total coliform, fecal coliform, and enterococcus established in Order 00-084 have been retained in this MRP (Attachment E). The primary source for bacteria is the sanitary wastewater generated at the facility. That discharge was terminated in 2010. However, low volume wastes from the open retention basin may be a potential source of bacteria.

d. Compliance with effluent limits must be determined using an approved method under 40 CFR section 136. In the case of PCBs, this is Method 608. Consistent with the Santa Monica Bay TMDL for DDT and PCBs, this Order also requires the Discharger to monitor and report PCBs using USEPA's proposed Method 1668c,

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which is capable of quantifying PCBs that are present at lower levels than Method 608. The Los Angeles Water Board will use Method 1668c PCBs data to verify assumptions and evaluate the need to further refine wasteload allocations in the TMDL. The Los Angeles Water Board finds that these monitoring and reporting requirements bear a reasonable relationship to the Los Angeles Water Board's need for and the benefits obtained from the reports.

3. **Low Volume Wastes (Monitoring Location INT-001)**

Monitoring requirements for low volume wastes included in Order 00-084 have been retained in the MRP (Attachment E). These monitoring requirements are necessary to determine compliance with effluent limitations established in this Order.

Monthly monitoring has been established in the MRP (Attachment E) for those pollutants where effluent limitations at Monitoring Location INT-001 are newly established in the Order (i.e., chromium (VI), cadmium, mercury, selenium, silver, PCBs and DDT). The monitoring frequency for PCBs is increased to once per month to be consistent with other parameters with effluent limitations.These monitoring frequencies are necessary to determine compliance with the effluent limitations.

4. **Metal Cleaning Wastes**

Monitoring requirements for chemical metal cleaning wastes included in Order 00-084 have not been retained in the MRP (Attachment E) since these wastes are no longer a componenet of the discharge to the receiving water, as discussed in Section II.A of the Fact Sheet. Metal cleaning wastes generated at the Facility are currently trucked to an off-site treatment facility for treatment and disposal.

5. **Sanitary Wastewater Treatment Plant Nos. 1 and 2**

Order 00-084 contained monitoring requirements applicable to the discharges from two sanitary wastewater package plants which have not been retained in the MRP (Attachment E). As discussed in Section II.A of the Fact Sheet, the Facility has retired from service and demolished the wastewater treatment plants. Sanitary wastes generated at the Facility are currently piped to a nearby municipal wastewater treatment plant and therefore monitoring at the former locations of the wastewater treatment plants is no longer necessary.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. Chronic toxicity is a more stringent requirement that acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects. For this permit, chronic toxicity in the discharge is limited and evaluated using USEPA's 2010 TST hypothesis testing approach. The chronic toxicity effluent limitations are as stringent as necessary to protect the Ocean Plan Water Quality Objective for chronic toxicity.

Section III.C.3.c.(4) of the Ocean Plan requires dischargers to conduct chronic toxicity testing if the minimum initial dilution of the effluent is below 100:1. The Facility has an initial dilution ratio of 18 to 1. Therefore, this Order includes monitoring requirements for chronic toxicity in the MRP (Attachment E).

This Order retains additional requirements to treat samples with chlorine to simulate effluent chlorine concentrations greater than BAT levels. This requirement is based on conditions for

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the 301(g) variance approval as stated in U.S. EPA's *Final Analysis of 301(g) Variance Application for the Southern California Edison Company El Segundo Generating Station,* May 23, 1996. The chlorine treatment is only required if any of the effluent chlorine results from the previous three months exceed BAT limitations of 0.2 mg/L.

D. Receiving Water Monitoring

1. Water Quality Monitoring

The monitoring requirements implement the Ocean Plan and follow the monitoring guidance in Appendix III (Standard Monitoring Procedures) of the Ocean Plan. The water quality monitoring requirements are included in the MRP (Attachment E) to determine compliance with the receiving water limitations established in this Order.

2. Benthic Sediments Monitoring

The monitoring requirements implement the Ocean Plan and follow the monitoring guidance in Appendix III (Standard Monitoring Procedures) of the Ocean Plan. This monitoring is required to determine if benthic conditions are changing over time as a result of the discharge.

3. Bioaccumulation Monitoring

The monitoring requirements implement the Ocean Plan and follow the monitoring guidance in Appendix III (Standard Monitoring Procedures) of the Ocean Plan. This local bioaccumulation trends survey is to address the question: "Is mussel tissue contamination in the vicinity of the outfall changing over time?"

4. Impingement Survey

Section 316(b) of the CWA requires the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. In accordance with Federal and State guidelines in effect at the time, the Discharger conducted a study (1982) to assess the requirements of the CWA Section 316(b) as they relate to the Facility intake structures. The study concluded the ecological impacts were environmentally acceptable and did not warrant modifications to the intake structure. The Los Angeles Water Board concurred and determined the design, construction, and operation of the intake structure to be Best Available Technology Economically Achievable based on regulations in effect at the time. Periodic monitoring of the biological impacts caused by the operation of the intake structure is required to ensure compliance with the requirements in the new OTC Policy.

5. Regional Monitoring Program

NPDES compliance monitoring focuses on the effects of a specific point source discharge. Generally, it is not designed to assess impacts from other sources of pollution (e.g., nonpoint source runoff, aerial fallout) or to evaluate the current status of important ecological resources in the waterbody. The scale of existing compliance monitoring programs does not match the spatial and, to some extent, temporal boundaries of the important physical and biological processes in the ocean. In addition, the spatial coverage provided by compliance monitoring programs is less than ten percent of the nearshore ocean environment. Better technical information is needed about status and trends in ocean waters to guide management and regulatory decisions, to verify the effectiveness of existing programs, and to shape policy on marine environmental protection.

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Regional monitoring is focused on questions that are best answered by a region-wide approach that incorporates coordinated survey design and sampling techniques. The major objective of regional monitoring is to collect information required to assess how safe it is to swim in the ocean, how safe it is to eat seafood from the ocean, and whether the marine ecosystem is being protected. Key components of regional monitoring include elements to address pollutant mass emission estimations, public health concerns, monitoring of trends in natural resources, assessment of regional impacts from all contaminant sources, and protection of beneficial uses.

The compliance monitoring programs for the El Segundo Power, LLC, and other major ocean dischargers will serve as the framework for the regional monitoring program. However, substantial changes to these programs will be required to fulfill the goals of regional monitoring, while retaining the compliance monitoring component required to evaluate the potential impacts from NPDES discharges.

The regular monitoring for the Southern California Bight has been established, occurring at four- to five-year intervals, and coordinated through the Southern California Coastal Water Research Project (SCCWRP) with discharger agencies and numerous other entities. The Bight regional monitoring programs were funded, in large part, by resource exchanges with the participating discharger agencies. During the year when Bight regional monitoring was scheduled, USEPA and this Regional Board eliminated portions of the routine compliance monitoring programs for that year, while retaining certain critical compliance monitoring elements. A certain percentage of the traditional sampling sites were also retained to maintain continuity of the historical record and to allow comparison of different sampling designs. The exchanged resources were redirected to complete sampling within the regional monitoring program design. Thus, the dischargers' overall level of effort for the 1994, 1998, 2003, 2008 and 2013 pilot programs remained approximately the same as the compliance monitoring programs.

Future regional monitoring programs may be funded in a similar manner. Thus, revisions to the routine compliance monitoring program will be made under the direction of the USEPA and this Regional Board as necessary to accomplish the goal; and may include resource exchanges.

E. Other Monitoring Requirements

1. Storm Water Monitoring

For discharges of storm water other than at Discharge Point 002, the Discharger shall implement the Monitoring and Reporting Requirements for individual dischargers contained in the general permit for Dischargers of Storm Water Associated with Industrial Activities (State Board Order No. 97-030-DWQ, NPDES No. CAS000001, adopted on April 17, 1997).

2. Monitoring for Discharge of Calcareous Material

Monitoring during the discharge of calcareous material (excluding heat treatment discharge) has been retained from Order 00-084. This monitoring is necessary to evaluate the effect of the discharge on the beneficial uses of the receiving water.

VIII. PUBLIC PARTICIPATION

The Los Angeles Water Board has considered the issuance of WDR's that will serve as an NPDES permit for El Segundo Generating Station. As a step in the WDR adoption process, the Los Angeles Water Board staff has developed tentative WDR's and has encouraged public participation in the WDR adoption process.

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A. Notification of Interested Parties

The Los Angeles Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDR's for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided to all interested parties via newspaper, email and posting in the vicinity of the facility.

The public had access to the agenda and any changes in dates and locations through the Los Angeles Water Board's web site at: http://www.waterboards.ca.gov/losangeles

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDR's as provided through the notification process electronically at losangeles@waterboards.ca.gov with a copy to JauRen.Chen@waterboards.ca.gov

To be fully responded to by staff and considered by the Los Angeles Water Board, the written comments were due at the Los Angeles Water Board office by 5:00 p.m. on **January 19, 2015**.

C. Public Hearing

The Los Angeles Water Board held a public hearing on the tentative WDR's during its regular Board meeting on the following date and time and at the following location:

Date:	**February 12, 2015**
Time:	**9:00 a.m.**
Location:	**Metropolitan Water District of Southern California, Board Room** **700 North Alameda Street** **Los Angeles, California**

Interested persons were invited to attend. At the public hearing, the Los Angeles Water Board heard testimony, pertinent to the discharge, WDR's, and permit. For accuracy of the record, important testimony was requested in writing.

Please be aware that dates and venues may change. Our Web address is http://www.waterboards.ca.gov/losangeles where you can access the current agenda for changes in dates and locations.

D. Reconsideration of Waste Discharge Requirements

Any aggrieved person may petition the State Water Board to review the decision of the Los Angeles Water Board regarding the final WDR's. The petition must be received by the State Water Board at the following address within 30 calendar days of the Los Angeles Water Board's action.

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

For instructions on how to file a petition for review, see:
http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

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E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Los Angeles Water Board by the Los Angeles Water Board.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDR's and NPDES permit should contact the Los Angeles Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Jau Ren Chen at (213) 576-6656.

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ATTACHMENT G – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

I. IMPLEMENTATION SCHEDULE

A storm water pollution prevention plan (SWPPP) shall be developed and submitted to the Los Angeles Water Board within 90 days following the adoption of this Order. The SWPPP shall be implemented for each facility covered by this Permit within 10 days of approval from the Los Angeles Water Board, or 6-months from the date of the submittal of the SWPPP to the Los Angeles Water Board (whichever comes first).

II. OBJECTIVES

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, overhead coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Los Angeles Water Board inspectors.

III. PLANNING AND ORGANIZATION

A. Pollution Prevention Team

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Attachment E of this Permit. The SWPPP shall clearly identify the Permit related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

B. Review Other Requirements and Existing Facility Plans

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this General permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this Permit. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly,

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facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

IV. SITE MAP

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

TABLE A
FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS

PLANNING AND ORGANIZATION Form Pollution Prevention Team Review other plans
ASSESSMENT PHASE Develop a site map Identify potential pollutant sources Inventory of materials and chemicals List significant spills and leaks Identify non-storm water discharges Assess pollutant risks
BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE Non-structural BMPs Structural BMPs Select activity and site-specific BMPs
IMPLEMENTATION PHASE Train employees Implement BMPs Conduct recordkeeping and reporting
EVALUATION / MONITORING Conduct annual site evaluation Review monitoring information Evaluate BMPs Review and revise SWPPP

The following information shall be included on the site map:

A. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.

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B. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

C. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.

D. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in section A.6.a.iv. below have occurred.

E. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

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V. LIST OF SIGNIFICANT MATERIALS

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

VI. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

A. The SWPPP shall include a narrative description of the facility's industrial activities, as identified in section A.4.e above, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

1. **Industrial Processes.** Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

2. **Material Handling and Storage Areas.** Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

3. **Dust and Particulate Generating Activities.** Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

4. **Significant Spills and Leaks.** Describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 C.F.R., part 302) that have been

discharged to storm water as reported on U.S. Environmental Protection Agency (USEPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 Code of Federal Regulations [C.F.R.], parts 110, 117, and 302).

The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this Permit.

5. **Non-Storm Water Discharges.** Facility operators shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

   All non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area.

   Non-storm water discharges that contain significant quantities of pollutants or that do not meet the conditions provided in Special Conditions D of the storm water general permit are prohibited by this Permit (Examples of prohibited non-storm water discharges are contact and non-contact cooling water, rinse water, wash water, etc.). Non-storm water discharges that meet the conditions provided in Special Condition D of the general storm water permit are authorized by this Permit. The SWPPP must include BMPs to prevent or reduce contact of non-storm water discharges with significant materials or equipment.

6. **Soil Erosion.** Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

B. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similar to Table B. The last column of Table B, "Control Practices", should be completed in accordance with section VII.A.8. below.

VII. ASSESSMENT OF POTENTIAL POLLUTANT SOURCES

A. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in A.6. above to determine:

1. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and

2. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.

B. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

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Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in VIII below.

VIII. STORM WATER BEST MANAGEMENT PRACTICES

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (sections A.6. and 7. above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

TABLE B

EXAMPLE
ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES SUMMARY

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery. Spills caused by topping off fuel tanks. Hosing or washing down fuel oil fuel area. Leaking storage tanks. Rainfall running off fuel oil, and rainfall running onto and off fueling area.	fuel oil	Use spill and overflow protection. Minimize run-on of storm water into the fueling area. Cover fueling area. Use dry cleanup methods rather than hosing down area. Implement proper spill prevention control program. Implement adequate preventative maintenance program to preventive tank and line leaks. Inspect fueling areas regularly to detect problems before they occur. Train employees on proper fueling, cleanup, and spill response techniques.

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

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Facility operators shall consider the following BMPs for implementation at the facility:

A. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs (see section A.8.b. below). Below is a list of non-structural BMPs that should be considered:

1. **Good Housekeeping.** Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility.
2. **Preventive Maintenance.** Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.
3. **Spill Response.** This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.
4. **Material Handling and Storage.** This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.
5. **Employee Training.** This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.
6. **Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.
7. **Recordkeeping and Internal Reporting.** This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.
8. **Erosion Control and Site Stabilization.** This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.
9. **Inspections.** This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.
10. **Quality Assurance.** This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

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B. Structural BMPs.

Where non-structural BMPs as identified in section VII.A.8 above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that should be considered:

1. **Overhead Coverage.** This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.
2. **Retention Ponds.** This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.
3. **Control Devices.** This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.
4. **Secondary Containment Structures.** This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.
5. **Treatment.** This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

IX. ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

A. A review of all visual observation records, inspection records, and sampling and analysis results.

B. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.

C. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.

D. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in section A.10.e, for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this General Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions V.D.5 of Attachment D.

X. SWPPP GENERAL REQUIREMENTS

A. The SWPPP shall be retained on site and made available upon request of a representative of the Los Angeles Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.

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B. The Los Angeles Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this section. As requested by the Los Angeles Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Los Angeles Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Los Angeles Water Board and/or local agency that the revisions have been implemented.

C. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

D. The SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this Permit.

When any part of the SWPPP is infeasible to implement due to proposed significant structural changes, the facility operator shall submit a report to the Los Angeles Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Los Angeles Water Board approval and/or modifications. Facility operators shall provide written notification to the Los Angeles Water Board within 14 days after the SWPPP revisions are implemented.

E. The SWPPP shall be provided, upon request, to the Los Angeles Water Board. The SWPPP is considered a report that shall be available to the public by the Los Angeles Water Board under Section 308(b) of the Clean Water Act.

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ATTACHMENT H – STATE WATER BOARD MINIMUM LEVELS

The Minimum Levels identified in this attachment represent the lowest concentration of a pollutant that can be quantitatively measured in a sample given the current state of performance in analytical chemistry methods in California. These Minimum Levels were derived from data provided by state-certified analytical laboratories in 1997 and 1998 for pollutants regulated by the California Ocean Plan and shall be used until new values are adopted by the State Water Board. There are four major chemical groupings: volatile chemicals, semi-volatile chemicals, inorganics, pesticides & PCBs. “No Data” is indicated by “—“.

TABLE II-1
MINIMUM LEVELS – VOLATILE CHEMICALS

Volatile Chemicals	CAS Number	Minimum Level* (µg/L)	
		GC Method[a]	GCMS Method[b]
Acrolein	107028	2.	5
Acrylonitrile	107131	2.	2
Benzene	71432	0.5	2
Bromoform	75252	0.5	2
Carbon Tetrachloride	56235	0.5	2
Chlorobenzene	108907	0.5	2
Chlorodibromomethane	124481	0.5	2
Chloroform	67663	0.5	2
1,2-Dichlorobenzene (volatile)	95501	0.5	2
1,3-Dichlorobenzene (volatile)	541731	0.5	2
1,4-Dichlorobenzene (volatile)	106467	0.5	2
Dichlorobromomethane	75274	0.5	2
1,1-Dichloroethane	75343	0.5	1
1,2-Dichloroethane	107062	0.5	2
1,1-Dichloroethylene	75354	0.5	2
Dichloromethane	75092	0.5	2
1,3-Dichloropropene (volatile)	542756	0.5	2
Ethyl benzene	100414	0.5	2
Methyl Bromide	74839	1.	2
Methyl Chloride	74873	0.5	2
1,1,2,2-Tetrachloroethane	79345	0.5	2
Tetrachloroethylene	127184	0.5	2
Toluene	108883	0.5	2
1,1,1-Trichloroethane	71556	0.5	2
1,1,2-Trichloroethane	79005	0.5	2
Trichloroethylene	79016	0.5	2
Vinyl Chloride	75014	0.5	2

Table II-1 Notes

a) GC Method = Gas Chromatography
b) GCMS Method = Gas Chromatography / Mass Spectrometry

* To determine the lowest standard concentration in an instrument calibration curve for these techniques, use the given ML (see Ocean Plan, Chapter III, “Use of Minimum Levels”).

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TABLE II-2
MINIMUM LEVELS – SEMI VOLATILE CHEMICALS

Semi-Volatile Chemicals	CAS Number	Minimum* Level (µg/L)			
		GC Method[a, *]	GCMS Method[b,*]	HPLC Method[c,*]	COLOR Method[d]
Acenapthylene	208968	--	10	0.2	--
Anthracene	120127	--	10	2	--
Benzidine	92875	--	5	--	--
Benzo(a)anthracene	56553	--	10	2	--
Benzo(a)pyrene	50328	--	10	2	--
Benzo(b)fluoranthene	205992	--	10	10	--
Benzo(g,h,i)perylene	191242	--	5	0.1	--
Benzo(k)floranthene	207089	--	10	2	--
Bis2-(1-Chloroethoxy) methane	111911	--	5	--	--
Bis(2-Chloroethyl)ether	111444	10	1	--	--
Bis(2-Chloroisopropyl)ether	39638329	10	2	--	--
Bis(2-Ethylhexyl) phthalate	117817	10	5	--	--
2-Chlorophenol	95578	2	5	--	--
Chrysene	218019	--	10	5	--
Di-n-butyl phthalate	84742	--	10	--	--
Dibenzo(a,h)anthracene	53703	--	10	0.1	--
1,2-Dichlorobenzene (semivolatile)	95504	2	2	--	--
1,3-Dichlorobenzene (semivolatile)	541731	2	1	--	--
1,4-Dichlorobenzene (semivolatile)	106467	2	1	--	--
3,3-Dichlorobenzidine	91941	--	5	--	--
2,4-Dichlorophenol	120832	1	5	--	--
1,3-Dichloropropene	542756	--	5	--	
Diethyl phthalate	84662	10	2	--	--
Dimethyl phthalate	131113	10	2	--	--
2,4-Dimethylphenol	105679	1	2	--	--
2,4-Dinitrophenol	51285	5	5	--	--
2,4-Dinitrotoluene	121142	10	5	--	--
1,2-Diphenylhydrazine	122667	--	1	--	--
Fluoranthene	206440	10	1	0.05	--
Fluorene	86737	--	10	0.1	--
Hexachlorobenzene	118741	5	1	--	--
Hexachlorobutadiene	87683	5	1	--	--
Hexachlorocyclopentadiene	77474	5	5	--	--
Hexachloroethane	67721	5	1	--	--
Indeno(1,2,3-cd)pyrene	193395	--	10	0.05	--
Isophorone	78591	10	1	--	--
2-methyl-4,6-dinitrophenol	534521	10	5	--	--
3-methyl-4-chlorophenol	59507	5	1	--	--
N-nitrosodi-n-propylamine	621647	10	5	--	--
N-nitrosodimethylamine	62759	10	5	--	--
N-nitrosodiphenylamine	86306	10	1	--	--

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Semi-Volatile Chemicals	CAS Number	Minimum* Level (µg/L)			
		GC Method[a, *]	GCMS Method[b,*]	HPLC Method[c,*]	COLOR Method[d]
Nitrobenzene	98953	10	1	--	--
2-Nitrophenol	88755	--	10	--	--
4-Nitrophenol	100027	5	10	--	--
Pentachlorophenol	87865	1	5	--	--
Phenanthrene	85018	--	5	0.05	--
Phenol	108952	1	1	--	50
Pyrene	129000	--	10	0.05	--
2,4,6-Trichlorophenol	88062	10	10	--	--

Table II-2 Notes

a) GC Method = Gas Chromatography
b) GCMS Method = Gas Chromatography / Mass Spectrometry
c) HPLC Method = High Pressure Liquid Chromatography
d) COLOR Method = Colorimetric

* To determine the lowest standard concentration in an instrument calibration curve for this technique, multiply the given ML by 1000 (see Ocean Plan, Chapter III, “Use of Minimum Levels”).

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TABLE II-3
MINIMUM* LEVELS – INORGANICS

Inorganic Substances	CAS Number	Minimum* Level (µg/L)								
		COLOR Method[a]	DCP Method[b]	FAA Method[c]	GFAA Method[d]	HYBRIDE Method[e]	ICP Method[f]	ICPMS Method[g]	SPGFAA Method[h]	CVAA Method[i]
Antimony	7440360	--	1000.	10.	5.	0.5	50.	0.5	5.	--
Arsenic	7440382	20.	1000.	--	2.	1.	10.	2.	2.	--
Beryllium	7440417	--	1000.	20.	0.5	--	2.	0.5	1.	--
Cadmium	7440439	--	1000.	10.	0.5	--	10.	0.2	0.5	--
Chromium (total)	--	--	1000.	50.	2.	--	10.	0.5	1.	--
Chromium (VI)	18540299	10.	--	5.	--	--	--	--	--	--
Copper	7440508	--	1000.	20.	5.	--	10.	0.5	2.	--
Cyanide	57125	5.	--	--	--	--	--	--	--	--
Lead	7439921	--	10000.	20.	5.	--	5.	0.5	2.	--
Mercury	7439976	--	--	--	--	--	--	0.5	--	0.2
Nickel	7440020	--	1000.	50.	5.	--	20.	1.	5.	--
Selenium	7782492	--	1000.	--	5.	1.	10.	2.	5.	--
Silver	7440224	--	1000.	10.	1.	--	10.	0.2	2.	--
Thallium	7440280	--	1000.	10.	2.	--	10.	1.	5.	--
Zinc	7440666	--	1000.	20.	--	--	20.	1.	10.	--

Table II-3 Notes

a) COLOR Method = Colorimetric
b) DCP Method = Direct Current Plasma
c) FAA Method = Flame Atomic Absorption
d) GFAA Method = Graphite Furnace Atomic Absorption
e) HYDRIDE Method = Gaseous Hydride Atomic Absorption
f) ICP Method = Inductively Coupled Plasma
g) ICPMS Method = Inductively Coupled Plasma / Mass Spectrometry
h) SPGFAA Method = Stabilized Platform Graphite Furnace Atomic Absorption (i.e., US EPA 200.9)
i) CVAA Method = Cold Vapor Atomic Absorption

* To determine the lowest standard concentration in an instrument calibration curve for these techniques, use the given ML (see Ocean Plan, Chapter III, "Use of Minimum* Levels").

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TABLE II-4
MINIMUM* LEVELS – PESTICIDES AND PCBS*

Pesticides – PCB's	CAS Number	Minimum* Level (µg/L) GC Method[a,*]
Aldrin	309002	0.005
Chlordane	57749	0.1
4,4'-DDD	72548	0.05
4,4'-DDE	72559	0.05
4,4'-DDT	50293	0.01
Dieldrin	60571	0.01
a-Endosulfan	959988	0.02
b-Endosulfan	33213659	0.01
Endosulfan Sulfate	1031078	0.05
Endrin	72208	0.01
Heptachlor	76448	0.01
Heptachlor Epoxide	1024573	0.01
a-Hexachlorocyclohexane	319846	0.01
b-Hexachlorocyclohexane	319857	0.005
d-Hexachlorocyclohexane	319868	0.005
g-Hexachlorocyclohexane (Lindane)	58899	0.02
PCB1016	--	0.5
PCB1221	--	0.5
PCB1232	--	0.5
PCB1242	--	0.5
PCB1248	--	0.5
PCB1254	--	0.5
PCB1260	--	0.5
Toxaphene	8001352	0.5

Table II-4 Notes

a) GC Method = Gas Chromatography

* To determine the lowest standard concentration in an instrument calibration curve for this technique, multiply the given ML by 100 (see Ocean Plan, Chapter III, "Use of Minimum Levels").

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