CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

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ORDER R4-2016-XXXX
NPDES NO. CA0000361

WASTE DISCHARGE REQUIREMENTS FOR THE LOS ANGELES DEPARTMENT OF WATER AND POWER HARBOR GENERATING STATION

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

Table 1. Discharger Information

Discharger	Los Angeles Department of Water and Power
Name of Facility	Harbor Generating Station
Facility Address	161 N. Island Avenue
	Wilmington, CA 90744
	Los Angeles County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Once-through cooling water, low volume wastes, and storm water	33.76639º N	-118.27º W	West Basin (Los Angeles Inner Harbor)

Table 3. Administrative Information

This Order was adopted on:	**June 28, 2016**
This Order shall become effective on:	**September 1, 2016**
This Order shall expire on:	**August 31, 2021**
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs 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 (USEPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	**Major**

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 Harbor 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 (Regional Water Board), finds:

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 USEPA 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 Regional 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 J 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 Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments. Details of the notification are provided in the Fact Sheet.

E. Consideration of Public Comment. The Regional 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.

THEREFORE, IT IS HEREBY ORDERED, that this Order supersedes Order No. R4-2003-0101 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 Regional Water Board from taking enforcement action for past violations of Order No. R4-2003-0101.

III. DISCHARGE PROHIBITIONS

A. Wastes discharged shall be limited to a maximum of 108 million gallons per day (MGD) comingled wastewater (consisting of once-through cooling water, storm water, and low volume wastewater consisting of demineralizer regeneration wastes) through Discharge Point 001. 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

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system, the West Basin of Los Angeles Inner Harbor, or other waters of the State, are prohibited.

C. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or create 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 Regional 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 Regional Water 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) such as those once commonly used for transformer fluid [40 C.F.R. sections 423.12(b)(2), and 423.13(a)].

J. The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited.

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IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

1. Final Effluent Limitations – Combined Effluent Through Discharge Point 001

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program, Attachment E:

Table 4. Effluent Limitations at Discharge Point 001 (Combined Discharge)

Parameter	Units	Effluent Limitations – Discharge Point 001				Performance Goals[1]
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Conventional Pollutants						
pH	standard units	--	--	6.5	8.5	--
Biochemical Oxygen Demand (BOD), 5-day @ 20ºC	mg/L	20	30			
	lbs/day[4]	18,014	27,022			
Oil and Grease	mg/L	10	15			
	lbs/day[4]	9,007	13,511			
Total Suspended Solids (TSS)[9]	mg/L	50	75			
	lbs/day[4]	45,036	67,554			

Parameter	Units	Effluent Limitations – Discharge Point 001				Performance Goals[1]
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Non-Conventional Pollutants						
Temperature	°F	--	--	--	86[2]	--
Settleable Solids	ml/L	0.1	0.3			
Turbidity	NTU	50	75			
Free Available Chlorine[5,6]	mg/L	--	0.2[3]	--	0.5	--
	lbs/day[4]	--	180	--	450	--
Total Residual Chlorine[5,6]	mg/L	--	0.1	--	--	--
	lbs/day[4]	--	90	--	--	--
Chronic Toxicity[7]	Pass or Fail, % Effect	Pass	Pass or % Effect <50	--	--	--
Radioactivity	[8]					--
Priority Pollutants						
Copper, Total Recoverable[9]	µg/L	3.3	5.5	--	--	--
	lbs/day[4]	3	5	--	--	--
Lead, Total Recoverable[9]	µg/L	6.0	16	--	--	--
	lbs/day[4]	5.4	14.4	--	--	--
Mercury, Total Recoverable[10]	µg/L	0.051	0.10	--	--	--
	lbs/day[4]	0.05	0.09	--	--	--
Zinc, Total Recoverable[9]	µg/L	70	140	--	--	--
	lbs/day[4]	63	126	--	--	--
Cyanide[10]	µg/L	0.50	1.0	--	--	--
	lbs/day[4]	0.45	0.9	--	--	--
Bis(2-ehtylhexyl) Phthalate[10]	µg/L	6	16	--	--	--
	lbs/day[4]	5.4	14.4	--	--	--
Heptachlor Epoxide[10]	µg/L	0.00011	0.00022	--	--	--
	lbs/day[4]	0.0001	0.0002	--	--	--
4,4'-DDT[9]	µg/L	0.00059	0.0012	--	--	--
	lbs/day[4]	0.0005	0.0011	--	--	--
Total PCBs[9]	[11]					
PAHs						
Benzo(a) Pyrene[9,12]	µg/L	--	--	--	--	0.049[13]
Chrysene [9,12]	µg/L	--	--	--	--	0.049[13]

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1 Performance Goals are intended to ensure that effluent concentrations and mass discharges do not exceed levels currently achieved by the permitted facility that are protective of water quality. These performance goals are not considered as limitations or standards for the regulation of the facility. They act as triggers to determine when effluent sediment monitoring is required for this category of pollutants.

2 The maximum temperature shall not exceed the natural receiving water temperature by more than 20°F. The maximum temperature of thermal waste discharges shall not exceed 86°F.

3. Applied as an average daily limitation.

4. Mass-based (lbs/day) effluent limitations are based on the new flow rate of 108 MGD for Discharge Point 001 at Monitoring Location EFF-001. The mass-based effluent limitations are calculated using the formula::

Mass (lbs/day) = 8.34 x C x Q

Where: C = concentration for a pollutant in mg/L

Q = maximum discharge flow rate in MGD

5. If other oxidants are used, this shall be the total of all oxidants reported as residual chlorine.
6. Total residual chlorine and free available chlorine may not be discharged from any single generating unit for more than two hours per day unless the Discharger demonstrates to the permitting authority that discharge for more than two hours per day is required for macroinvertebrate control.
7. The Median Monthly Effluent Limitation (MMEL) shall be reported as "Pass" or "Fail". The Maximum Daily Effluent Limitation (MDEL) shall be reported as "Pass" or Fail" and "% Effect". 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 may be conducted when one toxicity test results in "Fail"
8. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or hat result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
9. During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit or performance goal for copper, lead, zinc, 4,4'-DDT, total PCBs, benzo(a)pyrene, or chrysene, implementation of the effluent sediment monitoring program is required for that priority pollutant. The effluent sediment monitoring shall begin during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the interim sediment allocations in **Table 8** of this Order, demonstrates attainment with the applicable sediment allocation and additional sediment monitoring of the effluent is not required. A sediment monitoring result that exceeds the interim sediment allocation requires additional sediment monitoring of the effluent during discharge but not more frequently than once per year until the three-year average concentration for sediment monitoring results is at or below the interim sediment allocation.
10. The effluent limitation is based on CTR salt water criteria and calculated using CTR-SIP procedures.
11. There shall be no discharge of PCBs (See Prohibition III.I.).
12. Samples analyzed must be unfiltered samples.
13. CTR human health criteria were not established for total PAHs. Therefore, the performance goals are based on the CTR human health criteria for the individual PAHs; benzo(a)pyrene and chrysene. The benzo(a)pyrene and chrysene were selected because the State's 2010 303(d) List classifies the Los Angeles/Long Beach Inner Harbor as impaired for these PAH compounds.

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2. Final Effluent Limitations – Low Volume Wastewater (Monitoring Location INT-001A)

a. The Discharger shall maintain compliance with the following effluent limitations for low volume wastes [demineralizer regeneration wastes, and in-plant floor drains wastes (during emergency)] at Monitoring Location INT-001A with compliance measured at the same location as described in the Monitoring and Reporting Program, Attachment E:

Table 5. Effluent Limitations at Monitoring Location EFF-001A (Low Volume Wastes)

Parameter	Units	Effluent Limitations – Low Volume Wastes			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	6.0	9.0
Oil and Grease	mg/L	15	20	--	--
	lbs/day[1]	3.1	4.2	--	--
Total Suspended Solids	mg/L	30	100	--	--
	lbs/day[1]	6.3	21	--	--

1 Mass-based (lbs/day) effluent limitations are based on the flow rate of 0.025 MGD for Low Volume Wastes at Monitoring Location EFF-001A. The mass-based effluent limitations are calculated using the formula::

Mass (lbs/day) = 8.34 x C x Q
Where: C = concentration for a pollutant in mg/L
Q = maximum discharge flow rate in MGD

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3. Final Effluent Limitations – Storm Water (East Yard Drain - Monitoring Location INT-001B)

a. The Discharger shall maintain compliance with the following effluent limitations for storm water at East Yard Drain at Monitoring Location INT-001B with compliance measured at the same location as described in the Monitoring and Reporting Program, Attachment E

Table 6. Effluent Limitations for Storm Water at East Yard (Monitoring Locations EFF-001B)

Pollutant	Units	Effluent Limitations – East Yard Drain			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	6.5	8.5
Temperature	°F	--	--	--	86
Biochemical Oxygen Demand (BOD), 5-day @ 20ºC	mg/L	--	30	--	--
	lbs/day[1]	--	1.84	--	--
Oil and Grease	mg/L	--	15	--	--
	lbs/day[1]	--	0.92	--	--
Total Suspended Solids	mg/L	--	75	--	--
	lbs/day[1]	--	4.6	--	--

[1] Mass-based (lbs/day) effluent limitations are based on the storm water flow rate of 0.00735 MGD for East Yard Drain at Monitoring Location EFF-001B. The mass-based effluent limitations are calculated using the formula:

Mass (lbs/day) = 8.34 x C x Q
Where: C = concentration for a pollutant in mg/L
Q = maximum discharge flow rate in MGD

4. Final Effluent Limitations – Storm Water (West Yard Drain - Monitoring Location INT-001C)

a. The Discharger shall maintain compliance with the following effluent limitations for storm water at West Yard Drain at Monitoring Location INT-001C with compliance measured at the same location as described in the Monitoring and Reporting Program, Attachment E.

Table 7. Effluent Limitations for Storm Water at West Yard (Monitoring Locations EFF-001C)

Pollutant	Units	Effluent Limitations – East Yard Drain			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	6.5	8.5
Temperature	°F	--	--	--	86
Biochemical Oxygen Demand (BOD), 5-day @ 20ºC	mg/L	--	30	--	--
	lbs/day[1]	--	0.91	--	--
Oil and Grease	mg/L	--	15	--	--
	lbs/day[1]	--	0.46	--	--
Total Suspended Solids	mg/L	--	75	--	--
	lbs/day[1]	--	2.28	--	--

[1] Mass-based (lbs/day) effluent limitations are based on the storm water flow rate of 0.00365 MGD for West Yard Drain at Monitoring Location EFF-001C. The mass-based effluent limitations are calculated using the formula:

Mass (lbs/day) = 8.34 x C x Q
Where: C = concentration for a pollutant in mg/L
Q = maximum discharge flow rate in MGD

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B. Land Discharge Specifications – Not Applicable

C. Recycling Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitation

The discharge shall not cause the following in the Los Angeles Inner Harbor:

1. The normal ambient pH to fall below 6.5 nor exceed 8.5 units nor vary from normal ambient pH levels by more than 0.2 units.

2. Surface water temperature to rise greater than 4°F above the natural temperature of the receiving waters at any time or place. .

3. Water Contact Standards

In marine waters designated for Water Contact Recreation (REC-1), the waste discharged shall not cause the following bacterial standards to be exceeded in the receiving water:

a. Rolling 30-day Geometric Mean Limits

i. Total Coliform density shall not exceed 1,000/100 ml.
ii. Fecal coliform density shall not exceed 200/100 ml.
iii. Enterococcus density shall not exceed 35/100 ml.

b. Single Sample Maximum (SSM)

i. Total Coliform density shall not exceed 10,000/100 ml
ii. Fecal coliform density shall not exceed 400/100 ml
iii. Enterococcus density shall not exceed 104/100 ml
iv. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1

4. The concentration of dissolved oxygen to fall below 5.0 mg/L at any time, and/or the median dissolved oxygen concentration for any three consecutive months to be less than 80 percent of the dissolved oxygen content at saturation.

5. Exceedance of the total ammonia (as N) concentrations specified in the Regional Water Board Resolution 2004-022, adopted on March 4, 2004, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (including Enclosed Bays, Estuaries, and Wetlands) with the Beneficial Use Designations for Protection of "Aquatic Life"*.

6. Increases in natural turbidity attributable to controllable water quality factors to exceed the following limits:

a. Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%, and

b. Where natural turbidity is greater than 50 NTU, increase shall not exceed 10%.

7. The presence of visible, floating, suspended or deposited macroscopic particulate matter or foam.

8. Oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the receiving water or on objects in the water.

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9. Suspended or settleable materials, chemical substances or pesticides in amounts that cause nuisance or adversely affect any designated beneficial use.

10. Toxic or other deleterious substances in concentrations or quantities which cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

11. Accumulation of bottom deposits or aquatic growths.

12. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

13. The presence of substances that result in increases of biochemical oxygen demand that adversely affect beneficial uses.

14. Taste or odor-producing substances in concentrations that alter the natural taste, odor, and/or color of fish, shellfish, or other edible aquatic resources; cause nuisance; or adversely affect beneficial uses.

15. Alteration of turbidity such as apparent color beyond present natural background levels.

16. Damage, discolor, or formation of sludge deposits on flood control structures or facilities, or overloading of the design capacity.

17. Degradation of surface water communities and populations including vertebrate, invertebrate, and plant species.

18. Problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.

19. Nuisance, or adversely affect beneficial uses of the receiving water.

20. Violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or State Water Board. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board will revise or modify this Order in accordance with such standards.

21. Trash shall not be present in inland surface waters, enclosed bays, estuaries, and along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance

B, Groundwater Limitaions – Not Applicable

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D.

2. 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

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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 Regional 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.

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: Violation of any term or condition contained in this Order;

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 Regional 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 and the appropriate filing fee.

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k. The Discharger shall file with the Regional 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 Regional Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture 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 Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Regional 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.

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

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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 Regional 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 Regional 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.

u. 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. (Wat. Code § 1211.)

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. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal CWA, and amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

b. This Order may be reopened to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as part of this Order and based on the results of the Reasonable Potential Analysis (RPA) conducted from monitoring data according to the procedures outlined in the State Implementation Policy (SIP).

c. This Order may be reopened and modified, in accordance with the provisions set forth in 40 C.F.R parts 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 for the Los Angeles Inner Harbor.

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

f. This Order may be reopened and modified to revise limitations or provisions as a result of future updates or amendments to the OTC Policy.

g. 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.

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2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan. The Discharger shall submit to the Regional 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.

b. Monitoring Thresholds based on Sediment Interim Concentration-based Allocations in the Harbor Toxics TMDL for Sediment Monitoring of Effluent.

The monitoring thresholds in the table below are based on the TMDL's interim sediment allocations for copper, lead, zinc, DDT, PAHs, and PCBs. Attainment with these thresholds shall be demonstrated in accordance with Footnote 9 to Table 4 (Effluent Limitations) of this Order. Regardless of these monitoring thresholds, the Discharger shall ensure that effluent concentrations and mass discharges do not exceed levels that can be attained by performance of the Facility's treatment technologies existing at the time of permit issuance, reissuance, or modification.

As specified in **Section IV.A.2** of the MRP, the Discharger is required to monitor sediment (TSS) in effluent, at a minimum, **once during the five year permit term** if there is a discharge from the Facility during said term.

Table 8. Monitoring Thresholds

Pollutant	Monitoring Thresholds (mg/kg sediment)
Copper, Total Recoverable	142.3
Lead, Total Recoverable	50.4
Zinc, Total Recoverable	240.6
Polynuclear Aromatic Hydrocarbons (PAHs)[1]	4.58
DDT	0.07
Polychlorinated Biphenyls (PCBs)	0.06

1. According to the Sediment Quality Plan, total PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthene, anthracene, biphenyl, naphthalene, 2,6-dimethylnaphthalene, fuorene, 1-methylnaphthalene, 2-methylnaphthalene, 1-methylphenanthrene, phenanthrene, benzo(a)anthracene, benzo(a)pyrene, benzo(e)pyrene, chrysene, dibenz(a,h)anthracene, fluoranthene, perylene, and pyrene.

c. Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for the Greater Los Angeles and Long Beach Harbor Waters Compliance Monitoring Program.

As defined in the Harbor Toxics TMDL, the Discharger is a "responsible party" because it is an "Individual Industrial Permittee". As such, either individually or with a collaborating group, the Discharger shall develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in the Greater Los Angeles and Long Beach Harbor. These plans shall follow the "TMDL Element - Monitoring Plan" provisions in Attachment A to Resolution No. R11-008. The TMDL requires that the Monitoring Plan and QAPP shall be submitted 20 months after the effective date (March 23, 2012) of the TMDL for public review and subsequent Executive Officer approval. Since the effective date of this Order exceeds the deadline for the Monitoring Plan and QAPP, the Discharger shall join a group already formed or

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develop a site specific monitoring plan. If the Discharger decides to join a group already formed, the Discharge shall notify the Regional Water Board within 90 days of the effective date of the Order. If the Discharger decides to develop a site specific Monitoring Plan with a QAPP, the Discharger shall notify the Regional Water Board within 90 days of the effective date of the Order and submit the plans to the Regional Water Board within 12 months of the effective date of the Order for public comment and the Regional Water Board approval. The Discharger shall begin monitoring 6 months after the Monitoring Plan and QAPP are approved by the Executive Officer, unless otherwise directed by the Executive Officer. The compliance monitoring program shall include water column, sediment, and fish tissue monitoring. The Discharger shall submit the annual monitoring report to the Regional Water Board by the specified date in the proposed Monitoring Plan. The annual monitoring report shall indicate compliance and non-compliance with waste load and/or load allocations.

The Compliance Monitoring Program shall include:

i. Water Column Monitoring. At the Station ID in Table 9, parameters in the water column shall be monitored three times per year, during two wet weather events and one dry weather event. During wet weather events, water column samples shall be collected at several depths. Wet weather monitoring must include the first large storm event of the wet season. Sampling shall be designed to collect sufficient volumes of TSS for analyses of bulk sediment priority pollutants in Table 9 below.

ii. Sediment Monitoring. Sediment quality objective evaluation monitoring, as detailed in SQO Part 1 (sediment triad sampling), shall be performed once per five years in coordination with the Biological Baseline and Bight regional monitoring program, if possible. It shall include the full chemical suite, two sediment toxicity tests, and four benthic indices as specified in SQO Part 1. At the Station ID in the table below, and between sediment triad monitoring events, sediment chemistry parameters shall be monitored once per five years.

Table 9. Sediment Chemistry Monitoring Requirements[1]

Water Body Name	Station ID	Station Location	Sample Media and Parameters	
			Water Column/TSS	Sediment
Los Angeles Inner Harbor	03	Center of the Port of Los Angeles West Basin	Temperature, Dissolved Oxygen, pH, Salinity, TSS, Copper, Lead, Zinc, PCBs, DDT	Copper, Lead, Zinc, PCBs, DDT

[1.] Based on Harbor Toxics TMDL (Attachment A to Resolution No. R11-008, page 25)

iii. Fish Tissue Monitoring. In Los Angeles/Long Beach Inner Harbor, fish tissue shall be monitored once per two years for chlordane, dieldrin, toxaphene, DDT, and PCB's. The three target species shall include white croaker, a sport fish, and a prey fish.

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. An updated Storm Water Pollution Prevention Plan (SWPPP) that describes site-specific management practices for minimizing contamination of storm water

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runoff and for preventing contaminated storm water runoff and trash from being discharged directly to waters of the State. The SWPPP shall be developed in accordance with the requirements in Attachment G. As part of the SWPPP update, the Discharger shall include procedures that the Discharger will be undertaking in anticipation of a storm event to clear out all the contents within each yard drain.

ii. An updated Best Management Practices Plan (BMPP), that includes site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material and trash from being discharged to waters of the State. The BMPs shall 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 discharged of trash or 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 Regional Water Board, whichever comes first. The plans shall be reviewed annually and at the same time. Updated information shall be submitted to the Regional 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. Other Special Provisions

a. Discharges of Storm Water. Except for storm water authorized under this Order to be discharged through Discharge Points 001, 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 from parking areas, roads, Peaker Units 10-14, and other yard drains discharges to the street and to the storm drain.

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 April 1, 2011, which was later amended on December 10, 2012. The Facility consists of seven natural gas-fired units, which do not require circulating water and one steam turbine, Unit 5, which requires cooling water. Unit 5 is rated at 75 megawatts

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(MW). Per the Discharger's amended implementation plan and in accordance with the amended OTC Policy, the Discharger plans to comply with the OTC Policy using Track 1 compliance. Compliance with Unit 5 will be achieved in accordance with the following schedule:

Table 10. Schedule of Compliance with OTC Policy

Task	Compliance Date
1. Submit the results of studies and a proposal to minimize impingement and entrainment to the State Water (see item ii,iv(3) below).	December 31, 2015
2. Submit first Progress Report on OTC compliance status for Unit 5.	December 1, 2019
3. Submit second Progress Report on OTC compliance status for Unit 5.	December 1, 2021
4. Submit third Progress Report on OTC compliance status for Unit 5.	December 1, 2025
5. Achieve full compliance with Unit 5.	December 31, 2029

Based on the need for continued operation to maintain the reliability of the electric system, the Regional 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).

ii. Immediate and Interim Requirements

The Discharger shall implement the following immediate and interim actions:

i. 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.

ii. Commencing on October 1, 2015 the Discharger shall implement measures to mitigate interim impingement and entrainment impacts until full compliance is achieved by December 31, 2029. The Discharger may comply with this requirement by:

(1) Demonstrating to the State Water Board's satisfaction that the Discharger is compensating for the interim impingement and entrainment impacts through existing mitigation efforts, including any projects that were required by state or federal permits as of October 1, 2010, or

(1) Demonstrating to the State Water Board's satisfaction that the interim impacts are compensated for by the Discharger by providing funding to the California Coastal Conservancy which will work with the California Ocean Protection Council to fund an appropriate mitigation project[1].

(2) Developing and implementing a mitigation project for the facility, approved by the State Water Board, which will compensate for the interim impingement and entrainment impacts. Such a project must be overseen by an advisory panel of experts convened by the State Water Board.

[1] It is the preference of the State Water Board that funding is directed toward mitigation projects addressing increases in marine life associated with the State's Marine Protected Areas in the area of the discharge.

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iii. Since compliance with Unit 5 is scheduled after December 31, 2022, the Discharger shall submit the results of a study evaluating new technologies or improving existing technologies to reduce impingement and entrainment, along with a proposal to minimize entrainment and impingement to the Chief Deputy Director of the Division of Water Quality of the State Water Board no later than December 31, 2015, and upon approval of the proposal by the Chief Deputy Director, complete implementation of the proposal no later than December 31, 2020.

In a letter dated November 4, 2014, the Discharger transmitted to the State Water Board the reports for evaluating impingement and entrainment technologies at the Harbor Generating Station and Haynes Generating Station, entitled "*Final Report Evaluation of Impingerment and Entrainment Technologies for Harbor and Haynes Generating Stations, dated July 2014", and "Evaluation of Impingement Mortality Reducing Technologies for Harbor and Haynes Generating Stations, dated July 2014".* The letter also indicated that *w*ith regards to the mitigating measures, the Discharger proposed to provide funding to the Coastal Conservancy to be used for mitigation projects directed toward increases in marine life associated with the State's Marine Protected Areas in the local region of the the Facility starting October 1, 2015, and until the Facility achieves full OTC compliance.

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below:

A. Single Constituent Effluent Limitation.

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. Effluent Limitations Expressed as a Sum of Several Constituents.

If the sum of the individual pollutant concentrations is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, consider constituents reported as ND or DNQ to have concentrations equal to zero, provided that the applicable ML is used.

C. Effluent Limitations Expressed as a Median.

In determining compliance with a median limitation, the analytical results in a set of data will be arranged in order of magnitude (either increasing or decreasing order); and

1. If the number of measurements (n) is odd, then the median will be calculated as = $X_{(n+1)/2}$, or

2. If the number of measurements (n) is even, then the median will be calculated as= [$X_{n/2}$ + $X_{(n/2)+1}$], i.e. the midpoint between the n/2 and n/2+1 data points.

D. Multiple Sample Data.

When determining compliance with an AMEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not

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Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. 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.

2. 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.

E. Average Monthly Effluent Limitation (AMEL).

If the average (or when applicable, the median determined by subsection 2 above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation; though 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). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

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 for 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 five 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.

3. 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.

4. 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 Effluent Limitations (MDEL).

If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for that parameter for that one day only within the reporting period. For any one day during which no sample is taken, no compliance determination can be made for that day.

G. Instantaneous Minimum Effluent Limitation.

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both 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 is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation.

I. 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 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.

J. Chronic Toxicity

The discharge is subject to determination of “Pass” or “Fail” and “Percent Effect” from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical 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 statistical approach, results in “Fail” and the “Percent Effect” is ≥50.

The Median Monthly Effluent Limitation (MMEL) for chronic toxicity is exceeded and a violation will be flagged when the median of up to three independent chronic toxicity tests, conducted within the same calendar month and analyzed using the TST statistical approach, results in “Fail.” The MMEL for chronic toxicity shall only apply when there is a discharge

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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."

K. Mass and Concentration Limitations

Compliance with mass effluent limitations and concentration effluent limitations for the same parameter shall be determined separately. When the concentration for a parameter in a sample is reported as ND or DNQ, the corresponding mass emission rate determined using that sample concentration shall also be reported as ND or DNQ.

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

Arithmetic Mean (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

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.

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.

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

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.

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 1 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.

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

Dilution Credit
Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the

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dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA)
ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays
Enclosed Bays means 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 the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries
Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters
All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

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).

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

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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).

Method Detection Limit (MDL)
MDL is 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, revised as of July 3, 1999.

Minimum Level (ML)
ML is 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.

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

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 a priority pollutant(s) 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.

Pollution Prevention
Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Resources Control Board (State Water Board) or Regional Water Board.

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Reporting Level (RL)
The 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 Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. 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 RL.

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

Standard Deviation (σ)
Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

Toxicity Reduction Evaluation (TRE)
TRE is 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.)

Trash
All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural material.

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ATTACHMENT B – MAP

City of Los Angeles
Dept. of Water and Power

Harbor Generating Station

NPDES Permit No. CA0000361

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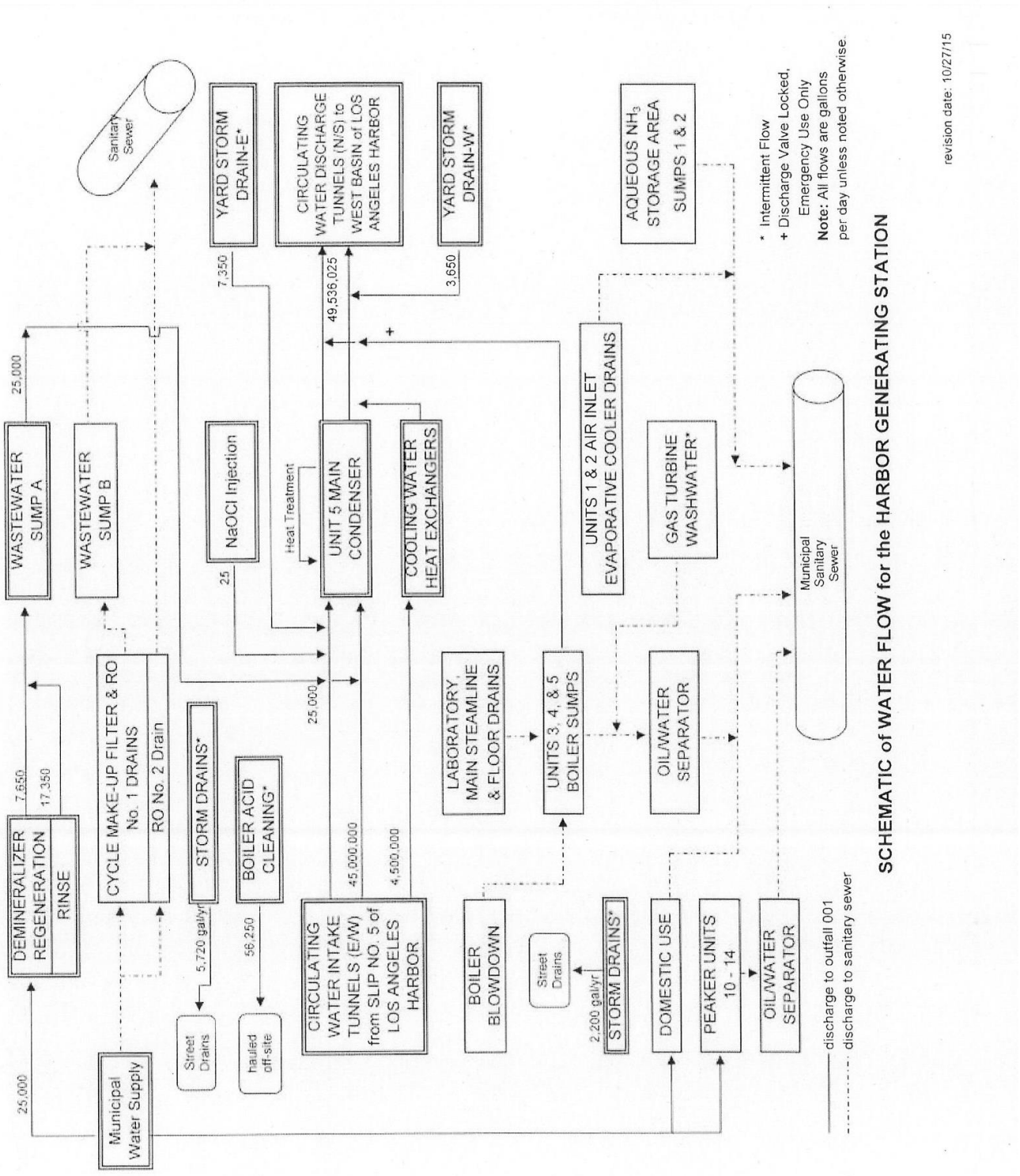
ATTACHMENT C – FLOW SCHEMATIC



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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 Regional Water Quality Control Board, State Water Board, USEPA, 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. As of December 21, 2020 all notices must be submitted electronically by the Discharger to the initial recipient, as defined in 40 C.F.R. section 127.2(b), in compliance with this section and 40 C.F.R. part 3 (including, in all cases, subpart D of part 3), section 122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by a particular permit or if required to do so by state law. (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). As of December 21, 2020 all notices must be submitted electronically by the Discharger to the initial recipient, as defined in 40 C.F.R. section 127.2(b), in compliance with this section and 40 C.F.R. part 3 (including, in all cases, subpart D of part 3), section 122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by a particular permit or if required to do so by state law. (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).)

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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).)

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 Regional Water Quality Control Board. The Los Angeles Regional Water Quality Control 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 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. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or as required under 40 C.F.R. chapter 1, subchapter N or O. For the purposes of this paragraph, a method is sufficiently sensitive when:

1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

2. The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N or O for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. chapter 1, subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 C.F.R. §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).)

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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 Regional 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
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 Regional Water Quality Control Board, State Water Board, or USEPA within a reasonable time, any information which the Los Angeles Regional Water Quality Control Board, State Water Board, or USEPA 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 Regional Water Quality Control Board, State Water Board, or USEPA 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 USEPA 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 either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive

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officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). (40 C.F.R. § 122.22(a)(3).).

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA 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 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).)

6. If documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 are submitted electronically by or on behalf of the NPDES-regulated facility, any person providing the electronic signature for such documents shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all of the relevant requirements of 40 C.F.R. part 3 (including, in all cases, subpart D of part 3) (Cross-Media Electronic Reporting) and 40 C.F.R. part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R § 122.22(e).)

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 the results of monitoring, sludge use, or disposal practices. As of

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December 21, 2016, all reports and forms must be submitted electronically by the Discharger to the initial recipient, as defined in Standard Provisions – Reporting V.J, in compliance with this section and 40 C.F.R. part 3 (including, in all cases, subpart D of part 3), section 122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by the permit or if required to do so by state law. (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 which 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 report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report 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. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather. As of December 21, 2020 all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted electronically by the Discharger to the initial recipient, as defined in Standard Provisions – Reporting V.J, in compliance with this section and 40 C.F.R. part 3 (including in all cases, subpart D of part 3), section 122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The <Regional Water Board name> may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(6)(i).)

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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).)

The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (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. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 C.F.R. part 127. As of December 21, 2020 all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted electronically by the Discharger to the initial recipient, as defined in Standard Provisions – Reporting V.J, in compliance with this section and 40 C.F.R. part 3 (including, in all cases, subpart D of part 3), section122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (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

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Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

J. Identification of the Initial Recipient for NPDES Electronic Reporting Data

The owner, operator, or the duly authorized representative of an NPDES-regulated entity is required to electronically submit the required NPDES information (as specified in appendix A to 40 C.F.R. part 127) to the appropriate initial recipient, as determined by U.S. EPA, and as defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 C.F.R. § 122.41(l)(9).)

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.

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 (MRP) CI-2020

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) CI-2020

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 Regional Water Quality Control 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. An effluent sampling station shall be established for the point of discharge (Discharge Point 001 [Latitude 33.76639º N, Longitude -118.27º W]) 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 Regional 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 Regional Water Board or the State Water Board.

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 Resources Control Board Division of Drinking Water Program or approved by the Executive Officer and in accordance with current USEPA 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.

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 MLs (Attachment H) are those published by the State Water Board in the *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, February 24, 2005.

H. The ML's employed for effluent analyses to determine compliance with effluent limitations shall be lower than the permit limitations established for a given parameter as per the

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sufficiently sensitive regulations at 40 C.F.R. section 122.44(i)(1)(iv). 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. The MLs 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 as per the sufficiently sensitive regulations at 40 C.F.R. section 122.21(e)(3). Water quality objectives for parameters may be found in Chapter 3 of the Basin Plan and the CTR (40 C.F.R. section 131.38). 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 (RLs), and method detection limits (MDLs).

The Regional 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 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. 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.

L. 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.

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M. 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.

N. Field analyses with short sample holding time such as pH, total residual chlorine, and temperature, may be performed using properly calibrated and maintained portable instruments by trained personnel acting on the Discharger's behalf, using methods in accordance with 40 C.F.R. part 136. All field instruments must be calibrated per manufacturer's instructions. A manual containing the standard operating procedures for all field analyses, including records of personnel proficiency training, instruments calibration and maintenance, and quality control procedures shall be maintained onsite, and shall be available for inspection by Regional Water Board staff. Information including instrument calibration, time of sample collection, time of analysis, name of analyst, quality assurance/quality control data, and measurement values shall be clearly documented during each field analysis and submitted to the Regional Water Board as part of the corresponding regular monitoring report.

O. When requested by the Regional Water Board or U.S. EPA, 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 of 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:

1. Types of wastes and quantity of each type;

2. Name and address for each hauler of wastes (or method of transport if other than by hauling); and

3. 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.

S. Laboratory Certification. Laboratories analyzing monitoring samples shall be certified by the State Water Board, in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports.

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T. The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Resources Control Board at the following address:

State Water Resources Control Board
Quality Assurance Program Officer, Office of Information Management and Analysis
State Water Resources Control Board
1001 I Street, Sacramento, CA 95814.

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 Internal Outfall Monitoring Stations		
001	EFF-001	Effluent shall be sampled at a location downstream of any treatment process and upstream of the discharge point into the West Basin of the Los Angeles Inner Harbor, where representative samples of the effluent can be obtained.
--	INT-001A	At a location after treatment of all low volume wastes but prior to commingling with other internal process waste streams and/or once-through cooling water.
--	INT-001B	At a location where a representative sample of the storm water from the East Yard Drain but prior to commingling with other internal process waste streams and/or once-through cooling water.
--	INT-001C	At a location where a representative sample of the storm water from the West Yard Drain but prior to commingling with other internal process waste streams and/or once-through cooling water.
Harbor Intake	FIP-001	At a location where Fish Impingement Program sampling for Unit 5 can be conducted.
Receiving Water Monitoring Stations		
--	RSW-001	492 feet from the discharge point and equidistant from Berths 138 and 143.
--	RSW-002	In the middle of the West Basin and approximately 590 feet from the perpendicular to Berth 144.
--	RSW-003	Mid-channel in the entrance to West Basin, off Berth 147.
Benthic Monitoring Stations		
--	BEN-001	Directly beneath Monitoring Location RSW-001.
--	BEN-002	Directly beneath Monitoring Location RSW-002.
--	BEN-003	Directly beneath Monitoring Location RSW-003.
Trawl Monitoring Stations		
--	TRL-001	Beginning at Monitoring Location RSW-001 and extending to Monitoring Location RSW-002.
--	TRL-002	Beginning at Monitoring Location RSW-003 and extending to Berth 100.
Bioaccumulation Station Monitoring		
--	MUS-001	Within the West Basin, at the Discharge Point 001 conduit, as close to the point of discharge as possible

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III. INFLUENT MONITORING REQUIREMENTS

A. Fish Impingement Program at Monitoring Location FIP-001

Impingement sampling for fish and commercially important macroinvertebrates shall be conducted semiannually at Monitoring Location FIP-001.

Fish and macroinvertebrates shall be identified to the lowest possible taxon. For each intake point, 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 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 aliquot samples. Total fish impingement per sampling event shall be reported and data shall be expressed per unit volume water entrained.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor the combined effluent at Monitoring Location EFF-001 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 001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Meter	Continuous[1]	--
Conventional Pollutants				
pH	standard units	Grab or Meter	1/Day	[3]
Biochemical Oxygen Demand (BOD; 5-day @20 deg. C)	mg/L, lbs/day[8]	Grab	1/Month	[3]
Total Suspended Solids	mg/L, lbs/day[8]	Grab	1/Month	[3]
Oil and Grease	mg/L, lbs/day[8]	Grab	1/Month	[3]
Non-Conventional Pollutants				
Settleable Solids	ml/L	Grab	1/Month	[3]
Turbidity	NTU	Grab	1/Month	[3]
Temperature	^{o}F	Meter	Continuous[2]	[3]
Free Available Chlorine	mg/L, lbs/day[8]	Grab	1/Day[4]	[3]
Total Residual Chlorine	mg/L, lbs/day[8]	Grab or Meter	1/Day[4]	[3]
Total Coliform	MPN/100 mL	Grab	5/Quarter[5]	[3]
Fecal Coliform	MPN/100 mL	Grab	5/Quarter[5]	[3]
Enterococcus	MPN/100 mL	Grab	5/Quarter[5]	[3]
Chronic Toxicity[6]	Pass or Fail, % Effect	Grab	1/Quarter	[3]
Nitrate Nitrogen (as N)	mg/L	Grab	1/Year	[3]
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Year	[3]
Priority Pollutants				
Copper, Total Recoverable[7]	µg/L, lbs/day[8]	Grab	1/Month	[3]
Lead, Total Recoverable[7]	µg/L, lbs/day[8]	Grab	1/Month	[3]

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Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Mercury, Total Recoverable	µg/L, lbs/day[8]	Grab	1/Month	[3]
Zinc, Total Recoverable[7]	µg/L, lbs/day[8]	Grab	1/Month	[3]
Cyanide	µg/L, lbs/day[8]	Grab	1/Month	[3]
Bis (2-ethylhexyl) Phthalate	µg/L, lbs/day[8]	Grab	1/Month	[3]
Heptachlor Epoxide	µg/L, lbs/day[8]	Grab	1/Month	[3]
4,4-DDT[7]	µg/L, lbs/day[8]	Grab	1/Month	[3, 9]
Benzo(a)pyrene[7]	µg/L, lbs/day[8]	Grab	1/Month	[3, 9]
Chrysene[7]	µg/L, lbs/day[8]	Grab	1/Month	[3, 9]
Cyanide, Total	µg/L, lbs/day[8]	Grab	1/Month	[3]
Heptachlor Epoxide	µg/L, lbs/day[8]	Grab	1/Month	[3]
Total PCBs [7,10]	µg/L, lbs/day[8]	Grab	1/Month	[3, 9]
TCDD Equivalents[11]	µg/L, lbs/day[8]	Grab	1/Year	[3]
Remaining Priority Pollutants[12]	µg/L, lbs/day[8]	Grab	1/Year	[3]
Radioactivity[13] (including gross alpha, gross beta, combined radium--226 and radium-228, tritium, strontium-90 and uranium	pCi/L	Grab	1/Year	[3]

1. When continuous monitoring is required, the total daily flow (24-hour basis) shall be reported. Periods of no flow shall also be reported.
2. Only the maximum temperature for each calendar day shall be reported.
3. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; for priority pollutants, the methods must meet the lowest MLs specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. 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.
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, with at least four equally-spaced samples during each hour of chlorine addition. The maximum and average concentrations for the duration of the chlorine addition shall be reported. Alternatively, a single grab sample may be collected at the time of peak residual chlorine concentration.
5. Five (5) samples should be taken equally spaced over a 30-day period with the first sample taken in the monitoring month (February, May, August, or November) for the required quarter. The results will provide sufficient data for the calculation of the geometric mean values.
6. 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”.
7. During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit or performance goal for copper, lead, zinc, 4,4-DDT, total PCBs, benzo(a)pyrene, or chrysene in Table 4 of this Order, implementation of the effluent sediment monitoring program is required for that priority pollutant. The effluent sediment monitoring shall begin during the next regular monitoring event following the effluent exceedance. An effluent sediment monitoring result at or below the interim sediment allocations (Monitoring Thresholds) in Table 8 of this Order, demonstrates attainment with the applicable sediment allocation and additional sediment monitoring of the effluent is not required. An effluent sediment monitoring result that exceeds the interim sediment allocation requires additional sediment monitoring of the effluent during discharge but not more frequently than once per year until the three-year average concentration for sediment monitoring results is at or below the interim sediment allocation.

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

   M = 8.34 x C x Q

   where: M = mass discharge for a pollutant (lbs/day)
   C = Reported concentration for a pollutant (mg/L)
   Q = actual discharge flow rate (MGD).

9. Samples analyzed must be unfiltered samples.

10. Total PCBs (polychlorinated biphenyls) means the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1245, Aroclor-1254, and Aroclor-1260.

11. TCDD equivalents shall be calculated using the following formula, where the minimum levels (MLs) and toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the MLs to zero. USEPA method 1613 may be used to analyze dioxin and furan congeners.

    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

Congeners	Minimum Levels (pg/L)	Toxicity Equivalence Factor (TEF)
2,3,7,8 - tetra CDD	10	1.0
1,2,3,7,8 - penta CDD	50	1.0
1,2,3,4,7,8 - hexa CDD	50	0.1
1,2,3,6,7,8 - hexa CDD	50	0.1
1,2,3,7,8,9 - hexa CDD	50	0.1
1,2,3,4,6,7,8 - hepta CDD	50	0.01
Octa CDD	100	0.0001
2,3,7,8 - tetra CDF	10	0.1
1,2,3,7,8 - penta CDF	50	0.05
2,3,4,7,8 - penta CDF	50	0.5
1,2,3,4,7,8 - hexa CDF	50	0.1
1,2,3,6,7,8 - hexa CDF	50	0.1
1,2,3,7,8,9 - hexa CDF	50	0.1
2,3,4,6,7,8 - hexa CDF	50	0.1
1,2,3,4,6,7,8 - hepta CDFs	50	0.01
1,2,3,4,7,8,9 - hepta CDFs	50	0.01
Octa CDF	100	0.0001

12. Priority Pollutants as defined by the California Toxics Rule (CTR) defined in Attachment I to this Order.

13. 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 uranium shall be conducted only if gross alpha results for the same sample exceed 15 pCi/L, or beta greater than 50 pCi/L. If the uranium result is greater than 20 pCi/L, analysis for radium-226 & 228 shall be conducted. If the combined radium-226 & 228 exceeds 5 pCi/L, analyze for tritium and strontium- 90.

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2. Effluent Sediment Monitoring At Monitoring Location EFF-001

Effluent sediment monitoring is only required during years in which any exceedance occurs as described in Footnote 1 to Table E-3 of this MRP. If effluent sediment monitoring is not triggered by an exceedance, effluent sediment monitoring must be conducted as described here at **least once during the permit term**.

The Discharger must sample the discharge at the discharge point following final treatment, prior to the discharge entering the receiving water. The Discharger must collect sufficient effluent sample to provide an adequate amount of effluent sediments (suspended solids) for sediment analyses.

Table E-3. Sediment Monitoring at Monitoring Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Method
Copper, Total Recoverable	mg/kg	Grab	1/Year[1]	[2]
Lead, Total Recoverable	mg/kg	Grab	1/Year[1]	[2]
Zinc, Total Recoverable	mg/kg	Grab	1/Year[1]	[2]
DDT[3]	mg/kg	Grab	1/Year[1]	[2]
PAHs[4]	mg/kg	Grab	1/Year[1]	[2]
PCBs[5]	mg/kg	Grab	1/Year[1]	[2]

1. Annual monitoring is required when it is triggered by an exceedance as specified in Footnote 9 to Table 4 of this Order. If monitoring is not triggered because of an exceedance, sediment monitoring must occur at least once during the five year permit term.
2. Pollutants shall be analyzed in accordance with USEPA or ASTM methodologies where such methods exist. Where no USEPA or ASTM methods exist, the State Water Board or Regional Water Board shall approve the use of other methods. Analytical tests shall be conducted by laboratories certified by the State Water Board in accordance with Water Code section 13176.
3. The State Water Board *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality*, August 25, 2009, (known as Sediment Quality Plan, Attachment A) listed chemical analytes needed to characterize sediment contamination exposure and effect. According to Sediment Quality Plan, 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.
4. According to the Sediment Quality Plan, total PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthene, anthracene, biphenyl, naphthalene, 2,6-dimethylnaphthalene, fuorene, 1-methylnaphthalene, 2-methylnaphthalene, 1-methylphenanthrene, phenanthrene, benzo(a)anthracene, benzo(a)pyrene, benzo(e)pyrene, chrysene, dibenz(a,h)anthracene, fluoranthene, perylene, and pyrene.
5. According to the Sediment Quality Plan, total PCBs (polychlorinated biphenyls) shall mean the sum of the following PCB congeners: 2,4'-dichlorobiphenyl, 2,2',5-trichlorobiphenyl, 2,4,4'-trichlorobiphenyl, 2,2',3,5'-tetrachlorobiphenyl, 2,2',5,5'-tetrachlorobiphenyl, 2,3',4,4'-tetrachlorobiphenyl, 2,2',4,5,5'-tentachlorobiphenyl, 2,3,3',4,4'-pentachlorobiphenyl, 2,3',4,4',5-pentachlorobiphenyl, 2,2',3,3',4,4'-hexachlorobiphenyl, 2,2',3,4,4',5'-hexachlorobiphenyl, 2,2',4,4',5,5'-hexachlorobiphenyl, 2,2',3,3',4,4',5-heptachlorobiphenyl, 2,2',3,4,4',5,5'-heptachlorobiphenyl, 2,2',3,4',5,5',6-heptachlorobiphenyl, 2,2',3,3',4,4',5,6-octachlorobiphenyl, 2,2',3,3',4,4',5,5',6-nonachlorobiphenyl, and decachlorobiphenyl.

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B. Monitoring Location INT-001A – Low Volume Wastes

The Discharger shall monitor low volume wastes [demineralizer regeneration wastes, and in-plant floor drains wastes (during emergency)] at Monitoring Location INT-001A as follows:

Table E-4. Low Volume Wastes (Monitoring Location INT-001A)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	gal/day	--	Continuous[1]	[2]
pH	standard units	Grab	1/Month	[2]
Oil and Grease	mg/L, lbs/day[3]	Grab	1/Month	[2]
Biochemical Oxygen Demand (BOD_5; 5-day 20 deg. C)	mg/L, lbs,day[3]	Grab	1/Month	[2]
Total Suspended Solids	mg/L,lbs/day[3]	Grab	1/Month	[2]
Priority Pollutants[4]	µg/L	Grab	1/Year	[2]

1. When continuous monitoring is required, the total daily flow (24-hour basis) shall be reported. For any continuously monitored parameter, the Discharger shall report the minimum, average, and maximum value for each calendar day. Periods of no flow shall also be reported.
2. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; for priority pollutants, the methods must meet the lowest MLs specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. 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.
3. The mass emission (lbs/day) for the discharge of low volume wastes shall be calculated and reported using the measured concentration and the actual flow rate measured at the time of discharge, using the formula:

   $M = 8.34 \times C \times Q$

   where: M = mass discharge for a pollutant (lbs/day)
   C = Reported concentration for a pollutant (mg/L)
   Q = actual discharge flow rate (MGD).
4. Priority Pollutants as defined by the California Toxics Rule (CTR) defined in Attachment I to this Order.

C. Monitoring Locations INT-001B and INT-001C – Storm Water At East and West Yard Drains

1. The Discharger shall monitor storm water at East Yard Drain at Monitoring Location INT-001B and West Yard Drain at Monitoring Location INT-001C as follows:

Table E-5. Storm Water At East Yard Drain (Monitoring Locations INT-001B) and West Yard Drain (Monitoring Location INT-001C)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	gal/day	--	1/Day[1]	[3]
Temperature	°F	Grab	1/Discharge event[2]	[3]
pH	standard units	Grab	1/Discharge event[2]	[3]
Oil and Grease	mg/L, lbs/day[4]	Grab	1/Discharge event[2]	[3]
Biochemical Oxygen Demand (BOD_5; 5-day 20 deg. C)	mg/L, lbs,day[4]	Grab	1/Discharge event[2]	[3]
Total Suspended Solids	mg/L,lbs/day[4]	Grab	1/Discharge event[2]	[3]
Turbidity	NTU		1/Discharge event[2]	[3]
Priority Pollutants[5]	µg/L	Grab	2/Year	[3]

1. Flow shall be recorded during each period of discharge. Periods of no flow shall also be reported.

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2. During periods of extended rainfall, no more than one sample per week (or 7-day period) is required to be collected. Sampling shall be during the first hour of discharge. If, for safety reasons, a sample cannot be obtained during the first hour of discharge, a sample shall be obtained at the first safe opportunity, and the reason for the delay shall be included in the report. If there is no discharge to surface waters, then no monitoring is required. In that event, the Discharger shall indicate under penalty of perjury in the corresponding monitoring report that no effluent was discharged to surface water during the reporting period.
3. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; for priority pollutants, the methods must meet the lowest MLs specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. 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.
4. The mass emission (lbs/day) for the discharge of low volume wastes shall be calculated and reported using the measured concentration and the actual flow rate measured at the time of discharge, using the formula:

   $M = 8.34 \times C \times Q$

   where: M = mass discharge for a pollutant (lbs/day)
   C = Reported concentration for a pollutant (mg/L)
   Q = actual discharge flow rate (MGD).
5. Priority Pollutants as defined by the California Toxics Rule (CTR) defined in Attachment I to this Order

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Chronic Toxicity

1. Definition of Chronic Toxicity

Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Chronic toxicity test results shall be measured using the two concentration (i.e., discharge in-stream waste concentration and laboratory water control) Test of Significant Toxicity (TST) statistical approach and reported in units of Pass or Fail and % Effect.

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

The chronic toxicity IWC for this discharge at Discharge Point 001 is 100 percent effluent. For receiving water monitoring, the IWC shall be 100% of the sample collected at the specified station location for receiving water monitoring.

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 and Toxicity Identification Evaluation (TIE) studies. 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.

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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); or a static non-renewal test with the pacific oyster, *Crassostrea gigas*, and a mussel species, *Mytilus edulis, M. californianus, M. galloprovincialis, or M. trossulus* (Embryo-Larval Development Test Method)..

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

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 (the purple sea urchin, the sand dollar, or the red abalone), 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.

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) statistical 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

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control water is different from test organism culture water, then a second control using culture water shall also be used.

e. Reference toxicant test and effluent toxicity tests shall be conducted usinf 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 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 toxicity reduction evaluation (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 of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in operations at the facility.

c. If a 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

During the TRE Process, monthly effluent monitoring shall resume and TST results ("Pass" or "Fail", "Percent Effect") for chronic toxicity tests shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL and MMEL.

a. Preparation and Implementation of Detailed TRE Work Plan. The Discharger shall immediately initiate a TRE using, according to the type of treatment facility,

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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.

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, USEPA 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 statistical 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.

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

e. Any additional QA/QC documentation or any additional chronic toxicity-related information, upon request of Regional Water Board staff.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

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.

A. Water Quality Monitoring at Monitoring Locations RSW-001 through RSW-003

1. The Discharger shall monitor the receiving water (West Basin of Los Angeles Inner Harbor) at Monitoring Locations RSW-001 through RSW-003 as follows:

Table E-6. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Profile[3]	2/Year[1]	[2]
pH	pH units	Profile[3]	2/Year[1]	[2, 4]
Salinity	psu	Profile[3]	2/Year[1]	[2, 4]
Temperature	ºF	Profile[3]	2/Year[1]	[2, 4]
Visual Observations[5]	--	Visual	2/Year[1]	[2]
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Year	[2, 4]
Priority pollutants	µg/L	Grab	1/Year	[2, 4]
Total Coliform	MPN/100 ml	Grab	5/Quarter[6]	[2]
Fecal Coliform	MPN/100 ml	Grab	5/Quarter[6]	[2]
Enterococcus	MPN/100 ml	Grab	5/Quarter[6]	[2]

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 Attachment 4 of the SIP that is required to demonstrate compliance. Where no methods are specified for a given pollutant, the methods must be approved by this 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. Dissolved oxygen, pH, and salinity shall be measured at surface, mid-depth, and bottom at a minimum at each station.
4. Receiving water pH, temperature, salinity and ammonia must be collected at the same time the samples are collected for Priority Pollutants analysis. A hand-held field meter may be used for pH and temperature, provided the meter utilizes a USEPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.
5. 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.

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- 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.

6. Five (5) samples should be taken equally spaced over a 30-day period with the first sample taken in the monitoring month (February, May, August, or November) for the required quarter. The results will provide sufficient data for the calculation of the geometric mean values.

B. Benthic Sediments Monitoring at Monitoring Locations BEN-001 through BEN-003

1. The Discharger shall collect and analyze benthic samples once per year during the summer at Monitoring Locations BEN-001 through BEN-003.

2. Total PCBs (polychlorinated biphenyls) means the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1245, Aroclor-1254, and Aroclor-1260.

3. One liter sediment core samples shall be collected by divers at each of the benthic stations for biological examination and determination of biomass and diversity. Four replicates shall be obtained at each station for benthic analyses, and each shall be analyzed separately. A fifth sample shall be taken at each station for sediment analyses and general description.

4. Each benthic replicate sample shall be sieved through a 1.0 mm standard mesh screen. All organisms recovered shall be enumerated and identified below to the lowest taxon possible. Infaunal organisms shall be reported as concentrations per liter for each replicate and each station. Total abundance, number of species and Shannon-Weiner diversity indices shall be calculated (using natural logs) for each replicate and each station. Biomass shall be determined as the wet weight in grams or milligrams retained on a 0.5 millimeter screen per unit volume (e.g., 1 liter) of sediment. Biomass shall be reported for each major taxonomic group (e.g., polychaetes, crustaceans, mollusks) for each replicate and each station.

5. Sampling and analysis techniques shall follow protocols described in the most current edition of the Field Operations Manual for Marine Water-Column, Benthic, and Trawl Monitoring in Southern California, Southern California Coastal Waters Research Project (SCCWRP).

6. When monitoring at benthic stations, the following visual observations shall be made and recorded:

a. Tidal stage and time of monitoring.

b. General water conditions

c. Color of the water.

d. Appearance of oil films or grease, or floatable material.

e. Extent of visible turbidity or color patches.

f. Direction of tidal flow.

g. Description of odor, if any, of the receiving water.

h. Depth at each station for each sampling period.

i. Presence or absence of red tide.

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j. Presence and activity of marine life.

k. Presence and activity of the California Least Tern and the California Brown Pelican.

7. The Discharger shall collect and analyze sediment samples for parameters in the following table:

Table E-7. Benthic Sediment Monitoring Requirements

Parameter	Units[1]	Sample Type	Minimum Sampling Frequency
Sediment Grain Size[2]	--	Core	1/Year
Arsenic	mg/kg	Core[3]	1/Year
Beryllium	mg/kg	Core[3]	1/Year
Cadmium	mg/kg	Core[3]	1/Year
Copper	mg/kg	Core[3]	1/Year
Chromium, Total	mg/kg	Core[3]	1/Year
Chromium (III)	mg/kg	Core[3]	1/Year
Lead	mg/kg	Core[3]	1/Year
Mercury	mg/kg	Core[3]	1/Year
Nickel	mg/kg	Core[3]	1/Year
Selenium	mg/kg	Core[3]	1/Year
Silver	mg/kg	Core[3]	1/Year
Thallium	mg/kg	Core[3]	1/Year
Zinc	mg/kg	Core[3]	1/Year
Acid Soluble Sulfides	mg/kg	Core[3]	1/Year
Pesticides[4]	mg/kg	Core[3]	1/Year
PAHs[5]	mg/kg	Core[3]	1/Year
Total PCBs[6]	mg/kg	Core[3]	1/Year

1. Dry weight basis.
2. Sediment grain size analyses shall be performed on each sediment sample (sufficiently detailed to calculate percent weight in relation to phi size).
3. Three replicate samples shall be taken from the upper two centimeters at each monitoring location and analyzed separately.
4. Pesticides shall mean aldrin, chlordane, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, dieldrin, alpha-endosulfan, beta-endosulfan, endosulfan sulfate, endrin, heptachlor, heptachlor epoxide, and toxaphene.
5. PAHs shall mean 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.
6. According to the Sediment Quality Plan, total PCBs (polychlorinated biphenyls) shall mean the sum of the following PCB congeners: 2,4'-dichlorobiphenyl, 2,2',5-trichlorobiphenyl, 2,4,4'-trichlorobiphenyl, 2,2',3,5'-tetrachlorobiphenyl, 2,2',5,5'-tetrachlorobiphenyl, 2,3',4,4'-tetrachlorobiphenyl, 2,2',4,5,5'-tentachlorobiphenyl, 2,3,3',4,4'-pentachlorobiphenyl, 2,3',4,4',5-pentachlorobiphenyl, 2,2',3,3',4,4'-hexachlorobiphenyl, 2,2',3,4,4',5'-hexachlorobiphenyl, 2,2',4,4',5,5'-hexachlorobiphenyl, 2,2',3,3',4,4',5-heptachlorobiphenyl, 2,2',3,4,4',5,5'-heptachlorobiphenyl, 2,2',3,4',5,5',6-heptachlorobiphenyl, 2,2',3,3',4,4',5,6-octachlorobiphenyl, 2,2',3,3',4,4',5,5',6-nonachlorobiphenyl, and decachlorobiphenyl.

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C. Trawl Monitoring at Monitoring Location TRL-001 through TRL-002

1. The Discharger shall sample by otter trawl at Monitoring Locations TRL-001 through TRL-002 as follows:

a. Sample frequency shall be semi-annually during the winter and summer.

b. Trawl net dimensions shall be as follows:

i. At least a 25 foot throat width.

ii. 1.5 inch mesh-size (body).

iii. 0.5 inch mesh-size (liner in the cod end).

c. Two replicate trawls shall be conducted at each monitoring location for a duration of 10 minutes each at a uniform speed between 2.0 and 2.5 knots.

d. The identity, size (standard length), wet weight, and number of fish in each trawl shall be reported. The number of fish affected by abnormal growth or disease, such as fin erosion, lesions, and papillomas shall be reported. Fish species shall be reported in rank order of abundance and frequency of occurrence for each trawl. The Shannon-Wiener diversity index shall also be computed for each trawl.

e. All commercially important macroinvertebrates shall be identified, enumerated, and reported in the same manner as fish species.

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

Table E-8.Mussels Bioaccumulation Monitoring Requirements (MUS-001)

Parameter	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Arsenic	Tissue	1/ 2 Year	[1]
Beryllium	Tissue	1/ 2 Year	[1]
Cadmium	Tissue	1/ 2 Year	[1]
Copper	Tissue	1/ 2 Year	[1]
Chromium, Total	Tissue	1/ 2 Year	[1]
Chromium (III)	Tissue	1/ 2 Year	[1]
Lead	Tissue	1/ 2 Year	[1]
Mercury	Tissue	1/ 2 Year	[1]
Nickel	Tissue	1/ 2 Year	[1]
Selenium	Tissue	1/ 2 Year	[1]
Silver	Tissue	1/ 2 Year	[1]
Thallium	Tissue	1/ 2 Year	[1]
Zinc	Tissue	1/ 2 Year	[1]
Pesticides[2]	Tissue	1/ 2 Year	[1]
PAHs[3]	Tissue	1/ 2 Year	[1]
Total PCBs[4]	Tissue	1/ 2 Year	[1]

1. Procedures used to determine compliance with bioaccumulation monitoring should use the *USEPA. Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories* (November 2000, EPA 823-B-00-007),

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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. Pesticides shall mean aldrin, chlordane, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, dieldrin, alpha-endosulfan, beta-endosulfan, endosulfan sulfate, endrin, heptachlor, heptachlor epoxide, and toxaphene.

3. 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.

4. Total PCBs (polychlorinated biphenyls) shall mean the sum of the following PCB congeners: 2,4'-dichlorobiphenyl, 2,2',5-trichlorobiphenyl, 2,4,4'-trichlorobiphenyl, 2,2',3,5'-tetrachlorobiphenyl, 2,2',5,5'-tetrachlorobiphenyl, 2,3',4,4'-tetrachlorobiphenyl, 2,2',4,5,5'-tentachlorobiphenyl, 2,3,3',4,4'-pentachlorobiphenyl, 2,3',4,4',5-pentachlorobiphenyl, 2,2',3,3',4,4'-hexachlorobiphenyl, 2,2',3,4,4',5'-hexachlorobiphenyl, 2,2',4,4',5,5'-hexachlorobiphenyl, 2,2',3,3',4,4',5-heptachlorobiphenyl, 2,2',3,4,4',5,5'-heptachlorobiphenyl, 2,2',3,4',5,5',6-heptachlorobiphenyl, 2,2',3,3',4,4',5,6-octachlorobiphenyl, 2,2',3,3',4,4',5,5',6-nonachlorobiphenyl, and decachlorobiphenyl.

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 Regional 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

1. For discharges of storm water other than at Discharge Point 001, 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. Rainfall Monitoring. The Discharger shall measure and record the rainfall on each day of the month or submit the data obtained from the nearest city/county operated rain gauge monitoring station. This information shall be included in the monitoring report for that month.

3. Visual Observation. The Discharger shall make visual observations of all storm water discharge locations on at least one storm event per month that produces a significant storm water discharge to observe the presence of trash, floating and suspended materials, oil and grease, discoloration, turbidity, and odor. A "significant storm water discharge" is a continuous discharge of storm water for a minimum of one hour, or the intermittent discharge of storm water for a minimum of 3 hours in a 12-hour period

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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).

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. HARBOR TOXICS TMDL MONITORING

The Discharger may act independently or join a group already formed to conduct the Harbor Toxics TMDL monitoring including the following components as described in section VI.C.2.c of the Order.

A. Greater Los Angeles and Long Beach Harbor Waters Water Column Monitoring

Water samples and total suspended solids (TSS) samples shall be collected during two wet weather events and one dry weather event each year. TSS shall be collected at several depths during wet weather events. The first large storm event of the season shall be included as one of the wet weather events. General water chemistry (temperature, dissolved oxygen, pH and salinity) and a flow measurement shall be required at each sampling event.

B. Greater Los Angeles and Long Beach Harbor Waters Sediment Monitoring

Sediment chemistry samples shall be collected every five years. The analysis shall include the chemical suite, two toxicity tests and four benthic indices as specified in the State Water Quality Control Plan for Enclosed Bays and Estuaries—Part 1 Sediment Quality.

C. Fish Tissue Monitoring

Fish tissue samples shall be collected every two years in San Pedro Bay, Los Angeles Harbor and Long Beach Harbor, and analyzed for chlordane, dieldrin, toxaphene, DDT, and PCBs. At a minimum, three species shall be collected, including white croaker, a sport fish, and a prey fish.

XI. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

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.

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3. 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.

4. 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.

5. Quarterly analyses shall be performed during the months of February, May, August, and November. Semiannual analyses shall be performed during the months of February and August. 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 Regional Water Board, state the reason why the monitoring could not be conducted, and obtain approval from the Executive Officer for an alternate schedule. Results of annual analyses shall be reported in the quarterly monitoring report following the analysis.

6. The Discharger shall inform the Regional 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 monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly SMR's including the results of all required monitoring using USEPA-approved test methods or 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:

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Table E-9. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	August 1, 2016	All	Submit with quarterly SMR
Daily	August 1, 2016	(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	August 1, 2016	1st day of calendar month through last day of calendar month	Submit with quarterly SMR
Quarterly	August 1, 2016	January 1 – March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	May 15 August 15 November 15 February 15
Semiannually	August 1, 2016	January 1 – June 30 July 1 – December 31	August 15 February 15
Annually	August 1, 2016	January 1 through December 31	February 15

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. part 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.

   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 Attachment A of this Order. For purposes of reporting and administrative enforcement by

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the Regional 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 WDRs; 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. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic submittal of DMRs will be in addition to electronic submittal of SMRs. Information about electronic submittal of DMRs is provided by the Discharge Monitoring Report website as follows: (http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/).

D. Other Reports

1. The Discharger shall report the results of any special studies, chronic toxicity testing, TRE/TIE, TMDL monitoring, and SWPP required by Special Provisions – VI.C.2.a., VI.C.2.b, VI.C.2.c., and VI.C.3.a. The Discharger shall report the progress in satisfaction of compliance schedule dates specified in Special Provision VI.C.5.b. The Discharger shall submit reports in compliance with SMR reporting requirements described in subsection XI.B.

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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).
   d. An updated Spill Control Plan (SCP)

   The SWPPP and BMPPP shall be reviewed at a minimum once per year and updated as needed to ensure all actual or potential sources of trash and pollutants in wastewater and storm water discharged from the Facility are addressed. The SCP shall also be reviewed at a minimum once per year and updated as needed to ensure all actual or potential sources of spills and pollutants in wastewater discharged from the Facility are addressed. All changes or revisions to the SWPPP, BMPPP, and SCP shall be submitted to the Regional Water Board within 30 days of revisions. The Discharger is required to submit the SWPPP, BMPPP, and SCP to the Regional Water Board annually

3. The receiving water monitoring report containing the results of semiannual, annual, and once every 2 years monitoring shall be received at the Regional 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 California Regional Water Quality Control Board, Los Angeles Region (Regional 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.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	4B193500004
Discharger	Los Angeles Department of Water and Power
Name of Facility	Harbor Generating Station
Facility Address	161 North Island Avenue
	Wilmington, CA 90744
	Los Angeles County
Facility Contact, Title and Phone	Katherine Rubin, Manager of Wastewater Quality & Compliance, (213) 367-0436
Authorized Person to Sign and Submit Reports	Katherine Rubin, Manager of Wastewater Quality & Compliance, (213) 367-0436
Mailing Address	111 North Hope Street, Room 1213, Los Angeles, CA 90012
Billing Address	111 North Hope Street, Room 1213, Los Angeles, CA 90012
Type of Facility	Electric Power Generation (SIC 4911: Electric Services)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Not Applicable
Recycling Requirements	Not Applicable
Facility Permitted Flow	108 million gallons per day (MGD)
Facility Design Flow	108 MGD
Watershed	Los Angeles/Long Beach Harbor Watershed
Receiving Water	Los Angeles Inner Harbor (West Basin)
Receiving Water Type	Enclosed Bay

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A. The Los Angeles Department of Water and Power (hereinafter Discharger) is the owner and operator of the Harbor Generating Station (hereinafter Facility), a steam-electric generating facility.

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 West Basin, Los Angeles Harbor, a water of the United States. The Facility was previously regulated by Order R4-2003-0101 adopted on June 10, 2003, which expired on June 10, 2008. Pursuant to Title 40, Code of Federal Regulations (CFR) section 122.6, Order R4-2003-0101 has been administratively extended and the terms and conditions of the permit remain in effect until the Regional Water Board issues new Waste Discharge Requirements (WDRs) and a National Pollutant Discharge Elimination System (NPDES) permit 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. The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for reissuance of its WDRs and NPDES permit on December 12, 2007. Subsequently, per State Water Resources Control Board (State Water Board) request, the Discharger resubmitted an updated ROWD on April 1, 2011. The renewal of the permits for coastal power plants was delayed as a 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. The amendment specified that the Regional Water Board would review, update and renew these permits. On November 13, 2013, the Regional Water Board requested an updated ROWD to reflect the current conditions/operations at the Facility. The Discharger filed an updated ROWD on February 20, 2014. Supplemental information was requested and received on March 13, 2014. Additional information was received on October 28, 2015. A site visit was conducted on February 3, 2015, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge. In addition, a site visit was conducted on April 6, 2016, to gather new information and verify the supplemental information submitted by the Discharger.

II. FACILITY DESCRIPTION

The Facility generates and provides electricity to its service area using one active steam turbine unit (Unit 5) and seven gas turbine units for a design capacity of 449 megawatts (MW). Of the gas turbine units, Units 1 and 2 are combined cycle combustion turbines and Peaker Units 10, 11, 12, 13, and 14 are simple cycle combustion turbines. All of the Units are powered by the combustion of natural gas. The exhaust gas from Units 1 and 2 are coupled to heat recovery boilers used to generate steam for Unit 5. Unit 5, the active steam turbine unit, is cooled using ocean water drawn from the Los Angeles Harbor.

Prior to 1990, the Facility consisted of nine generating units, five of which were steam turbine generators and steam boilers (referred to at that time as Units 1-5), and four of which were gas combustion turbine generators (Units 6-9). The Discharger undertook and completed a repowering of the Facility in January 1994 with a start-up in June 1994. The repowering project consisted of replacing two steam boilers and steam turbine generators (Units 1 and 2) with two gas combustion turbine generators coupled to heat recovery boilers. The project also included installation/construction of ancillary facilities such as aqueous ammonia storage tanks, resin tanks, acid and caustic storage tanks, a sodium hypochlorite tank, and reverse osmosis filter assemblies. Subsequently, in 2002, two combustion turbine generators (Units 6 and 7) were sold, disassembled, and removed from the site.

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The previous Order No. R4-2003-0101 authorized a maximum discharge rate of 108 million gallons per day (MGD) for all permitted waste streams through Discharge Point 001. Since the adoption of Order No. Order R4-2003-0101 in 2003, most of the in-plant waste streams discharges (aqueous ammonia sumps, evaporative cooler drains, reverse osmosis drains, and miscellaneous wastes from the boiler sumps, laboratory drains and turbine wash water), were eliminated and/or redirected to the municipal sanitary sewer system. In order to maintain grid reliability during summer months, the Facility is required to have the ability to operate at its full capacity. As such, this Order authorizes a maximum discharge flow rate of 108 MGD for all permitted waste streams through Discharge Point 001 to the West Basin of the Los Angeles Inner Harbor.

B. Description of Wastewater

1. Once-Through Cooling Water

Cooling water for the Facility is withdrawn from the ocean via an off-shore cooling water intake structure located at the northwest corner of Slip No. 5 of Los Angeles Inner Harbor. Water is withdrawn from a curtain wall intake structure (56 feet by 10 feet) in the bulkhead of the harbor through two 8 ft diameter closed conduits approximately 1,100 ft in length to the screen and pump chamber at Facility. Intake water is pumped via two circulating pumps. Cooling water is supplied to Unit 5 via pipeline. Up to 45 MGD of cooling water is conveyed to the condenser tubes and up to 4.5 MGD of cooling water for the heat exchangers for Unit 5. From Unit 5, cooling water flows through an underground pipeline to the monitoring location which is located in the southwest section of the site. From this site, the cooling water travels in the underground pipe to Discharge Point 001, located in the West Basin of the Los Angeles Inner Harbor.

Biofouling is the formation of an insulating layer of slime-producing organisms. During “plugging and shooting” treatments, rubber scrubbers are drawn through condensers in order to scrape the walls clean of fouling material and growth. Marine biofouling of the cooling water conduits and forebay is controlled by annual “plugging and shooting” and chlorine injection.

In addition to biofouling of the intake structure, the use of ocean water as a matrix for heat removal can result in biofouling of conduits and heat-transfer structures within the Facility. Biological growths which accumulate within the structures of the once-through cooling water system reduce the heat transfer efficiency of the condensers. Periodic chlorination of intake water is performed to control biological growths on the condenser tubes.

2. Internal Process WasteStreams

The Facility is permitted to discharge a number of process wastewaters which are commingled with once-through cooling water and cooling water from the heat exchangers. These permitted waste streams include: low volume wastes (i.e., demineralizer regenerant wastes), and equipment wash water collected in floor drains.

a. Low Volume Wastes

i. **Demineralizer Regeneration Wastes.** These wastes (0.025 MGD) consists of reverse osmosis reject water and condensate demineralizer regenerant wastes. These wastes are conveyed to the retention basins for settling prior to being discharged to the receiving water through Discharge Point 001.

ii. **In-Plant Floor Drains.** Power block floor drains collect equipment wash water, residual oil and detergent from Units 3, 4, and 5. These wastes are typically discharged to the local municipal sanitary sewer. However, these wastes are discharged to Discharge Point 001 during an emergency. The discharge is

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negligible. The pipeline connecting the floor drains to the Discharge Point 001 is locked with a shut-off valved that is only opened when the wastes can not be discharged to the sanitary sewer.

3. Storm Water

a. Yard Drains. All precipitation that falls on the paved portions of the Facility is collected in the yard drains. Two of the yard drains (East and West Yard Drains) flow to Discharge Point 001 where they commingle with cooling water and internal process waters. The estimated storm water discharge is 0.011 MGD (0.00735 for East Yard Drain and 0.00365 MGD for West Yard Drain). The discharges of storm water combined with other process water and cooling water through Discharge Point 001 is covered under this Order.

Storm water from parking areas, roads, Peaker Units 10-14, and other yard drains discharges to the street and to the storm drain. This discharge is regulated by the general permit for Dischargers of Storm Water Associated with Industrial Activities (State Board Order No. 2014-0057-DWQ, NPDES No. CAS000001, adopted on April 1, 2014).

C. Discharge Points and Receiving Waters

The Facility discharges once-through cooling (OTC) water commingled with internal process wastewater, and storm water at Discharge Point 001 to the West Basin of the Los Angeles Harbor, a water of the United States. The discharge volume is 108 MGD. The wastes are discharged through Discharge Point 001 at latitude: 33.76639^{o}; longitude: -118.27^{o}.

The Los Angeles Harbor is located in the southern portion of the Los Angeles Basin. Order No. 95-027, which regulated the Harbor Generating Station, considered the receiving waters as ocean waters and therefore established permit limitations and conditions to protect beneficial uses and water quality objectives for ocean waters as described by the California Ocean Plan (1997). The Basin Plan (Figure 2-7), however, classifies the receiving waters as part of the Los Angeles Harbor. The State Water Board, in a memo dated July 18, 2001, identifies the receiving waters for the Harbor Generating Station as subject to requirements of the State Implementation Policy (SIP), which is applicable only to the inland surface waters, enclosed bays and estuaries of the state. In a letter dated January 21, 2003, the Regional Water Board notified the Discharger of reclassification of the Facility from an ocean discharger to an estuarine discharger. Although Order No. R4-2003-0101 notes the reclassification of the Facility, the effluent limitations in Order No. 95-027 were carried over in Order No. R4-2003-0101. This Order reflects the reclassification of the Facility and therefore implements the California Toxics Rule (CTR) utilizing the SIP.

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

1. Effluent limitations contained in Order R4-2003-0101 for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from February 2010 to December 2015 are as follows:

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Table F-2. Discharge Point 001 Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation[1]		(From February 2010 – December 2015) Monitoring Data	
		30-day Average	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
pH	s.u.	--	6.5 – 8.5	--	6.9 – 8.22
Temperature	°F	--	[2]	--	116
Chronic Toxicity	TU_c	--	4.1	--	4
Biochemical Oxygen Demand 5-day @ 20ºC	mg/L	--	--	--	12
	lbs/day	--	--	--	--
Total Suspended Solids	mg/L	--	--	--	121
	lbs/day	--	--	--	--
Oil and Grease	mg/L	--	--	--	12
	lbs/day	--	--	--	--
Chlorine, Total Residual	mg/L	--	0.377	--	0.32
	lbs/day	--	340	--	NR
Chlorine, Free Available	mg/L	0.2	0.377	0.09	0.23
	lbs/day	180	340	NR	NR
Arsenic, Total Recoverable	µg/L	23.5	122	11.34	23
	lbs/day	21	110	NR	NR
Cadmium, Total Recoverable	µg/L	4.1	16.4	0.06	0.11
	lbs/day	3.7	15	NR	NR
Chromium (VI), Total Recoverable	µg/L	8.2	32.8	NR	<0.5
	lbs/day	7.4	29	NR	NR
Copper, Total Recoverable	µg/L	6.1	43	2.51	5.8
	lbs/day	5.5	39	NR	NR
Lead, Total Recoverable	µg/L	8.2	32.8	0.41	2.3
	lbs/day	7.4	29	NR	NR
Mercury, Total Recoverable	µg/L	0.162	0..654	0.035	0.05
	lbs/day	0.14	0..589	NR	NR
Nickel, Total Recoverable	µg/L	20.5	82	0.65	1.3
	lbs/day	18	74	NR	NR
Selenium, Total Recoverable	µg/L	61.5	246	1.36	6.1
	lbs/day	55	220	NR	NR
Silver, Total Recoverable	µg/L	2.37	10.98	0.4	1.4
	lbs/day	2.1	9.8	NR	NR
Zinc, Total Recoverable	µg/L	57.23	303	9.4	20
	lbs/day	51	270	NR	NR
Radioactivity	pCi/L	[3]		[4]	

"—" No Limitatations and/or data.

NR = Not Reported

1. Concentration limits are based on the Order No. 95-927. Concentration limits are based on Ocean Plan objectives using a dilution ratio of 3.1 parts of seawater to 1 part effluent. The daily mass emission limits (in lbs per day) are based on the maximum permitted flow rate of 108 mgd.
2. The temperature of wastes discharged shall not exceed 94ºF during normal operation of the facility.

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3. Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30269, California Code of Regulations.
4. Annual statements indicating no radioactive materials were used at the Facility were provided in lieu of monitoring.

2. Effluent limitations contained in the Order R4-2003-0101 for low volume waste discharges and representative monitoring data from February 2010 to September 2015 are as follows:

Table F-3. Low Volume Wastes Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation		Monitoring Data (From February 2010 – September 2015)	
		30-day Average	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Total Suspended Solids	mg/L	30	100	14.55	22
	lbs/day[1]	4.0	13	--	--
Oil and Grease	mg/L	15	20	0.68	0.9
	lbs/day[1]	2.0	2.7	--	--

"—" No data.

3. Effluent limitations contained in the Order R4-2003-0101 for storm water discharges and representative monitoring data from February 2010 to September 2015 are as follows:

Table F-4. Storm Water (West Yard Drain) Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation		Monitoring Data (From February 2010 – September 2015)	
		30-day Average	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
pH	s.u.	--	6.5 – 8.5	--	7.48
Biochemical Oxygen Demand 5-day @ 20ºC	mg/L	--	--	--	44
	lbs/day	--	--	--	--
Total Suspended Solids	mg/L	--	--	--	1322
	lbs/day	--	--	--	--
Oil and Grease	mg/L	--	--	--	11
	lbs/day	--	--	--	--

"—" No limitations and/or data.

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E. Compliance Summary

1. Monitoring data submitted to the Regional Water Board during the term of R4-2003-0101 for the period May 2009 through September 2015 indicated that the Discharger has not consistently complied with the numeric effluent limitations as outlined in the table below:

Table F-5. Summary of Compliance History

Date	Monitoring Period	Violation Type	Pollutants	Reported Value	Permit Limitation	Units
4/4/2011	2nd Quarter 2011	Daily Maximum	Temperature	116	94	°F
10/10/2013	4th Quarter 2013	Instantaneous Minimum	pH	6.38	6.5	s.u.
10/31/2013	4th Quarter 2013	Instantaneous Minimum	pH	6.41	6.5	s.u
12/20/2014	4th Quarter 2014	Daily Maximum	Temperature	97	94	°F
9/21/2015	3rd Quarter 2015	Daily Maximum	Temperature	99	94	°F

The temperature exceedances have been classified as Class 2 (moderate) violations and the pH exceedances have been classified as Class 3 (minor) violations. The Regional Water Board has also identified instances of deficient reporting; these instances of non-compliance have been addressed through a Notice of Violation issued on February 27, 2013, and California Water Code Section 13267 Order sent on July 15, 2014, and an amended 13267 Order was sent on August 12, 2014.

F. Planned Changes

The Discharger indicates that changes are planned to comply with the requirements of Clean Water Act Section 316(b). These changes are discussed in Section III.C.10. below.

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 USEPA 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 Regional Water Board adopted a *Water Quality Control Plan for the Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (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 all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In

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addition, the Basin Plan implements 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. Beneficial uses applicable to the West Basin in Los Angeles Inner Harbor are as follows:

Table F-6. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Los Angeles Inner Harbor	Existing: Industrial service supply (IND), navigation (NAV), non-contact water recreation (REC-2), commercial and sport fishing (COMM), marine habitat (MAR), and rare, threatened, or endangered species[1] (RARE) Potential: Water contact recreation (REC-1), shellfish harvesting (SHELL)

1. One or more rare species utilizes all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting

Requirements of this Order implement the Basin Plan.

2. **Enclosed Bays and Estuaries Policy.** The Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Enclosed Bay and Estuaries Policy), adopted by the State Water Resources Control Board (State Water Board) as Resolution No. 95-84 on November 16, 1995, states that:

> *"It is the policy of the State Water Board that the discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a Regional Water Board only when the Regional Water Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge."*

While the Facility discharges to the Los Angeles Inner Harbor, the wastewater is comprised primarily of once-through cooling water (approximately 91 percent). The once-through cooling water is one of the exclusions quoted in the policy. Hence, this discharge is in compliance with the policy and this Order contains provisions necessary to protect all beneficial uses of the receiving water.

3. **Thermal Plan.** The State Water Board adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan) on January 7, 1971, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. The Facility, as presently operating, is considered an existing discharge per Definition 10 of the Thermal Plan. Water Quality Objective 5A of the Thermal Plan is applicable to existing thermal discharges to the estuaries of California and therefore applicable to discharges from the Facility:

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5A(1) Elevated temperature waste discharges shall comply with the following:

i. *The maximum temperature shall not exceed the natural receiving water temperature by more than 20°F.*

ii. *Elevated temperature waste discharges either individually or combined with other discharges shall not create a zone, defined by water temperature of more than 1°F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of a main river channel at any point.*

iii. *No discharge shall cause a surface water temperature rise greater than 4°F above the natural temperature of the receiving waters at any time or place.*

iv. *Additional limitations shall be imposed when necessary to assure protection of beneficial uses.*

5A(2) Thermal waste discharges shall comply with the provisions of 5A(1) above and, in addition, the maximum temperature of thermal waste discharges shall not exceed 86°F.

Requirements of this Order implement the Thermal Plan.

4. **Sediment Quality.** The State Water Board adopted the *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* on September 16, 2008, and it became effective on August 25, 2009. This plan supersedes other narrative sediment quality objectives, and establishes new sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries. Requirements of this Order implement sediment quality objectives of this Plan.

5. **California Toxics Rule (CTR).** On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted National Toxics Rule (NTR) criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.

6. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

7. **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

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justified based on specific findings. The Regional 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 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.

8. **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.

9. **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, threatened, or endangered species. The discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

10. **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 (BTA) 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.

    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 BTA.

    The Policy requires compliance under two alternatives:

    a. Track 1, where 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, or

    b. Track 2, where 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

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level to that which would be achieved under Track 1, using operational or structural controls, or both.

All owners or operators of *existing power plants* were required to submit an implementation plan identifying the OTC Policy compliance alternative selected by April 1, 2011. The Discharger submitted an implementation plan on April 1, 2011, which was later amended on December 10, 2012. According to the amended implementation plan, the facility consists of one Unit that uses once through cooling water, Unit 5 with a rated capacity of 75 megawatts (MW). The Discharger plans to comply with the OTC Policy using Track 1 compliance. The compliance date for Unit 5 is December 31, 2029 and the Discharger is expected to comply in accordance with the time schedule included in the OTC policy.

11. Part 1 Trash Provisions Requirements. The State Water Board adopted "*Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash and and Part I Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California*" (Trash Amendments) through Resolution 2015-0019, which was approved by Office of Administrative Law (OAL) on December 2, 2015, and became effective upon U.S. Environmental Protection Agency (U.S. EPA) approval on January 12, 2016. The Trash Amendments apply to all surface waters of the State, with the exception of those waters within the jurisdiction of the Los Angeles Regional Water Board where trash or debris TMDLs are in effect prior to the effective date of the Trash Amendments. The discharge described in this Order may be subject to the Trash Provisions as there are currently no applicable Trash TMDLs for the Los Angeles Inner Harbor. The Trash Amendments established a narrative water quality objective for trash and a prohibition on the discharge of trash, with specific implementation provisions for Dischargers permitted pursuant to CWA section 402(p), including the MS4 permits, Caltrans MS4 permit, Industrial General Permit, and the Construction General Permit; no specific implementation provisions were prescribed for individual industrial permittees. In addition, the Trash Provisions prescribed specific monitoring and reporting requirements for MS4 and Caltrans permittees only; it stated that Dischargers under the Industrial General Permit and the Construction General Permit are required to report the measures used to comply with the Trash Provisions, with no detail monitoring and reporting provisions. No references were made to the monitoring and reporting requirements for individual industrial permits.

This Order implements the requirements of the Trash Provisions through the prohibition of trash discharges to the NPDES discharge point. The Trash Provisions did not prescribed specific monitoring and reporting requirements applicable to the Discharger; as such, consistent with the monitoring and reporting requirements for dischargers under the Industrial General Permit (due to similarity of the type of discharge, as the Facility's discharge consists of once-through cooling (OTC) water commingled with internal process wastewater, and storm water from an industrial facility), this Order requires the Discharger to develop and implement a Storm Water Pollution Prevention Plan (SWPPP), which shall include BMPs used as wastewater and storm water control measures that the Discharger will undertake to prevent the discharge of trash from the Facility to the Los Angeles Inner Harbor. The Discharger is required to detail and submit to the Regional Water Board annually (through their annual SWPPP submittal) specific BMPs (wastewater and storm water control measures) employed to control and prohibit the discharge of trash and other pollutants from the Facility through the NPDES discharge point to satisfy the monitoring and reporting requirement of the Trash Provisions.

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D. Impaired Water Bodies on CWA Section 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 Regional 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.

On June 26, 2015, USEPA approved California's 2012 Section 303(d) list of impaired waters and disapproved the omission of several water bodies and associated pollutants that meet federal listing requirements. USEPA identified additional water bodies and pollutants for inclusion on the State's 303(d) list. On July 30, 2015, USEPA issued its final decision adding Topaz Lake to the State's 303(d) list.

The Facility discharges into the West Basin within the Los Angeles Inner Harbor. The 2012 California CWA section 303(d) List classifies the Los Angeles-Long Beach Inner Harbor as impaired. The pollutants/stressors of concern for the Los Angeles-Long Beach Inner Harbor include: beach closures due to bacteria, benthic community effects, benzo(a)pyrene (3,4-benzopyrene-7-d), chrysene, copper, dichlorodiphenyltrichloroethane (DDT), polychlorinated biphenyls (PCBs), sediment toxicity, and zinc.

The following are summaries of the TMDLs for the Los Angeles-Long Beach Inner Harbor:

1. Bacteria TMDL

The Los Angeles Harbor Bacteria TMDL was adopted by the Regional Water Board on July 1, 2004, by Resolution No. R4-2004-011. The TMDL was subsequently approved by the State Water Board on October 21, 2004, by the OAL on January 5, 2005, and by USEPA on March 1, 2005. The TMDL became effective on March 10, 2005, when the Regional Water Board filed a Certificate of Fee Exemption with the California Department of Fish and Game. This TMDL addresses only the elevated bacterial indicator densities that are causing impairment of the REC-1 beneficial use of Inner Cabrillo Beach and the potential REC-1 uses of the Main Ship Channel in the Los Angeles Inner Harbor. This Order includes bacteria limitations based on water quality standards (WQS) applicable to the Los Angeles Inner Harbor. These WQS (and WQBELs) are identical to the WQS used to develop the Bacteria TMDL that is applicable to the Main Ship Channel.

2. Harbor Toxics TMDL

The Regional Water Board adopted Resolution No. R11-008 on May 5, 2011, that amended the Basin Plan to incorporate the TMDL for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbors Waters (Harbor Toxics TMDL). The Harbor Toxic TMDL was approved by the State Water Board on February 7, 2012, the OAL on March 21, 2012, and the USEPA on March 23, 2012. The Harbor Toxics TMDL contains requirements applicable to this discharge. Therefore, this Order contains effluent limitations and monitoring requirements based on the TMDL. The Harbor Toxics TMDL includes:

a. Sediment interim concentration-based allocations (in mg/kg sediment) for copper, lead, zinc, DDT, PAHs, and PCBs (Attachment A to Resolution R11-008, p. 11).

b. Water column final concentration-based WLAs (µg/L) for copper, lead, zinc, 4,4' DDT, and total PCBs (Attachment A to Resolution R11-008, pp. 13-14).

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c. Provisions for monitoring discharges and/or receiving waters during the TMDL's 20 year implementation schedule to determine attainment with WLAs and LAs as appropriate.

Implementation.

a. **Water Column WLAs.** This Order also requires final water quality-based effluent limitations (WQBELs) that are statistically-calculated based on saltwater column final concentration-based WLAs (in µg/L, total recoverable metal) for copper (3.73), lead (8.52), zinc (85.6), 4,4'-DDT (0.00059), and total PCBs (0.00017) [referred to in this Order as CTR TMDL-based WLAs] converted from saltwater CTR criteria using CTR saltwater default translators, and relevant implementation provisions in section 1.4 of the State Implementation Policy. The TMDL includes provisions for a 20-year implementation schedule when warranted. However, this Order requires final WQBELs (referred to in this Order as CTR TMDL based effluent limits) because any compliance schedule or interim limits for these constituents may only be included in the Order as per the Clean Water Act section 303(c)(2) approval authorizing compliance schedules for CTR criteria with WLAs in the EPA-approved TMDL (received from USEPA on November 8, 2012).

b. **Interim Sediment WLAs and Monitoring.** This Order includes monitoring thresholds based on sediment interim concentration-based allocations (in mg/kg sediment) for copper (154.1), lead (145.5), zinc (362.0), DDT (0.341), PAHs (90.30), and PCBs (2.107) (referred to in this Order as TMDL-based priority pollutants) and associated monitoring requirements for the effluent. Regardless of these monitoring thresholds, the Discharger shall ensure that effluent concentrations and mass discharges do not exceed levels that can be attained by performance of the Facility's treatment technologies existing at the time of permit issuance, reissuance, or modification. The TMDL's interim sediment allocations were developed to ensure that the beneficial uses of the Los Angeles Inner Harbor are protected.

The water column CTR TMDL-based WLAs for copper, lead, zinc, 4,4'-DDT, and total PCBs are also developed to ensure that the beneficial uses of the Los Angeles Inner Harbor are preserved. However, no water column CTR TMDL-based WLAs are assigned for PAHs for the Greater Harbor Waters (includes Los Angeles Inner Harbor). Therefore, performance goals are established for the PAHs (benzo(a)pyrene and chrysene) based on CTR human health criteria (see below for details).

During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and an effluent limit for copper, lead, zinc, PAHs [benzo(a)pyrene, chrysene], DDT or total PCBs, then the Discharger has not demonstrated attainment with the interim sediment allocations stipulated by the Harbor Toxics TMDL (Attachment A to Resolution No. R11-008, p. 11) and implementation of the effluent sediment monitoring program is required for that priority pollutant. Sediment monitoring of the effluent shall begin during the first discharge event following the effluent exceedances. An effluent sediment monitoring result at or below interim sediment allocations (monitoring thresholds) in Table 6 of this Order demonstrates attainment with the monitoring thresholds and additional effluent sediment monitoring of the effluent is not required. An effluent sediment monitoring result that exceeds the interim sediment allocation requires additional sediment monitoring of the effluent during discharge, but not more frequently than once per year, until the three-year average concentration for effluent sediment monitoring results is at or below the applicable interim sediment allocation.

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c. Performance Goals for PAH Compounds Benzo(a)pyrene and Chrysene. Performance goals are intended to ensure that effluent concentrations do not exceed levels currently achieved by the permitted facility. These performance goals are not enforceable effluent limitations. They act as triggers to determine when sediment monitoring of the effluent is required for these compounds.

The CTR criteria for benzo(a)pyrene of 0.049 µg/L and chrysene of 0.049 µg/L are set as performance goals in this Order. The State's 2012 303(d) List classifies the Los Angeles/Long Beach Inner Harbor as impaired for these PAHs; benzo(a)pyrene and chrysene

d. Water Column, Sediment, and Fish Tissue Monitoring for Greater Los Angeles and Long Beach Harbor Waters Compliance Monitoring Program.

Responsible parties in the Greater Los Angeles and Long Beach Harbors are each individually responsible for conducting water, sediment, and fish tissue monitoring. However, they are encouraged to collaborate or coordinate their efforts to avoid duplication and reduce associated cost.

Compliance monitoring shall be conducted at the locations and for the constiuents listed at the Station IDs in Table F-7 below.

i. Water Column Monitoring. Water samples and total suspended solids (TSS) samples shall be collected during two wet weather events and one dry weather event each year. The first storm event that has a predicted rainfall of 0.25 inches (within 24 hour period) and at least 70% probability of rainfall at least 24 hours prior to the event would be monitored as a wet weather event. An additional wet weather event would be monitored. Depending on forecasts (drought year vs. wet year) this event must produce at least 0.1 inch of runoff preceeded by a 72-hour dry period. Consideration will be given to monitor "larger storm events" (greater than 0.5 inches) if forecasted. TSS shall be collected at several depths during wet weather events. General water chemistry (temperature, dissolved oxygen, pH, and salinity) and a flow measurement shall be required at each sampling event.

ii. Sediment Monitoring. Sediment chemistry samples shall be collected every five years (in addition to, and in between, the sediment triad sampling events as described below), beginning after the first sediment triad event, to evaluate trends in general sediment quality constituents and tested constituents relative to sediment quality targets. Chemistry data without accompanying sediment triad datashall be used to assess sediment chemistry trends and shall not be used to determine compliance.

The Sediment quality objective evaluation as detailed in the SQO Plan 1 (sediment triad sampling) shall be performed every five years in coordination with the Biological Baseline and Bight regional monitoring programs, if possible. Sampling and analysis for the full chemical suite, two toxicity tests and four benthic indices as specified in the SQO Part 1 shall be conducted and evaluated. If moderate toxicity as defined in the SQO Part 1 is observed, results shall be highlighted in annual reports and further analysis and evaluation to determine causes and remedies shall be required in accordance with the Executive Officer approved Monitoring Plan. Locations for sediment triad assessment and the methodology for combining results from sampling locations to determine sediment conditions shall be specified in the Monitoring

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Plan. The sampling design shall be in compliance with Section VII.E of SQO Part 1.

Table F-7. Sedment Chemistry Monitoring Requirements[1]

Water Body Name	Station ID[1]	Station Location	Sample Media and Parameters	
			Water Column/TSS	Sediment
Los Angeles Inner Harbor	03	Center of the Port of Los Angeles West Basin	Temperature, Dissolved Oxygen, pH, Salinity, TSS, Copper, Lead, Zinc, PCBs, DDT	Copper, Lead, Zinc, PCBs, DDT

[1] Based on Harbor Toxics TMDL (Attachment A to Resolution No. R11-008, page 25)

.

iii. **Fish Tissue Monitoring.** In Los Angeles/Long Beach Inner Harbor, fish tissue shall be monitored once per two years for chlordane, dieldrin, toxaphene, DDT, and PCB's. The three target species shall include white croaker, a sport fish, and a prey fish.

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

1. Discharge Prohibitions in this Board Order are based on the Federal Clean Water Act, Basin Plan, Water Code, State Water Resources Control Board's plans and policies, USEPA guidance and regulations, and previous permit provisions. As discussed in Sections IV.B.3 of the Fact Sheet, the discharge of PCB's is prohibited based on the standards applicable to steam-electric generating facilities contained in 40 C.F.R. sections 423.12(b)(2), and 423.13(a)..

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. part 423.

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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 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 BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

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 Regional Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

2. Applicable Technology-Based Effluent Limitations

Pursuant to CWA section 306(b)(1)(B), USEPA has established standards of performance for the steam electric power point source category, for existing and new sources at 40 C.F.R part 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 section 423.10). Standards of performance for existing facilities (instead of new source performance standards) 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 ELGs for existing sources at 40 C.F.R part 423. The guidelines do not include standards of performance based on BCT.

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

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Table F-8. Plant Waste Streams Subject to Effluent Limitation Guidelines

Outfall	Waste Stream	ELG Classification
Discharge Point 001	Once-through cooling water	Once-through cooling water
	Cooling water heat exchanger	Once-through cooling water
	Demineralization regeneration wastes	Low-volume waste source
	In-plant floor drains wastes	Low-volume waste source
	East and West yard drains (storm water)	Not subject to ELG

ELGs at 40 C.F.R. part 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), once-through cooling water, cooling tower blowdown, and discharges of coal pile runoff. Discharges from the Facility covered under 40 C.F.R. part 423 include low volume wastes and once-through cooling water.

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. section 423.12 (b) (2)].

iii. *Low volume wastes* are defined as 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 Table F-8 below [40 C.F.R. section 423.12 (b) (3)].

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 Table F-8 below [40 C.F.R. section 423.12 (b) (6)].

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 or chlorination [40 C.F.R. section 423.12 (b) (8)].

vi. In the event that waste streams from various sources are combined for treatment or discharge, the quantity of each pollutant attributable to each controlled waste source shall not exceed the specified limitations for that waste source.

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Table F-9. BPT Effluent Limitations Guidelines from 40 C.F.R. section 423.12

Parameter	Units	BPT Effluent Limitations			
		Average Monthly[1]	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Effluent Limitations for Low Volume Wastes					
Total Suspended Solids (TSS)	mg/L	30.0	100.0	---	---
Oil and Grease	mg/L	15.0	20.0	---	---
Effluent Limitations for Once-through Cooling Water					
Free Available Chlorine	mg/L	---	0.2[2]	---	0.5

[1] Applied as a 30-day average concentration.limitation.
[2] Applied as an average daily concentration.

b. Standards of Performance Based on BAT

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

i. There shall be no discharge of polychlorinated biphenyl (PCB) 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:

i. 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 Table F-10 below [40 C.F.R. section 423.13(b)(1)].

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

Table F-10. BAT Effluent Limitations for Once-Through Cooling Water

Parameter	Units	BAT Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Effluent Limitations for Once-through Cooling Water					
Total Residual Chlorine	mg/L	---	0.2	---	---

c. 301(g) Variance from BAT Standards for Total Residual Chlorine

The prior order contained a proposed modified effluent limitation (PMEL) for total residual chlorine which was based on a USEPA-approved variance from BAT standards. This PMEL has not been retained in this Order and effluent limitations for total residual chlorine are instead based on the BAT standards contained in 40 C.F.R. part 423. The variance from BAT standards is no longer applicable to the discharge because this variance was developed based on a marine receiving water classification, and not on an estuarine receiving water classification. As discussed in

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Sections II.B and III.C.1 of the Fact Sheet, since the adoption of Order R4-2003-0101, the receiving water has been re-categorized as an estuary which possesses a set of beneficial uses which were not contemplated during the development of the variance. The Regional Water Board views State Water Board Resolution Nos. 86-42 and 88-80 and USEPA's approval of a variance to BAT requirements for chlorine as contemplating an ocean discharge, not an estuarine discharge. This is evidenced by language that specifically addresses an "exception to the Ocean Plan" by the consideration of:

- Water quality standards for ocean, not estuarine waters.
- Receiving water beneficial uses from the Ocean Plan that include marine habitat, not estuarine habitat.
- Toxicity implications to marine, not estuarine organisms.

In addition, the USEPA 301(g) variance was premised on the inclusion of a mixing zone and associated dilution credit which is no longer applicable to this discharge, as discussed in Section II.B of the Fact Sheet.

Therefore, the Regional Water Board finds that due to the re-classification of the discharge from an ocean discharge to an estuarine discharge, the exceptions and variance no longer apply. Consequently, the PMEL contained in Order R4-2003-0101 has not been retained in this Order and BAT standards contained in 40 C.F.R. part 423 are applicable to the discharge.

d. Technology-Based Effluent Limitations for Storm Water Runoff

There are no applicable ELGs for the discharge of storm water runoff from this Facility to the Los Angeles Inner Harbor. Pursuant to section 122.44(k), the prior Order required the Discharger to develop, implement, and submit a Best Management Practices Plan (BMPP). This Order will continue to require the Discharger to update and implement, consistent with the prior Order requirements, a BMPP as well as Storm Water Pollution Prevention Plan (SWPPP) to outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff and trash from being discharged directly into the storm drain or receiving water. At a minimum, the management practices should ensure that trash are not entrained in storm water discharges, and unauthorized non-storm water discharges do not occur at the Facility. The BMPPP and SWPPP shall outline management practices to eliminate the discharge of trash entrained in storm water discharged from the Facility, which may enter the surface water of the State and U.S. The combination of a BMPP, SWPPP and permit limitations based on past performance and reflecting BPJ will serve as the equivalent of technology based effluent limitations, in the absence of established ELGs, in order to carry out the purposes and intent of the CWA. Where USEPA has not yet developed technology-based standards for a particular industry or a particular pollutant, CWA section 402(a)(1) and 40 C.F.R. section 125.3 authorize the use of BPJ to derive technology-based effluent limitations (TBELs) on a case-by-case basis. When BPJ is used, the permit must reflect specific factors outlined at 40 C.F.R. section 125.3.

The Basin Plan includes water quality objectives (WQOs) for the following parameters:

i. Biochemical Oxygen Demand (BOD): Waters shall be free of substances that result in increases in the BOD which adversely affect beneficial uses.

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ii. Oil and Grease: Waters shall not contain oils, greases, waxes or other materials in oncentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.

iii. Solids, Suspended, or Settleable Materials: Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses.

For storm water runoff at other industrial facilities within the Region the Regional Water Board has addressed these WQOs through the use of BPJ to derive TBELs as authorized under CWA section 402(a)(1) and 40 C.F.R. section 125.3. TBELs are typically established for BOD, oil and grease, and total suspended solids (TSS). Due to the intermittent nature of storm water discharges, maximum daily effluent limitations are appropriate. The values typically established for these parameters are shown in the following table:

Table F-11. Technology-Based Effluent Limitations for Storm Water

Parameter	Units	Maximum Daily
Biochemical Oxygen Demand (BOD), 5-day @ 20ºC	mg/L	30
Oil and Grease	mg/L	15
Total Suspended Solids	mg/L	75

The Discharger has been monitoring the storm water discharge at the West Yard Drain. Parameters analyzed have included pH, BOD, TSS, and oil and grease. Data from monitoring reports submitted to the Regional Water Board for the years 2010 through September 2016 indicate that 10 of 53 samples were within below the limits for pH of 6.5. For TSS, 33 of 53 (less than 50% are in compliance) samples were above the limits and 1 of 53 samples was above the limit for BOD. All 53 samples were within the limits for oil and grease.

The TBELs for BOD, TSS, and oil and grease are based on BPT and BCT. In setting these limitations, the Regional Water Board considered the factors listed in 40 C.F.R. sections 125.3(d)(1) and 125.3(d)(2), respectively. These factors include: cost of application of technology, age of equipment and facilities used, process employed, engineering aspects/control techniques, process changes and non-water quality environmental impacts.

The Discharger's past performance indicates the ability to meet the TBELs for BOD, and oil and grease using current technology, except for TSS. As the current technology used by the Discharger is capable of meeting the limitations for BOD and oil and grease, no changes to equipment, facilities, process, or controls are necessary, thereby incurring no additional costs or nonwater quality environmental impacts. For TSS, the Discharger may need to make some changes to consistently comply with the limit.

This Order therefore establishes the above effluent limitations for BOD, oil and grease, and TSS that are applicable to the discharge of storm water runoff from this Facility to the Los Angeles Inner Harbor, through Discharge Point 001.

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3. Summary of Technology-based Effluent Limitations

The Facility discharges to the West Basin of the Los Angeles Inner Harbor via Discharge Point 001. The total flow volume discharged through Discharge Point 001 is a combination of once-through cooling water, and in-plant waste streams consisting of low volume wastes, as defined in 40 C.F.R. section 423. In addition, the Facility discharges storm water at this location for which ELGs have not been specified.

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 001.

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 R4-2003-0101, technology-based effluent limitations in this Order are expressed as concentration-based limitations.

Effluent limitations are specific to the type of discharge. The discharge of PCBs is prohibited for all types of discharge. A summary of the technology-based effluent limitations applicable to this Facility is shown in Table F-10.

Table F-12. Summary of Technology-Based Effluent Limitations

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Effluent Limitations for Once-through Cooling Water					
Free Available Chlorine[1, 2]	mg/L	---	0.2[3]	---	0.5
Total Residual Chlorine[1,2]	mg/L	---	0.2	---	---
Effluent Limitations for Low Volume Wastes (Demineralizer Regenation and In-plant Floor Drains Wastes)					
pH	s.u.	---	---	6.0	9.0
Oil and Grease	mg/L	15	20	---	---
Total Suspended Solids	mg/L	30	100	---	---
Effluent Limitations for Storm Water (East and West Yard Drains)					
Biochemical Oxygen Demand (BOD), 5-day @ 20ºC	mg/L	---	30	---	---
Oil and Grease	mg/L	---	15	---	---
Total Suspended Solids (TSS)	mg/L	---	75	---	---

1. If other oxidants are used, this shall be the total of all oxidants reported as residual chlorine.
2. Total residual and free available chlorine may not be discharged from any single generating unit for more than two hours per day unless the Discharger demonstrates to the permitting authority that discharges for more than two hours per day is required for macroinvertebrate control.
3. Applied as an average daily concentration.

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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 CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Regional Water Board adopted a Basin 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 Basin Plan. The beneficial uses applicable to the Los Angeles Inner Harbor are summarized in section III.C.1 of this Fact Sheet. The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving water.

Priority pollutant water quality criteria in the CTR are applicable to the receiving water. The CTR contains both saltwater and freshwater criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, the following apply, in accordance with section 131.38(c)(3), saltwater criteria apply at salinities of 10 part per thousand (ppt) and higher at locations where this occurs 95 percent or more of the time. Results of the Discharger's salinity monitoring from 2010 through 2014 showed a salinity range of 32.10 ppt to 33.55 ppt. Therefore, the CTR criteria for saltwater aquatic life or human health for consumption of organisms, whichever is more stringent, are used to prescribe the effluent limitations in this Order to protect the beneficial uses of the Los Angeles Inner Harbor.

Table F-13 summarizes the applicable water quality criteria/objective for priority pollutants reported in detectable concentrations in the effluent or receiving water during the most recent dischrges.

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Table F-13. Applicable Water Quality Criteria

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria			
			Saltwater		Human Health for Consumption of:	
			Acute	Chronic	Water & Organisms	Organisms only
		µg/L	µg/L	µg/L	µg/L	µg/L
2	Arsenic	36	69.00	36.00	--	--
4	Cadmium	9.36	42.25	9.36	--	Narrative
5b	Chromium (VI)	50	1100.00	50.00	--	Narrative
6	Copper	3.73	--	3.73	--	--
7	Lead	8.52	--	8.52	--	Narrative
8	Mercury	0.051	Reserved	Reserved	--	0.051
9	Nickel	8.28	74.75	8.28	--	4,600
10	Selenium	71.14	290.58	71.14	--	Narrative
11	Silver	2.24	2.24	--	--	--
12	Thallium	6.3	--	--	--	6.3
13	Zinc	85.62	--	85.62	--	--
14	Cyanide	1.0	1.00	1.00	--	220,000
20	Bromoform	360	--	--	--	360
23	Chlorodibromomethane	34	--	--	--	34
27	Dichlorobromomethane	46	--	--	--	46
61	Benzo(a) Pyrene	0.049	--	--	--	0.049
68	Bis(2-ethylhexyl) Phthalate	5.9	--	--	--	5.9
70	Butylbenzyl Phthalate	5200	--	--	--	5,200
73	Chrysene	0.049	--	--	--	0.049
98	N-nitrosodimethylamine	8.1	--	--	--	8.1
104	beta-BHC	0.046	--	--	--	0.046
118	Heptachlor Epoxide	0.00011	0.053	0.0036	--	0.00011
119-125	PCBs	0.00017	--	--	--	0.00017

Harbor Toxics TMDL. The TMDL assigned concentration-based waste load allocations (WLAs) to discharges in Dominguez Channel Estuary and Greater Harbor Waters for copper, lead, zinc 4-4'-DDT and total PCBs. These WLAs are applicable to discharges in the Los Angeles Inner Harbor.

Table F-14 summarizes the applicable WLAs for copper, lead, zinc, 4,4'-DDT and total PCBs contained in the Harbor Toxics TMDL.

Table F-14. Harbor Toxics TMDL WLAs Applicable to Discharge Point No. 001

Constituents	Units	WLAs
Copper, Total Recoverable[1]	µg/L	3.73
Lead, Total Recoverable[1]	µg/L	8.52
Zinc, Total Recoverable[1]	µg/L	85.6
4,4'-DDT	µg/L	0.00059
Total PCBs	µg/L	0.00017
Total PAHs[2]	µg/L	--

1. WLAs for metals are converted from saltwater dissolved CTR criteria using CTR saltwater default translators.

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[2.] CTR human health criteria were not established for total PAHs. Therefore, the CTR criterion for individual PAHs of 0.049 µg/L is applied individually to benzo(a)anthracene, benzo(a)pyrene, and chrysene. Benzo(a)pyrene and chrysene are selected to be included in this permit because the State's 2010 303(d) List classifies the Los Angeles/Long Beach Inner Harbor as impaired for these PAH compounds.

This permit implements the applicable WLAs as required in the TMDL. The WLAs are converted into effluent limitations by applying the CTR-SIP procedures.

Total Ammonia Water Quality Objectives - Translation of un-ionized ammonia (NH_3) water quality objectives to total ammonia water quality objectives.

Total un-ionized ammonia (NH_3) water quality objectives of 0.035 mg/L for the 4-day average and 0.233 mg/L for the 1-hour average are to be translated to total ammonia ($NH_4^+ + NH_3$) utilizing the implementation procedure contained in Resolution No. 2004-022 which revised the saltwater ammonia water quality objectives in the 1994 Basin Plan. The equation for the translation is as follows:

$[NH_4^+] + [NH_3] = [NH_3] + [NH_3]*10^{(pK_a^S + 0.0324(298 - T) + 0.0415 P/T - pH)}$

Where: P = 1 atm

T = temperature (ºK)

$pK_a^S = 0.116 * i + 9.425$, the stoichiometric acid hydrolysis constant of ammonium ions in saltwater based on i

i = 19.9273 S (1000 – 1.005109 S)-1, the molal ionic strength of saltwater based on S

S = salinity

In order to calculate total ammonia objectives, receiving water pH, temperature, and salinity data are required. Monitoring data (pH, temperature and salinity) of the receiving water from February 2010 to 2015 were used in the calculation. The calculated total ammonia water quality objectives are as follows:

<u>One hour average total ammonia objective -</u> 5.75 mg NH_3/L

based on: 90 percentile pH (8.12),
90 percentile temperature (19.71 ºC) and
10 percentile salinity (32.77 ppt)

<u>4-day average total ammonia objective -</u> 1.37 mg NH_3/L

based on: 50 percentile pH (8.01),
50 percentile temperature (16.57 ºC) and
50 percentile salinity (33.35 ppt)

The reasonable potential analysis for ammonia was conducted base on these two total ammonia objectives.

3. Determining the Need for WQBELs

a. Reasonable Potential Analysis Methodology

In accordance with Section 1.3 of the SIP, the Regional Water Board conducts a Reasonable Potential Analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. If there is a TMDL WLAs approved by USEPA, then WQBELs are developed using these WLAs. Otherwise, the Regional Water Board analyzes effluent and receiving water data and identifies the maximum observed effluent concentration (MEC) and maximum

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background concentration (B) in the receiving water for each constituent. To determine reasonable potential, the MEC and the B are then compared with the applicable water quality objectives (C) outlined in the CTR, NTR, as well as the Basin Plan. For all pollutants that have a reasonable potential to cause or contribute to an excursion above a state water quality standard, numeric WQBELs are required. The RPA considers water quality criteria from the CTR and NTR, and when applicable, water quality objectives specified in the Basin Plan. To conduct the RPA, the Regional Water Board identifies the MEC and maximum background concentration in the receiving water for each constituent, based on data provided by the Discharger.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete a RPA:

i. Trigger 1 – if MEC ≥ C, a limit is needed.

ii. Trigger 2 – If the background concentration B > C and the pollutant is detected in the effluent, a limit is needed.

iii. Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, or other applicable factors indicate that a WQBEL is required.

Sufficient effluent and receiving water data are needed to conduct a complete RPA. If data are not sufficient, the Discharger will be required to gather the appropriate data for the Regional Water Board to conduct the RPA. Upon review of the data, and if the Regional Water Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification. Effluent and receiving water monitoring data collected by the Discharger from February 2010 through January 2015, were utilized to conduct the RPA as dischussed below (Section IV.C.3.d in this Fact Sheet).

b. Assimilative Capacity and Dilution Credit

Order 95-027 granted a dilution credit of 3:1 for the discharge based on the policies and procedures contained in the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan). Assimilative capacity and dilution credits were not assessed in Order R4-2003-0101. Instead, limitations based on Ocean Plan objectives were retained based on anti-backsliding unitil a reasonable potential analysis could be conducted. As discussed in section II.B of the Fact Sheet, the receiving water is no longer categorized as an ocean discharge and is now regulated as an enclosed bay and estuary. The dilution credit determined for the Facility under the Ocean Plan is no longer applicable, instead dilution shall be determined based on the policies and procedures contained in the SIP.

Insufficient information is available to assess the appropriateness of establishing dilution credit in relation to requirements in the SIP; therefore, this Order has established WQBELs on the assumption of zero assimilative capacity. The impact of assuming zero assimilative capacity within the receiving water is that discharge limitations are end-of-pipe limits with no allowance for dilution within the receiving water.

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c. Intake Credits

Section 1.4.4 of the SIP, which applies to toxic pollutants with criteria/objectives established by the NTR, CTR, and the Basin Plans, allows intake credits on a pollutant-by-pollutant or discharge-by-discharge basis, if the following conditions are met:

i. Both the observed maximum background and the intake concentration of the pollutant exceed the most stringent applicable criterion,

ii. Intake water credits are consistent with any applicable TMDL,

iii. Intake water is from the same water body as the receiving water body, which may be demonstrated by showing that:

a) The ambient background concentration of the pollutant in the receiving water, excluding any amount in the facility's discharge, is similar to that of the intake water;

b) There is a direct hydrological connection between the intake and discharge points;

c) The water quality characteristics are similar in the intake and receiving waters; and

d) The intake water pollutant would have reached the vicinity of the discharge point in the receiving water in a reasonable amount of time and with the same effect had it not been diverted by the Discharger.

iv. The intake water pollutant is not altered chemically or physically in a manner that adversely affects water quality and beneficial uses, and

v. The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body.

The Discharger requested intake credits for copper because the concentrations of copper in the influent water between 2003 and 2013 frequently exceeded the monthly average limitations for copper in Order No. R4-2003-0101. Copper is one of a number of pollutants with concentration-based waste load allocations in the Harbor Toxics TMDL. As mentioned in condition ii above "Intake water credits are consistent with any applicable TMDL". Any permitted exceedance of the effluent limitation based on the WLA would not be consistent with the TMDL. Hence, intake credits are not included for copper.

d. Reasonable Potential Analysis Results

The reasonable potential analysis (RPA) was performed based on effluent and receiving water data collected between February 2010 and January 2015. Copper, cyanide, bis(2-ethylhexyl) phthalate, and heptachlor epoxide show (Trigger 1) reasonable potential because the MEC was greater than C. Mercury shows (trigger 2) reasonable potential because the B is greater than C and the constituent was detected in the effluent. Effluent limitations contained in the previous Order for pollutants which do not display reasonable potential were not retained in this Order (see section IV.D.1 for further discussion of compliance with anti-backsliding requirements).

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The reasonable potential analysis for ammonia was performed based on water quality objectives applicable to the receiving water contained in the Basin Plan. Consistent with procedures contained in the Basin Plan, the water quality objectives for ammonia were converted to total ammonia concentrations (i.e., ammonia plus ammonium concentrations) utilizing ambient receiving water pH, temperature, and salinity data. The acute total ammonia criteria was computed based on 90th percentile of the ambient receiving water pH and temperature data, and the chronic criteria was computed based on the median pH and temperature. Total ammonia did not display reasonable potential to cause or contribute to an exceedance of water quality objectives. Therefore, this Order does not include effluent limitations for total ammonia.

As discussed in section III.D of the Fact Sheet, discharges from the Facility are subject to the Harbor Toxics TMDL. This Order establishes effluent limitations for copper, lead, PCBs, and zinc based on the TMDL. Effluent limitations for these parameters were developed according to calculation procedures contained in section 1.4 of the SIP.

The following Table F-15 summarizes results from the RPA.

Table F-15. RPA Results Summary

CTR No.	Constituent	Applicable Water Quality Criteria/TMDL (µg/L)	Maximum Effluent Concentration (µg/L)	Maximum Detected Receiving Water Concentration (µg/L)	RPA Result – Need Limitation?	Reason
2	Arsenic	36	23	19	No	--
4	Cadmium	9.4	0.11	0.14	No	--
5b	Chromium (VI)	50	0.1	<0.1	No	--
6	Copper	3.7[1]	5.8	3.8	Yes	MEC>C, TMDL
7	Lead	8.5[1]	2.3	0.68	Yes	TMDL
8	Mercury	0.051	0.05	0.11	Yes	Trigger 2, B≥C & Effluent Detection
9	Nickel	8.3	1.3	6.1	No	--
10	Selenium	71	6.1	3.1	No	--
11	Silver	2.2	1.4	0.61	No	--
13	Zinc	86[1]	20	19	Yes	TMDL
14	Cyanide	1.0	5.0	<0.5	Yes	Trigger 1, MEC≥C
68	Bis(2-ethylheyxl) Phthalate	5.9	33	5.1	Yes	Trigger 1, MEC≥C
108	4,4'-DDT	0.059[1]	<0.0047	<0.0047	Yes	TMDL
118	Heptachlor Epoxide	0.00011	0.0025	<0.0019	Yes	Trigger 1, MEC≥C
119-125	PCBs	0.0017[1]	<0.21	<0.21	Yes	TMDL

1. Harbor Toxics TMDL WLA..

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4. WQBEL Calculations

a. If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one or more of the three procedures contained in section 1.4 of the SIP. These procedures include:

i. If applicable and available, use the WLA established as part of a TMDL.

ii. Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).

iii. Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Regional Water Board.

b. WQBELs for copper, lead, zinc, 4,4'-DDT, and PCBs are based on the Harbor Toxics TMDL calculated following the procedures in section 1.4 of the SIP. For mercury, cyanide, bis(2-ethylheyxl) phthalate, and heptachlor epoxide, the WQBELs are calculated following the procedures in section 1.4 of the SIP.

c. Since many of the streams in the Region have minimal upstream flows, mixing zones and dilution credits are usually not appropriate. Therefore, in this Order, no dilution credit is being allowed. However, in accordance with the reopener provision in Section VI.C.1.d, this Order may be reopened upon the submission by the Discharger of adequate information to establish appropriate dilution credits or a mixing zone, as determined by the Regional Water Board.

d. WQBELs Calculation Example

Using cyanide and total recoverable copper as examples, the following demonstrates how WQBELs were established for this Order. The example of copper indicates how WLAs in the Harbor Toxics TMDL are included in the development of WQBELs. The tables in Attachments J and K summarize the development and calculation of all WQBELs for this Order using the process described below.

Concentration-based Effluent Limitations

The process for developing these limits is in accordance with section 1.4 of the SIP. For non-TMDL constituents, a set of AMEL and MDEL values are calculated separately, one set for the protection of aquatic life and the other for the protection of human health. The AMEL and MDEL limitations for aquatic life and human health are compared, and the most restrictive AMEL and the most restrictive MDEL are selected as the WQBELs. For Harbor Toxics TMDL constituents, a single set of MDEL values are calculated from the WLA as provided in the TMDL. Attachment J summarizes the development and calculation of all WQBELs for this Order using the process described below.

Example of Cyanide

Calculation of aquatic life AMEL and MDEL:

Step 1: For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective. For each criterion, determine the effluent concentration allowance (ECA) using the following steady state equation:

$ECA = C + D(C-B)$ when $C>B$, and

$ECA = C$ when $C \leq B$,

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Where

C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. For discharges from the Facility, criteria for saltwater are independent of hardness and pH.

D = The dilution credit, and

B = The ambient background concentration

As discussed above, this Order does not allow dilution; therefore

ECA = C

When a WLA has been established through a TMDL for a parameter, the WLA is set equal to the ECA. The Harbor Toxics TMDL establishes the copper water column concentration-based WLA as equal to the saltwater chronic aquatic life criterion.

For cyanide, the applicable ECAs are:

ECA_{Acute} = 1.0 µg/L

$ECA_{Chronic}$ = 1.0 µg/L

When a WLA has been established through a TMDL for a parameter, the WLA is set equal to the ECA.

Step 2: For each ECA based or aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 3 of the SIP and will not be repeated here.

$LTA_{acute} = ECA_{acute} \times Multiplier_{acute99}$

$LTA_{chronic} = ECA_{chronic} \times Multiplier_{chronic99}$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6. It the data set is greater than 10 samples, and at least 20% of the samples in the data set are reported as detected, the CV shall be equal to the standard deviation of the data set divided by the average of the data set.

For cyanide, the data indicate more than 80% are non-detect, therefore the cv is set to 0.6. The following data were used to develop the acute and chronic LTAs using equations provided in section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals):

No. of Samples	CV	ECA Multiplier$_{acute}$	ECA Multiplier$_{chronic}$
22	0.60	0.32	0.53

For cyanide, the calculated LTAs are:

LTA_{acute} = 1.0 µg/L x 0.32 = 0.32 µg/L

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$LTA_{chronic}$ = 1.0 µg/L x 0.53 = 0.53 µg/L

Step 3: Select the most limiting (lowest) of the LTA.

LTA = most limiting of LTA_{acute} or $LTA_{chronic}$

For total recoverable nickel, the most limiting LTA was the $LTA_{chronic}$

$LTA_{cyanide}$= $LTA_{chronic}$ = 0.32 µg/L

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as AMEL and MDEL. The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the CV of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 5 of the SIP and will not be repeated here.

$AMEL_{aquatic\ life}$ = LTA x $AMEL_{multiplier95}$

$MDEL_{aquatic\ life}$ = LTA x $MDEL_{multiplier99}$

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

For cyanide, the following data were used to develop the AMEL and MDEL for effluent limitations using equations provided in Section 1.4, Step 5 of the SIP (Table 2 of the SIP also provides this data up to two decimals):

No. of Samples Per Month	CV	$Multiplier_{MDEL99}$	$Multiplier_{AMEL95}$
4	0.60	3.11	1.55

<u>For cyanide</u>

AMEL = 0.32 µg/L x 1.55 = 0.50 µg/L

MDEL= 0.32 µg/L x 3.11 = 1.0 µg/L

<u>Calculation of human health AMEL and MDEL for Cyanide</u>

Step 5: For the ECA based on human health, set the AMEL equal to the $ECA_{human\ health}$

$AMEL_{human\ health}$ = $ECA_{human\ health}$

For cyanide, the AMEL for human health is as follows:

$AMEL_{human\ health}$ = 220,000 µg/L

Step 6: Calculate the MDEL for human health by multiplying the AMEL by the ratio of $Multipler_{MDEL}$ to the $Multiplier_{AMEL}$. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

$MDEL_{human\ health}$ = $AMEL_{human\ health}$ x ($Multiplier_{MDEL}$/ $Multiplier_{AMEL}$)

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For cyanide, the following data were used to develop the $MDEL_{human\ health}$:

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$	Ratio
4	0.60	3.11	1.55	2.01

For cyanide:

$MDEL_{human\ health}$= 220,000 µg/L x 2.01 = 441,362 µg/L

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health criteria as the WQBEL for the Order. Therefore, in this instance the MDEL and AMEL for aquatic life have been selected as these are more stringent than the WQBELs based on human health criteria.

Final WQBELs for Cyanide:

AMEL = 0.50 µg/L

MDEL= 1.0 µg/L

Example of Copper

Calculation of aquatic life AMEL and MDEL for Copper

Step 1: For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective. For each criterion, determine the effluent concentration allowance (ECA) using the steady state equation as described in Step 1 for nickel above.

When a WLA has been established through a TMDL for a parameter, the WLA is set equal to the ECA. For total recoverable copper the applicable water quality criterion is from the Harbor Toxics TMDL WLA which is based on chronic aquatic life criterion. Thus, for total recoverable copper, the applicable ECA is (reference Table F-7).

$ECA = WLA_{Harbor\ Toxics\ TMDL/chronic\ aquatic\ life}$ = 3.73 µg/L

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. The calculated multipliers are as follows:

No. of Samples	CV	ECA $Multiplier_{acute\ 99}$	ECA $Multiplier_{chronic\ 99}$
22	0.42	0.43	0.631

For total recoverable copper, the water column concentration-based WLA for total recoverable copper in the Harbor Toxics TMDL is based on the chronic criterion and therefore the chronic multiplier will be used to develop the LTA and effluent limitations.

$LTA_{chronic}$ = 3.73 µg/L x 0.631 = 2.35 µg/L

Step 3: Select the most limitaing)lowest of the LTA.

For total recoverable copper, since we are limited to using the chronic aquatic life criterion, the most limiting LTA is $LTA_{chronic.}$

$LTA_{copper} = LTA_{chronic}$ = 2.35 µg/L

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Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as AMEL and MDEL. The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the CV of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2 of the SIP provides precalculated values for the multipliers based on the value of the CV and the number of samples.

$AMEL_{aquatic\ life} = LTA \times AMEL_{multiplier95}$

$MDEL_{aquatic\ life} = LTA \times MDEL_{multiplier99}$

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4). For total recoverable copper, the following data were used to develop the AMEL and MDEL for effluent limitations using equations provided in section 1.4, Step 5 of the SIP (Table 2 of the SIP also provides this data up to two decimals):

No. of Samples	CV	$Multiplier_{AMEL95}$	$Multiplier_{MDEL99}$
4	0.42	1.38	2.35

For total recoverable copper:

AMEL = 2.35 µg/L x 1.38 = 3.24 µg/L

MDEL = 2.35 µg/L x 2.35 = 5.52 µg/L

Calculation of human health AMEL and MDEL for Copper

Step 5: For the ECA based on human health, set the AMEL equal to the $ECA_{human\ health}$

$AMEL_{human\ health} = ECA_{human\ health}$

For total recoverable copper, only the aquatic life (TMDL-based) effluent limitations are applicable.

$AMEL_{human\ health\ (copper)} = ECA_{human\ health\ (copper)}$ = Not Available:

Step 6: Calculate the MDEL for human health by multiplying the AMEL by the ratio of $Multipler_{MDEL}$ to the $Multiplier_{AMEL}$. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

$MDEL_{human\ health} = AMEL_{human\ health} \times (Multiplier_{MDEL} / Multiplier_{AMEL})$

For total recoverable copper, $MDEL_{human\ health}$ is not applicable.

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health as the WQBEL for the Order.

For copper, lead, and zinc, there are no human health (Consumption of Organism Only) criteria, and WLAs have been established based on the Harbor Toxics TMDL, therefore the established effluent limitations are based on aquatic life criteria used for the Harbor Toxics TMDL WLAs. For 4-4'DDT and total PCBs, there are no aquatic life criteria and WLAs have been established based on the Harbor Toxics TMDL, therefore the established effluent limitations are based on human health criteria used for the Harbor Toxics TMDL WLAs. These limitations are expected to be protective of the beneficial uses.

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Final WQBELs for Copper:

$AMEL_{copper}$ = 3.24 µg/L

$MDEL_{copper}$ = 5.52 µg/L

5. PCBs.

As discussed in sections IV.A and IV.B, this Order includes a prohibition against the discharge of PCBs to the receiving water. Further, as discussed in section III.D.1., the discharge is subject to a WLA for PCBs of 0.00017 µg/L based on the Harbor Toxics TMDL, resulting in WQBELs of 0.00017 µg/L (AMEL) and 0.00034 µg/L (MDEL). This Order establishes the prohibition against the discharge of PCBs based on the ELGs as it is more stringent than the applicable WQBELs.

6. WQBELs Based on Basin Plan Objectives

The Basin Plan Objectives applicable to the Discharger are identified in following table. These objectives were evaluated with respect to effluent monitoring data and Facility operations.

Table F-16. Applicable Basin Plan Water Quality Objectives

Constituent	Units	Water Quality Objective
pH	standard units	The pH of inland surface waters must be between 6.5 and 8.5 at all times and ambient pH shall not be changed more than 0.5 units from natural conditions.
Ammonia	mg/L	1-hour avg. total ammonia concentration (mg/L): 0.233 mg/L NH_3 as N[1] 4-day avg. total ammonia concentration (mg/L): 0.035 mg/L NH_3 as N[1]
Bacteria	MPN/ 100 mL	Marine Waters Designated for Water Contact Recreation (REC-1) Geometric Mean Limits Total coliform density shall not exceed 1,000/100 ml. Fecal coliform density shall not exceed 200/100 ml. Enterococcus density shall not exceed 35/100 ml. Single Sample Limits Total coliform density shall not exceed 10,000/100 ml. Fecal coliform density shall not exceed 400/100 ml. Enterococcus density shall not exceed 104/100 ml. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.
Dissolved Oxygen	mg/L	The mean annual dissolved oxygen concentration of all waters shall be greater than 7.0 mg/L, and no single determination shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations.
Temperature	°F	The Basin Plan identifies numeric temperature objectives consistent with the Thermal Plan. The Thermal plan contains a maximum temperature limitation of 86°F for thermal discharges to the Estuaries. Requirements in this Order implement the Thermal Plan.
Total Residual Chlorine	mg/L	Chlorine residual shall not be present in surface water discharges at concentrations that exceed 0.1 mg/L and shall not persist in the receiving waters at any concentration that causes impairment of beneficial uses.
Radioactive Substances	pCi/L	Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

1. These objectives have been translated from unionized ammonia to total ammonia according to Basin Plan Implementation Provision 5 (see Section IV.C.2.of this Fact Sheet).

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a. pH. Instantaneous maximum and minimum effluent limitations for pH based on Basin Plan objectives (6.5 – 8.5) are more stringent than pH limitations based on applicable ELGs (6.0 – 9.0; see Section IV.B of the Fact Sheet). This Order establishes the more stringent limitations based on Basin Plan objectives.

b. Bacteria. This Order contains effluent limitations and receiving water limitations for bacteria to ensure that the discharge is not contributing to an impairment of the receiving water environment. These limitations are consistent with the water quality objectives used to develop the Bacteria TMDL discussed in Section III.D of the Fact Sheet.

c. Ammonia. The discharge was evaluated for potential to exceed the Basin Plan objective for ammonia as specified in Resolution No. 2002-011. The Basin Plan objectives for ammonia are expressed as a function of pH and temperature. The toxicity of ammonia to aquatic organisms increases with increasing pH and temperature. In turn, objectives calculated from higher pH and temperature values results in lower (more stringent) objectives. The one-hour ammonia objective was converted to total ammonia using the 90th percentile pH and temperature monitoring results obtained from receiving water Monitoring Location RSW-001. The 4-day average ammonia objective was converted to total ammonia using median pH and temperature receiving water data. The calculated ammonia objectives are 5.75 mg/L (one-hour average) and 1.37 mg/L (4-day average). Monitoring data collected from 2010 through 2015 indicate non-detect except for 2010 (0.30 mg/L and 2011 (0.28 mg/L) which are below the calculated objectives. This Order does not include ammonia effluent limitations at Discharge Points 001. This Order requires the Discharger to conduct ammonia, pH, temperature and salinity monitoring in the receiving water in order to provide data necessary to calculate ammonia objectives and conduct future RPAs.

d. Dissolved Oxygen. This Order addresses dissolved oxygen through receiving water limitations.

e. Temperature. This Order addresses the water quality objective for temperature, by establishing effluent limitations at Discharge Point based on the interpretation of the Thermal Plan and the White Paper, as described in section III.C.3 and Table F-16 of this Fact Sheet.

f. Total Chlorine Residual. Disinfection of wastewaters with chlorine produces chlorine residual. Chlorine and its reaction products are toxic to aquatic life. The limit for residual chlorine is based on the Basin Plan (page 3-9) narrative, "*Chlorine residual shall not be present in surface water discharges at concentrations that exceed 0.1 mg/L and shall not persist in receiving waters at any concentration that causes impairment of beneficial uses.*" As discussed in Section IV.B of this Fact Sheet, TBELs for total residual chlorine are applicable to the combined discharge at Discharge Points 001. However, the applicable TBEL is less stringent than the WQBEL of 0.1 mg/L based on the water quality objective contained in the Basin Plan. Therefore, this Order establishes the more stringent total residual chlorine effluent limitation based on Basin Plan objectives.

g. Radioactivity. Order R4-2003-0101 included effluent limitations specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30269 of the California Code of Regulations. These limitations were based on requirements of the Ocean Plan. These limitations have not been retained in this Order due to the recategorization of the discharge from an ocean discharge to an estuarine

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discharge. The Basin Plan states the radioactive substances shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life. Therefore, this Order establishes the Basin Plan narrative effluent limitation for radionuclides.

7. 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.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses by aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota.

In accordance with the Basin Plan, Order No. R4-2003-0101 contained a maximum daily effluent limitation for chronic toxicity of 4.1 TUc. In addition to the Basin Plan requirements, Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. The Regional Water Board has determined that chronic toxicity demonstrates reasonable potential based on Step 7 of the RPA procedure described in the SIP which states that other information may be considered to determine whether a WQBEL is needed. Such information includes, among other aspects, the facility type, the discharge type, and the potential toxic impacts of the discharge. A chronic toxicity effluent limitation is included in this Order to ensure that the receiving water meets the Basin Plan narrative water quality objective for toxicity.

Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects. Order No. R4-2003-0101 included an effluent limitation for acute and chronic toxicity. For the discharge covered under this Order, the chronic toxicity limit provides a higher level of protection than the acute toxicity limitation

In 2010, USEPA endorsed the peer-reviewed Test of Significant Toxicity (TST) two 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 no observed effect concentration (NOEC) hypothesis-testing approach. TST results are also more transparent than the point estimate model approach used for acute toxicity 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

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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 for chronic toxicity is:

H_o: Mean response (In-stream Waste Concentration (IWC) in % effluent)

≤ 0.75 mean response (Control).

Results obtained from a single-concentration 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 IWCs for Discharge Points 001 are 100/(0+1) = 100 percent effluent.

The 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, exactly three independent toxicity tests are required when one toxicity test results in "Fail".

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 effluent limitations for arsenic, cadmium, chromium (VI), nickel, selenium, silver, and acute toxicity. As discussed below, the relaxation of these effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

The federal anti-backsliding provisions allow for relaxation of effluent limitations when new information (other than revised regulations, guidance, or test methods) is available that was not available at the time of permit issuance that would have justified a less stringent effluent limitation. The effluent limitations for arsenic, cadmium, chromium (VI), nickel, selenium, and silver were removed in this Order because the results of the reasonable potential analysis (RPA) for the effluent monitoring data collected from February 2010 through September 2015 demonstrate no reasonable potential to cause or contribute to an excursion above water quality objectives. The RPA was conducted based on the SIP procedures. Therefore, the removal of the effluent limitations for these pollutants is consistent with the exceptions to the anti-backsliding provisions of the CWA and federal regulations based on this new information (i.e., RPA for pollutants discharged through Discharge Point 001).

Order R4-2003-0101 also contained an acute toxicity effluent limitation. This Order includes a chronic toxicity effluent limitation that is assessed using the TST statistical approach, which is protective of the Basin Plan's narrative objective for toxicity. The chronic toxicity effluent limitation is actually more stringent than the acute toxicity effluent limitation. Therefore, the acute toxicity effluent limitation contained in the previous permit

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has not been retained in this Order. The removal of the acute toxicity effluent limitation is consistent with the exceptions to the anti-backsliding provisions of the CWA and federal regulations since it has been replaced with the more stringent chronic toxicity effluent limit.

2. Antidegradation Policies

Federal regulations at 40 C.F.R. section 131.12 require 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 Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge.

As discussed in section IV.C.D.1 above (Anti-Backsliding Requirements), this Order no longer includes effluent limitations for arsenic, cadmium, chromium (VI), nickel, selenium, and silver based on the RPA using updated information. Effluent monitoring data indicates these pollutants are no longer present in the discharge at concentrations that demonstrate reasonable potential to cause or contribute to an exceedance of water quality objectives.

Further, the effluent limitations for copper, lead, and zinc in this Order implement WLAs in the Harbor Toxics TMDL, the purpose of which is to bring the waterbody into attainment with water quality standards.

The acute toxicity effluent limitation contained in the previous permit has also not been retained in this Order. Instead, this Order includes a chronic toxicity effluent limitation that is assessed using the TST statistical approach, which is protective of the Basin Plan's narrative water quality objective for toxicity. The chronic toxicity effluent limitation is more stringent than the acute toxicity effluent limitation; evaluating the mortality, reproduction, and growth endpoints.

This Order also does not provide for an increase in the permitted design flow or allow for a reduction in the level of treatment. The final effluent limitations in this Order, which include concentration based and mass based effluent limitations, hold the discharger to performance levels that will not cause or contribute to water quality impairment or degradation of water quality. Therefore, the permitted discharge is consistent with the antidegradation provisions 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 applicable to Discharge Point 001 consist of restrictions on free available chlorine, total residual chlorine, oil and grease, and TSS. Restrictions on these pollutants are discussed in Section IV.B of the Fact Sheet. This Order's technology-based pollutant restrictions are based on BPJ and 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

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objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating the individual WQBEL's for priority pollutants are based on the CTR implemented by the SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 C.F.R. section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order were approved by USEPA and are applicable water quality standards pursuant to 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.

40 C.F.R. section 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 C.F.R. section 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 C.F.R. section 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCL's) and mass limitations are not necessary to protect the beneficial uses of the receiving water. This Order contains mass-based effluent limitations for bis(2-ethylhexyl) phthalate, free available chlorine, total residual chlorine, oil and grease, TSS, copper, cyanide, lead, mercury, and zinc. Mass-based effluent limitations were calculated based upon the flow rate permitted in section III.A of this Order.

4. Mass-Based Effluent Limitations

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. 40 C.F.R. 122.45(f)(1) requires that all permit limitations, standards or prohibitions be expressed in terms of mass units except under the following conditions: (1) for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if in establishing technology-based permit limitations on a case-by-case basis limitations based on mass are infeasible because the mass or pollutant cannot be related to a measure of production.

This Order included mass-based limitations calculated based on the discharge flow rates from each discharge point.

Mass-based effluent limitations are established using the following formula:

Mass (lbs/day) = flow rate (MGD) x 8.34 x effluent limitation (mg/L)
where: Mass = mass limitation for a pollutant (lbs/day)
Effluent limitation = concentration limit for a pollutant (mg/L)
Flow rate = discharge flow rate (MGD)

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5. Summary of Final Effluent Limitations

a. Summary of Final Effluent Limitations for Discharge Point 001.

Table F-17. Summary of Final Effluent Limitations for Discharge Point 001

Pollutant	Units	Effluent Limitations				Performance Goals[2]	Rationale[1]
		Average Monthly	Maximum Daily	Inst. Minimum	Inst. Maximum		
Conventional Pollutants							
pH	standard units	--	--	6.5	8.5	--	BP
Biochemical Oxygen Demand (BOD), 5-day @ 20ºC	mg/L	20	30	--	--	--	BPJ
	lbs/day[4]	18,014	27,022	--	--	--	
Oil and Grease	mg/L	10	15	--	--	--	BPJ
	lbs/day[4]	9,007	13,511	--	--	--	
Total Suspended Solids (TSS)[9]	mg/L	50	75	--	--	--	BPJ
	lbs/day[4]	45,036	67,554	--	--	--	
Non-Conventional Pollutants							
Temperature	ºF	--	--	--	[3]	--	TP
Settleable Solids	ml/L	0.1	0.3	--	--	--	BPJ
Turbidity	NTU	50	75	--	--	--	BPJ
Free Available Chlorine[6,]	mg/L	--	0.2[5]	--	0.5	--	ELG
	lbs/day[4]	--	180	--	450	--	
Total Residual Chlorine [6,7]	mg/L	--	0.1	--	--	--	BP
	lbs/day[4]	--	90	--	--	--	
Chronic Toxicity[8]	Pass or Fail, % Effect	Pass	Pass or % Effect <50	--	--	--	BPJ, TST
Radioactivity	[9]						BP
Priority Pollutants							
Copper, Total Recoverable[10]	µg/L	3.3	5.5	--	--	--	TMDL, SIP
	lbs/day[4]	3	5	--	--	--	
Lead, Total Recoverable[10]	µg/L	6.0	16	--	--	--	TMDL, SIP
	lbs/day[4]	4	14.4	--	--	--	
Mercury, Total Recoverable[12]	µg/L	0.051	0.10	--	--	--	CTR, SIP
	lbs/day[4]	0.0.05	0.09	--	--	--	
Zinc, Total Recoverable[10]	µg/L	70	140	--	--	--	TMDL, SIP
	lbs/day[4]	63	126	--	--	--	
Cyanide[12]	µg/L	0.50	1.0	--	--	--	CTR, SIP
	lbs/day[4]	0.45	0.9	--	--	--	
Bis(2-ethylhexyl) Phthalate[12]	µg/L	6	16	--	--	--	CTR, SIP
	lbs/day[4]	5.4	14.4	--	--	--	
Benzo(a) Pyrene [10,11]	µg/L	--	--	--	--	0.049[13]	TMDL
Chrysene [10,11]	µg/L	--	--	--	--	0.049[13]	TMDL
4,4'-DDT[10]	µg/L	0.00059	0.0012	--	--	--	TMDL, SIP
	lbs/day[4]	0.0001	0.0002	--	--	--	

Pollutant	Units	Effluent Limitations				Performance Goals[2]	Rationale[1]
		Average Monthly	Maximum Daily	Inst. Minimum	Inst. Maximum		
Heptachlor Epoxide[12]	µg/L	0.00011	0.00022	--	--	--	CTR, SIP
	lbs/day[4]	0.0005	0.0011	--	--	--	
PCBs	[15]						ELG

1. ELG= Effluent Limitations Guidelines and Standards; BP = Basin Plan; BPJ = Best Profeddional Judgement TP = Thermal Plan; TMDL = Total Maximum Daily Load; CTR = California Toxic Rule; SIP = State Implementation Policy.
2. Performance Goals are intended to ensure that effluent concentrations and mass ;discharges do not exceed levels currently achieved by the permitted facility that are protective of water quality. These performance goals are not considered as limitations or standards for the regulation of the facility. They act as triggers to determine when effluent sediment monitoring is required for this category of pollutants.
3. The maximum temperature shall not exceed the natural receiving water temperature by more than 20°F. The maximum temperature of thermal waste discharges shall not exceed 86°F.
4. Mass-based (lbs/day) effluent limitations are based on the new flow rate of 108 MGD for Discharge Point 001 at Monitoring Location EFF-001. The mass-based effluent limitations are calculated using the formula::

   Mass (lbs/day) = 8.34 x C x Q
   Where: C = concentration for a pollutant in mg/L
   D = maximum discharge flow rate in MGD.
5. Applied as an average daily limitation.
6. If other oxidants are used, this shall be the total of all oxidants reported as residual chlorine.
7. Total residual chlorine and free available chlorine may not be discharged from any single generating unit for more than two hours per day unless the Discharger demonstrates to the permitting authority that discharge for more than two hours per day is required for macroinvertebrate control.
8. The Median Monthly Effluent Limitation (MMEL) shall be reported as “Pass” or “Fail”. The Maximum Daily Effluent Limitation (MDEL) shall be reported as “Pass” or Fail” and “% Effect”. 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 may be conducted when one toxicity test results in “Fail”.
9. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or hat result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
10. During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit or performance goal for copper, lead, zinc, 4,4’-DDT, benzo(a)pyrene, or chrysene, implementation of the effluent sediment monitoring program is required for that priority pollutant. The effluent sediment monitoring shall begin during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the interim sediment allocations in Table 5 of this Order, demonstrates attainment with the applicable sediment allocation and additional sediment monitoring of the effluent is not required. A sediment monitoring result that exceeds the interim sediment allocation requires additional sediment monitoring of the effluent during discharge but not more frequently than once per year until the three-year average concentration for sediment monitoring results is at or below the interim sediment allocation.
11. Samples analyzed must be unfiltered samples.
12. The effluent limitation is based on CTR salt water criteria and calculated using CTR-SIP procedures..
13. CTR human health criteria were not established for total PAHs. Therefore, the performance goals are based on the CTR human health criteria for the individual PAHs; benzo(a)pyrene and chrysene. The benzo(a)pyrene and chrysene were selected because the State’s 2010 303(d) List classifies the Los Angeles/Long Beach Inner Harbor as impaired for these PAH compounds.
14. There shall be no discharge of PCBs. (Discharge Prohibition III.I)

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b. Summary of Final Effluent Limitations for Low Volume Wastes (Monitoring Location EFF-001A).

Table F-18. Summary of Final Effluent Limitations for Low Volume Wastes (Monitoring Location EFF-001A)

Pollutant	Units	Effluent Limitations				Rationale[1]
		Average Monthly	Maximum Daily	Inst. Minimum	Instant. Maximum	
pH	standard units	--	--	6.0	9.0	P, ELG
Oil and Grease	mg/L	15	20	--	--	P, ELG
	lbs/day[2]	3.1	4.2	--	--	
Total Suspended Solids	mg/L	30	100	--	--	P, ELG
	lbs/day[2]	6.3	21	--	--	

[1] P = Previous Order No. R4-2003-0101; ELG= Effluent Limitations Guidelines and Standards.

[2] Mass-based (lbs/day) effluent limitations are based on the flow rate of 0.025 MGD for Low Volume Wastes at Monitoring Location EFF-001A. The mass-based effluent limitations are calculated using the formula::

Mass (lbs/day) = 8.34 x C x Q

Where: C = concentration for a pollutant in mg/L

D = maximum discharge flow rate in MGD

c. Summary of Final Effluent Limitations for Storm Water at East Yard and West Yard Drains [Monitoring Locations EFF-001B (East) and EFF-001C (West)]

Table F-19. Summary of Final Effluent Limitations for Storm Water at East Yard and West Yard Drains [Monitoring Locations EFF-001B (East) and EFF-001C (West)]

Pollutant	Units	Effluent Limitations				Rationale[1]
		Average Monthly	Maximum Daily	Inst. Minimum	Instant. Maximum	
pH	standard units	--	--	6.5	8.5	BP
Temperature	^{o}F	--	--	--	86	BP, TP
Biochemical Oxygen Demand (BOD), 5-day @ 20ºC	mg/L	--	30	--	--	BPJ
	lbs/day[2]	--	1.84[3]	--	--	
		--	0.91[4]	--	--	
Oil and Grease	mg/L	--	15	--	--	BPJ
	lbs/day[2]	--	0.92[3]	--	--	
		--	0.46[4]	--	--	
Total Suspended Solids	mg/L	--	75	--	--	BPJ
	lbs/day[2]	--	4.6[3]	--	--	
		--	2.28[4]	--	--	

[1] BP = Basin Plan; TP.= Thermal Plan; BPJ = Best Professional Judgment
BPJ = Best Professional Judgment is the method used by permit writers to develop technology-based NPDES permit conditions on a case-by-case basis using all reasonably available and relevant data. BPJ limitations are established in cases in which effluent limitation guidelines are not available for a particular pollutant of concern. Authorization for using BPJ limitations is found under section 401(a)(1) of the Clean Water Act and under 40 C.F.R. section 125.3.

[2] Mass-based (lbs/day) effluent limitations are based on the storm water flow rate of 0.00735 MGD for East Yard Drain and 0.00365 MGD for West Yard Drain. The mass-based effluent limitations are calculated using the formula::

Mass (lbs/day) = 8.34 x C x Q

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Where: C = concentration for a pollutant in mg/L
D = maximum discharge flow rate in MGD

[3] Mass-based (lbs/day) effluent limitations for East Yard Drain at Monitoring Location EFF-001B are based on storm water flow rate of 0.00735 MGD.

[4] Mass-based (lbs/day) effluent limitations for West Yard Drain at Monitoring Location EFF-001C are based on storm water flow rate of 0.00365 MGD.

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 Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (40 C.F.R. 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. If there is reasonable potential or a USEPA-approved TMDL WLA, then WQBEL's are included in this Order to ensure protection of water quality standards.

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. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

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

These provisions are based on 40 C.F.R. section 123 and the previous Order. The Regional 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 Regional Water Board, including revisions to the Basin Plan.

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2. Special Studies and Additional Monitoring Requirements

a. Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan. This provision is based on section 4 of the SIP, Toxicity Control Provisions, which establishes minimum toxicity control requirements for implementing the narrative toxicity objective for aquatic life protection established in the basin plans of the State of California or the OTC policy.

b. Monitoring Thresholds based on Sediment Interim Concentration-based Allocations in the Harbor Toxics TMDL for Sediment Monitoring of the Effluent. This Order implements the Harbor Toxics TMDL's interim sediment allocations (Greater Harbor Waters) for copper, lead, zinc, DDT, PAHs, and PCBs as monitoring thresholds. Attainment with these thresholds shall be demonstrated in accordance with **Footnote 4 to Table 4** of this Order which includes effluent limits for TSS and the targeted pollutants. If there is a discharge, the permittee is required to collect sufficient sample at least once during the permit term to analyze the sediment in the effluent directly. Regardless of these monitoring thresholds, the Discharger shall ensure that effluent concentrations and mass discharges do not exceed levels that can be attained by performance of the Facility's treatment technologies existing at the time of permit issuance, reissuance, or modification.

c. Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for the Greater Los Angeles and Long Beach Harbor Waters Compliance Monitoring Program. This provision implements the Compliance Monitoring Program as required in the Harbor Toxics TMDL. The Compliance Monitoring Program includes water column monitoring, sediment monitoring and fish tissue monitoring at monitoring stations in **Table 9** (Sediment Chemistry Monitoring Requirements) of the Order. The Discharger may join a collaborating group or develop a site specific plan to comply with this requirement

3. Best Management Practices and Pollution Prevention

a. Storm Water Pollution Prevention Plan (SWPPP). This Order requires the Discharger to update and continue to implement a SWPPP. The SWPPP will outline site-speecific management processes for minimizing storm water runoff contamination and for preventing trash and contaminated storm water runoff from being discharged directly into the Los Angeles Inner Harbor. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with storm water and to prevent the entrainment of trash in storm water that is discharged through Discharge Point 001.

As part of the SWPPP update, the Discharger shall include procedures that the Discharger will be undertaking in anticipation of a storm event to clear out all the contents within each yard drain.

The SWPPP requirements are included as Attachment G, based on 40 C.F.R. section 122.44(k).

b. Best Management Practices Plan (BMPP). This Order requires the Discharger to develop and implement a 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.

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The Harbor Toxics TMDL addresses BMPs as follows:

> *"When permits for responsible parties are revised, the permits should provide mechanisms to make adjustments to the required BMPs as necessary to ensure their adequate performance. If proposed structural and non-structural BMPs adequately implement the WLAs then additional controls will not be necessary. Alternatively, if the proposed structural and non-structural BMPs selected prove to be inadequate then additional structural and non-structural BMPs or additional controls may be required."*

Special Provision VI.C.3.a. requires the Discharger to update and maintain a BMPP that incorporates requirements contained in Appendix G. Appendix G requires a discussion on the effectiveness of each BMP to reduce or prevent pollutants and trash in storm water discharges and authorized non-storm water discharges. Special Provision VI.C.3.a and Appendix G requirements satisfy the TMDL component to address BMP performance for this Facility.

c. Spill Contingency Plan (SCP). This Order requires the Discharger to update and continue to 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

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. Except for storm water authorized under this Order to be discharged through Discharge Point 001, 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

i. Once-Through Cooling Water Implementation Plan and Schedule

Under Track 1, of the 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 foot 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.

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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 April 1, 2011, which was later amended on December 10, 2012. The Facility consists of seven natural gas-fired units, which do not require circulating water and one steam turbine, Unit 5, which requires cooling water. Unit 5 is rated at 75 megawatts (MW). Per the Discharger's amended implementation plan and in accordance with the amended OTC Policy, the Discharger plans to comply with the OTC Policy using Track 1 compliance. Compliance with Unit 5 will be achieved in accordance with the following schedule. The Regional Water Board is responsible for ensuring that compliance with the OTC policy is timely, appropriate, and effective. Progress reports will enable the Regional Water Board to monitor the progress towards achieving compliance.

Table F-20. Schedule of Compliance with OTC Policy

Task	Compliance Date
1. Submit the results of studies and a proposal to minimize impingement and entrainment to the State Water (see item ii,iv(3) below).	December 31, 2015
2. Submit first Progress Report on OTC compliance status for Unit 5.	December 1, 2019
3. Submit second Progress Report on OTC compliance status for Unit 5.	December 1, 2021
4. Submit third Progress Report on OTC compliance status for Unit 5.	December 1, 2025
5. Achieve full compliance with Unit 5.	December 31, 2029

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ii. OTC Policy Immediate and Interim Requirements

The OTC Policy further 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.

iv. Owners or operators of fossil fueled units that have submitted implementation plans to comply with the OTC Policy and have requested OTC compliance dates after December 31, 2022, that are approved by the State Water Board shall:

(1) Commit to eliminate OTC and seawater use for cooling water purposes for all units at the facility.

(2) Conduct a study or studies, singularly or jointly with other facilities, to evaluate new technologies or improve existing technologies to reduce impingement and entrainment.

(3) Submit the results of the study and a proposal to minimize entrainment and impingement to the Chief Deputy Director no later than December 31, 2015. Upon approval of the proposal by the Chief Deputy Director, complete implementation of the proposal no later than December 31, 2020.

The Discharger's implementation plan and subsequent amendment indicate that the large organism exclusion device requirement does not apply to the Facility because it does not have an offshore intake.

In a letter dated November 4, 2014, the Discharger transmitted to the State Water Board the reports for evaluating impingement and entrainment technologies at the Harbor Generating Station and Haynes Generating Station, entitled "*Final Report Evaluation of Impingerment and Entrainment Technologies for Harbor and Haynes Generating Stations, dated July 2014", and "Evaluation of Impingement Mortality Reducing Thechnologies for Harbor and Haynes Generating Stations, dated july 2014".* The letter also indicated that *w*ith regards to the mitigating measures, the Discharger proposed to provide funding to the Coastal Conservancy to be used for mitigation projects directed toward increases in marine life associated with the State's Marine Protected Areas in the local region of the the Facility starting October 1, 2015, and until the Facility achieves full OTC compliance.

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 Regional 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 – Not Applicable

B. Effluent Monitoring

1. Discharge Point 001

a. Monitoring for pollutants expected to be present in the discharge will be required as established in the MRP (Attachment E). To demonstrate compliance with the established effluent limitations, the Order includes monitoring requirements for parameters for which effluent limitations have been established.

b. The SIP states that the Regional Water Board will require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established. This Order requires the Discharger to conduct annual monitoring for the remaining CTR priority pollutants at Discharge Point 001. The Regional Water Board will use the additional data to conduct an RPA and determine if additional WQBELs are required. The Regional Water Board may reopen the permit to incorporate additional effluent limitations and requirements, if necessary.

c. This Order includes a requirement to measure effluent flow by meter. The Discharger has previously measured flow based on circulating pump levels. The discharge flow rate varies based on the pressure with the pump's operation. In

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order to provide a more accurate measurement of effluent flow, the Discharger must install a meter that is capable of measuring the effluent flow at Discharge Point 001.

2. Low Volume Wastes (Monitoring Location INT-001A)

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

3. Storm Water at East Yard Drain (Monitoring Location INT-001B) and West Yard Drain (Monitoring Location INT-001C)

a. Monitoring requirements for storm water that flows to the East and West Yard Drains have been included in the MRP (Attachment E). These monitoring requirements are necessary to determine compliance with effluent limitations established in this Order.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) testing protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. This Order requires quarterly monitoring for chronic toxicity which is a more stringent measure of the aggregate toxic properties of the discharge than acute toxicity. For this permit, chronic toxicity in the discharge is limited and evaluated using USEPA's 2010 TST statistical approach. This Order increases the frequency for chronic toxicity monitoring from once per year to once per quarter.

D. Receiving Water Monitoring

1. Surface Water

Monitoring requirements are included in the MRP (Attachment E) to determine compliance with the receiving water limitations established in Limitations and Discharge Requirements, Receiving Water Limitations, Section V.A. Receiving water monitoring requirements included in Order R4-2003-0101 have largely been retained without modification. This Order establishes benthic and bioaccumulative monitoring requirements for particular pollutants of concern in the receiving water (i.e., metals, pesticides, total PCBs, and PAHs) which are necessary to assess any deleterious effects which may be due to the discharge.

Since there was no reasonable potential for ammonia, this Order does not implement the revised ammonia water quality objectives which are expressed as un-ionized ammonia. Since the equation for conversion of unionized ammonia objectives to total ammonia objectives relies on pH, temperature and salinity, this Order includes monitoring requirements for these parameters. Monitoring for total coliform, fecal coliform and enterococcus is included to determine compliance with the receiving water limitations for these pollutants.

This Order also includes annual monitoring for the CTR pollutants in order to obtain necessary data of the receiving water to determine reasonable potential.

2. Groundwater – Not Applicable

E. Harbor Toxics TMDL Monitoring

This Order contains water column monitoring, water sediment monitoring, and fish tissue monitoring which is necessary to comply with requirements contained in the Harbor Toxics TMDL.

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F. Other Monitoring Requirements

1. Regional Monitoring

To implement the Harbor Toxics TMDL, the Discharger is encouraged to participate in the development of Regional Monitoring program(s) to address pollutants as specified in the Harbor Toxics TMDL

2. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program

Under the authority of section 308 of the CWA (33 U.S.C. § 1318), USEPA requires major permittees under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by USEPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to USEPA's DMR-QA Coordinator and Quality Assurance Manager.

VIII. PUBLIC PARTICIPATION

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

A. Notification of Interested Parties

The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments. Notification was provided to all interested persons 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 Regional Water Board's website at: http://www.waterboards.ca.gov/losangeles

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. electronically at losangeles@waterboards.ca.gov with a copy to Rosario.Aston@waterboards.ca.gov.

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 5:00 p.m. on **June 6, 2016.**

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C. Public Hearing

The Regional Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **June 28, 2016**
Time: **9:00 a.m.**
Location: **Los Angeles Regional Water Quality Control Board Office, Carmel Room**
320 W. 4th Street, Suite 200
Los Angeles, California

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

Please be aware that dates and venues may change. The Regional Water Board's 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 Regional Water Board regarding the final WDRs. The petition must be received by the State Water Board at the following address within 30 calendar days of the Regional 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

E. Information and Copying

The Report of Waste Discharge (ROWD), tentative WDRs, comment received, and other supporting documents are on file and may be inspected at the Regional Water Board's officeat any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling 213-576-6600.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, email addresss, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Rosario Aston at (213) 576-6653 or Rosario.Aston@waterboards.ca.gov.

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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 Regional 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 Regional Water Board, or 6-months from the date of the submittal of the SWPPP to the Regional 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, over-head 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 Regional 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

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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, 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

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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.

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 VI.A.4. 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.

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, ntermediate 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 IV.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

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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 of the general permit for Dischargers of Storm Water Associated with Industrial Activities (State Board Order No. 2014-0057-DWQ, NPDES No. CAS000001, adopted on April 1, 2014) 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 Conditions of the general permit for Dischargers of Storm Water Associated with Industrial Activities 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.

7. **Trash.** Describe the facility locations where trash may be generated as a result of facility operations and on-site activities.

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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 below. The last column of Table B, "Bes Mangement Practices", should be completed in accordance with section VIII 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.

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.

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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.

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.

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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.

B. Structural BMPs.

Where non-structural BMPs as identified in section VIII.A. 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.

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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 X.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.B.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 Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.

B. The Regional 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 Regional 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 Regional 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 Regional Water Board and/or local agency that the revisions have been implemented.

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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.

E. 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 Regional 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 Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

F. The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional 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 (MLs) in ppb (µg/L) in this appendix are for use in reporting and compliance determination purposes in accordance with section 2.4 of the State Implementation Policy. These MLs were derived from data for priority pollutants provided by State certified analytical laboratories in 1997 and 1998. These MLs shall be used until new values are adopted by the State Water Board and become effective. The following tables (Tables 2a - 2d) present MLs for four major chemical groupings: volatile substances, semi-volatile substances, inorganics, and pesticides and PCBs.

Table 2a - VOLATILE SUBSTANCES*	GC	GCMS
1,1-Dichloroethane	0.5	1
1,1-Dichloroethylene	0.5	2
1,1,1-Trichloroethane	0.5	2
1,1,2-Trichloroethane	0.5	2
1,1,2,2-Tetrachloroethane	0.5	1
1,2-Dichlorobenzene (volatile)	0.5	2
1,2-Dichloroethane	0.5	2
1,2-Dichloropropane	0.5	1
1,3-Dichlorobenzene (volatile)	0.5	2
1,3-Dichloropropene (volatile)	0.5	2
1,4-Dichlorobenzene (volatile)	0.5	2
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Methyl Bromide	1.0	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromo-methane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Chloromethane	0.5	2
Dichlorobromo-methane	0.5	2
Dichloromethane	0.5	2
Ethylbenzene	0.5	2
Tetrachloroethylene	0.5	2
Toluene	0.5	2
Trans-1,2-Dichloroethylene	0.5	1
Trichloroethene	0.5	2
Vinyl Chloride	0.5	2

*The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

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Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Benzo (a) Anthracene	10	5		
1,2-Dichlorobenzene (semivolatile)	2	2		
1,2-Diphenylhydrazine		1		
1,2,4-Trichlorobenzene	1	5		
1,3-Dichlorobenzene (semivolatile)	2	1		
1,4-Dichlorobenzene (semivolatile)	2	1		
2-Chlorophenol	2	5		
2,4-Dichlorophenol	1	5		
2,4-Dimethylphenol	1	2		
2,4-Dinitrophenol	5	5		
2,4-Dinitrotoluene	10	5		
2,4,6-Trichlorophenol	10	10		
2,6-Dinitrotoluene		5		
2- Nitrophenol		10		
2-Chloroethyl vinyl ether	1	1		
2-Chloronaphthalene		10		
3,3'-Dichlorobenzidine		5		
Benzo (b) -Fluoranthene		10	10	
3-Methyl-Chlorophenol	5	1		
4,6-Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl phenyl ether	10	5		
4-Chlorophenyl phenyl ether		5		
Acenaphthene	1	1	0.5	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo(a) pyrene		10	2	
Benzo(g,h,i)perylene		5	0.1	
Benzo(k)fluoranthene		10	2	
bis 2-(1-Chloroethoxyl) methane		5		
bis(2-chloroethyl) ether	10	1		
bis(2-Chloroisopropyl) ether	10	2		
bis(2-Ethylhexyl) phthalate	10	5		
Butyl benzyl phthalate	10	10		
Chrysene		10	5	
di-n-Butyl phthalate		10		
di-n-Octyl phthalate		10		
Dibenzo(a,h)-anthracene		10	0.1	
Diethyl phthalate	10	2		
Dimethyl phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachloro-cyclopentadiene	5	5		
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		

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Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol **	1	1		50
Pyrene		10	0.05	

* With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1,000; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1,000.

** Phenol by colorimetric technique has a factor of 1.

Table 2c – INORGANICS*	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1,000
Arsenic		2	10	2	2	1		20	1,000
Beryllium	20	0.5	2	0.5	1				1,000
Cadmium	10	0.5	10	0.25	0.5				1,000
Chromium (total)	50	2	10	0.5	1				1,000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1,000
Cyanide								5	
Lead	20	5	5	0.5	2				10,000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1,000
Selenium		5	10	2	5	1			1,000
Silver	10	1	10	0.25	2				1,000
Thallium	10	2	10	1	5				1,000
Zinc	20		20	1	10				1,000

* The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

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Table 2d – PESTICIDES – PCBs*	GC
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
a-Endosulfan	0.02
alpha-BHC	0.01
Aldrin	0.005
b-Endosulfan	0.01
Beta-BHC	0.005
Chlordane	0.1
Delta-BHC	0.005
Dieldrin	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Gamma-BHC (Lindane)	0.02
PCB-1016	0.5
PCB-1221	0.5
PCB-1232	0.5
PCB-1242	0.5
PCB-1248	0.5
PCB-1254	0.5
PCB-1260	0.5
Toxaphene	0.5

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* The normal method-specific factor for these substances is 100; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.

Techniques:

GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR – Colorimetric

ATTACHMENT I – LIST OF PRIORITY POLLUTANTS

CTR Number	Parameter	CAS Number	Analytical Methods
1	Antimony	7440360	[1]
2	Arsenic	7440382	[1]
3	Beryllium	7440417	[1]
4	Cadmium	7440439	[1]
5a	Chromium (III)	16065831	[1]
5a	Chromium (VI)	18540299	[1]
6	Copper	7440508	[1]
7	Lead	7439921	[1]
8	Mercury	7439976	[1]
9	Nickel	7440020	[1]
11	Selenium	7782492	[1]
11	Silver	7440224	[1]
12	Thallium	7440280	[1]
13	Zinc	7440666	[1]
14	Cyanide	57125	[1]
15	Asbestos	1332214	[1]
16	2,3,7,8-TCDD	1746016	[1]
17	Acrolein	117028	[1]
18	Acrylonitrile	117131	[1]
19	Benzene	71432	[1]
20	Bromoform	75252	[1]
21	Carbon Tetrachloride	56235	[1]
22	Chlorobenzene	118907	[1]
23	Chlorodibromomethane	124481	[1]
24	Chloroethane	75003	[1]
25	2-Chloroethylvinyl Ether	111758	[1]
26	Chloroform	67663	[1]
27	Dichlorobromomethane	75274	[1]
28	1,1-Dichloroethane	75343	[1]
29	1,2-Dichloroethane	117062	[1]
30	1,1-Dichloroethylene	75354	[1]
31	1,2-Dichloropropane	78875	[1]
32	1,3-Dichloropropylene	542756	[1]
33	Ethylbenzene	110414	[1]
34	Methyl Bromide	74839	[1]
35	Methyl Chloride	74873	[1]
36	Methylene Chloride	75092	[1]
37	1,1,2,2-Tetrachloroethane	79345	[1]
38	Tetrachloroethylene	127184	[1]
39	Toluene	118883	[1]
40	1,2-Trans-Dichloroethylene	156605	[1]
41	1,1,1-Trichloroethane	71556	[1]
42	1,12-Trichloroethane	79005	[1]
43	Trichloroethylene	79016	[1]
44	Vinyl Chloride	75014	[1]
45	2-Chlorophenol	95578	[1]

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CTR Number	Parameter	CAS Number	Analytical Methods
46	2,4-Dichlorophenol	120832	[1]
47	2,4-Dimethylphenol	115679	[1]
48	2-Methyl-4,6-Dinitrophenol	534521	[1]
49	2,4-Dinitrophenol	51285	[1]
50	2-Nitrophenol	88755	[1]
51	4-Nitrophenol	110027	[1]
52	3-Methyl-4-Chlorophenol	59507	[1]
53	Pentachlorophenol	87865	[1]
54	Phenol	118952	[1]
55	2,4,6-Trichlorophenol	88062	[1]
56	Acenaphthene	83329	[1]
57	Acenaphthylene	208968	[1]
58	Anthracene	120127	[1]
59	Benzidine	92875	[1]
60	Benzo(a)Anthracene	56553	[1]
61	Benzo(a)Pyrene	50328	[1]
62	Benzo(b)Fluoranthene	205992	[1]
63	Benzo(ghi)Perylene	191242	[1]
64	Benzo(k)Fluoranthene	207089	[1]
65	Bis(2-Chloroethoxy)Methane	111911	[1]
66	Bis(2-Chloroethyl)Ether	111444	[1]
67	Bis(2-Chloroisopropyl)Ether	118601	[1]
68	Bis(2-Ethylhexyl)Phthalate	117817	[1]
69	4-Bromophenyl Phenyl Ether	111553	[1]
70	Butylbenzyl Phthalate	85687	[1]
71	2-Chloronaphthalene	91587	[1]
72	4-Chlorophenyl Phenyl Ether	7005723	[1]
73	Chrysene	218019	[1]
74	Dibenzo(a,h)Anthracene	53703	[1]
75	1,2-Dichlorobenzene	95501	[1]
76	1,3-Dichlorobenzene	541731	[1]
77	1,4-Dichlorobenzene	116467	[1]
78	3,3'-Dichlorobenzidine	91941	[1]
79	Diethyl Phthalate	84662	[1]
80	Dimethyl Phthalate	131113	[1]
81	Di-n-Butyl Phthalate	84742	[1]
82	2,4-Dinitrotoluene	121142	[1]
83	2,6-Dinitrotoluene	606202	[1]
84	Di-n-Octyl Phthalate	117840	[1]
85	1,2-Diphenylhydrazine	122667	[1]
86	Fluoranthene	206440	[1]
87	Fluorene	86737	[1]
88	Hexachlorobenzene	118741	[1]
89	Hexachlorobutadiene	87863	[1]
90	Hexachlorocyclopentadiene	77474	[1]
91	Hexachloroethane	67721	[1]
92	Indeno(1,2,3-cd)Pyrene	193395	[1]
93	Isophorone	78591	[1]
94	Naphthalene	91203	[1]
95	Nitrobenzene	98953	[1]
96	N-Nitrosodimethylamine	62759	[1]

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CTR Number	Parameter	CAS Number	Analytical Methods
97	N-Nitrosodi-n-Propylamine	621647	[1]
98	N-Nitrosodiphenylamine	86306	[1]
99	Phenanthrene	85018	[1]
110	Pyrene	129000	[1]
111	1,2,4-Trichlorobenzene	120821	[1]
112	Aldrin	309002	[1]
113	alpha-BHC	319846	[1]
114	beta-BHC	319857	[1]
115	gamma-BHC	58899	[1]
116	delta-BHC	319868	[1]
117	Chlordane	57749	[1]
118	4,4'-DDT	50293	[1]
119	4,4'-DDE	72559	[1]
111	4,4'-DDD	72548	[1]
111	Dieldrin	60571	[1]
112	alpha-Endosulfan	959988	[1]
113	beta-Endosulfan	33213659	[1]
114	Endosulfan Sulfate	1131178	[1]
115	Endrin	72208	[1]
116	Endrin Aldehyde	7421934	[1]
117	Heptachlor	76448	[1]
118	Heptachlor Epoxide	1124573	[1]
119	PCB-1116	12674112	[1]
120	PCB-1221	11114282	[1]
121	PCB-1232	11141165	[1]
122	PCB-1242	53469219	[1]
123	PCB-1248	12672296	[1]
124	PCB-1254	11197691	[1]
125	PCB-1260	11196825	[1]
126	Toxaphene	8001352	[1]

[1] Pollutants shall be analyzed using the methods described in 40 C.F.R. Part 136 (revised May 18, 2012); for priority pollutants, the methods must meet the lowest MLs specified in Attachment 4 of the SIP (Attachment H of this Order) or, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. 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.

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ATTACHMENT J – REASONABLE POTENTIAL ANALYSIS AND EFFLUENT LIMITATIONS CALCULATIONS

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