

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

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**Los Angeles Regional Water Quality Control Board
<http://www.waterboards.ca.gov>**

**ORDER R4-2020-XXXX
NPDES NO. CA0001198**

**WASTE DISCHARGE REQUIREMENTS FOR THE ORMOND BEACH POWER, LLC,
ORMOND BEACH GENERATING STATION, VENTURA COUNTY, DISCHARGE TO THE
PACIFIC OCEAN**

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

Table 1. Discharger Information

| | |
|-------------------|---|
| Discharger: | Ormond Beach Power, LLC (Discharger or Permittee) |
| Name of Facility: | Ormond Beach Generating Station (Facility) |
| Facility Address: | 6635 South Edison Drive Oxnard, CA 93033 Ventura County |

Table 2. Discharge Location

| Discharge Point | Effluent Description | Discharge Point Latitude (North-South) | Discharge Point Longitude (East-West) | Receiving Water |
|-----------------|--|--|---------------------------------------|-----------------|
| 001 | Once-through cooling water, low volume wastes, and storm water | 34.1239° | -119.1733 ° | Pacific Ocean |

Table 3. Administrative Information

| | |
|--|--|
| This Order was adopted on: | November 12, 2020 |
| This Order shall become effective on: | January 01, 2021 |
| This Order shall expire on: | December 31, 2025 |
| 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 United States Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows. | Major |

I, Renee Purdy, 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 **November 12, 2020**.

Renee Purdy, Executive Officer

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1. FACILITY INFORMATION

Information describing the Ormond Beach Generating Station (Facility) is summarized in Table 1 and in sections 1 and 2 of the Fact Sheet (Attachment F). Section 1 of the Fact Sheet also includes information regarding the Facility's permit application.

2. FINDINGS

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

- 2.1. **Legal Authorities.** This Order serves as waste discharge requirements (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 serves as a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.
- 2.2. **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 I are also incorporated into this Order.
- 2.3. **Provisions and Requirements Implementing State Law.** The provisions and requirements in subsections 4.2, 4.3, and 5.2 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.
- 2.4. **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 and recommendations. Details of the notification are provided in the Fact Sheet.
- 2.5. **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. R4-2015-0172 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 shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for violations of the previous Order.

3. DISCHARGE PROHIBITIONS

- 3.1. Wastes discharged shall be limited to a maximum of 688.2 million gallons per day (MGD) of commingled wastewater (consisting of once-through cooling water, low volume wastes, and storm water) from Discharge Point 001.
- 3.2. The discharge of wastewater at a location other than specifically described in this Order is prohibited and constitutes a violation of the Order. The discharge of wastes from accidental spills or other sources is prohibited.
- 3.3. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, the Pacific Ocean, or other waters of the State, are prohibited.
- 3.4. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or a nuisance as defined by section 13050 of the California Water Code (CWC or the Water Code).
- 3.5. Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.
- 3.6. The discharge shall not cause or contribute to 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.
- 3.7. The discharge of any radiological, chemical, or biological warfare agent or high- level radiological waste is prohibited under Water Code section 13375.
- 3.8. Discharge of oil or any residuary product of petroleum to waters of the State, except in accordance with this Order or other provisions of division 7 of the Water Code, is prohibited.
- 3.9. There shall be no discharge of polychlorinated biphenyl compounds (PCBs).
- 3.10. The discharge of any in-plant waste streams from the Facility (specifically including the discharge of low volume wastes and storm water) from Discharge Point 001 is prohibited unless coincident with circulating water pump flows related to power generating activities or critical system maintenance. This prohibition is effective until the Facility achieves final compliance with the OTC Policy, prior to which the terms and provisions of this Order shall be reconsidered to account for the change of operation at the Facility.
- 3.11. 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.

4. EFFLUENT LIMITATIONS AND DISCHARGE PROHIBITIONS

4.1. Effluent Limitations - Discharge Point 001

Final Effluent Limitations – Combined Effluent Through Discharge Point 001

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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 (MRP), Attachment E:

Table 4. Effluent Limitations at Discharge Point 001 (Monitoring Location EFF-001)

| Parameter | Units | 6-Month Median | Average Concentration | Maximum Daily | Instantaneous Maximum | Notes |
|---|------------------------|----------------|-----------------------|-----------------------|-----------------------|--------|
| pH | pH Units | --- | --- | --- | 9.0 | Note a |
| Total Residual Chlorine (Note b) | mg/L | --- | --- | --- | 0.399 | Note c |
| Free Available Chlorine (Note b) | mg/L | --- | 0.2 | --- | 0.5 | Note d |
| Chronic Toxicity (Test of Significant Toxicity (TST)) | Pass or Fail, % Effect | --- | --- | Pass or % Effect < 50 | --- | Note e |
| Ammonia (as N) | µg/L | 4,500 | --- | 18,000 | 45,000 | --- |
| Ammonia (as N) | lbs/day | 25,828 | --- | 103,313 | --- | Note f |
| Radioactivity | pCi/L | --- | --- | --- | --- | Note g |
| Temperature | °F | --- | --- | --- | --- | Note h |
| PCBs | µg/L | --- | --- | --- | --- | Note i |

Footnotes for Table 4

- Instantaneous minimum of pH is 6.0.
- The discharge is limited to **2 hrs/day/unit**. Simultaneous discharge of chlorine from multiple units is prohibited.
- If other oxidants are used, this shall be the total of all oxidants reported as residual chlorine.
The effluent limitation is applicable to the sampling during periods of chlorination. Each condenser half (two in a single unit) is chlorinated for up to 20 minutes per chlorination cycle, and there is a maximum of one chlorination cycle per 24-hour period. For chlorine discharges of up to 20 minutes per condenser half, the instantaneous maximum limitation is **0.399 mg/L**. For chlorine discharges exceeding 20 minutes, the instantaneous maximum total residual chlorine limitation shall be the BAT limitation of **0.2 mg/L**.
- The effluent limitation of **0.2 mg/L** is applied as an average concentration limitation during chlorine release period.
- The Maximum Daily Effluent Limitation (MDEL) shall be reported as "Pass" or "Fail" and "% Effect".
- The mass-based limitations are based on a maximum combined effluent flow from Discharge Point 001 of **688.2 MGD** and are calculated as follows:
Mass-based limitation (lbs/day) = Flow (mgd) x Concentration (µg/L) x 0.00834 (conversion factor)
Where:
Concentration (µg/L) = the concentration-based limitations calculated in the combined discharge (cooling water and in-plant wastes).
Flow (mgd) = 688.2 MGD, the maximum flow for the combined cooling water and low volume wastes discharge to Discharge Point 001.

- g. Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, section 30253, California Code of Regulations
- h. The temperature of wastes discharged shall not exceed 105°F during normal operation of the Facility. During heat treatment, the temperature of wastes discharged shall not exceed 125°F except during adjustment of the recirculation gate at which time the temperature of wastes discharged shall not exceed 135°F. Temperature fluctuations during gate adjustment above 125 °F shall not last more than 30 minutes.
- i. There shall be no discharge of PCBs

End of Footnotes for Table 4

4.2. Final Effluent Limitations – In-Plant Low Volume Waste Streams

4.2.1 Final Effluent Limitations – Low Volume Wastes and Storm Water (Monitoring Location INT-001A)

The Discharger shall maintain compliance with the following effluent limitations at Monitoring Location INT-001A, with compliance measured at Monitoring Location INT-001A as described in the Monitoring and Reporting Program, Attachment E:

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

| Parameter | Units | Average Monthly (30-Day Average) | Maximum Daily | Instantaneous Minimum / Maximum | Notes |
|------------------------------|----------|----------------------------------|---------------|---------------------------------|--------|
| pH | pH Units | --- | --- | 6.0 / 9.0 | --- |
| Total Suspended Solids (TSS) | mg/L | 30.0 | 100.0 | --- | --- |
| TSS | lbs/day | 205 | 684 | --- | Note a |
| Oil and Grease | mg/L | 15.0 | 20.0 | --- | --- |
| Oil and Grease | lbs/day | 103 | 137 | --- | Note a |
| PCBs | µg/L | --- | --- | --- | Note b |

Footnotes for Table 5

- a. The mass-based limitations are based on a maximum low volume wastes and storm water flow from the retention basins of **0.82 MGD** and are calculated as follows:

$$\text{Mass-based limitation (lbs/day)} = \text{Flow (mgd)} \times \text{Concentration (}\mu\text{g/L)} \times 0.00834 \text{ (conversion factor)}$$
 Where:

$$\text{Concentration (}\mu\text{g/L)} = \text{the concentration-based limitations as prescribed in 40 CFR Part 423.}$$

$$\text{Flow (mgd)} = 0.82 \text{ MGD, the maximum flow for low volume wastes and storm water from the retention basins at INT- 001A.}$$
- b. PCBs. There shall be no discharge of PCBs.

End of Footnotes for Table 5

4.2.2. Final Effluent Limitations – Seal Water Low Volume Wastes (Monitoring Location INT-001C)

The Discharger shall maintain compliance with the following effluent limitations at Monitoring Location INT-001C, with compliance measured at Monitoring Location INT-001C as described in the Monitoring and Reporting Program, Attachment E.

Table 6 Effluent Limitations for Seal Water Low Volume Wastes (Monitoring Location INT-001C)

| Parameter | Units | Average Monthly (30-Day Average) | Maximum Daily | Instantaneous Minimum / Maximum | Notes |
|----------------|----------|----------------------------------|---------------|---------------------------------|--------|
| pH | pH Units | --- | --- | 6.0 / 9.0 | --- |
| TSS | mg/L | 30.0 | 100.0 | --- | --- |
| TSS | lbs/day | 30.0 | 100.1 | --- | Note a |
| Oil and Grease | mg/L | 15.0 | 20.0 | --- | --- |
| Oil and Grease | lbs/day | 15.0 | 20.0 | --- | Note a |
| PCBs | µg/L | --- | --- | --- | Note b |

Footnotes for Table 6

- a. The mass-based limitations are based on a maximum seal water low volume wastes flow of **0.12 MGD** and are calculated as follows:
 Mass-based limitation (lbs/day) = Flow (mgd) x Concentration (µg/L) x 0.00834 (conversion factor)
 Where:
 Concentration ((µg/L) = the concentration-based limitations as prescribed in 40 CFR Part 423.
 Flow (mgd) = 0.12 MGD, the maximum flow for seal water low volume wastes at INT- 001C.
- b. **PCBs.** There shall be no discharge of PCBs.

End of Footnotes for Table 6

4.2.3. Final Effluent Limitations – In-Plant Waste Streams (Total)

The Discharger shall maintain compliance with the following effluent limitations for all in-plant waste streams taken together, with compliance determined by the sum of mass discharges measured at Monitoring Location INT-001A and INT-001C, as described in the Monitoring and Reporting Program, Attachment E.

Compliance shall be determined from the sum of mass discharges of each parameter in the individual in-plant waste streams as follows:

Total Mass Emission per day (lb/day) = Mass Emission at INT-001A calculated using flow measured at INT-001A) (lb/day) + Mass Emission at INT-001C (calculated using flow measured at INT-001C) (lb/day)

The Total Mass Emission per day(lb/day) value from a single day will be compared with the maximum daily effluent limitations as set forth in this table for compliance determination; compliance with the 6-month median effluent

limitations shall be determined by the median of Total Mass Emission per day values over any 180-day period.

Table 7. Effluent Limitations for All In-Plant Waste Streams

| Parameter | Units | 6-Month Median | Maximum Daily | Notes |
|----------------|---------|----------------|---------------|--------|
| Ammonia (as N) | lbs/day | 36.06 | 141.11 | Note a |

Footnotes for Table 7

- a. The mass-based limitations are based on a maximum combined flow of 0.94 MGD for all in-plant waste streams, and are calculated as follows:
Mass-based limitation (lbs/day) = Flow (mgd) x Concentration (µg/L) x 0.00834 (conversion factor)
Where:
Concentration ((µg/L) = the concentration-based limitations calculated in the combined discharge (cooling water and in-plant wastes).
Flow (mgd) = 0.94 MGD, the maximum combined flow for all in-plant waste streams.

End of Footnotes for Table 7

4.3. Land Discharge Specifications – Not Applicable

4.4. Recycling Specifications – Not Applicable

5. RECEIVING WATER LIMITATIONS

5.1. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the California Ocean Plan including the latest amendment to the Ocean Plan revising the bacteria provisions for ocean waters (effective March 22, 2019)¹, and are a required part of this Order. Unless specifically excepted by this Order, the discharge, by itself or jointly with any other discharge(s), shall not cause violations of the following water quality objectives. Compliance with these objectives shall be determined by samples collected at stations representative of the area within the waste field where initial dilution is completed (i.e., outside the zone of initial dilution (ZID)):

5.1.1. Bacterial Characteristics

a. Water-Contact Objectives

Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline,

¹ The amendment is titled, the Amendment to the Water Quality Control Plan for Ocean Waters of California – Bacterial Provisions and Water Quality Standards Variance Policy, adopted by the State Water Board on August 7, 2018, and approved by the Office of Administrative Law (OAL) on February 4, 2019, and the United States Environmental Protection Agency (U.S. EPA) on March 22, 2019 (Bacteria Provisions or Ocean Plan Amendment).

and in areas outside this zone used for water contact sports, as determined by the Regional Water Board (i.e., waters designated as REC-1), but including all kelp beds, the following water quality objectives shall be maintained throughout the water column. A summary of these requirements is provided in Table 8.

Fecal coliform

A 30-day geometric mean (GM) of fecal coliform density not to exceed 200 per 100 milliliters (mL), calculated based on the five most recent samples from each site, and a single sample maximum (SSM) not to exceed 400 per 100 mL.

Enterococci

A six-week rolling GM of enterococci not to exceed 30 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 110 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner. U.S. EPA recommends using U.S. EPA Method 1600 or other equivalent method to measure culturable enterococci.

Table 8. Bacteria Water Quality Objective for Ocean Waters

| Indicator | Geometric Mean (Note a) | Other |
|--|----------------------------|-------------------------------------|
| Fecal Coliform Density | 200 cfu per 100 mL | SSM: 400 cfu per 100 mL |
| Total Coliform Density | 70 cfu per 100 mL | SSM: 230 cfu per 100 mL |
| Enterococci | 30 cfu per 100 ml | STV: 110 cfu per 100 mL (Note b) |
| GM = geometric mean cfu = colony forming units SSM = single sample maximum STV= statistical threshold value mL= milliliter | | |

Footnotes for Table 8

- Geometric mean is based on 30 days for total and fecal coliform and 6 weeks for Enterococci (calculated weekly).
- The STV shall not be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.

End of Footnotes for Table 8

b. Kelp Beds

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

c. Shellfish Harvesting Standards

Consistent with the water quality objectives in the Ocean Plan and its latest amendment, in all areas where shellfish may be harvested for human

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consumption, as determined by the Regional Water Board, the discharge shall not cause the exceedance of the following bacterial objectives throughout the water column:

The median total coliform density shall not exceed 70 per 100 mL, and not more than 10 percent of the samples shall exceed 230 per 100 mL. Compliance shall be determined based on the sample results over any six-month period.

5.1.2. **Physical Characteristics**

- a. Floating particulates and oil and grease shall not be visible.
- b. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.
- c. Natural light shall not be significantly reduced at any point outside the zone of initial dilution as a result of the discharge of waste.
- d. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.
- e. Trash shall not be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.

5.1.3. **Chemical Characteristics**

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

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5.1.4. Biological Characteristics

- a. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.
- b. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.
- c. The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

5.1.5. Radioactivity

- a. Discharge of radioactive waste shall not degrade marine life.

5.2. Groundwater Limitations – Not Applicable

6. PROVISIONS

6.1. Standard Provisions

- 6.1.1. The Discharger shall comply with all Standard Provisions included in Attachment D.
- 6.1.2. 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. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of wastewater and storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management programs developed to comply with NPDES permits issued by the Regional Water Board to local agencies.
 - b. 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.
 - c. 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.
 - d. Oil or oily material, chemicals, refuse, or other wastes that constitute a condition of pollution or nuisance 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.

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- e. A copy of these waste discharge requirements shall be maintained at the discharge facility so as to be available at all times to operating personnel.
- f. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - i. Violation of any term or condition contained in this Order;
 - ii. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;
 - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge
- g. If there is any storage of hazardous or toxic materials or hydrocarbons at this Facility and if the Facility is not staffed at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.
- h. The Discharger shall file with the Regional Water Board a report of waste discharge at least 180 days before making any material change or proposed change in the character, location, or volume of the discharge.
- i. 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 30 days prior to taking effect 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.
- j. Violation of any of the provisions of this Order may subject the violator to any of the civil liability or penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of liability or penalty may be applied for each kind of violation.
- k. 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
- l. 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, civil or 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.

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- m. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent 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.
- n. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.
- o. If there is any storage of hazardous or toxic materials or hydrocarbons at this Facility and if the Facility is not always manned, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

6.2. Monitoring and Reporting Program (MRP) Requirements

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

6.3. Special Provisions

6.3.1. Reopener Provisions

- a. This Order may be reopened for modification to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above an Ocean Plan Table 3 (formerly Table B) water quality objective.
- b. The Regional Water Board may modify or revoke and reissue this Order if present or future investigations demonstrate that the discharge(s) governed by this Order will cause, have the potential to cause, or will contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters.
- c. 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 may revise and modify this Order in accordance with such more stringent standards.
- d. This Order may be modified, in accordance with the provisions set forth in title 40 of the Code of Federal Regulations (40 CFR) parts 122 and 124 to include requirements for the implementation of a watershed protection management approach or to include new minimum levels (MLs).
- e. This Order may also be modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR parts 122.44, 122.62 to 122.64,

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125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order, and endangerment to human health or the environment resulting from the permitted activity, or acquisition of newly obtained information which would have justified the application of different conditions if known at the time of Order adoption.

- f. If an applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Regional Water Board may institute proceedings under these regulations to modify or revoke and reissue the Orders to conform to the toxic effluent standard or prohibition.
- g. 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 and modify this Order in accordance with such standards.
- h. This Order may be reopened and modified to revise effluent limitations as a result of future additions or amendments to a statewide water quality control plan, the Los Angeles Region's Basin Plan or the adoption of a TMDL.
- i. This Order may be reopened and modified, to revise effluent limitations as a result of the delisting of a pollutant from the 303(d) list.
- j. This Order will be reopened and modified to revise any and all of the chronic toxicity testing provisions and effluent limitations, to the extent necessary, to incorporate all elements contained in the State Water Board adopted Toxicity Plan promptly after USEPA-approval of such Plan to be consistent with the State Water Board precedential decisions, new policies, a new state-wide plan, new laws, or new regulations.
- k. This Order will be reopened and modified to the extent necessary, to be consistent with new policies, new state-wide plans, new laws, or new regulations.
- l. 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.
- m. This Order may be modified, or revoked and reissued, based on the results of Magnuson-Stevens Conservation and Management Act and/or Endangered Species Act section 7 consultations with the National Marine Fisheries Service and/or the U.S. Fish and Wildlife Service.
- n. This Order may also be reopened and modified in accordance with any updates to the final compliance date for the Facility in the OTC Policy and amendments thereto, as set forth in Section 6.3.5.

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6.3.2. **Special Studies, Technical Papers and Additional Monitoring Requirements**

a. **Updated Initial Investigation Toxicity Reduction Evaluation (TRE)**

Workplan. The Discharger shall submit to the Regional Water Board an updated Initial Investigation TRE workplan **within 90 days** of the effective date of this permit. This plan shall describe the steps the Discharger intends to follow in the event that toxicity is detected. See section 5 of the Monitoring and Reporting Program (Attachment E) for an overview of TRE requirements.

6.3.3. **Best Management Practices and Pollution Prevention**

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

- a. **An Updated Storm Water Pollution Prevention Plan (SWPPP)** that describes site-specific management practices for minimizing contamination of storm water runoff and for preventing contaminated storm water runoff from being discharged directly to waters of the State. The SWPPP shall be developed in accordance with the requirements in Attachment G of this Order.
- b. **An Updated Best Management Practices Plan (BMPP)** that include 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. Further, the Discharger shall ensure that the storm water discharges from the Facility would neither cause nor contribute to a nuisance in the receiving water, and that unauthorized discharges (i.e. spills) to the receiving water have been effectively prohibited. 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. The BMPs shall be consistent with the general guidance contained in the *U.S. EPA Guidance Manual for Developing Best Management Practices* (BMPs) (EPA 833-B-93-004).
- c. **An Updated Spill Clean-up Contingency Plan (SCCP)** that describes the preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events.

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

The Discharger shall implement the SWPPP, BMPP, and SCCP 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 Discharger shall continue to implement any existing and previously approved SWPPP, BMPP, and SCCP until an updated SWPPP, BMPP, and SCCP is approved by the Executive Officer or until the stipulated 90-day period after the updated SWPPP, BMPP, and SCCP submittal has occurred. The plans shall be reviewed annually and at the same

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time. Updated information shall be submitted to the Regional Water Board within 30 days of revisions.

6.3.4. 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.
- b. **Climate Change Effects Vulnerability Assessment and Mitigation Plan.** The Discharger shall consider the impacts of climate change as they affect the operation of the facility due to flooding, wildfire, or other climate-related changes. The Discharger shall develop a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) to assess and manage climate change-related effects that may impact the facility's operation and discharges covered by this Order. The Climate Change Plan is due if and when a ROWD is submitted for permit renewal.

6.3.5. Special Provisions

Once-Through Cooling Water Compliance with OTC Policy

a. Final 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. The OTC Policy established a final compliance date for the Discharger of December 31, 2020.

On September 1, 2020, the State Water Board adopted an amendment to the OTC Policy that established a final compliance date for the Discharger of December 31, 2023 (Final Compliance Date). Therefore, the Discharger shall achieve full compliance with the OTC Policy by permanently shutting down Units 1 and 2 by the Final Compliance Date for the Facility established in Section 3.E, Table 1 of the OTC Policy, or any later date established in accordance with the Final Compliance Date suspension provisions in Section 2.B(2) of the OTC Policy.

This Order requires the Discharger to provide annual progress reports to the Regional Water Board to document the Facility's progress towards compliance with the OTC Policy:

Table 9. Progress Report Schedule on Compliance with OTC Policy

| Task | Compliance Date | Completion Date |
|--|------------------|-------------------|
| 1. Submit Workplan for OTC compliance under Track 2. | December 1, 2016 | November 29, 2016 |
| 2. Submit first progress report. | December 1, 2017 | December 1, 2017 |
| 3. Submit second progress report. | December 1, 2018 | October 29, 2018 |
| 4. Submit third progress report. | December 1, 2019 | November 26, 2019 |

| Task | Compliance Date | Completion Date |
|--|---|-----------------|
| 5. Submit fourth progress report. | December 1, 2020 | --- |
| 6. Submit fifth progress report. | December 1, 2021 | --- |
| 7. Submit sixth progress report. | December 1, 2022 | ---- |
| 8. Achieve full compliance with Units 1 and 2; submit final progress report. | Date established in § 3.E, Table 1 of the OTC Policy (currently December 31, 2023), or any later date established in accordance with the Final Compliance Date suspension provisions in Section 2.B(2) of the OTC Policy. | --- |

b. **Immediate and Interim Requirements.** In accordance with the OTC Policy, 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 (as defined in Attachment A of this Order) 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, implement measures to mitigate interim impingement and entrainment impacts until full compliance is achieved by December 31, 2023. 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
 2. Demonstrating to the State Water Board's satisfaction that the interim impacts are compensated by the Discharger in providing funding to the California Coastal Conservancy, which will work with the California Ocean Protection Council to fund an appropriate mitigation project. 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.
 3. 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.

6.3.6. Compliance Schedules – Not Applicable

7. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section 4 of this Order will be determined as specified below:

7.1. General

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

7.2. Single Constituent Effluent Limitation.

Dischargers are out of compliance with the 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.H. of the MRP).

7.3. Effluent Limitations Expressed as a Sum of Several Constituents.

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

7.4. 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 DNQ or ND. In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

- 7.4.1. 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.
- 7.4.2. 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.

7.5. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection 7.2 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 for the purpose of calculating mandatory minimum penalties, though the Discharger may be considered out of

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compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month) in cases where discretionary administrative civil liabilities are appropriate. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger may be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month with respect to the AMEL.

If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for a given parameter, the Discharger will have demonstrated compliance with the AMEL for each day of that month for that parameter.

If the analytical result of any single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any parameter, the Discharger may collect up to four additional samples within the same calendar month. All analytical results shall be reported in the monitoring report for that month. The concentration of pollutant (an arithmetic mean or a median) in these samples estimated from the "Multiple Sample Data Reduction" section above, will be used for compliance determination.

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

7.6. Maximum Daily Effluent Limitation (MDEL)

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

7.7. Average Concentration Effluent Limitation (for Free Available Chlorine)

If the average concentration of discharge during a chlorine release period exceeds the average concentration effluent limitation for free available chlorine, an alleged violation will be flagged and the Discharger will be considered out of compliance. Discharge of chlorine is limited to 2 hours/day/unit. The average concentration shall be calculated as the sum of all discharges of free available chlorine measured during a chlorine release period divided by the number of measurements taken for that parameter during that period. If no sample is taken over a chlorine release period, no compliance determination can be made for that chlorine release period with respect to an effluent violation determination, but compliance determination can be made for that chlorine release period with respect to reporting violation determination.

7.8. 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 potential violation will be flagged, and the

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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).

7.9. 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 potential 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).

7.10. Six-month Median Effluent Limitation

If the median of daily discharges over any 180-day period exceeds the six-month median effluent limitation for a given parameter, a potential violation will be flagged, and the Discharger will be considered out of compliance for each day of that 180-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 180-day period and the analytical result for that sample exceeds the six-month median, the Discharger will be considered out of compliance for the 180-day period. For any 180-day period during which no sample is taken, no compliance determination can be made for the six-month median effluent limitation. The six-month median shall apply as a moving median of daily values for any 180-day period in which daily values represent flow weighted average concentrations within a 24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred. If only one sample is collected during the time period associated with the 6-month median water quality objective, the single measurement shall be used to determine compliance with the effluent limitation for the entire time period.

7.11. 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 non-compliance 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.

7.12. 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 t-test

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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, Table A-1, and Appendix B, Table B-1. The null hypothesis (H_0) for the TST statistical approach is: Mean discharge In-stream Waste Concentration (IWC) response $\leq 0.75 \times$ 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: $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100$. This is a t-test (formally Student's t-Test), a statistical analysis comparing two sets of replicate observations - in the case of Whole Effluent Toxicity (WET), only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is "Pass" or "Fail")). For this discharge the IWC is 13.3 percent $[1/(6.5+1)]$ effluent. The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances

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 ≥ 0.50 .

The 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 statistical approach, results in "Fail." The MMEL for chronic toxicity shall only apply when there is a discharge on 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."

The chronic toxicity MDEL IWC for the discharge at Discharge Point 001 is 13.3 percent $[1/(6.5+1)]$ effluent and expressed in units of the TST statistical approach ("Pass" or "Fail", "Percent Effect"). All NPDES effluent compliance monitoring for the chronic toxicity MDEL and MMEL shall be reported using only the 13.3 % effluent concentration and negative control, expressed in units of the TST. The TST hypothesis (H_0) (see above) is statistically analyzed using the IWC and a negative control. Effluent toxicity tests shall be run using a multi-concentration test design when required by *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA 2002, EPA-821-R-02-013). The Regional Water Board's review of reported toxicity test results will include review of concentration-response patterns as appropriate (see Fact Sheet discussion at 4.3.6.). As described in the bioassay laboratory audit correspondence from the State Water Resources Control Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the No Observable Effect Concentration (NOEC) and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. Standard Operating Procedures used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach, including

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those that incorporate a consideration of concentration-response patterns, must be submitted to the Regional Water Board (40 CFR section 122.41(h)). The Regional Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Discharger, the USEPA, the State Water Board's Quality Assurance Officer, or the State Water Board's Environmental Laboratory Accreditation Program (ELAP) as needed. The Board may consider the results of any TIE/TRE studies in an enforcement action.

7.13. Mass and Concentration Limitations

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

7.14. Bacterial Standards and Analysis

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

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

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.

7.14.2. 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 methods used for each analysis shall be reported with the results of the analyses.

7.14.3. Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 CFR part 136, unless alternate methods have been approved by USEPA pursuant to 40 CFR part 136, or improved methods have been determined by the Executive Officer and/or USEPA.

7.14.4. Detection methods used for enterococcus shall be those presented in Table 1A of 40 CFR part 136 or in the USEPA publication EPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure* or any improved method determined by the Executive Officer and/or USEPA to be appropriate.

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ATTACHMENT A – DEFINITIONS

All Forms of Marine Life

Includes all life stages of all marine species

Areas of Special Biological Significance (ASBS)

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

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:

$$\text{Arithmetic mean } (\mu) = \frac{\sum x}{n}$$

where: $\sum x$ is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Concentration Effluent Limitation

The highest allowable average concentration of free available chlorine discharges over a single chlorine release period (which does not exceed two hours), calculated as the sum of all discharges for that parameter measured during a chlorine release period divided by the number of measurements taken during that period.

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.

Blowdown

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

Carcinogenic

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

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Chemical Metal Cleaning Wastes

The term chemical metal cleaning waste means any wastewater resulting from the cleaning of any metal process equipment including, but not limited to, boiler tube cleaning, using chemical compounds

Chlorinated Phenolic Compounds

The sum of 2-chlorophenol, 2,4-dichlorophenol, 4-chloro-3 methylphenol, 2,4,6-trichlorophenol, and pentachlorophenol.

Chlorination Event

An event during which chlorine is injected into a cooling water stream to inhibit fouling of condenser tubes by slime and algal growths

Coefficient of Variation (CV)

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

Composite Sample

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

For other than flow rate measurement, composite sample means:

- a. No fewer than eight individual sample portions taken at equal time intervals for 24 hours, or the duration of the discharge, whichever is shorter. The volume of each individual sample portion shall be directly proportional to the discharge flow rate at the time of sampling; or,
- b. No fewer than eight individual sample portions taken of equal volume taken over a 24-hour period. The time interval between each individual sample portion shall vary such that the volume of the discharge between each individual sample portion remains constant.

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

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

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

Daily Discharge

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

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

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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.

Degrade (Degradation)

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

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

Downstream Ocean Waters

Waters downstream with respect to ocean currents.

Dredged Material

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

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 wasteload allocation (WLA) as used in U.S. EPA 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.

Grab Sample

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

Indicator Bacteria

Includes total coliform bacteria, fecal coliform bacteria (or *E. coli*), and/or *Enterococcus* bacteria.

Initial Dilution

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

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

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

Inland Surface Waters

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

In-Plant Waste Streams

For this permit, the in-plant waste streams for the facility includes low volume wastes and stormwater.

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Instantaneous Maximum Effluent Limitation

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

Instantaneous Minimum Effluent Limitation

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

Kelp Beds

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

Low Volume Waste

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

Mariculture

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

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.

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 $n/2+1$).

Metal Cleaning Waste

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

Method Detection Limit (MDL)

MDL is the minimum concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 CFR part 136, Attachment B.

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.

Natural Light

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

Non-Chlorinated Phenolics

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

Not Detected (ND)

Sample results which are less than the laboratory's MDL.

Ocean Waters

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

Once-Through Cooling Water

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

PAHs (polynuclear aromatic hydrocarbons)

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

PCBs (polychlorinated biphenyls) as Aroclors

The sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

PCBs as Congeners

The sum of the following 41 individually quantified PCB congeners or mixtures of isomers of a single congeners in a co-elution: PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101,

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105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206.

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.

Reporting Level (RL)

The RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs 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.

Shellfish

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

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Significant Difference

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

Single Sample Maximum (SSM)

Maximum value not to be exceeded in any single sample.

Six-Month Median Effluent Limitation

The highest allowable moving median of all daily discharges for any 180-day period

Standard Deviation (σ)

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

$$\text{Standard Deviation } (\sigma) = \frac{\sum (X - \mu)^2}{(n - 1)^{0.5}}$$

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

State Water Quality Protection Areas (SWQPAs)

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

State Water Quality Protection Areas – General Protection (SWQPA-GP)

Designated by the State Water Board to protect marine species and biological communities from an undesirable alteration in natural water quality within State Marine Parks and State Marine Conservation Areas.

Statistical Threshold Value (STV)

The STV for the bacteria water quality objectives is a set value that approximates the 90th percentile of the water quality distribution of a bacterial population.

Test of Significant Toxicity (TST)

A statistical approach used to analyze toxicity test data. The TST incorporates a restated null hypothesis, Welch's t-test, and the biological effect thresholds for chronic and acute toxicity.

Thermal Waste

Cooling water and industrial process water used for the purpose of transporting waste heat.

Toxicity Identification Evaluation (TIE)

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.

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

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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 operations, including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions

The water quality objective for Trash, as well as the prohibition of discharge set forth in Chapter III.I and implementation requirements set forth in Chapter III.L of the Ocean Plan.

Waste

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

Zone of Initial Dilution (ZID)

Zone of Initial Dilution (ZID) means, for purposes of designating monitoring stations, the region within which initial dilution of the discharge in the receiving water occurs, and at the boundary of which initial dilution is completed.

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ACRONYMS AND ABBREVIATIONS

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| AMEL..... | Average Monthly (30-Day Average) Effluent Limitation |
| B..... | Background Concentration |
| BAT..... | Best Available Technology Economically Achievable |
| Basin Plan | Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties |
| BCT..... | Best Conventional Pollutant Control Technology |
| BMP..... | Best Management Practices |
| BMPP..... | Best Management Practices Plan |
| BPJ..... | Best Professional Judgment |
| BOD..... | Biochemical Oxygen Demand 5-day @ 20 °C |
| BPT..... | Best Practicable Treatment Control Technology |
| C..... | Water Quality Objective |
| CCR..... | California Code of Regulations |
| CEQA..... | California Environmental Quality Act |
| CDPH..... | California Department of Public Health |
| CFR..... | Code of Federal Regulations |
| CTR..... | California Toxics Rule |
| CV..... | Coefficient of Variation |
| CWA..... | Clean Water Act |
| CWC..... | California Water Code |
| Discharger..... | Ormond Beach Power LLC |
| DMR..... | Discharge Monitoring Report |
| DNQ..... | Detected But Not Quantified |
| ELAP..... | State Water Resources Control Board, Drinking Water Division, Environmental Laboratory Accreditation Program |
| ELG..... | Effluent Limitations, Guidelines and Standards |
| Facility..... | Ormond Beach Generating Station |
| g/kg..... | grams per kilogram |
| gpd..... | gallons per day |
| IC..... | Inhibition Coefficient |
| IC ₁₅ | Concentration at which the organism is 15% inhibited |
| IC ₂₅ | Concentration at which the organism is 25% inhibited |
| IC ₄₀ | Concentration at which the organism is 40% inhibited |
| IC ₅₀ | Concentration at which the organism is 50% inhibited |
| LA..... | Load Allocations |
| LOEC..... | Lowest Observed Effect Concentration |
| µg/L..... | micrograms per Liter |
| LACDPW..... | County of Los Angeles, Department of Public Works |
| mg/L..... | milligrams per Liter |
| MDEL..... | Maximum Daily Effluent Limitation |
| MEC..... | Maximum Effluent Concentration |
| MGD..... | Million Gallons per Day |
| ML..... | Minimum Level |
| MRP..... | Monitoring and Reporting Program |

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| ND | Not Detected |
| ng/L | nanograms per liter |
| NOEC | No Observable Effect Concentration |
| NPDES | National Pollutant Discharge Elimination System |
| NSPS..... | New Source Performance Standards |
| NTR | National Toxics Rule |
| OAL | Office of Administrative Law |
| PAHs | Polynuclear Aromatic Hydrocarbons |
| pg/L | picograms per liter |
| PMEL..... | Proposed Maximum Daily Effluent Limitation |
| PMP..... | Pollutant Minimization Plan |
| POTW..... | Publicly Owned Treatment Works |
| ppm | parts per million |
| ppb | parts per billion |
| QA | Quality Assurance |
| QA/QC..... | Quality Assurance/Quality Control |
| Ocean Plan (OP) | Water Quality Control Plan for Ocean Waters of California |
| Regional Water Board | California Regional Water Quality Control Board, Los Angeles Region |
| RPA | Reasonable Potential Analysis |
| SCP | Spill Contingency Plan |
| Sediment Quality Plan | <i>Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality</i> |
| SIP | State Implementation Policy (Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California) |
| SMR..... | Self-Monitoring Reports |
| State Water Board | California State Water Resources Control Board |
| SWPPP..... | Storm Water Pollution Prevention Plan |
| TAC | Test Acceptability Criteria |
| TBEL..... | Technology-Based Effluent Limitation |
| Thermal Plan | Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California |
| TIE | Toxicity Identification Evaluation |
| TMDL..... | Total Maximum Daily Load |
| TOC | Total Organic Carbon |
| TRE | Toxicity Reduction Evaluation |
| TSD | Technical Support Document |
| TSS | Total Suspended Solid |
| TST..... | Test of Significant Toxicity |
| TU _c | Chronic Toxicity Unit |
| U.S. EPA | United States Environmental Protection Agency |
| WDR..... | Waste Discharge Requirements |
| WET..... | Whole Effluent Toxicity |
| WLA..... | Waste Load Allocations |
| WQBELs..... | Water Quality-Based Effluent Limitations |

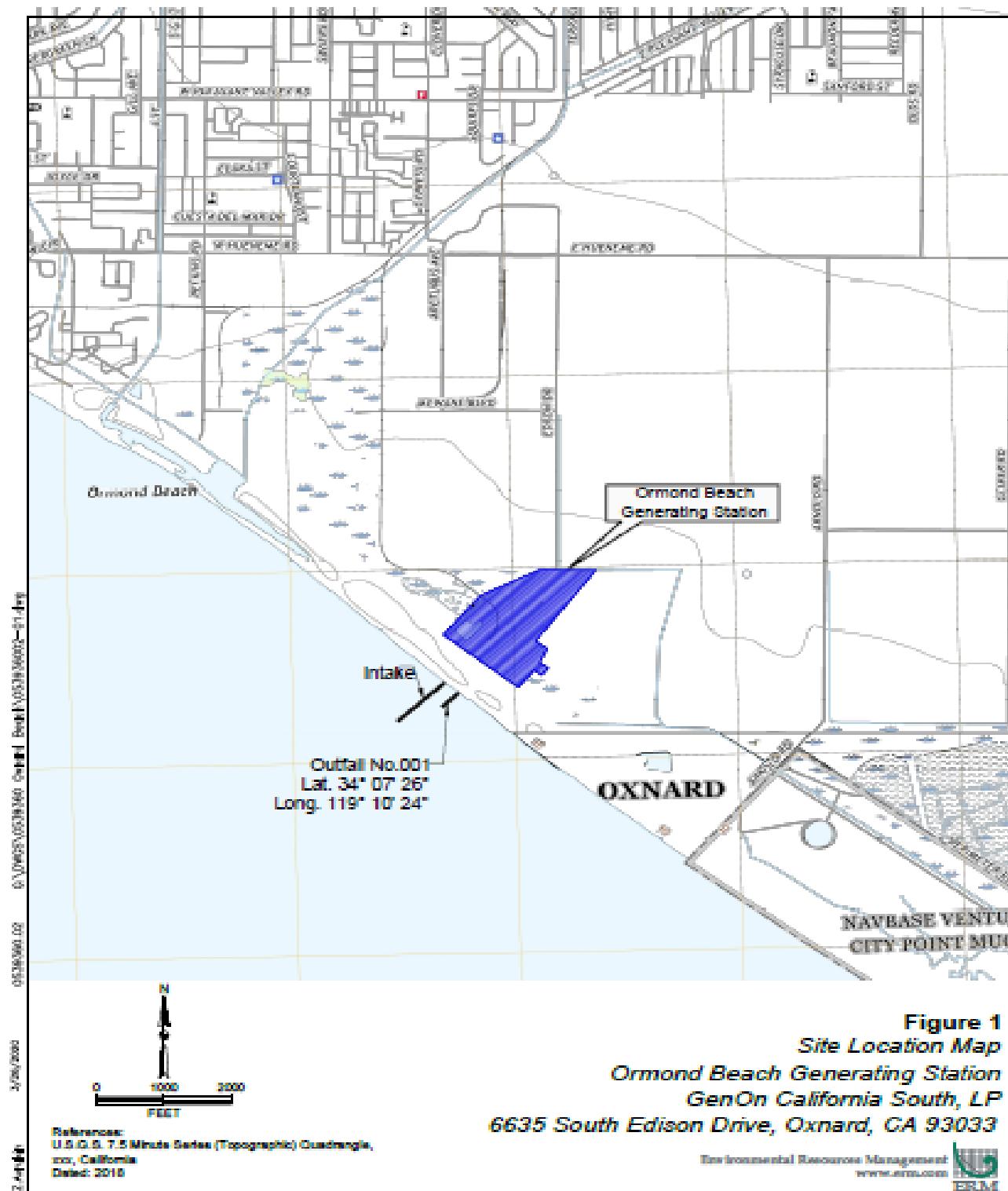
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ORMOND BEACH GENERATING STATION

ORDER R4-2020-XXXX
NPDES NO. CA0001198

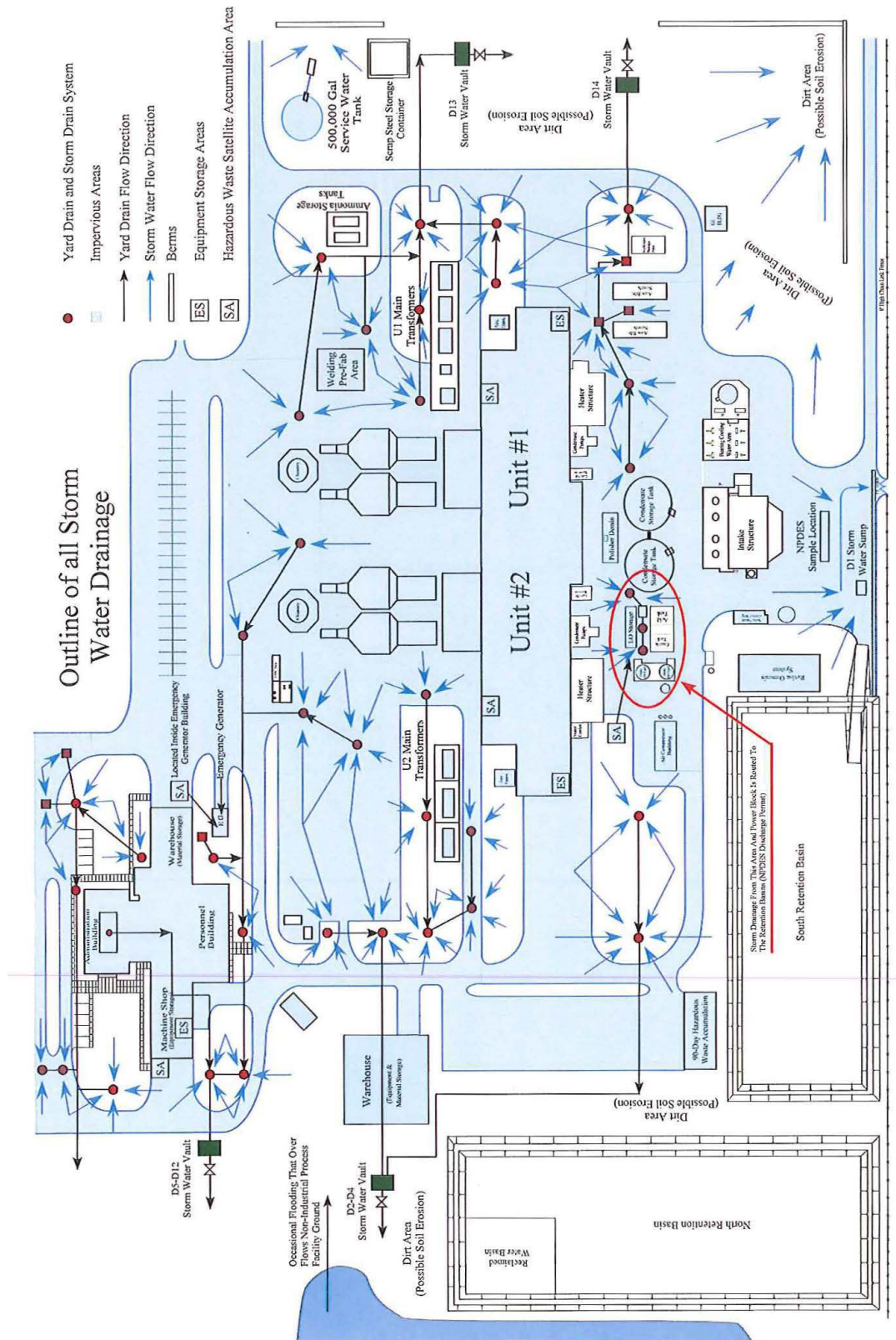
WQS Water Quality Standards
ZID Zone of Initial Dilution
% Percent

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ATTACHMENT B1 - SITE LOCATION MAP

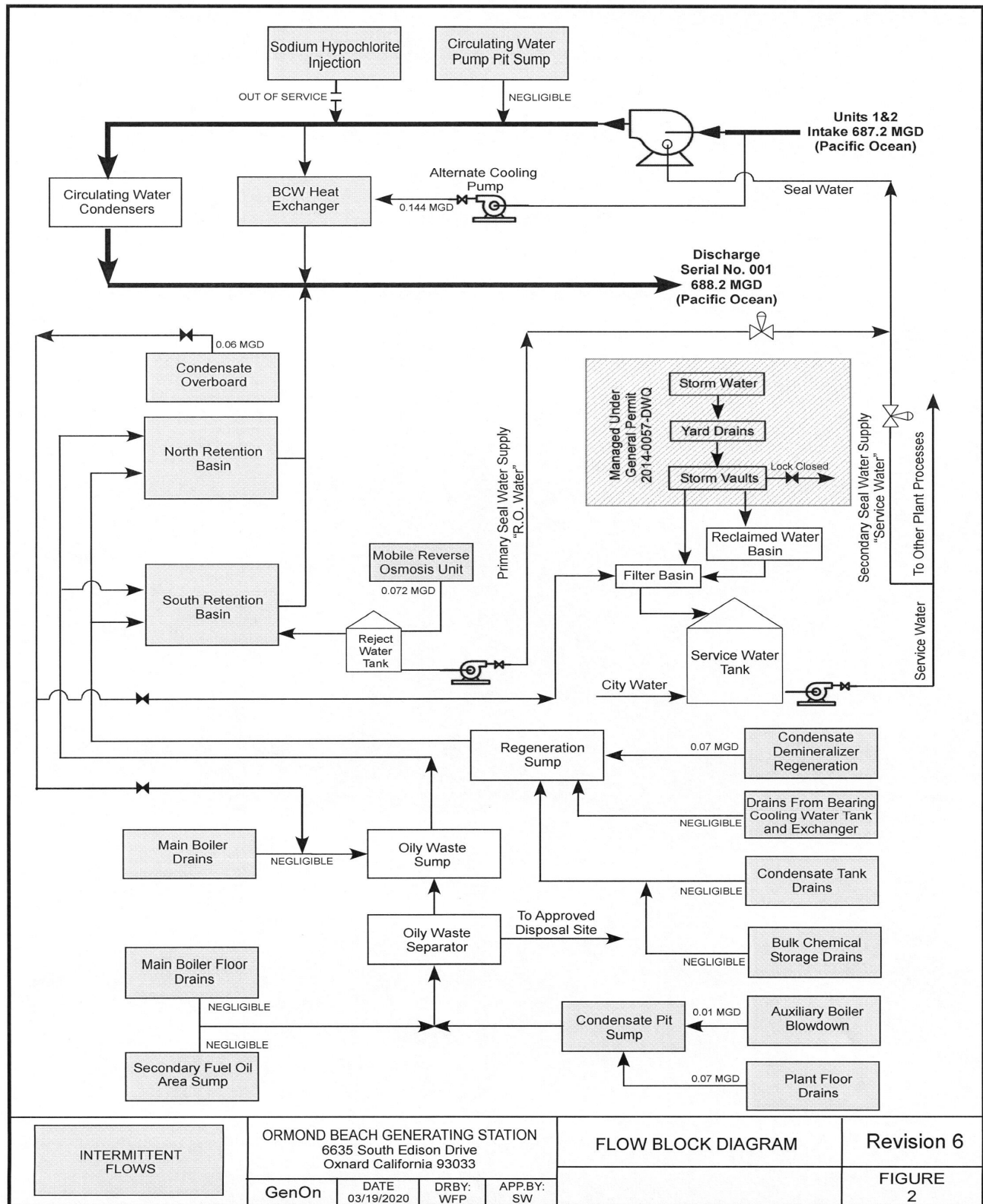


ATTACHMENT B2 – SITE DRAINAGE MAP



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ATTACHMENT C – FLOW SCHEMATIC



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ATTACHMENT D – STANDARD PROVISIONS

1. STANDARD PROVISIONS – PERMIT COMPLIANCE

1.1. Duty to Comply

1.1.1. The Discharger must comply with all 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. (Title 40 of the Code of Federal Regulations (40 CFR) § 122.41(a); California Water Code (CWC), §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

1.1.2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants 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 CFR § 122.41(a)(1).)

1.2. 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 CFR § 122.41(c).)

1.3. Duty to Mitigate

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

1.4. 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 CFR § 122.41(e).)

1.5. Property Rights

1.5.1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR § 122.41(g).)

1.5.2. 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 CFR § 122.5(c).)

1.6. Inspection and Entry

The Discharger shall allow the Regional Water 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

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be required by law, to (33 U.S.C. § 1318(a)(B); 40 CFR § 122.41(i); CWC, §§ 13267, 13383):

- 1.6.1. 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)(B)(i); 40 CFR § 122.41(i)(1); CWC, §§ 13267, 13383);
- 1.6.2. 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)(B)(ii); 40 CFR § 122.41(i)(2); CWC, §§ 13267, 13383);
- 1.6.3. 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)(B)(ii); 40 CFR § 122.41(i)(3); CWC, §§ 13267, 13383); and
- 1.6.4. 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)(B); 40 CFR § 122.41(i)(4); CWC, §§ 13267, 13383.)

1.7. Bypass

1.7.1. Definitions

- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 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 CFR § 122.41(m)(1)(ii).)

1.7.2. **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 1.7.3, 1.7.4, and 1.7.5 below. (40 CFR § 122.41(m)(2).)

1.7.3. **Prohibition of bypass.** Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR § 122.41(m)(4)(i)):

- a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 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

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equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B));
and

- c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance 1.7.5 below. (40 CFR § 122.41(m)(4)(i)(C).)

1.7.4. 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 conditions listed in Standard Provisions – Permit Compliance 1.7.3 above. (40 CFR § 122.41(m)(4)(ii).)

1.7.5. **Notice**

- a. **Anticipated bypass.** If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass. As of December 21, 2023, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(m)(3)(i).)
- b. **Unanticipated bypass.** The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting 5.5 below (24-hour notice). As of December 21, 2023, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(m)(3)(ii).)

1.8. **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 CFR § 122.41(n)(1).)

1.8.1. **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 1.8.2 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 CFR § 122.41(n)(2).)

1.8.2 **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 CFR § 122.41(n)(3)):

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

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- b. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));
- c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting 5.5.2.2 below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and
- d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance 1.3 above. (40 CFR § 122.41(n)(3)(iv).)

1.8.3. **Burden of proof.** In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR § 122.41(n)(4).)

2. STANDARD PROVISIONS – PERMIT ACTION

2.1. 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 CFR § 122.41(f).)

2.2. 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 CFR § 122.41(b).)

2.3. Transfers

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

3. STANDARD PROVISIONS – MONITORING

- 3.1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR § 122.41(j)(1).)
- 3.2. Monitoring must be conducted according to test procedures approved under 40 CFR part 136 for the analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 CFR part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:
 - 3.2.1. 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

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high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

- 3.2.2. The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter 1, subchapter N for the measured pollutant or pollutant parameter. In the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR part 136 or otherwise required under 40 CFR chapter 1, subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 CFR §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).)

4. STANDARD PROVISIONS – RECORDS

- 4.1. 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 CFR § 122.41(j)(2).)

4.2. Records of monitoring information shall include:

- 4.2.1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));
- 4.2.2. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));
- 4.2.3. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));
- 4.2.4. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));
- 4.2.5. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and
- 4.2.6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi).)

4.3. Claims of confidentiality for the following information will be denied (40 CFR § 122.7(b)):

- 4.3.1. The name and address of any permit applicant or Discharger (40 CFR § 122.7(b)(1)); and
- 4.3.2. Permit applications and attachments, permits and effluent data. (40 CFR § 122.7(b)(2).)

5. STANDARD PROVISIONS – REPORTING

5.1. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water 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 Regional Water

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Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); CWC, §§ 13267, 13383.)

5.2. Signatory and Certification Requirements

- 5.2.1. 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 5.2.2, 5.2.3, 5.2.4, 5.2.5, and 5.2.6 below. (40 CFR § 122.41(k).)
- 5.2.2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 CFR § 122.22(a)(1).)
- 5.2.3. 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 5.2.2 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 5.2.2 above (40 CFR § 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 CFR § 122.22(b)(2)); and
 - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 CFR § 122.22(b)(3).)
- 5.2.4. All permit applications shall be signed by a general partner or the proprietor, respectively. (40 CFR § 122.22(a)(2).)
- 5.2.5. If an authorization under Standard Provisions – Reporting 5.2.3 above is no longer accurate because a different individual or position has responsibility for

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the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting 5.2.3 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 CFR § 122.22(c).)

- 5.2.6. Any person signing a document under Standard Provisions – Reporting 5.2.2 or 5.2.3 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 CFR § 122.22(d).)

- 5.2.7. Any person providing the electronic signature for documents described in Standard Provisions – 5.2.1, 5.2.2, or 5.2.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting 5.2, and shall ensure that all relevant requirements of 40 CFR part 3 (Cross-Media Electronic Reporting) and 40 CFR part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 CFR § 122.22(e).)

5.3. Monitoring Reports

- 5.3.1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR § 122.41(l)(4).)
- 5.3.2. 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. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 and comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(l)(4)(i).)
- 5.3.3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR part 136, or another method required for an industry-specific waste stream under 40 CFR chapter 1, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Regional Water Board or State Water Board. (40 CFR § 122.41(l)(4)(ii).)
- 5.3.4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR § 122.41(l)(4)(iii).)

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5.4. 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 CFR § 122.41(l)(5).)

5.5. Twenty-Four Hour Reporting

5.5.1. 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.

As of December 21, 2023, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 The reports shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. 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 CFR § 122.41(l)(6)(i).)

5.5.2. The following shall be included as information that must be reported within 24 hours:

- a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(A).)
- b. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B).)

5.5.3. The Regional Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR § 122.41(l)(6)(ii)(B).)

5.6. 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 CFR § 122.41(l)(1)):

- 5.6.1. 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 CFR § 122.41(l)(1)(i)); or
- 5.6.2. 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 CFR § 122.41(l)(1)(ii).)

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5.6.3. The alteration or addition results in a significant change in the Permittee'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 CFR § 122.41(l)(1)(iii))

5.7. **Anticipated Noncompliance**

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

5.8. **Other Noncompliance**

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting 5.3, 5.4, and 5.5 above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5.5 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 5.5 and the applicable required data in appendix A to 40 CFR part 127. 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 CFR § 122.41(l)(7).)

5.9. **Other Information**

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

5.10. **Initial Recipient for Electronic Reporting Data**

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 CFR part 127 to the initial recipient defined in 40 CFR section 127.2(b). USEPA 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 CFR section 127.2(c)]. USEPA will update and maintain this listing. (40 CFR § 122.41(l)(9).)

6. **STANDARD PROVISIONS – ENFORCEMENT**

6.1. 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 13268, 13385, 13386, and 13387.

6.2. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the CWA, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who *negligently* violates sections 301, 302, 306, 307, 308,

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318, or 405 of the CWA, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the CWA, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two years, or both. Any person who *knowingly* violates such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who *knowingly* violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions (40 CFR § 122.41(a)(2); CWC section 13385 and 13387).

- 6.3. Any person may be assessed an administrative penalty by the Administrator of USEPA, the Regional Water Board, or State Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000. (40 CFR § 122.41(a)(3))
- 6.4. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both. (40 CFR § 122.41(j)(5)).
- 6.5. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both. (40 CFR § 122.41(k)(2)).

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7. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

7.1. 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 CFR § 122.42(a)):

- 7.1.1. 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 CFR § 122.42(a)(1)):
- a. 100 micrograms per liter (µg/L) (40 CFR § 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 CFR § 122.42(a)(1)(ii));
 - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR § 122.42(a)(1)(iii)); or
 - d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 CFR § 122.42(a)(1)(iv).)
- 7.1.2. 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 CFR § 122.42(a)(2)):
- a. 500 micrograms per liter (µg/L) (40 CFR § 122.42(a)(2)(i));
 - b. 1 milligram per liter (mg/L) for antimony (40 CFR § 122.42(a)(2)(ii));
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR § 122.42(a)(2)(iii)); or
 - d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 CFR § 122.42(a)(2)(iv).)

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP No. 5619)

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP No. 5619)

Section 308(a) 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 CFR) 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. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

1. GENERAL MONITORING PROVISIONS

- 1.1. Quarterly effluent 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 monitoring could not be conducted, and obtain approval from the Executive Officer for an alternate schedule. Results of quarterly, semiannual, and annual analyses shall be reported by the due date specified in Table E-12 of the MRP.
- 1.2. Effluent samples shall be taken downstream of any treatment works and prior to mixing with the receiving waters.
- 1.3. 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.
- 1.4. Pollutants shall be analyzed using the analytical methods described in 40 CFR § 136.3, 136.4, and 136.5; or where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. Laboratories analyzing effluent samples and receiving water samples shall be certified by the State Water Resources Control Board, Division of Drinking Water (DDW) Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer and must include quality assurance/quality control (QA/QC) data in their reports. A copy of the laboratory certification shall be provided in the Annual Report due to the Regional Water Board and USEPA each time a new certification and/or renewal of the certification is obtained from ELAP.
- 1.5. **Laboratory Certification.** Laboratories analyzing effluent samples and receiving water samples shall be certified by the State Water Resources Control Board, Division of Drinking Water (DDW) Environmental Laboratory Accreditation Program (ELAP) in accordance with CWC 13176 and must include quality assurance/quality control (QA/QC) data in their reports. A copy of the laboratory certification shall be provided in the Annual Report due to the Regional Water Board each time a new certification and/or renewal of the certification is obtained from ELAP.
- 1.6. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR § 136.3. All QA/QC analyses must be run on the same dates that samples are analyzed. The Discharger shall retain the QA/QC documentation in its files and make available for inspection and/or submit them when requested by the Regional

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Water Board. Proper chain of custody procedures must be followed, and a copy of that documentation shall be submitted with the quarterly report.

- 1.7 The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to ensure accuracy of measurements or shall ensure that both equipment activities will be conducted.
- 1.8. For any analyses performed for which no procedure is specified in the United States Environmental Protection Agency (USEPA) guidelines, or in the MRP, the constituent or parameter analyzed, and the method or procedure used must be specified in the monitoring report.
- 1.9. 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, or approved by the Executive Officer and in accordance with current USEPA guideline procedures or as specified in this Monitoring and Reporting Program.”*
- 1.10. The monitoring report shall specify the USEPA analytical method used, the Method Detection Limit (MDL), and the Reporting Level (RL) [the applicable Minimum Level (ML) or Reported Minimum Level (RML)] for each pollutant. The MLs are those published by the State Water Board in appendix II of the 2019 Ocean Plan. The ML represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interference. When all specific analytical steps are followed and after appropriate application of method specific factors, the ML also represents the lowest standard in the calibration curve for that specific analytical technique. When there is deviation from the analytical method for dilution or concentration of samples, other factors are applied to the ML depending on the sample preparation. The resulting value is the reported Minimum Level.
- 1.11 The Permittee shall select the analytical method that provides an ML lower than the effluent limitation or performance goal established for a given parameter or where no such requirement exists, the lowest applicable water quality objective in the Ocean Plan. If the effluent limitation, performance goal, or the lowest applicable water quality objective is lower than all the MLs in Appendix II of the 2019 Ocean Plan, the Permittee must select the method with the lowest ML for compliance purposes. The Permittee shall include in the annual summary reports a list of the analytical methods and MLs employed for each test.
- 1.12. The Discharger shall instruct its laboratories to establish calibration standards so that the ML (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.
- 1.13 If the Discharger samples and performs analyses (other than for process/operational control, startup, research, or equipment testing) on any influent, effluent, or receiving water constituent more frequently than required by this MRP using approved analytical methods, the results of those analyses shall be included in the report. These results shall be reflected in the calculation of the average used in demonstrating compliance with limitations set forth in this Order.

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- 1.14. For all bacteriological 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 methods used for each analysis shall be reported with the results of the analyses.
- 1.14.1. Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 CFR part 136, unless alternate methods have been approved in advance by the USEPA pursuant to 40 CFR part 136.
- 1.15. The Discharger shall ensure 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 Board at the following address:
- State Water Resources Control Board
Quality Assurance Program Officer
Office of Information Management and Analysis
1001 I Street, Sacramento, CA 95814
- 1.16. Discharger participation in regional monitoring programs is required as a condition of this Order/Permit. Every five years SCCWRP coordinates regional monitoring within the Southern California Bight and compiles monitoring data collected by the dischargers and other participating entities. The sixth regional monitoring program (Bight '18) occurred primarily during summer 2018. The Discharger shall complete collection and analysis of samples in accordance with the schedule established by the Steering Committee directing the Bight-wide regional monitoring surveys. The level of participation shall be similar to that provided by the Discharger in previous regional surveys conducted in 1994, 1998, 2003, 2008, 2013, and 2018. While participation in regional monitoring programs is required under this Order/Permit, revisions to the Discharger's monitoring program at the direction of the Regional Water Board may be necessary to accomplish the goals of regional monitoring or to allow the performance of special studies to investigate regional or site-specific water issues of concern. These revisions may include a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples to be collected. Such changes may be authorized by the Regional Water Board Executive Officer upon written notification to the Discharger.

2. 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 |
|----------------------|---|---|
| --- | Sampling Station for Entrainment and Impingement Survey IMP-001 | At the cooling water intake system for Units 1 and 2. |

| Discharge Point Name | Monitoring Location Name | Monitoring Location Description |
|----------------------|--|---|
| 001 | EFF-001 | At a location where a representative sample of the commingled wastewater can be obtained after treatment but prior to discharge to the Pacific Ocean via Discharge Point 001. [Latitude 34.1285° North, Longitude 119.1697° West] |
| --- | Internal Outfall INT-001A | At a location within the retention basin outfall where a representative sample of low volume wastes (other than seal water monitored at INT-001C) and storm water can be obtained after treatment but prior to commingling with other internal process waste streams or once-through cooling water. |
| --- | Internal Outfall INT-001C | At a location where the seal water low volume wastes can be obtained after treatment but prior to commingling with other internal process waste streams or once-through cooling water. |
| --- | Receiving Water Monitoring Station RSW-001 | 3,000 feet upcoast of the discharge terminus, at a depth of 30 feet. Latitude: 34.12833°; Longitude: -119.183° |
| --- | Receiving Water Monitoring Station RSW-002 | 1,000 feet upcoast of the discharge terminus, at a depth of 30 feet. Latitude: 34.125167° Longitude: -119.178° |
| --- | Receiving Water Monitoring Station RSW-003 | At the point of discharge. Latitude: 34.124°; Longitude: -119.17433° |
| --- | Receiving Water Monitoring Station RSW-004 | 1,000 feet downcoast of the discharge terminus, at a depth of 30 feet. Latitude: 34.122167°; Longitude: -119.17233° |
| --- | Receiving Water Monitoring Station RSW-005 | 3,000 feet downcoast of the discharge terminus, at a depth of 30 feet. Latitude: 34.11833°; Longitude: -119.16767° |
| --- | Receiving Water Monitoring Station RSW-006 | Along the centerline of the discharge conduit, at a depth of 20 feet. Latitude: 34.125°; Longitude: -119.173° |
| --- | Receiving Water Monitoring Station RSW-007 | Along the centerline of the discharge conduit, at a depth of 40 feet. Latitude: 34.1195°; Longitude: -119.17867° |
| --- | Receiving Water Monitoring Station RSW-008 | 7,920 feet downcoast of the discharge terminus, at a depth of 30 feet. Latitude: 34.10867°; Longitude: -119.15567° |

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| Discharge Point Name | Monitoring Location Name | Monitoring Location Description |
|----------------------|--|---|
| --- | Receiving Water Monitoring Station RSW-009 | 7,920 feet upcoast of the discharge terminus, at a depth of 30 feet. Latitude: 34.136°; Longitude: -119.1963° |
| --- | Bottom Station for Benthic Sediments Monitoring BEN-001 | Directly beneath Monitoring Location RSW-001. Latitude: 34.12833°; Longitude: -119.183° |
| --- | Bottom Station for Benthic Sediments Monitoring BEN-002 | Directly beneath Monitoring Location RSW-002. Latitude: 34.12517°; Longitude: -119.178° |
| --- | Bottom Station for Benthic Sediments Monitoring BEN-003 | Directly beneath Monitoring Location RSW-003. Latitude: 34.124°; Longitude: -119.17433° |
| --- | Bottom Station for Benthic Sediments Monitoring BEN-004 | Directly beneath Monitoring Location RSW-004. Latitude: 34.122167°; Longitude: -119.17233° |
| --- | Bottom Station for Benthic Sediments Monitoring BEN-005 | Directly beneath Monitoring Location RSW-005. Latitude: 34.11833°; Longitude: -119.16767° |
| --- | Bottom Station for Benthic Sediments Monitoring BEN-006 | Directly beneath Monitoring Location RSW-006. Latitude: 34.125°; Longitude: -119.173° |
| --- | Mussel Stations for Bioaccumulation Monitoring MUS-001 | Within the Pacific Ocean, at the Discharge Point 001 conduit, as close to the point of discharge as possible |
| --- | Sampling Stations for the Zone of Initial Dilution ZID-001 | Outside of ZID (328 feet) within the waste field where initial mixing occurs (at the edge of the ZID or mixing zone). |

The North latitude and West longitude information in Table E-1 are approximate for administrative purposes.

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3. INFLUENT MONITORING REQUIREMENTS

Impingement Survey at Monitoring Location IMP-001

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

Table E-2. Intake Monitoring at Monitoring Location IMP-001

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|---------------------------|-------|-------------|----------------------------|---------------------------------|
| Fish & Macroinvertebrates | -- | Grab | 1/Quarter Note a | Note b |

Footnotes for Table E-2

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

End of Footnotes for Table E-2

4. EFFLUENT MONITORING REQUIREMENTS

4.1 Monitoring Location EFF-001

The Discharger shall monitor the commingled wastewater (composed of storm water, internal process waters, and once-through cooling water) at Monitoring Location EFF-001 as follows. If a discharge of low volume wastes from the retention basins (to be monitored in Monitoring Location INT-001A) occurs during a discharge event, then the Discharger must sample for the final combined effluent at Monitoring Location EFF-001 during the duration of such discharge, and state so under penalty of perjury in the corresponding monitoring report. 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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Table E-3. Effluent Monitoring

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method and (Minimum Level, units), respectively |
|--|------------------------|------------------------------------|----------------------------|--|
| Flow (Note a) | MGD | Recorder | Day | --- |
| Temperature (Note c) | °F | Recorder | Continuous | Note b |
| pH | pH Unit | Grab | 1/Week | Note b |
| Total Residual Chlorine | mg/L | Grab | 1/Day (Note d) | Note b |
| Free Available Chlorine | mg/L | Grab | 1/Day (Note d) | Note b. |
| Chronic Toxicity (Note e) | Pass or Fail, % Effect | Grab or 24-hour Composite (Note f) | 1/Quarter (Note g) | Note b |
| Chromium (VI) (Note h) | µg/L | Grab or 24-hour Composite (Note f) | 2/Year (Note o) | Notes b and i |
| Copper, Total Recoverable | µg/L | Grab or 24-hour Composite (Note f) | 2/Year (Note o) | Notes b and i |
| Mercury, Total Recoverable | µg/L | Grab or 24-hour Composite (Note f) | 2/Year (Note o) | Notes b and i |
| Nickel, Total Recoverable | µg/L | Grab or 24-hour Composite (Note f) | 2/Year (Note o) | Notes b and i |
| PCBs (as Aroclors) | µg/L | Grab or 24-hour Composite (Note f) | 1/Month | Notes b and j |
| Silver, Total Recoverable | µg/L | Grab or 24-hour Composite (Note f) | 2/year (Note o) | Notes b and i |
| Total Coliform | MPN/100 mL | Grab | 2/Year (Notes k and l) | Note b |
| Fecal Coliform | MPN/100 mL | Grab | 2/Year (Note k) | Note b |
| <i>Enterococcus</i> | MPN/100 mL | Grab | 2/Year (Note l) | Note b |
| Ammonia (as N) | µg/L as N | Grab or 24-hour Composite (Note f) | 1/Month | Note b and i |
| Nitrate (as N) | µg/L as N | Grab or 24-hour Composite (Note f) | 2/Year (Note o) | Note b |
| TCDD Equivalents | µg/L | Grab or 24-hour Composite (Note f) | 2/Year (Note o) | Note b and m |
| Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 and uranium) | pCi/L | Grab or 24-hour Composite (Note f) | 1/Year | Note b and n |
| Remaining Ocean Plan Table 3 (formerly Table B) Pollutants | µg/L | Grab or 24-hour Composite (Note f) | 2/Year (Note o) | Note b |

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Footnotes for Table E-3

- a. When continuous monitoring is required, the total daily flow (24-hour basis) shall be reported. If no discharge occurs during the month, the report shall so state.
- b. Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136, the methods chosen must meet the lowest MLs specified in Appendix II of the Ocean Plan and be sufficiently sensitive to determine compliance with applicable effluent limitations and/or water quality criteria. Where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or State Water Resources Control Board. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding ML necessary to demonstrate compliance with applicable effluent limitations.
- c. Only the maximum temperature for each calendar day shall be reported, except when temperature exceeds 105° F, in which case the reason(s), duration, and time of day of the events of elevated temperature shall be reported.
- d. Monitoring is only applicable during periods of chlorine addition. A statement certifying that chlorination did not occur during the day may be submitted in lieu of an analysis. Multiple grab samples shall be collected at 25, 30, and 35 minutes following the start of chlorination and the highest value of the three measurements shall be reported.
- e. Refer to section 5, Whole Effluent Toxicity Testing Requirements. "Pass" or "Fail" and "% Effect" for Maximum Daily Effluent Limitation (MDEL).
- f. Where a composite sample for the parameter is not feasible as specified in the respective analytical method in 40 CFR Part 136 or in other EPA methods, a grab sample can be obtained in lieu of the 24-hour composite sample for that parameter. Bis(2-ethylhexyl) phthalate is to be collected only as a grab.
- g. Monthly sampling is required in the first three months. Species sensitivity screening shall be conducted during the first three monthly monitoring events. The species that exhibit the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for the routine quarterly monitoring
- h. The Discharger may at their option meet this requirement as total chromium.
- i. The mass emission (lbs/day) for the discharge shall be calculated and reported using the actual concentration and the actual flow rate measured at the time of discharge, using the formula:
$$\text{Mass (lb/day)} = \text{Flow (mgd)} \times \text{Concentration (}\mu\text{g/L)} \times 0.00834 \text{ (conversion factor)}$$

Where:

Mass = mass discharge for a pollutant, lbs/day
Concentration = actual concentration for a pollutant, $\mu\text{g/L}$
Flow = actual discharge flow rate, MGD
- j. The results of PCB analyses using Method 608 shall be reported in Discharge Monitoring Reports and used for assessing compliance with effluent limitations. Using U.S. EPA Method 608, PCBs (as Aroclors) shall mean the sum of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260. Non-detected and/or estimated values shall be treated as zeros in the summation of PCBs as Aroclor.
- k. A 30-day geometric mean (GM) of fecal coliform density not to exceed 200 per 100 milliliters (mL), calculated based on the five most recent samples from each site, and a single sample maximum (SSM) not to exceed 400 per 100 mL Monitoring shall be once per semiannual period (January – June, July – December).
- l. A six-week rolling GM of enterococci not to exceed 30 colony forming units (cfu) or most probable number (MPN) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 110 cfu/100 mL or 110 MPN/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner. U.S. EPA recommends using U.S. EPA Method 1600 or other equivalent method to measure culturable enterococci. Monitoring shall be once per semiannual period (January – June, July – December).

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- m. TCDD Equivalents shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners.

$$\text{Dioxin-TEQ (TCDD equivalents)} = \sum(C_x \times \text{TEF}_x)$$

Where:

C_x = concentration of dioxin or furan congener x

TEF_x = TEF for congener x

Toxicity Equivalence Factors

| Isomer Group | Toxicity Equivalence Factor (TEF) |
|---------------------|-----------------------------------|
| 2,3,7,8-tetra CDD | 1.0 |
| 2,3,7,8-penta CDD | 0.5 |
| 2,3,7,8-hexa CDDs | 0.1 |
| 2,3,7,8-hepta CDD | 0.01 |
| Octa CDD | 0.001 |
| 2,3,7,8 tetra CDF | 0.1 |
| 1,2,3,7,8 penta CDF | 0.05 |
| 2,3,4,7,8 penta CDF | 0.5 |
| 2,3,7,8 hexa CDFs | 0.1 |
| 2,3,7,8 hepta CDFs | 0.01 |

- n. Analyze these radiochemicals by the following U.S. EPA methods:

Method 900.0 for gross alpha and gross beta;

Method 903.0 or 903.1 for radium-226;

Method 904.0 for radium-228;

Method 906.0 for tritium;

Method 905.0 for strontium-90;

Method 908.0 for uranium.

Analysis for combined radium-226 & 228 shall be conducted only if gross alpha results for the same sample exceed 15 pCi/L or beta greater than 50 pCi/L. If radium-226 & 228 exceeds 5 pCi/L, analyze for tritium, strontium-90 and uranium. A statement certifying that radioactive pollutants were not added to the discharge may be submitted in lieu of monitoring.

- o. Monitoring shall be once per semiannual period (January - June, July - December).

End of Footnotes for Table E-3

4.2. Monitoring Location INT-001A

The Discharger shall monitor low volume wastes and storm water from the retention basin prior to commingling with other internal waste streams at Monitoring Location INT-001A as follows. Low volume wastes are collectively treated in the retention basin, including condensate overboard, auxiliary boiler blowdown, reverse osmosis reject water, demineralizer regenerant wastes, and equipment wash water collected in floor drains.

Table E-4. Low Volume Wastes and Storm Water Monitoring at Monitoring Location INT-001A

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|------------------------------|----------|-------------------|----------------------------|---------------------------------|
| Flow | MGD | --- | 1/Month (Note a) | Note b |
| pH | pH Units | Grab | 1/Month (Note a) | Note b |
| Total Suspended Solids (TSS) | mg/L | 24-hour Composite | 1/Month (Note a) | Note b, and c, |

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|--|-------|------------------------------------|----------------------------|---------------------------------|
| Oil and Grease | mg/L | Grab | 1/Month (Note a) | Note b, and c |
| Ammonia (as N) | µg/L | Grab or 24-hour Composite (Note e) | 1/Month (Note a) | Note b, and c |
| Chromium (VI) (Note d) | µg/L | Grab or 24-hour Composite (Note e) | 2/Year (Note g) | Note b |
| Mercury, Total Recoverable | µg/L | Grab or 24-hour Composite (Note e) | 2/Year (Note g) | Note b |
| Silver, Total Recoverable | µg/L | Grab or 24-hour Composite (Note e) | 2/Year (Note g) | Note b |
| PCBs (as Aroclors) | µg/L | Grab or 24-hour Composite (Note e) | 2/Year (Note g) | Note b, and f |
| Remaining Ocean Plan Table 3 (formerly Table B) Pollutants (excluding acute and chronic toxicity) (Note h) | µg/L | Grab or 24-hour Composite (Note e) | 2/Year (Note g) | Note b |

Footnotes for Table E-4

- a. If no discharge occurred during the month, the report shall so state.
- b. Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136, where no methods are specified for a given pollutant, the methods must be approved by the Regional Water Board or the State Water Board. For priority pollutants, the methods must meet the lowest minimum levels (MLs) specified in Appendix II of the Ocean Plan (2019) that is required to demonstrate compliance.
- c. The mass emission (lbs/day) for the discharge shall be calculated and reported using the actual concentration and the actual flow rate measured at the time of discharge, using the formula:

$$\text{Mass (lb/day)} = \text{Flow (mgd)} \times \text{Concentration (}\mu\text{g/L)} \times 0.00834 \text{ (conversion factor)}$$
 Where:
 Mass = mass discharge for a pollutant, lbs/day
 Concentration = actual concentration for a pollutant, µg/L
 Flow = actual discharge flow rate, MGD
- d. The Discharger may at their option meet this limitation as a total chromium limitation
- e. Where a composite sample for the parameter is not feasible as specified in the respective analytical method in 40 CFR Part 136 or in other EPA methods, a grab sample can be obtained in lieu of the 24-hour composite sample for that parameter. Bis(2-ethylhexyl) phthalate is to be collected only as a grab.
- f. The results of PCB analyses using Method 608 shall be reported in Discharge Monitoring Reports and used for assessing compliance with effluent limitations. Using U.S. EPA Method 608, PCBs (as Aroclors) shall mean the sum of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260. Non-detected and/or estimated values shall be treated as zeros in the summation of PCBs as Aroclor.
- g. Monitoring once per semiannual period (January – June, July – December).
- h. For radioactivity, a statement certifying that radioactive pollutants were not added to the discharge may be submitted in lieu of monitoring.

End of Footnotes for Table E-4

REVISITED TENTATIVE

4.3. Monitoring Location INT-001C

The Discharger shall monitor seal water low volume wastes prior to commingling with other internal waste streams at Monitoring Location INT-001C as follows. Seal water includes a combination of city water, reclaimed storm water, and reverse osmosis reject water.

REVISITED TENTATIVE

Table E-5. Seal Water Low Volume Wastes Monitoring at Monitoring Location INT-001C

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|--|----------|------------------------------------|----------------------------|---------------------------------|
| Flow | MGD | -- | 1/Month (Note a) | Note b |
| pH | pH Units | Grab | 1/Month (Note a) | Note b |
| TSS | mg/L | 24-hour Composite | 1/Month (Note a) | Note b, and c |
| Oil and Grease | mg/L | Grab | 1/Month (Note a) | Note b, and c |
| Ammonia (as N) | µg/L | Grab or 24-hour Composite (Note e) | 1/Month (Note a) | Note b, and c |
| Chromium (VI) (Note d) | µg/L | Grab or 24-hour Composite (Note e) | 2/Year (Note g) | Note b |
| Mercury, Total Recoverable | µg/L | Grab or 24-hour Composite (Note e) | 2/Year (Note g) | Note b |
| Silver, Total Recoverable | µg/L | Grab or 24-hour Composite (Note e) | 2/Year (Note g) | Note b |
| PCBs (as Aroclors) | µg/L | Grab or 24-hour Composite (Note e) | 2/Year (Note g) | Note b and f |
| Remaining Ocean Plan Table 3 (formerly Table B) Pollutants (excluding acute and chronic toxicity) (Note h) | µg/L | Grab or 24-hour Composite (Note e) | 2/Year (Note g) | Note b |

Footnotes for Table E-5

- If no discharge occurred during the month, the report shall so state.
- Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136, where no methods are specified for a given pollutant, the methods must be approved by the Regional Water Board or the State Water Board. For priority pollutants, the methods must meet the lowest minimum levels (MLs) specified in Appendix II of the Ocean Plan (2019) that is required to demonstrate compliance.
- The mass emission (lbs/day) for the discharge shall be calculated and reported using the actual concentration and the actual flow rate measured at the time of discharge, using the formula:

$$\text{Mass (lbs/day)} = \text{Flow (mgd)} \times \text{Concentration (µg/L)} \times 0.00834 \text{ (conversion factor)}$$

Where:

$$\text{Mass} = \text{mass discharge for a pollutant, lbs/day}$$

Concentration = actual concentration for a pollutant, µg/L

Flow = actual discharge flow rate, MGD

- d. The Discharger may at their option meet this limitation as a total chromium limitation
- e. Where a composite sample for the parameter is not feasible as specified in the respective analytical method in 40 CFR Part 136 or in other EPA methods, a grab sample can be obtained in lieu of the 24-hour composite sample for that parameter. Bis(2-ethylhexyl) phthalate is to be collected only as a grab.
- f. The results of PCB analyses using Method 608 shall be reported in Discharge Monitoring Reports and used for assessing compliance with effluent limitations. Using U.S. EPA Method 608, PCBs (as Aroclors) shall mean the sum of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260. Non-detected and/or estimated values shall be treated as zeros in the summation of PCBs as Aroclor.
- g. Monitoring once per semiannual period (January – June, July – December).
- h. For radioactivity, a statement certifying that radioactive pollutants were not added to the discharge may be submitted in lieu of monitoring.

End of Footnotes for Table E-5

4.4. Monitoring for In-Plant Waste Streams (Total)

The Discharger shall report the mass emission of all in-plant, low volume wastes and storm water taken together prior to commingling with once-through cooling water using the calculated sum of mass emissions measured at Monitoring Location INT-001A, and INT-001C as follows:

Table E-6. Total In-Plant Waste Streams Monitoring

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|----------------|--------|-------------|----------------------------|---------------------------------|
| Flow | MGD | -- | 1/Day (Note a) | Note b |
| Ammonia (as N) | lb/day | Calculated | 1/Month (Note c) | Note b, and d |

Footnotes for Table E-6

- a. Report flow of each individual low volume waste streams as measured at INT-001A, and INT-001C.
- b. Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136, where no methods are specified for a given pollutant, the methods must be approved by the Regional Water Board or the State Water Board. For priority pollutants, the methods must meet the lowest minimum levels (MLs) specified in Appendix II of the Ocean Plan (2019) that is required to demonstrate compliance.
- c. If no discharge occurred during the month, the report shall so state.
- d. The mass emission (lbs/day) from each individual in-plant waste streams shall be calculated and reported using the actual concentration and the actual flow rate measured at the time of discharge from the individual in-plant low volume waste streams (as measured in INT-001A, and INT-001C), using the formula::

Mass (lbs/day) = Flow (mgd) x Concentration (µg/L) x 0.00834 (conversion factor)

Where:

Mass = mass emission for a pollutant, lbs/day

Concentration = actual concentration for a pollutant, µg/L

Flow = actual discharge flow rate, MGD

The combined mass emission of all in-plant waste streams taken together shall be determined as the sum of mass discharges of each parameter in the individual in-plant waste streams.

$$\text{Total Mass Emission per day (lbs/day)} = \text{Mass Emission at INT-001A (lbs/day)} + \text{Mass Emission at INT-001C (lbs/day)}$$

The Total Mass Emission per day (lbs/day) calculated for each day will be compared with the maximum daily effluent limitations as set forth in Table 7 of the Order for compliance determination for ammonia; compliance with the 6-month median effluent limitations shall be determined by the median of Total Mass Emission per day values over any 180-day period.

End of Footnotes for Table E-6

5. CHRONIC WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

5.1. Chronic Toxicity of Chlorine Variance Conditions

The chronic toxicity test must be representative of actual discharge conditions (at a minimum) or of the alternate Proposed Modified Effluent Limit (PMEL) of 0.399 mg/L total residual chlorine (TRC) during periods of chlorination. This means that, at a minimum, the effluent samples must be chlorinated in the laboratory to levels consistent with the maximum TRC effluent concentration measured during the previous 3 months' chlorination events. This requirement to chlorinate samples in the laboratory applies only if the recorded effluent chlorine concentrations exceed the BAT limit of 0.2 mg/L during the previous 3 months. Alternatively, the sample may be chlorinated to the alternate PMEL (unless the maximum TRC concentration from the previous 3 months exceeds this limit).

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

The chronic toxicity IWC for this discharge at Discharge Point 001 is 13.3 percent $[1/(6.5+1)]$ effluent. For receiving water monitoring, the IWC shall be 100% of the sample collected at the specified station location for receiving water monitoring.

5.3. 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 subsequent TIE studies, if necessary. 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.

5.4. Chronic Marine and Estuarine Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity ≥ 1 ppt, the Discharger shall conduct the following chronic toxicity tests on effluent samples—at the in-stream waste concentration for the discharge—in accordance with species and test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). Artificial sea salts shall be used to increase sample salinity. In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

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

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- b. A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, and the sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0), or a static non-renewal toxicity test with the red abalone, *Haliotis rufescens* (Larval Shell Development Test Method).
- c. A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0).

5.5. 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. If the result of all three species is "Pass", then the species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit cycle. If only one species fails, then that species shall be used for routine monitoring during the permit cycle. Likewise, if two or more species result in "Fail", then the species that exhibits the highest "Percent Effect" at the discharge IWC during the suite of species sensitivity screening shall be used for routine monitoring during the permit cycle, until such time as a rescreening is required.

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

During the calendar month, toxicity tests used to determine the most sensitive test species shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL

5.6. Quality Assurance and Additional Requirements

- 5.6.1. 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 a 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* and Appendix B, Table B-1. The null hypothesis (H_0) for the TST approach is: Mean discharge IWC response $\leq 0.75 \times$ 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: $((\text{Mean control response} - \text{Mean discharge IWC})$

response) ÷ Mean control response)) × 100. This is a t-test (formally Student's t-Test), a statistical analysis comparing two sets of replicate observations - in the case of WET, only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is "Pass" or "Fail")). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances.

- b. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (U.S. EPA/600/R-95/136, 1995) (See Table E-6, below), then the Discharger must re-sample and re-test within 14 days.

Table E-7. USEPA Methods and Test Acceptability Criteria West Coast Marine and Estuarine Organisms

| Species & USEPA Test Method Number | Test Acceptability Criteria (TAC) |
|---|--|
| Topsmelt, <i>Atherinops affinis</i> , Larval Survival and Growth Test Method 1006.0. (Table 3 of Test Method) | ≥80% survival in controls; 0.85 mg average weight of control larvae (9 day old), LC50 with copper must be ≤205 µg/L, <25% Minimum Significant Difference (MSD) for survival and <50% MSD for growth. |
| Purple Sea Urchin, <i>Strongylocentrotus purpuratus</i> , and the Sand Dollar, <i>Dendraster excentricus</i> , Fertilization Test Method 1008.0 (Table 7 and section 16.12 of Test Method) | ≥70% egg fertilization in controls; %MSD of <25%; and appropriate sperm counts. |
| Red Abalone, <i>Haliotis rufescens</i> , Larval Shell Development Test Method (Table 3 of Test Method) | ≥80% normal shell development in the controls; must have statistical significant effect at 56 µg/L zinc; must achieve a %MSD of <20%. |
| Giant Kelp, <i>Macrocystis pyrifera</i> , Germination and Growth Test Method 1009.0 (Table 3 of Test Method) | ≥70% germination in the controls; ≥10 µm germ-tube length in the controls and the NOEC must be below 35 µg/L in the reference toxicant test; must achieve a %MSD of <20 for both germination and germ-tube length in the reference toxicant. |

- c. Dilution and control water, including brine controls, shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.
- d. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.). Monthly reference toxicant testing is sufficient. All reference toxicant test results shall be reviewed and reported using the EC25, where EC25 is a point estimate of the toxicant concentration that would cause an observable adverse effect (e.g. death, immobilization, or serious incapacitation) in 25 percent of the test organisms.

- e. When preparing samples for toxicity testing, in addition to the required monitoring for conductivity, etc., it is recommended that total alkalinity and total hardness be measured in the undiluted effluent, receiving water, dilution water, and culture water (following the WET methods manual), as well as the major geochemical ions (see Mount et al., 2018).
- f. 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).

5.7. Accelerated Monitoring Schedule for Median Monthly Summary Result “Fail” (or Maximum Daily Single Result: “Fail and % Effect \geq 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.

Once the Discharger becomes aware of this result, the Discharger shall implement an accelerated monitoring schedule within five calendar days of the receipt of the result. However, if the sample is contracted out to a commercial laboratory, the Discharger shall ensure that the first of four accelerated monitoring tests is initiated within seven calendar days of the Discharger becoming aware of the result. The accelerated monitoring schedule shall consist of four toxicity tests (including IWC), conducted at approximately two-week intervals, over an eight-week period; in preparation for the TRE process and associated reporting, these results shall also be reported using the EC25. If each of the accelerated toxicity tests results in “Pass”, the Permittee shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results in “Fail,” the Permittee shall immediately implement the TRE Process conditions set forth below.

5.8. Preparation of an Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan

The Discharger shall prepare and submit a copy of the Discharger’s initial investigation TRE work plan to the Executive Officer of the Regional Water Board for approval within 90 days of the effective date of this permit. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use EPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (EPA/600/2-88/070, April 1989)*, or the most current version, as guidance. This work plan shall describe the steps that the Discharger intends to follow if toxicity is detected. At a minimum, the TRE work plan must describe the steps that the Discharger intends to follow if toxicity is detected. At a minimum the work plan shall include:

- 5.8.1. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
- 5.8.2 A description of the Facility’s methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the Facility.

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

5.9. Toxicity Reduction Evaluation (TRE) Process

- 5.9.1. **Preparation and Implementation of Detailed TRE Work Plan.** The Discharger shall immediately initiate a TRE and, within 15 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:
- Further actions by the Discharger to investigate, identify, and correct the causes of toxicity.
 - Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.
 - A schedule for these actions, progress reports, and the final report
- 5.9.2. **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, U.S. EPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.
- 5.9.3. 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.
- 5.9.4. The Discharger shall continue to conduct routine effluent monitoring for compliance determination purposes while the TIE and/or TRE process is taking place. Additional accelerated monitoring and TRE work plans are not required once a TRE has begun.
- 5.9.5. The Regional Water Board and U.S.EPA 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.
- 5.9.6. The Board may consider the results of any TIE/TRE studies in an enforcement action.

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5.10. 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, "Report Preparation," including:

- 5.10.1. 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. All toxicity test results (whether identified as valid or otherwise) conducted during the calendar month shall be reported on the SMR due date specified in Table E-12.
- 5.10.2. Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).
- 5.10.3. TRE/TIE results. The Regional Water Board Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses.
- 5.10.5. Statistical program (e.g., TST calculator, CETIS, etc.) output results, including graphical plots, for each toxicity test.
- 5.10.6. Any additional QA/QC documentation or any additional chronic toxicity-related information, upon request from the Regional Water Board staff.

6. LAND DISCHARGE MONITORING REQUIREMENTS (NOT APPLICABLE)

7. RECYCLING MONITORING REQUIREMENTS (NOT APPLICABLE)

8. RECEIVING WATER MONITORING REQUIREMENTS

8.1. Surface Water Monitoring (Monitoring Location RSW-001 through RSW-009)

The Discharger shall monitor the receiving water (Pacific Ocean) at Monitoring Locations RSW-001 through RSW-009 as follows:

Table E-8. Receiving Water Monitoring Requirements (Monitoring Locations RSW-001 through RSW-009)

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|--|--------------------------------|------------------|----------------------------|---------------------------------|
| Color (Chlorophyll a and/or Color Dissolved Organic Matter [CDOM]) | µg/L, mV or fluorescence units | Profile (Note c) | 2/Year (Note a) | Note b |
| Light transmittance | Percent | Profile (Note c) | 2/Year (Note a) | Note b |
| Salinity | ppt | Profile (Note c) | 2/Year (Note a) | Note b |
| Dissolved Oxygen | mg/L | Profile (Note c) | 2/Year (Note a) | Note b |
| pH | pH units | Profile (Note c) | 2/Year (Note a) | Note b |
| Temperature | °F | Profile (Note c) | 2/Year (Note a) | Note b |
| Visual Observations | -- | Visual | 2/Year (Note a) | Note d |

Footnotes for Table E-8

- a. Summer and winter during both flood and ebb tides

- b. Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136, where no methods are specified for a given pollutant, the methods must be approved by this Regional Water Board or the State Water Board. For priority pollutants, the methods must meet the lowest minimum levels (MLs) specified in Appendix II of the Ocean Plan (2019) that is required to demonstrate compliance.
- c. Temperature shall be measured from surface to bottom at a minimum of one-meter intervals at each station. Color, dissolved oxygen, light transmittance, pH, and salinity shall be measured at surface, mid-depth, and bottom at a minimum at each station.
- d. The following general observations or measurements at the receiving water stations shall be reported:
 - i. Tidal stage and time of monitoring.
 - ii. General water conditions.
 - iii. Extent of visible turbidity or color patches.
 - iv. Appearance of oil films or grease, or floatable material.
 - v. Depth at each station for each sampling period
 - vi. Presence or absence of red tide.
 - vii. Presence of marine life.
 - viii. Presence and activity of the California least tern and the California brown pelican.

End of Footnotes for Table E-8

8.2. Benthic Sediments Monitoring at Monitoring Locations BEN-001 through BEN-006

The Discharger shall collect and analyze benthic samples once per year during the summer at Monitoring Locations BEN-001 through BEN-006 as follows:

Table E-9. Benthic Sediment Monitoring Requirements (Monitoring Locations BEN-001 through BEN-006)

| Parameter | Units (Note a) | Sample Type | Minimum Sampling Frequency |
|------------------------------------|-------------------|--|----------------------------------|
| Benthic Infauna Community (Note b) | --- | 0.1 square meter Van Veen grab | 1/Year |
| Sediment Grain Size (Note d) | --- | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Ammonia as Nitrogen | mg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Arsenic | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Beryllium | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Cadmium | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Copper | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Chromium (III) | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Chromium, Total | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Lead | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |

| Parameter | Units (Note a) | Sample Type | Minimum Sampling Frequency |
|---------------------------------|-------------------|--|----------------------------------|
| Mercury | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Nickel | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Selenium | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Silver | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Thallium | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Zinc | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note e) | 1/Year |
| Acid Volatile Sulfides | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| PAHs (Note e) | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Total PCB (Note f) | µg/kg | 0.1 square meter Van Veen grab (upper 2 centimeters) (Note c) | 1/Year |
| Visual Observations (Note g) | -- | Visual | 1/Year |

Footnotes for Table E-9

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

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

Community analysis of benthic infauna shall include number of species, number of individuals per species, total numerical abundance per station, benthic response index (BRI) and biological indices, plus utilize appropriate regression analyses, parametric and nonparametric statistics, and multivariate techniques or other appropriate analytical techniques.
- c. Sediment grain size analyses shall be performed on each sediment sample (sufficiently detailed to calculate percent weight in relation to phi size).
- d. A separate grab sample shall be collected at each station whenever a biological sample is collected. Sub-samples (upper two centimeters) shall be taken from the grab for sediment chemistry analyses.
- e. 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.
- f. Total PCB (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

- g. The following general observations or measurements at the benthic stations shall be reported:
- Tidal stage and time of monitoring.
 - General water conditions.
 - Extent of visible turbidity or color patches.
 - Appearance of oil films or grease, or floatable material.
 - Depth at each station for each sampling period
 - Presence or absence of red tide.
 - Presence of marine life.
 - Presence and activity of the California least tern and the California brown pelican.

End of Footnotes for Table E-9

8.3. Bioaccumulation Monitoring at Monitoring Location MUS-001

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-10. Mussels Bioaccumulation Monitoring Requirements (Monitoring Location MUS-001)

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|---------------------|-------|-------------|----------------------------|---------------------------------|
| Arsenic | µg/kg | Tissue | 1/Year | Note a |
| Beryllium | µg/kg | Tissue | 1/Year | Note a |
| Cadmium | µg/kg | Tissue | 1/Year | Note a |
| Copper | µg/kg | Tissue | 1/Year | Note a |
| Chromium (III) | µg/kg | Tissue | 1/Year | Note a |
| Chromium, Total | µg/kg | Tissue | 1/Year | Note a |
| Lead | µg/kg | Tissue | 1/Year | Note a |
| Mercury | µg/kg | Tissue | 1/Year | Note a |
| Nickel | µg/kg | Tissue | 1/Year | Note a |
| Selenium | µg/kg | Tissue | 1/Year | Note a |
| Silver | µg/kg | Tissue | 1/Year | Note a |
| Thallium | µg/kg | Tissue | 1/Year | Note a |
| Zinc | µg/kg | Tissue | 1/Year | Note a |
| PAHs (Note b) | µg/kg | Tissue | 1/Year | Note a |
| Pesticides (Note c) | µg/kg | Tissue | 1/Year | Note a |

Footnotes for Table E-10

- a. Procedures used to determine compliance with bioaccumulation monitoring should use the U.S. EPA. *Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories* (November 2000, EPA 823-B-00-007), NOAA Technical Memorandum NOS ORCA 130, *Sampling and Analytical Methods of the National Status and Trends Program Mussel Watch Project* (1998 update), and/or

State Mussel Watch Program, 1987-1993 Data Report, State Water Resources Control Board 94-1WQ.

- b. 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.
- c. Pesticides shall include the following:
 - i. chlorinated hydrocarbons - aldrin, chlordane (cis and trans), dacthal, DDT (o,p' DDD, p,p' DDD, o,p' DDE, p,p' DDE, o,p' DDT, p,p' DDT), dieldrin, endosulfan (-I, -II, and -sulfate), endrin, endrin aldehyde, HCH (alpha, beta, and gamma), heptachlor, heptachlor epoxide, hexachlorobenzene, methoxychlor, mirex, nonachlor (cis and trans), oxadiazon, oxychlordane, toxaphene.
 - ii. Organophosphate Pesticides (OP pesticides) – mevinphos, ethoprop, sulfotep, phorate, diazinon, disulfoton, dimethoate, fenclorophos, parathion (ethyl and methyl), chlorpyrifos, malathion, prothiofos, tetrachlorvinphos, methidathion, sulprofos, phosmet, azinphos (ethyl and methyl), coumaphos, demeton, thionazin, dichlorofenthion, fenitrothion, chlorfenvinphos, ehtion, famphur, leptophos, terbufos, fonophos, trichloronate, fenthion, carbophenothion, fensulfothion.

End of Footnotes for Table E-10

8.4. Receiving Water Monitoring at the Zone of Initial Dilution

The Discharger shall monitor the receiving water outside the zone of initial dilution (ZID) within the waste field at Monitoring Location ZID-001 as follows:

Table E-11. Compliance Monitoring at the Zone of Initial Dilution at Monitoring Location ZID-001

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|---|-------|-------------|----------------------------|---------------------------------|
| All Table 3 Parameters in the Ocean Plan (Including chronic toxicity) | -- | Grab | 1/Permit Term (Note a) | Note b |

Footnotes for Table E-11

- a. The Discharger shall conduct compliance monitoring at Monitoring Location ZID-001 at least once during the term of this Order at a time of discharge from Discharge Point 001.
- b. Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136, where no methods are specified for a given pollutant, the methods must be approved by this Regional Water Board or the State Water Board. For priority pollutants, the methods must meet the lowest minimum levels (MLs) specified in Appendix II of the Ocean Plan (2019) 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.

End of Footnotes for Table E-11

8.5. Regional Monitoring Program

Regular regional monitoring for the Southern California Bight has been established, occurring at five-year intervals, and is coordinated through the Southern California Coastal Water Research Project (SCCWRP) with discharger agencies and numerous other entities. The sixth regional monitoring program (Bight '18) occurred primarily during summer 2018. The next (seventh) regional monitoring program (Bight '23) is expected to take place during 2023.

Discharger participation in each Bight Regional Monitoring Program is required as a condition of this Order/Permit. The Discharger shall complete collection and analysis of samples in accordance with the schedule established by the Steering Committee directing the Bight-wide regional monitoring surveys.

Revisions to the Discharger's monitoring program (which may include a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples to be collected) may be necessary to accomplish the goals of regional monitoring via a monitoring resource exchange (e.g., temporary suspension of normal receiving water monitoring requirements to dedicate monitoring resources for implementation of the regional monitoring program). Such changes may be authorized by the Regional Water Board Executive Officer upon written notification to the Discharger.

9. OTHER MONITORING REQUIREMENTS

9.1. Monitoring for Discharge of Calcareous Material

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 tern and the California brown pelican.

9.2. Outfall Inspection

The Discharger shall, at least once during the term of this permit, inspect the integrity of and perform maintenance on the ocean outfall structure to prevent restriction of flow or change in flow conditions that may cause deviation from the conditions used to model the mixing zone of the final discharge from the Facility.

10. REPORTING REQUIREMENTS

10.1. General Monitoring and Reporting Requirements

- 10.1.1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
- 10.1.2. If there is no discharge during any reporting period, the Discharger shall indicate under the statement of perjury that no effluent was discharged to surface water during the reporting period in the corresponding monitoring report
- 10.1.3. 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

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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.

- 10.1.4. Each monitoring report shall contain a separate section titled “Summary of Non-Compliance” which discusses the compliance record and the 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 discharge requirements, as well as all excursions of effluent limitations.
- 10.1.5. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.
- 10.1.6. The Discharger shall report the results of chronic toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting, section 5.
- 10.2. Self-Monitoring Reports (SMRs)
 - 10.2.1. The Discharger shall electronically submit SMRs using the State Water Board's [California Integrated Water Quality System \(CIWQS\) Program website](http://www.waterboards.ca.gov/water_issues/programs/ciwqs) <http://www.waterboards.ca.gov/water_issues/programs/ciwqs>. The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.
 - 10.2.2 The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections 3 through 9. The Discharger shall submit quarterly, semiannual, and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. SMRs 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.
 - 10.2.3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-12. Monitoring Periods and Reporting Schedule

| Sampling Frequency | Monitoring Period Begins On... | Monitoring Period | SMR Due Date |
|--------------------|--------------------------------|---|---|
| Continuous | January 1, 2021 | All | May 1 August 1 November 1 February 1 |
| 1/ Day | January 1, 2021 | Midnight through 11:59 PM or any 24-hour period that reasonably represents a calendar day for purposes of sampling. | May 1 August 1 November 1 February 1 |
| 1/Month | January 1, 2021 | 1 st day of calendar month through last day of calendar month | May 1 August 1 November 1 |

| Sampling Frequency | Monitoring Period Begins On... | Monitoring Period | SMR Due Date |
|--------------------|--------------------------------|---|---|
| | | | February 1 |
| 1/Quarter | January 1, 2021 | January 1 – March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31 | May 1 August 1 November 1 February 1 |
| 2/Year | January 1, 2021 | January 1 – June 30 July 1 – December 31 | August 1 February 1 |
| 1/Year | January 1, 2021 | January 1 through December 31 | March 1 |
| 1/ Permit Term | January 1, 2021 | January 1 through December 31 | February 1 |

10.2.4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR 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:

- Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- Sample results less than the RL, 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 (\pm a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.
- Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
- 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.

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

10.2.6. **Multiple Sample Data.** When determining compliance with an Average Monthly Effluent Limitation (AMEL), Average Weekly Effluent Limitation (AWEL), or Maximum Daily Effluent Limitation (MDEL) 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 Detected” (ND). In those cases, 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.

10.2.7. The Discharger shall submit SMRs 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 waste discharge requirements; 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.

10.3. Discharge Monitoring Reports (DMRs)

10.3.1. DMRs are USEPA reporting requirements. 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 DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the [DMR website](http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring) at: http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring.

10.4. Other Reports

- 10.4.1. By March 1st of each year, the Discharger is required to submit a Receiving Water Monitoring Report containing the results of bimonthly, semiannual, and annual monitoring to the Regional Water Board following the calendar year of data collection.
- 10.4.2. **Within 90 days** of the effective date of this permit, the Discharger is required to submit the following to the Regional Water Board:
- Initial Investigation TRE workplan.
 - Updated SWPPP.
 - Updated BMPP.
 - Spill Clean-up Contingency Plan (SCCP).

The SWPPP, BMPP, and SCCP status 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. All changes or revisions to the SWPPP, BMPP, and SCCP shall be submitted to the Regional Water Board within 30 days of revisions.

- 10.4.3 No later than 180 days before the planned commencement of cooling water withdrawals for the operation of any new unit at this Facility, the Discharger must submit the information required in 40 CFR 122.21(r) and 40 CFR 125.95(f) for the new unit.
- 10.4.4. No later than 180 days before the expiration of this Order, the Discharger shall submit a permit application consistent with 40 CFR section 122.21(r) and 40 CFR 125.95(f). If the Discharger plans to retire² the Facility before the end of the next permit cycle, the permit application need not comply with the requirements in section 122.21(r)(7), (9), (10), (11), (12), or (13) provided the Discharger's application includes a signed certification statement specifying the last operating date of the Facility.
- 10.4.5. The Discharger shall submit a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) as specified in section 6.3.4.b. of the Waste Discharge Requirements of this Order, to assess and manage climate change related-effects associated with the Facility operation, water supplies, water quality and beneficial uses.

² The Discharger plans to retire the Facility to comply with the OTC Policy by the Final Compliance Date established in Section 3.E, Table 1 of the OTC Policy (currently December 31, 2023), or any later date established in accordance with the Final Compliance Date suspension provisions in Section 2.B(2) of the OTC Policy.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section 2.2 of this Order, the 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.

1. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

| | |
|--|---|
| WDID | 4A560106003 |
| Discharger | Ormond Beach Power, LLC |
| Name of Facility | Ormond Beach Generating |
| Facility Address | 6635 South Edison Drive Oxnard, CA 93033 Ventura County |
| Facility Contact, Title and Phone | Thomas Di Ciolli, Plant Manager, (805) 986-7241 |
| Authorized Person to Sign and Submit Reports | Same as above |
| Mailing Address | 6635 South Edison Drive, Oxnard, CA 93033 |
| Billing Address | Same as above |
| Type of Facility | Industrial (Electric Services; SIC 4911) |
| Major or Minor Facility | Major |
| Threat to Water Quality | 1 |
| Complexity | A |
| Pretreatment Program | NA |
| Recycling Requirements | NA |
| Facility Permitted Flow | 688.2 million gallons per day (MGD) |
| Facility Design Flow | 688.2 MGD |
| Watershed | Pacific Ocean |
| Receiving Water | Pacific Ocean |
| Receiving Water Type | Ocean Waters |

- 1.1. Ormond Beach Power, LLC, formerly GenOn California South, LP (hereinafter Discharger or Permittee) is the owner and operator of the Ormond Beach Generating Station (hereinafter Facility), a steam-electric generating facility (SIC Code 4911). The name change from GenOn California South, LP to Ormond Beach Power, LLC became effective on June 8, 2020.

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.

- 1.2. The Facility discharges wastewater and storm water to the Pacific Ocean, a water of the United States. The Discharger was previously regulated by Order No. R4-2015-0172 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0001198, adopted on September 10, 2015, and which expired on October 31, 2020. The terms and conditions of that Order have been continued and remain in effect until new Waste Discharge Requirements (WDRs) and a NPDES permit are adopted pursuant to this Order in accordance with 40 Code of Federal Regulations (CFR) section 122.6(d)(1) and California Code of Regulations (CCR), title 23, section 2235.4. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.
- 1.3. The Discharger filed a report of waste discharge (ROWD) and applied for reissuance of its Waste Discharge Requirements (WDRs) and NPDES permit on April 17, 2020. Supplemental information was received on May 20, 2020. The application was deemed complete on June 16, 2020. A site visit was conducted on June 24, 2020, to observe operations and collect additional data to develop permit limitations and conditions.

2. FACILITY DESCRIPTION

2.1. Description of Wastewater and Treatment and Controls

- 2.1.1. The Discharger owns and operates the Facility located at 6635 South Edison Drive, Oxnard, California. The Facility consists of two natural gas-fueled, steam-electric generating units with a combined generating capacity of approximately 1,520 megawatts (MW). Units 1 (745 MW) and 2 (775 MW) use once-through cooling water. The wastewater treatment units at the Facility consist of an oil/water separator and two retention basins (the north and south basins). Storm water and some low volume wastes are treated by an oil/water separator and are conveyed to either the north or south retention basin. Flow of storm water and all low volume wastes except seal water is intermittent. All internal waste streams are routed to combine with the once-through cooling water stream prior to discharge through Discharge Point 001.

The Facility has a single discharge outfall (i.e., Discharge Point 001) which discharges to the Pacific Ocean. The Facility is permitted to discharge up to 688.2 MGD at Discharge Point 001. Internal discharge point designations (INT-001A, and INT-001C) are based on discrete locations at which the in-plant waste stream discharges to the main waste stream or following initial treatment, as specified in the MRP. Monitoring Location INT-001B is no longer in use as the waste stream has been re-routed to the oil/water separator (Monitoring Location INT-001A) as described in section 2.1.3 below. Based on available flow data, the maximum daily flow between December 2015 and March 2020 was 686.14 MGD.

2.1.2. Once-Through Cooling Water

Cooling water for the Facility is withdrawn from the ocean via an off-shore cooling water intake structure (CWIS) located 1,950 feet offshore and at a depth

of 35 feet Mean Low Lower Water (MLLW). The top of the cap is 20 feet below the water surface and is equipped with mammal exclusion bars spaced 8 inches apart. The CWIS has a capacity of 476,000 gallons per minute (gpm) flow of water to the onshore screen structure through a single 14-foot inner diameter concrete conduit at a velocity of 6.9 ft/sec. The onshore portion of the intake structure is comprised of four screen bays which are each approximately 11 feet wide. Each bay possesses an individual vertical traveling screen which prevents debris and large marine organisms from entering the cooling water system. A cooling water circulating pump is located immediately downstream of each traveling screen. The Facility possesses four circulating pumps and each is rated at 119,000 gpm. In addition, a 45-gallon per minute alternate cooling pump is used to provide backup cooling to the steam units' bearing cooling water (BCW) heat exchangers when the steam units are out of service. The discharge from the backup pump is recirculated to the intake structure and thus does not result in any increase in the once-through cooling flows.

Marine biofouling of the cooling water conduits and forebay is controlled by heat treatments and chlorine injection. Biofouling is the formation of an insulating layer of slime-producing organisms. During heat treatments, a portion of the heated discharge water is diverted into the forebay and intake conduits to raise water temperature. This effectively increases the temperature of the circulating water and extricates many encrusting organisms that adhere to the cooling structures.

During heat treatments, the temperature of the water discharged through the intake conduit must be raised to 105°F for one hour to remove the fouling organisms. The effluent limitation for temperature is 125°F. During gate adjustments, the discharge temperature is allowed to reach 135°F for no more than 30 minutes. Gate adjustments control the temperature of the water recirculating in the intake and discharge point during heat treatments. Calcareous shell debris accumulates in the intake structure as a result of heat treatments. When heat treatment is being utilized, this shell debris is manually removed from the forebay and in-plant conduits and disposed by the City of Oxnard. Heat treatments at the Facility occur approximately once every 5 weeks and lasts for about two hours per conduit.

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

Cleaning of the cooling water forebay is conducted periodically to remove accumulated shells and sediment. Water from the forebay cleaning is pumped to a decanting waste bin, filtered, and returned to the forebay. Materials cleaned from the pumps and forebay are collected in bins and disposed of as waste. Waste that accumulates on the traveling screens is removed as needed and disposed of at an offsite disposal facility.

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2.1.3. Low Volume Wastes

The Facility generates a number of internal low volume wastes which commingle with the once-through cooling water prior to discharge to Discharge Point 001, including: auxiliary boiler blowdown, boiler condensate overboard, reverse osmosis reject water, demineralizer regenerant wastes, equipment wash water collected in floor drains, and seal water. Most of these wastes are routed to the retention basins for storage and treatment before combining with the once-through cooling water and will be collectively monitored at Monitoring Location INT-001A, and seal water (monitored at INT-001C) which combines with the once-through cooling water stream without treatment. Condensate overboard was previously monitored at Monitoring Location INT-001B and was re-routed since the last permit issuance to the oil/water separator, which subsequently drains to one of the retention basins. Internal Monitoring Location INT-001B is no longer in use.

- a. **Auxiliary Boiler Blowdown.** The two auxiliary boilers do not undergo typical blowdown procedures. Instead, each boiler is regularly drained four to five times per year resulting in approximately 7,500 gallons of low volume waste per maintenance event. Auxiliary boiler blowdown is treated in the oil/water separator and the retention basins, followed by discharge at Discharge Point 001.
- b. **Boiler Condensate Overboard.** Under normal operating conditions there is no condensate overboard discharge. Condensate overboard, which occurs only during unit start-up or abnormal operating conditions, is primarily composed of condensed steam. Order No. R4-2015-0172 included a requirement to monitor the condensate overboard at Monitoring Location INT-001B. However, since the Order No. R4-2015-0172 issuance, the condensate overboard was re-routed to the oil/water separator, which subsequently drains to the retention basin and then discharges to Discharge Point 001.
- c. **Reverse Osmosis Reject Water.** Reject water from the mobile reverse osmosis unit will be stored in a reject water tank, which is reused within the Facility as a source of the Facility's seal water to cool the once-through cooling water intake pumps. Any overflow from the reject water tank will be routed to the retention basins before discharge to Discharge Point 001.
- d. **Demineralizer Regeneration Wastes.** Condensate demineralizer regenerant wastes are by-products of the production of purified water used in Facility processes. This process occurs 5 to 25 times per year at the Facility. These wastes are held in the retention basins then discharged to the receiving water through Discharge Point 001.
- e. **In-Plant Floor Drains.** Power block floor drains collect equipment wash water, residual oil and detergent. Wastes collected within each power block are treated (i.e., oil skimming and settling) in the retention basins prior to discharge through Discharge Point 001.

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- f. **Seal Water (Service Water).** City potable water is commingled with reclaimed storm water or reverse osmosis reject water to be reused within the Facility as cooling water for the once-through cooling water intake pumps. The seal water stream ultimately combines with the once-through cooling water and is discharged through Discharge Point 001 without treatment.

2.1.4. Storm Water

- a. **Yard Drains.** Precipitation that falls on paved portions of the Facility, including the power block area (with negligible contribution), is collected by yard drains. When opened, the discharge of storm water runoff collected from these yard drains may be directed to surrounding wetlands. The discharge of stormwater to these wetlands is separately regulated by the *General Permit for Storm Water Discharges Associated with Industrial Activities (NPDES No. CAS000001)* and is not covered by this Order.

Storm water collected in most of the Facility is reclaimed for reuse as in-plant process water. The station yard drain vaults have been converted into sumps to collect and temporarily store storm water runoff. This collected storm water is treated by filtration for reuse within the Facility as a source of the seal water (service water). The seal water is monitored at INT-001C. The seal water is combined with the once-through cooling water stream without treatment and is discharged to Discharge Point 001.

- b. **Bulk Chemical Storage Area Drains.** Storm water collected in the bulk chemical storage area is covered by this Order. Chemicals are stored in tanks located in two outdoor containment areas. These containment areas are typically hydraulically isolated by manually closing the control valves of the containment area drains. The area consists of a canopied structure, with an elevated platform. Containers within and adjacent to the structure are placed on pallets. The containment areas collect potential spillage from the chemical storage tanks. Rainwater which is collected within the containment areas will be drained to the oil/water separator and retention basins for treatment and storage before being discharged at Discharge Point 001. The control valves of the containment area drains are opened two to three times per year and drain approximately 300 gallons of rainwater per drain. Prior to opening the control valves of the drain, the rain water is visually inspected, if contamination of the rain water in the containment areas is evident or suspected, the rain water is collected and processed off-site at a permitted treatment facility.
- c. **In-Plant Drainage System.** Storm water drainage from within the two power units (power block area) enters the in-plant drainage system, which flows into the #1 and #2 condenser sumps. This drainage is pumped into the condensate pit sump, oil/water separator, and oily waste sump. From the sump, the water is pumped to either of two retention basins and discharged to Discharge Point 001.

The following table summarizes the waste streams and process waters contributing to the discharge at the Facility through Discharge Point 001 to the Pacific Ocean. The

maximum discharge of commingled wastes (i.e., cooling water, low volume wastes, and storm water) from Discharge Point 001 is 688.2 MGD.

Table F-2. Waste Stream Information

| Contributory Waste Stream | Overall Treatment | Average Flow (MGD) | Waste Stream Discharge Point |
|--|--|---------------------------|-------------------------------------|
| Once-Through Cooling Water | Screening, Chlorination, Accumulated Biological Solids to City of Oxnard | 687.2 | Discharge to Outfall 001 |
| Condensate Demineralizer Regeneration (Note a) | Sedimentation | 0.07 | Discharge to Retention Basins |
| Mobile Reverse Osmosis Reject (Note a) | Sedimentation | 0.072 | Discharge to Retention Basins |
| Floor Drains (Note a) | Oil Removal, Sedimentation | 0.07 | Discharge to Retention Basins |
| Auxiliary Boiler Blowdown (Note a) | Oil Removal, Sedimentation | 0.01 | Discharge to Retention Basins |
| Condensate Tank Drain (Note a) | Sedimentation | Note b | Discharge to Retention Basins |
| Seal Water (Note a) | None | 0.12 | Discharge to Outfall 001 |
| Condensate Overboard (Note a) | None | 0.06 | Discharge to Outfall 001 |
| Storm Water (Note a) | Oil Removal, Sedimentation | Note b | Discharge to Retention Basins |
| Retention Basin (Note c) | Sedimentation | 0.82 | Discharge to Outfall 001 |

Footnotes for Table F-2

- a. Low volume wastes and the flows are intermittent.
- b. Negligible flow.
- c. These flows are intermittent.

End of Footnotes for Table F-2

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2.2. Discharge Points and Receiving Waters

Wastewaters generated at the Facility are discharged to the Pacific Ocean at Ormond Beach via Discharge Point 001. Discharge Point 001 consists of an outfall coffer located approximately 1,790 feet offshore at a depth of 20 feet below MLLW.

Order No. 01-092 established an initial dilution ratio of 6.5 to 1 (receiving water to effluent) for discharges from Discharge Point 001, which was retained in Order No. R4-2015-0172. Order No. R4-2015-0172 included a requirement for the Discharger to perform a supplemental mixing zone study and collect additional receiving water monitoring data to supplement the dilution studies previously conducted for the Facility in an effort to identify the location of the boundary of the zone of initial dilution (ZID) based on modelling results.

On September 11, 2017, the Discharger submitted a "Supplemental Mixing Zone Study" (Mixing Zone Study) to the Regional Water Board. In a letter dated October 20, 2017, the Regional Water Board determined that the current dilution ratio of 6.5 for the Facility is appropriate. In addition, the Regional Water Board determined the ZID radius at 328 feet from the discharge terminus is appropriate (which is the lowest average ZID radius within a single month, August 1972, based on the data provided in the Mixing Zone Study), and shall be designated as Monitoring Location ZID-001 for future compliance monitoring.

This Order is incorporating a minimum probable initial dilution (Dm) of 6.5:1 for discharges through Discharge Point 001 and designates the ZID radius at 328 feet as Monitoring Location ZID-001.

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

2.3.1 Effluent limitations and discharge specifications contained in the existing Order for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Order between November 2015 and March 2020 are as follows:

Table F-3. Historic Effluent Limitations and Monitoring Data at Monitoring Location EFF-001 for Order No. R4-2015-0172

| Parameter | Units (Note a) | 6-Month Median | Maximum Daily | Instanta- neous Min. / Max. | Highest 6-Month Median Discharge | Highest Daily Discharge |
|--|--|-------------------|------------------------|-----------------------------------|---|-------------------------------|
| pH | pH Units | --- | --- | 6.0 / 9.0 | --- | 7.84 - 8.62 |
| Temperature | °F | --- | (Note b) | --- | --- | 100 |
| Chromium (VI) (Note c) | µg/L | 15 | 60 | 150 | --- | 1.04 |
| Chromium (VI) | lbs/day | 86 | 344 | --- | --- | 2.22 |
| Acute | TUa | --- | --- | --- | --- | 0.66 |
| Chronic Toxicity | Pass or Fail, % Effect (for the TST approach) | --- | Pass or % Effect<50 | --- | --- | Pass |
| Mercury, Total Recoverable (TR) (Note c) | µg/L | 0.30 | 1.2 | 3.0 | 0.00717 | 0.18 |
| Mercury, TR | lbs/day | 1.7 | 6.9 | -- | 0.02 | 0.26 |
| Silver, TR (Note c) | µg/L | 4.2 | 20 | 51 | --- | 0.289 |

| Parameter | Units (Note a) | 6-Month Median | Maximum Daily | Instanta- neous Min. / Max. | Highest 6-Month Median Discharge | Highest Daily Discharge |
|-----------------------------|-------------------|-------------------|------------------|-----------------------------------|---|-------------------------------|
| Silver TR | lbs/day | 24 | 120 | -- | --- | 0.456 |
| Total Residual Chlorine | mg/L | --- | --- | 0.399 | | Note d |
| Free Available Chlorine | mg/L | 0.2 (Note e) | --- | 0.5 | | Note d |
| Enterococci | CFU or MPN/100 | --- | --- | --- | --- | 22 |
| Fecal Coliform | CFU or MPN/100 | --- | --- | --- | --- | 2.3 |
| Total Coliform | CFU or MPN/100 | --- | --- | --- | --- | 8.7 |
| Ammonia (as N) | µg/L | --- | --- | --- | --- | 69200 |
| Nitrate (as N) | µg/L | --- | --- | --- | --- | 1200 |
| TCDD Equivalents | µg/L | --- | --- | --- | --- | 0.455E-9 |
| PCBs (as Aroclors) | µg/L | --- | --- | --- | --- | <0.35 |
| Radiation, (Gross Alpha) | pCi/L | --- | --- | --- | --- | 14.3 |
| Radiation, (Gross Beta) | pCi/L | --- | --- | --- | --- | 13.8 |
| Radium, 226 | pCi/L | --- | --- | --- | --- | 0 |
| Arsenic | µg/L | --- | --- | --- | --- | 2.2 |
| Beryllium | µg/L | --- | --- | --- | --- | 0.161 |
| Cadmium | µg/L | --- | --- | --- | --- | 0.0868 |
| Chromium III | µg/L | --- | --- | --- | --- | 0.414 |
| Copper | µg/L | --- | --- | --- | --- | 3.8 |
| Lead | µg/L | --- | --- | --- | --- | 0.125 |
| Nickel | µg/L | --- | --- | --- | --- | 5.6 |
| Selenium | µg/L | --- | --- | --- | --- | 2.8 |
| Thallium | µg/L | --- | --- | --- | --- | 0.146 |
| Zinc | µg/L | --- | --- | --- | --- | 28.2 |
| Cyanide | µg/L | --- | --- | --- | --- | 0.96 |
| Tributyltin | µg/L | --- | --- | --- | --- | 0.0031 |
| Methylene Chloride | µg/L | --- | --- | --- | --- | 1.72 |
| Bis(2-ethylhexyl) Phthalate | µg/L | --- | --- | --- | --- | 20 (Note f) |

Footnotes for Table F- 3

- The mass-based (lbs/day) limitations are based on a maximum combined effluent flow from Discharge Point 001 of 688.2 MGD and are calculated as follows:
 Mass-based limitation (lbs/day) = Flow (mgd) x Concentration (µg/L) x 0.00834 (conversion factor)
 Where:
 Concentration (µg/L) = the concentration-based limitations calculated in the combined discharge (cooling water and in-plant wastes).
 Flow (mgd) = 688.2 MGD, the maximum flow for the combined cooling water and low volume wastes discharge to Discharge Point 001.
- The temperature of wastes discharged shall not exceed 105°F during normal operation of the Facility. During heat treatment, the temperature of wastes discharged shall not exceed 125°F except during adjustment of the recirculation gate at which time the temperature of wastes

discharged shall not exceed 135°F. Temperature fluctuations during gate adjustment above 125 °F shall not last more than 30 minutes.

- c. Concentration limits are based on Ocean Plan objectives using a dilution ratio of 6.5 parts of seawater to 1 part effluent.
- d. No chlorination was used at the Facility during the term of Order No. R4-2015-0172.
- e. Applied as an average limitation during the chlorine release period.
- f. The highest concentration of bis(2-ethylhexyl) phthalate reported was based on suspected sampling and/or laboratory contamination that has been addressed through improved sampling and handling procedures as described in the supplemental ROWD. The observed concentration has decreased over time and is not likely representative of site conditions.

End of Footnotes for Table F- 3

2.3.2. Effluent limitations and discharge specifications contained in the existing Order for Low Volume Wastes and Storm Water from Monitoring Location INT-001A and representative monitoring data from the term of the previous Order between November 2015 and March 2020 are as follows:

Table F-4. Historic Effluent Limitations and Monitoring Data for Low Volume Wastes and Storm Water (Monitoring Location INT-001A)

| Parameter | Units (Note a) | Average Monthly (30- Day Average) | Maximum Daily | Instantaneous Minimum / Maximum | Highest Average Monthly (30- day average) | Highest Daily Discharge |
|---|-------------------|---|------------------|---------------------------------------|--|-------------------------------|
| pH | pH Units | --- | --- | 6.0 / 9.0 | --- | 6.05 - 8.86 |
| Total Suspended Solids (TSS) | mg/L | 30.0 | 100.0 | --- | 20 | 20 |
| TSS | lbs/day | 205 | 684 | --- | 42 | 43.2 |
| Oil and Grease | mg/L | 15.0 | 20.0 | --- | 14 | 14 |
| Oil and Grease | lbs/day | 103 | 137 | --- | 14.4 | 14.4 |
| Chromium (VI) ^{3, 4} | µg/L | --- | --- | --- | --- | 2.56 |
| Mercury, Total Recoverable ³ | µg/L | --- | --- | --- | --- | 0.026 |
| Silver, Total Recoverable ³ | µg/L | --- | --- | --- | --- | 0.34 |
| PCBs (as Aroclors) ⁵ | µg/L | --- | --- | --- | --- | <0.049 |

Footnotes for Table F-4

- a. The mass-based limitations are based on a maximum low volume waste and storm water flow from the retention basins of 0.82 MGD and are calculated as follows:
Mass-based limitation (lbs/day) = Flow (mgd) x Concentration (µg/L) x 0.00834 (conversion factor)
Where:
Concentration ((µg/L) = the concentration-based limitations as prescribed in 40 CFR Part 423.
Flow (mgd) = 0.82 MGD, the maximum flow for low volume wastes and storm water from the retention basins at INT- 001A.

End of Footnotes for Table F-4

2.3.3. The previous Order contained effluent limitations and discharge specifications for condensate overboard low volume wastes from Monitoring Location INT-001B.

There was no monitoring data from the term of the previous Order between November 2015 and March 2020 because no condensate overboard low volume waste was discharged from Monitoring Location INT-001B. The condensate overboard waste was re-routed to the oil/water separator, which subsequently drains to the retention basin Monitoring Location INT-001A and then discharges to Discharge Point 001.

- 2.3.4. Effluent limitations and discharge specifications contained in the existing Order for Seal Water Low Volume Wastes from Monitoring Location INT-001C and representative monitoring data from the term of the previous Order between November 2015 and March 2020 are as follows:

Table F-5. Historic Effluent Limitations and Monitoring Data for Seal Water Low Volume Wastes (Monitoring Location INT-001C)

| Parameter | Units (Note a) | Average Monthly (30-Day Average) | Maximum Daily | Instantaneous Minimum / Maximum | Highest Average Monthly (30-day average) | Highest Daily Discharge |
|---|----------------|----------------------------------|---------------|---------------------------------|--|-------------------------|
| pH | pH Units | --- | --- | 6.0 / 9.0 | --- | 7.28 - 8.08 |
| Total Suspended Solids (TSS) | mg/L | 30.0 | 100.0 | --- | 11.3 | 20.4 |
| TSS | lbs/day | 30.0 | 100.1 | --- | 2.83 | 5.1 |
| Oil and Grease | mg/L | 15.0 | 20.0 | --- | 3.22 | 4.07 |
| Oil and Grease | lbs/day | 15.0 | 20.0 | --- | 0.762 | 0.991 |
| Chromium (VI) ^{3, 4} | µg/L | --- | --- | --- | 0.494 | 0.897 |
| Mercury, Total Recoverable ³ | µg/L | --- | --- | --- | 0.00896 | 0.0129 |
| Silver, Total Recoverable ³ | µg/L | --- | --- | --- | 0.0201 | 0.312 |
| PCBs (as Aroclors) ⁵ | µg/L | --- | --- | --- | --- | <0.04 |

Footnotes for Table F-5

- a. The mass-based limitations are based on a maximum seal water low volume wastes flow of 0.12 MGD and are calculated as follows:
 Mass-based limitation (lbs/day) = Flow (mgd) x Concentration (µg/L) x 0.00834 (conversion factor)
 Where:
 Concentration ((µg/L) = the concentration-based limitations as prescribed in 40 CFR Part 423.
 Flow (mgd) = 0.12 MGD, the maximum flow for seal water low volume wastes at INT- 001C.

End of Footnotes for Table F-5

2.4. Compliance Summary

Data submitted to the Regional Water Board during the period of November 2015 and March 2020 indicate that there have not been any numerical exceedances of effluent limitations. During the same reporting period, the Discharger has violated monitoring and reporting requirements (i.e., holding times exceedances). The fourth Quarter 2015 monitoring report indicates that tributyltin samples collected at EFF-001 and INT-001C and the ammonia sample from INT-001C were analyzed past the allowable hold times. The second Quarter 2018 and first Quarter 2020 monitoring reports also incorrectly reported pH values of zero (0) at EFF-001.

The Discharger reported that the chain-of-custody forms were revised and will be reviewed by the regional and local environmental staff to ensure all new permit parameters and requirements are accounted for and all future hold times are strictly implemented. In addition, an automatic notification system has been implemented for the collection and testing of a weekly pH sample.

2.5. Planned Changes

The Discharger plans to retire the Facility to comply with the OTC Policy by the Final Compliance Date established in Section 3.E, Table 1 of the OTC Policy (currently December 31, 2023), or any later date established in accordance with the Final Compliance Date suspension provisions in Section 2.B(2) of the OTC Policy. After the compliance date, the Discharger will continue to discharge stormwater and other low-volume wastewater, in compliance with this Order, during the decommissioning of the Facility. The Discharger is continually exploring options to reuse storm water within the Facility and may modify the Facility in the future for storm water reuse with approval from the Regional Water Board.

3. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

3.1. 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 authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 1 subject to the WDRs in this Order.

3.2. California Environmental Quality Act (CEQA)

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

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

3.3.1. **Water Quality Control Plan.** The *Water Quality Control Plan for the Los Angeles Region* (Basin Plan) designates beneficial uses, establishes water quality objectives (WQOs), and contains implementation programs and policies to achieve those objectives for the Pacific Ocean and all waters within the Los Angeles Region. Requirements in this Order implement the Basin Plan.

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

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Table F-6. Basin Plan Beneficial Uses

| Discharge Point | Receiving Water Name | Beneficial Use(s) |
|-----------------|--|---|
| 001 | Ormond Beach | <p><u>Existing:</u> Industrial service supply (IND); navigation (NAV); water contact recreation (REC-1); non-contact water recreation (REC-2); hydropower generation (POW); commercial and sport fishing (COMM); marine habitat (MAR); wildlife habitat (WILD); rare, threatened, or endangered species (RARE) (Note a); and shellfish harvesting (SHELL).</p> <p><u>Potential:</u> Spawning, reproduction, and/or early development (SPWN).</p> |
| 001 | Pacific Ocean: <u>Nearshore Zone</u> (The zone bounded by the shoreline and a line 1,000 feet from the shoreline or the 30-foot depth contours, whichever is further from the shoreline) | <p><u>Existing:</u> Industrial service supply (IND); navigation (NAV); water contact recreation (REC-1), non-contact water recreation (REC-2), commercial and sport fishing (COMM); marine habitat (MAR); wildlife habitat (WILD); preservation of biological habitats (BIOL) (Note b); rare, threatened, or endangered species (RARE) (Note a); migration of aquatic organisms (MIGR) (Note c); spawning, reproduction, and/or early development (SPWN) (Note c); and shellfish harvesting (SHELL) (Note d).</p> |
| 001 | Pacific Ocean: <u>Offshore Zone</u> | <p><u>Existing:</u> Navigation (NAV); water contact recreation (REC-1), non-contact water recreation (REC-2), commercial and sport fishing (COMM); marine habitat (MAR); wildlife habitat (WILD); rare, threatened, or endangered species (RARE) (Note a); migration of aquatic organisms (MIGR) (Note c); spawning, reproduction, and/or early development (SPWN) (Note c); and shellfish harvesting (SHELL) (Note d).</p> |

Footnotes for Table F-6

- One or more rare species utilizes all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.
- Areas of Special Biological Significance (along coast from Latigo Point to Laguna Point) and Big Sycamore Canyon and Abalone Cove Ecological Reserves and Point Fermin Marine Life Refuge. None of these areas are in the immediate vicinity of the discharge.
- Aquatic organisms utilize all bays, estuaries, lagoons, and coastal wetlands, to a certain extent, for spawning and early development. This may include migration into areas which are heavily influenced by freshwater inputs.
- Areas in the Los Angeles Region exhibiting large shellfish populations include Malibu, Point Dume, Point Fermin, White Point and Zuma Beach. None of these areas are in the immediate vicinity of the discharge.

End of Footnotes for Table F-6

3.3.2. **Thermal Plan.** The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on January 7, 1971, and amended this

plan on May 18, 1972, and again on September 18, 1975. This plan contains temperature objectives for new and existing discharges to coastal and interstate waters and enclosed bays and estuaries of California. For the purposes of the Thermal Plan, the Facility is considered an existing discharge. Requirements of this Order implement the Thermal Plan as described in section 4.3.5 of this Fact Sheet.

- 3.3.3 **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) in 1972 and has amended on a number of occasions, most recently on March 22, 2019. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the state to be protected as summarized below:

Table F.7. Ocean Plan Beneficial Uses

| Discharge Point | Receiving Water | Beneficial Uses |
|-----------------|-----------------|---|
| 001 | Pacific Ocean | Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish spawning and shellfish harvesting. |

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

- 3.3.4. **Alaska Rule.** On March 30, 2000, U.S. EPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 CFR part 131.21, 65 Federal Register 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to U.S. EPA after May 30, 2000, must be approved by U.S. EPA before being used for Clean Water Act (CWA) purposes. The final rule also provides that standards already in effect and submitted to U.S. EPA by May 30, 2000, may be used for CWA purposes, whether or not approved by U.S. EPA.
- 3.3.5 **Antidegradation Policy.** CWA section 303 and Federal regulation 40 CFR section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California"). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The 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 CFR section 131.12 and State Water Board

Resolution 68-16. Requirements of this Order implement federal and state antidegradation policies as described in section 4.4.2 of this Fact Sheet.

3.3.5. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR 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. This Order complies with anti-backsliding provisions.

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

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

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

On May 4, 2010, the State Water Board adopted a *Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling* (OTC Policy). The 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 Best Technology Available (BTA).

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

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

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

All owners or operators of existing power plants were required to submit an implementation plan identifying the OTC compliance alternative selected by April 1, 2011. The Discharger submitted its first implementation plan on April 1, 2011. Additional implementation information was submitted on May 14, 2012 and November 7, 2013. Per the implementation plan originally submitted, the Discharger proposed to bring units 1 and 2 into compliance via Track 2. However, subsequent information submitted indicated that due to uncertainties and other concerns with Track 2 compliance, the Discharger instead opted for compliance via Track 1. The details of the proposed replacement project were not finalized in a formal amendment to its implementation plan, but the Discharger had indicated that it remained on track to comply with the OTC Policy by December 31, 2020. On May 6, 2016, the Discharger sent a letter to the joint-agency Statewide Advisory Committee on Cooling Water Intake Structures (SACCWIS), which was created to advise the State Water Board on the implementation of the OTC Policy, indicating that it intended to comply with the OTC Policy by retiring the Facility by December 31, 2020.

On January 19, 2018, the Discharger confirmed its intent to retire the Facility by the December 31, 2020, compliance date in its implementation plan update. On February 28, 2018, the Discharger notified CPUC of its intention to shut down and retire Ormond Beach by October 1, 2018. However, on September 28, 2018, NRG sent a letter to the California Independent System Operator (CAISO) to withdraw the earlier shutdown notice to meet local area reliability needs in 2019 pursuant to CPUC decision (D.18-06-030). The CAISO's 2019 Local Capacity Technical Analysis Final Report (released May 15, 2018) identified that at least one Ormond Beach unit was needed to meet local capacity requirements, and this need could not be addressed with other alternatives in time to meet the 2019 calendar year.

On January 23, 2020, the SACCWIS approved a compliance date extensions report and voted in favor of a recommendation to the State Water Board that included an extension of the compliance date for Ormond Beach Generating Station for three years until December 31, 2023. The SACCWIS recommendation was based on the megawatt need identified in California Public Utilities Commission (CPUC) Decision (D.)19-11-016. On September 1, 2020, the State Water Board considered the SACCWIS recommendation and adopted an amendment to the OTC Policy that established a final compliance date for the Discharger of December 31, 2023. Once the amendment to the OTC Policy is approved by the Office of Administrative Law (OAL), this Order implements the Final Compliance Date of December 31, 2023. If the final compliance date is further extended, the Order contains provisions to automatically incorporate such changes and need not be reopened.

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As long as the Facility remains operational, this Order includes requirements implementing the OTC Policy, including a requirement for the Discharger to submit annual reports to the Regional Water Board documenting the Facility's effort and progress towards achieving full compliance with the OTC Policy.

- 3.3.8 **Trash Amendments.** The State Water Board adopted the *Amendment to the Ocean Plan 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 became effective upon U.S. EPA approval on January 12, 2016. The Trash Amendments amended the Ocean Plan to establish a narrative water quality objective for trash and a prohibition on the discharge of trash, implemented through permits issued pursuant to CWA section 402(p), waste discharge requirements, or waivers of waste discharge requirements.

Consistent with the Trash Amendments, this Order implements the narrative objective of the Trash Provisions through a prohibition of trash discharges to the NPDES discharge point. This Order includes monitoring requirements and effluent limitations for solids to control in the discharge. It also requires the Discharger to develop and implement a Best Management Practices Plan (BMPP), which shall include specific BMPs used as wastewater control measures that the Discharger will undertake to prevent the discharge of trash from the Facility to the Pacific Ocean. The Discharger is required to detail and submit to the Regional Water Board annually (through their annual BMPP submittal) specific BMPs employed to control and prohibit the discharge of trash and other pollutants from the Facility.

3.4. Impaired Water Bodies on the 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 develops and adopts TMDLs that specify WLAs for point sources and load allocations (LAs) for non-point sources, as appropriate.

The U.S. EPA approved the State's 2014 and 2016 303(d) list of impaired water bodies on April 6, 2018. Certain receiving waters in the Los Angeles Region do not fully support beneficial uses and therefore have been classified as impaired on the 303(d) List of Water Quality Limited Segments (hereinafter 303(d) list) and have been scheduled for TMDL development. The Facility discharges to Ormond Beach. The 2014 and 2016 State Water Resources Control Board (State Water Board) California 303(d) List classified Ormond Beach (Offshore and Nearshore) as an impaired water. The pollutant of concern is indicator bacteria. A Total Maximum Daily Load (TMDL) for indicator bacteria is scheduled for completion in 2027. This Order includes monitoring requirements for indicator bacteria.

3.5. Other Plans, Policies and Regulations

3.5.1. Climate Change Adaptation and Mitigation

On March 07, 2017 the State Water Board adopted a resolution in recognition of the challenges posed by climate change that requires a proactive approach to climate change in all State Water Board actions, including drinking water

regulation, water quality protection, and financial assistance (Resolution No. 2017-0012). The resolution lays the foundation for a response to climate change that is integrated into all State Water Board actions, by giving direction to the State Water Board divisions and encouraging coordination with the Regional Water Boards. The Los Angeles Water Board adopted a similar resolution, “A Resolution to Prioritize Actions to Adapt and Mitigate the Impacts of Climate Change on the Los Angeles Region’s Water Resources and Associated Beneficial Uses” (Resolution No. R18-004) on May 10, 2018. The resolution summarizes the steps taken so far to address the impacts of climate change within the Los Angeles Water Board’s programs and lists a series of steps to move forward. These include the identification of potential regulatory adaptation and mitigation measures that could be mitigated on a short-term and long-term basis by each of the Los Angeles Water Board’s programs to take into account, and assist in mitigating where possible, the effects of climate change on water resources and associated beneficial uses. This Order contains provisions to require planning and actions to address climate change impacts in accordance with both the State and Regional Water Boards’ resolutions.

The Permittee shall develop a Climate Change Effects Vulnerability Assessment and Management Plan (Climate Change Plan) and submit the Climate Change Plan to the Regional Water Board for the Executive Officer’s approval if and when a ROWD is submitted for permit renewal of this Order. The Climate Change Plan shall include an assessment of short and long term vulnerabilities of facilities and operations as well as plans to address vulnerabilities of collection systems, facilities, treatment systems, and outfalls for predicted impacts in order to ensure that facility operations are not disrupted, compliance with permit conditions is achieved, and receiving waters are not adversely impacted by discharges. Control measures shall include, but are not limited to, emergency procedures, contingency plans, alarm/notification systems, training, backup power and equipment, and the need for planned mitigations to ameliorate climate-induced impacts including, but not limited to, changing influent and receiving water quality and conditions, as well as the impact of rising sea level (where applicable), wildfires, storm surges, and back-to-back severe storms that are expected to become more frequent.

4. 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 CFR section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 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.

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4.1. Discharge Prohibitions.

Effluent and receiving water limitations in this Board Order are based on the CWA, Basin Plan, State Water Board's plans and policies, USEPA guidance and regulations, and best practicable waste treatment technology. This order authorizes the discharge of OTC water, low volume wastes, and storm water from Discharge Points 001 only as described in sections 2.1.2, 2.1.3, and 2.1.4 of this Fact Sheet. It does not authorize any other type of discharge.

4.2. Technology-based Effluent Limitations (TBELs)

4.2.1. Scope and Authority.

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 CFR 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 in the receiving water. The discharge authorized by this Order must meet federal technology-based requirements based on (1) Best Professional Judgment (BPJ) in accordance with 40 CFR section 125.3 and (2) Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category in 40 CFR part 423.

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

- a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.
- b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.
- d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

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The CWA requires U.S. EPA 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 CFR 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 CFR section 125.3.

4.2.2. Applicable TBELs

Pursuant to section 306 (b) (1) of the CWA, U.S. EPA has established standards of performance for the steam electric power point source category, for existing and new sources, at 40 CFR 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 CFR § 423.10) Standards of performance for existing facilities (instead of NSPS) are applicable to discharges originating from the Facility because its construction was completed or commenced prior to publication of regulations on November 19, 1982, which proposed standards of performance for the industry. The following are applicable technology based-standards of performance (BPT and BAT) applicable to the Facility from the effluent limitation guidelines for existing sources at 40 CFR part 423. The guidelines do not include standards of performance based on BCT.

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

Table F-8. Process Water Summary

| Outfall | Waste Stream | ELG Classification |
|---------------------|--|----------------------------|
| Discharge Point 001 | Once-through cooling water | Once-through cooling water |
| Discharge Point 001 | Auxiliary boiler blowdown | Low-volume waste source |
| Discharge Point 001 | Boiler condensate overboard | Low volume waste source |
| Discharge Point 001 | Reverse osmosis reject water | Low-volume waste source |
| Discharge Point 001 | Demineralizer regeneration wastes | Low-volume waste source |
| Discharge Point 001 | In-plant floor drains | Low-volume waste source |
| Discharge Point 001 | Seal Water (Service Water) | Low-volume waste source |
| Discharge Point 001 | Yard drains (storm water runoff) | Not subject to ELG |
| Discharge Point 001 | Bulk chemical storage area drains (storm water runoff) | Not subject to ELG |
| Discharge Point 001 | In-plant drainage system (storm water runoff) | Not subject to ELG |

Discharges from the Facility covered under 40 CFR part 423 include low volume wastes and once-through cooling water at Discharge Point 001.

There are no BCT requirements in 40 CFR section 423.14. The BPT requirements in 40 CFR section 423.12 and the BAT requirements in 40 CFR section 423.13 apply to the Facility's once-through cooling water and low volume waste sources at Discharge Point 001.

a. Standards of Performance Based on BPT

Applicable effluent limitations established based on 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 CFR § 423.12 (b) (1)].
- ii. There shall be no discharge of polychlorinated biphenyl (PCB) compounds such as those commonly used for transformer fluid [40 CFR § 423.12 (b) (2)].
- iii. Low volume wastes are defined as those non-cooling wastewater sources for which specific limitations are not established by the effluent limitation guidelines at 40 CFR part 423. The quantity of pollutants discharged from low volume waste sources shall not exceed the quantity determined by multiplying the flow of the low volume waste sources times the concentration listed in the following table [40 CFR § 423.12 (b) (3)]:

Table F-9. BPT Effluent Limitations for Low Volume Wastes

| Parameter | Units | Average of Daily Values for 30 Consecutive Days Shall Not Exceed (Note a) | Maximum for Any 1 Day (Note b) |
|----------------|-------|---|--------------------------------|
| TSS | mg/L | 30.0 | 100.0 |
| Oil and Grease | mg/L | 15.0 | 20.0 |

Footnotes for Table F-9

- a. Applied as an average monthly (30-day average) limitation.
- b. Applied as a maximum daily limitation.

End of Footnotes for Table F-9

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

Table F-10. BPT Effluent Limitations for Once-through Cooling Water

| Parameter | Units | Average Concentration | Maximum Concentration |
|-------------------------|-------|-----------------------|-----------------------|
| Free available chlorine | mg/L | 0.2 | 0.5 |

- 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 in any plant may discharge free available or total residual chlorine at any one time, unless the Facility can demonstrate to the Regional Water Board that the units in a particular location cannot operate at or below this level of chlorination [40 CFR § 423.12 (b) (8)]

b. Standards of Performance Based on BAT

- i. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid [40 CFR § 423.13 (a)].
- ii. For any plant with a total rated electric generating capacity of 25 or more megawatts, the quantity of pollutants discharged in once-through cooling water from each discharge point shall not exceed the quantity determined by multiplying the flow of once-through cooling water from each discharge point times the concentration listed in the following table [40 CFR § 423.13 (b) (1)]:

Table F-11. BAT Effluent Limitations for Once-Through Cooling Water

| Parameter | Units | Maximum Concentration |
|-------------------------|-------|-----------------------|
| Total Residual Chlorine | mg/L | 0.20 |

- iii. Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the Discharger demonstrates to the permitting authority that discharge for more than two hours per day is required for macroinvertebrate control. [40 CFR § 423.13 (b) (2)].

c. Total Residual Chlorine Variance

In August 1983, the then owner and operator of the Facility (Southern California Edison, or SCE) submitted an application for a variance under section 301(g) of the CWA from BAT requirements for total residual chlorine (TRC). In September 1984, SCE also applied for a variance for TRC from the 1983 Ocean Plan objectives. In July 1988, the State Board adopted Resolution 88-80 that granted an exception from the 1983 Ocean Plan for TRC. The Discharger received an EPA-approved variance for total residual chlorine pursuant to section 301(g) of the CWA in May 1996, with the following conditions:

- i. The effluent from Discharge Point 001 must meet an alternate proposed maximum daily effluent limitation (PMEL) of 0.399 mg/L (instantaneous maximum) based on daily sampling at Discharge Point 001 during periods of chlorination.
- ii. The effluent from Discharge Point 001 must meet a chronic toxicity daily maximum limit of 7.5 TUc. The chronic toxicity tests must be conducted quarterly and must be representative of the actual discharge conditions (at a minimum) or of the alternate PMEL of 0.399 mg/L. This means that, at a minimum, the effluent samples must be chlorinated in the laboratory to levels consistent with the maximum TRC effluent concentration measured during the previous 3 months' chlorination events. This

requirement to chlorinate samples in the laboratory applies only if the recorded effluent chlorine concentrations exceed the BAT limit of 0.2 mg/L during the previous 3 months.

- iii. In the event effluent chronic toxicity limitations are exceeded at Discharge Point 001, the Discharger shall increase the monitoring frequency at the subject outfall to monthly in accordance with the NPDES permit. This Order does not require monthly accelerated monitoring but instead requires that the Discharger implement four five-concentration toxicity tests at two week intervals over an eight week period, which is a more stringent standard than that contained in the 301 (g) approval. If the chronic toxicity limitation is exceeded again during the accelerated monitoring period, the Discharger shall conduct a toxicity reduction evaluation (TRE). The TRE shall be conducted in accordance with U.S. EPA's most current TRE/toxicity identification evaluation (TIE) manuals.
- iv. The variance can be reviewed and revised by U.S. EPA at any time if subsequent information indicates that the alternate PMEL will not result in compliance with all 301(g) criteria. This information includes, but is not limited to, subsequent chronic toxicity tests, receiving water monitoring data, and TIE/TRE findings indicating that the discharge of TRC at concentrations greater than the BAT limit of 0.2 mg/L results in exceedance of the toxicity limitation.

In 1987, in coordination with the City of Los Angeles Department of Water and Power, SCE conducted a study on the concentrations of chlorine measured in the receiving water during chlorination of the condensers. The study showed that chlorine was not detected outside the zone of initial dilution during a chlorination event.

The Discharger conducted a study on February 17, 1995 to determine the time during the chlorination cycle that the peak residual chlorine concentration occurs in the ocean discharge to ensure that compliance monitoring samples for TRC are collected at the time of highest chlorine level in the combined effluent. The study indicated that the maximum levels of chlorine in the effluent occur about 11 minutes from the start of chlorination. After the study, the Discharger modified their sampling procedures in accordance with the above-mentioned results to ensure that compliance monitoring samples are collected at or near the time of peak chlorine levels in the effluent.

In a letter dated October 1997 (entitled "*Special Chlorine Study for 301(g) Variances*"), the Discharger documented the performance of chronic toxicity testing of effluent samples artificially spiked with chlorine in the laboratory for both the BAT level of 0.2 mg/L and the maximum chlorine level (0.399 mg/L) allowed by the 301(g) variance. The toxicity levels did not differ between the BAT and 301(g) spiked samples and were below the Ocean Plan limitation of 7.5 TUC for Discharge Point 001. While the Facility retains the ability to chlorinate, the Discharger has elected not to utilize disinfection during recent years.

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Table F-12. Total Residual Chlorine Effluent Limitation with Variance

| Parameter | Units | Proposed Modified Effluent Limitation |
|----------------------------------|-------|---------------------------------------|
| Total Residual Chlorine (Note a) | mg/L | 0.399 (Note b) |

Footnotes for Table F-12

- a. If other oxidants are used, this shall be the total of all oxidants reported as residual chlorine.
- b. This limit is applicable to the sampling during periods of chlorination. The U.S. EPA and State Water Board approved Ocean Plan Exception utilized a minimum initial dilution of 6.5 and the duration of chlorination is 20 minutes per event (State Water Board Resolution No. 88-80).

End of Footnotes for Table F-12

4.2.3. Summary of TBELs

The Facility discharges to the Pacific Ocean via Discharge Point 001 a combination of once-through cooling water and in-plant low volume wastes as defined in 40 CFR part 423 with the ELGs as provided in the previous section. In addition, the Facility discharges storm water for which ELGs have not been specified.

40 CFR 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 discharges from each individual waste stream is in compliance with 40 CFR part 423, effluent limitations have been established at the discharge of each in-plant waste stream before commingling with other waste streams and being discharged through Discharge Point 001.

As listed in Table F-10 and Table F-11, 40 CFR part 423 prescribed ELGs in the once-through cooling water waste stream for total residual chlorine as a maximum concentration of 0.2 mg/L (as listed in Table F-11), and for free available chlorine as an average concentration of 0.2 mg/L and a maximum concentration of 0.5 mg/L (as listed in Table F-10). In 2013 EPA published a document *Technical Development Document for the Proposed Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category* (EPA-821-R-13-002), which proposes revisions to the ELGs for the steam electric power generation point source category based on a review of the significant changes in treatment technologies for the industry over the last three decades; Table 1-1 of this document provides a summary of the current steam electric ELGs as codified at 40 CFR part 423, and references the maximum concentration of 0.2 mg/L for total residual chlorine as an instantaneous maximum limitation, and the maximum concentration of 0.5 mg/L and the average concentration of 0.2 mg/L for free available chlorine as an instantaneous maximum and average (over a single chlorine release period) limitation. Therefore, to be consistent with 40 CFR section 423.11 and the 2013 EPA document (EPA -821-R-13-002), consistent with Order No. R4-2015-0172, this Order is applying the ELGs in the once-through cooling water waste stream for total residual chlorine as an instantaneous maximum effluent limitation of 0.2 mg/L, and for free available chlorine as an

instantaneous maximum effluent limitation of 0.5 mg/L and an average concentration effluent limitation of 0.2 mg/L during the chlorine release period (discharge is limited to 2 hrs/day/unit and simultaneous discharge of chlorine from multiple units is prohibited). Limitations for total residual chlorine and free available chlorine based on ELGs of the once-through cooling water are applied directly as limitations in the combined effluent to Discharge Point 001 with consideration of structural constraints and consistent with Order No. R4-2015-0172. Consistent with Order No. R4-2015-0172, the PMEL of 0.399 mg/L for total residual chlorine as authorized by the 301(g) variance approval replaces the ELG concentration of 0.2 mg/L during a chlorination event. This Order applies the PMEL as an instantaneous maximum limitation for the combined final effluent at Discharge Point 001.

Effluent limitations in 40 CFR section 423.12(b)(11) and section 423.13(g) specify that, “at the permitting authority’s discretion, the quantity of pollutant allowed to be discharged may be expressed as a concentration limitation instead of the mass based limitations” specified in the regulation. Consistent with the previous Order, technology-based effluent limitations in this Order are expressed both as concentration and mass based limitations except for instantaneous maximum limitation and average concentration limitation for total residual and free available chlorine, which will be expressed only in concentration based limits. A mass-based effluent limitation is not appropriate for instantaneous maximum and average concentration effluent limitations for free available chlorine and total residual chlorine because the discharge periods are too short (instantaneous maximum) or are variable (average concentration of chlorination period, which is limited to 2 hours per day per generating unit) such that they are not translatable to limitations in terms of mass loading per day.

This Order establishes the following technology-based effluent limitations.

a. Discharge Point 001 (Monitoring Location EFF-001)

- i. **PCBs.** There shall be no discharge of PCBs. This limitation is based on 40 CFR section 423.12(b)(2). This limitation has been applied in this Order as a Discharge Prohibition.
- ii. The Discharger shall maintain compliance with the effluent limitations contained in the following table. The limitation for total residual chlorine is based on the variance from BAT requirements for total residual chlorine approved by EPA pursuant to section 301(g) of the CWA. The limitation for free available chlorine is based on 40 CFR section 423.12(b)(6)

Table F-13. Effluent Limitations at Discharge Point 001 (Monitoring Location EFF-001)

| Parameter | Units | Average Concentration | Instantaneous Maximum |
|--|-------|-----------------------|-----------------------|
| Total Residual Chlorine (Notes a and c) | mg/L | --- | 0.399 (Note b) |
| Free Available Chlorine (Note c) | mg/L | 0.2 (Note d) | 0.5 |

Footnotes for Table F-13

- a. If other oxidants are used, this shall be the total of all oxidants reported as residual chlorine
- b. This limit is applicable to the sampling during periods of chlorination. Total residual chlorine may not be discharged from any single generating unit for more than 20 minutes per condenser half, per shift.
- c. Discharge is limited to 2 hrs/day/unit. Simultaneous discharge of chlorine from multiple units is prohibited.
- d. Applied as an average limitation during the chlorine release period.

End of Footnotes for Table F-13

b. Low Volume Wastes (Monitoring Location INT-001A, and INT-001C)

- i. **pH.** The pH shall be within the range of 6.0 -9.0. This limitation is based on 40 CFR section 423.12(b)(1).
- ii. **PCBs.** There shall be no discharge of PCBs. This limitation is based on 40 CFR parts 423.12 (b) (2) and 423.13 (a).
- iii. The quantity of pollutants discharged from low volume waste sources shall not exceed the concentration listed in the following tables. These limitations are based on 40 CFR part 423.12 (b) (3).

Table F-14. Effluent Limitations for Low Volume Wastes and Storm Water at Retention Basin (INT-001A)

| Parameter | Units (Note a) | Average Monthly (30-day average) | Maximum Daily |
|----------------|-------------------|----------------------------------|---------------|
| TSS | mg/L | 30.0 | 100.0 |
| TSS | lbs/day | 205 | 684 |
| Oil and Grease | mg/L | 15.0 | 20.0 |
| Oil and Grease | lbs/day | 103 | 137 |

Footnotes for Table F-14

- a. The mass-based (lbs/day) limits are based on a flow rate of 0.82 MGD for low volume wastes and storm water from the retention basins.

End of Footnotes for Table F-14

Table F-15. Effluent Limitations for Seal Water Low Volume Wastes (INT-001C)

| Parameter | Units (Note a) | Average Monthly (30-day average) | Maximum Daily |
|----------------|-------------------|----------------------------------|---------------|
| TSS | mg/L | 30.0 | 100.0 |
| TSS | lbs/day | 30.0 | 100.1 |
| Oil and Grease | mg/L | 15.0 | 20.0 |
| Oil and Grease | lbs/day | 15.0 | 20.0 |

Footnotes for Table F-15

- a. The mass-based (lbs/day) limits are based on a flow rate of 0.12 MGD for seal water low volume wastes.

End of Footnotes for Table F-15

4.3. Water Quality-Based Effluent Limitations (WQBELs)

4.3.1. Scope and Authority

CWA Section 301(b) and 40 CFR 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 CFR 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, water quality-based effluent limitations (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). WQBELs must also be consistent with the assumptions and requirements of TMDL Waste Load Allocations (WLAs).

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.

4.3.2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan and Ocean Plan designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives for all waters. The beneficial uses of the Pacific Ocean affected by the discharge have been described previously in this Fact Sheet.

Table 3 of the Ocean Plan (2019) includes the following water quality objectives for toxic pollutants and whole effluent toxicity:

- i. 6-month median, daily maximum, and instantaneous maximum objectives for 18 chemicals and chemical characteristics, including total residual chlorine, for the protection of marine aquatic life.
- ii. 30-day average objectives for 20 non-carcinogenic chemicals for the protection of human health.
- iii. 30-day average objectives for 42 carcinogenic chemicals for the protection of human health.
- iv. Daily maximum objectives for acute and chronic toxicity protection of marine aquatic life.

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- v. For radioactivity objectives, Table 3 indicates that “Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, section 30253 of the California Code of Regulations....”

4.3.3. Determining the Need for WQBELs

a. Reasonable Potential Analysis Methodology

The need for effluent limitations based on water quality objectives in Table 3 of the Ocean Plan was evaluated in accordance with 40 CFR section 122.44(d) and Appendix VI of the Ocean Plan, which provides guidance for statistically determining the reasonable potential for a discharged pollutant to exceed an objective. The statistical RPA approach as included in the Ocean Plan is promulgated into a computer program RPcalc developed by the State Water Resources Control Board.

This Order uses RPcalc to calculate the one-sided, upper confidence bound (UCB) at 95% confidence level of the 95th percentile effluent population for a pollutant after complete mixing. The UCB of a pollutant is then compared to its corresponding numeric water quality objective. If the UCB exceeds its objective, then the discharge is determined to cause, have the reasonable potential to cause, or contributes to an in-stream excursion above the objective for that pollutant, and an effluent limitation for that pollutant is required. Conversely, if the UCB for a pollutant is lower than its objective, then an effluent limitation for that pollutant may not be required depending on other available information and best professional judgement (BPJ).

The water quality objectives contained in Table 3 of the Ocean Plan are summarized in the table below for pollutants which were detected in the effluent and/or for which effluent limitations were included for Discharge Point 001 in Order No. R4-2015-0172.

Table F-16. Ocean Plan Water Quality Objectives

| Parameter | Units | 6-Month Median | Daily Maximum | Instantaneous Maximum | 30-Day Average |
|---|-------|----------------|------------------------|-----------------------|----------------|
| Objectives for Protection of Marine Aquatic Life | | --- | --- | --- | --- |
| Arsenic | µg/L | 8 | 32 | 80 | --- |
| Cadmium | µg/L | 1 | 4 | 10 | --- |
| Copper | µg/L | 3 | 12 | 30 | --- |
| Lead | µg/L | 2 | 8 | 20 | --- |
| Mercury | µg/L | 0.04 | 0.16 | 0.4 | --- |
| Nickel | µg/L | 5 | 20 | 50 | --- |
| Selenium | µg/L | 15 | 60 | 150 | --- |
| Silver | µg/L | 0.7 | 2.8 | 7 | --- |
| Zinc | µg/L | 20 | 80 | 200 | --- |
| Cyanide | µg/L | 1 | 4 | 10 | --- |
| Total Chlorine Residual | µg/L | 2 | 8 | 60 | --- |
| Ammonia as N | µg/L | 600 | 2400 | 6000 | --- |
| Acute Toxicity | µg/L | -- | 0.3 (TU _a) | -- | --- |
| Chronic Toxicity | µg/L | -- | 1 (TU _c) | -- | --- |

| Parameter | Units | 6-Month Median | Daily Maximum | Instantaneous Maximum | 30-Day Average |
|--|-------|----------------|---------------|-----------------------|------------------------|
| Objectives for Protection of Human Health – Non-Carcinogens | | --- | --- | --- | --- |
| Antimony | µg/L | -- | -- | -- | 1,200 |
| Chromium (III) | µg/L | -- | -- | -- | 190,0000 |
| Thallium | µg/L | | | | 2 |
| Tributyltin | µg/L | | | | 0.0014 |
| Objectives for Protection of Human Health – Carcinogens | | --- | --- | --- | --- |
| Beryllium | µg/L | -- | -- | -- | 0.033 |
| Bis(2-ethylhexyl) phthalate | µg/L | -- | -- | -- | 3.5 |
| PCBs (Note a) | µg/L | -- | -- | -- | 0.000019 |
| TCDD equivalents (Note b) | µg/L | -- | -- | -- | 3.9 x 10 ⁻⁹ |

Footnotes for Table F-16

- PCBs shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.
- TCDD Equivalents shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners:

$$\text{Dioxin-TEQ (TCDD Equivalents)} = \sum (C_x \times \text{TEF}_x)$$

Where:

C_x = concentration of dioxin or furan congener x

TEF_x = TEF for congener x

Toxicity Equivalency Factors

| Isomer Group | Toxicity Equivalency Factor (TEF) |
|---------------------|-----------------------------------|
| 2,3,7,8-tetra CDD | 1.0 |
| 2,3,7,8-penta CDD | 0.5 |
| 2,3,7,8-hexa CDDs | 0.1 |
| 2,3,7,8-hepta CDD | 0.01 |
| Octa CDD | 0.001 |
| 2,3,7,8 tetra CDF | 0.1 |
| 1,2,3,7,8 penta CDF | 0.05 |
| 2,3,4,7,8 penta CDF | 0.5 |
| 2,3,7,8 hexa CDFs | 0.1 |
| 2,3,7,8 hepta CDFs | 0.01 |
| Octa CDF | 0.001 |

End of Footnotes for Table F-16

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

- Endpoint 1: An effluent limitation is required and monitoring is required;
- Endpoint 2: An effluent limitation is not required and the Regional Water Board may require monitoring; and
- Endpoint 3: The RPA is inconclusive, monitoring is required, and an existing effluent limitation may be retained or a permit reopener clause may be included to allow inclusion of an effluent limitation if future monitoring warrants the inclusion.

For constituents that have an insufficient number of monitoring data points or a substantial number of non-detected data with a reporting limit higher than the respective water quality objective, the RPA result is likely to be inconclusive.

b. **Minimum Initial Dilution**

The implementation provisions for Table 3 in section III.C.4.d. of the Ocean Plan (2019) specify that the minimum initial dilution is the lowest average initial dilution within any single month of the year. Dilution estimates are to be based on observed waste flow characteristics, observed receiving water density structure, and the assumption that no currents of sufficient strength to influence the initial dilution process flow across the discharge structure. Before establishing a dilution credit for a discharge, it must first be determined if, and how much, receiving water is available to dilute the discharge.

As discussed in section 2.2 of this Fact Sheet, Order No. 01-092 established the minimum initial dilution factor (Dm) for discharges from the Facility at Discharge Point 001 to be 6.5 to 1 which was retained in Order No. R4-2015-0172 for all parameters. Order No. R4-2015-0172 included a requirement for the Discharger to perform a supplemental mixing zone study and collect additional receiving water monitoring data to supplement the dilution studies previously conducted for the Facility in an effort to identify the location of the boundary of the zone of initial dilution (ZID) based on modelling results. The Discharger conducted the mixing zone study and submitted a "Supplemental Mixing Zone Study" (Mixing Zone Study) to the Regional Water Board on September 11, 2017. The Regional Water Board determined that the dilution ratio of 6.5 to 1 remained appropriate for the Facility. This Order is incorporating a minimum probable initial dilution (Dm) of 6.5:1 for discharges through Discharge Point 001 and is applied to the RPA and WQBELs established herein.

c. **RPA for Ocean Plan Table 3 Pollutants**

The RPA for the effluent was conducted using effluent monitoring data collected between November 2015 and March 2020 during the term of the previous Order No. R4-2015-0172. The dilution credit applicable to the

ocean outfall (6.5:1) was used to evaluate reasonable potential in accordance with the procedures contained in the Ocean Plan.

Data for total residual chlorine was not collected during the period for which data was analyzed since no chlorination has occurred during the discharges. As discussed in sections 4.2.2.c of this Fact Sheet, the Discharger has been granted an exception to the Ocean Plan under State Water Board Resolution 88-80 and is instead subject to an alternate WQBEL for total residual chlorine. As stated in the Ocean Plan exception (Resolution 88-80) *“the alternative effluent limitation should result in meeting the numeric chlorine receiving water objectives at the edge of the zone of initial dilution allowed by the Ocean Plan.”* Given the facility type and since the Discharger may still use chlorination, the Los Angeles Water Board has determined that total residual chlorine still has reasonable potential based on Step 13 of the RPA procedure described in Appendix VI of the Ocean Plan, which states that one may conduct an RPA on the basis of best professional judgment.

The Regional Water Board has determined that chronic toxicity also demonstrates reasonable potential based on Step 13 of the RPA procedure described in Appendix VI of the Ocean Plan. As discussed previously, State Water Board Resolution 88-80 and a 301(g) exception approved by EPA granted the Discharger a Proposed Modified Effluent Limit (PMEL) for total residual chlorine discharges from the Facility. The granting of the exception by EPA was contingent upon the Facility meeting a chronic toxicity effluent limitation of 7.5 TUC which demonstrates that application of the PMEL is not causing or contributing to an exceedance of water quality standards for chronic toxicity. Therefore, consistent with the findings of the May 1996 301(g) exception, the Regional Water Board has determined that the discharge demonstrates reasonable potential to cause or contribute to an exceedance of water quality standards for chronic toxicity in the receiving water (Endpoint 1). An effluent limitation for chronic toxicity has been retained in this Order.

Based on the evaluation using the *RPcalc* 2.2 software tool, the discharge demonstrates reasonable potential (RP) for acute toxicity (Endpoint 1). However, the chronic toxicity effluent limitation in this Order will be implemented in lieu of the acute toxicity effluent limitation as chronic toxicity measures the aggregated toxic effects of pollutants from the discharge. The chronic toxicity analysis and limit provide an opportunity for evaluation of acute toxicity while the test evaluates reductions in growth, and reproduction as well as lethality (acute). The implementation provisions for Table 3 in section C.4.c.(4) of the Ocean plan states:

“Dischargers shall conduct chronic toxicity* testing if the minimum initial* dilution of the effluent **falls below 100:1** at the edge of the mixing zone. “

As discussed in Section 4.3.3.b of this Fact Sheet, the minimum initial dilution factor for discharges from the Facility at Discharge Point 001 is 6.5

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to 1 at the edge of the mixing zone. Therefore, chronic toxicity testing is implemented in this Order.

Using the *RPcalc* 2.2 software tool, the discharge demonstrates RP for ammonia (as N) (Endpoint 1). Therefore, this Order includes effluent limitations for ammonia (as N).

Based on the evaluation using the *RPcalc* 2.2 software tool, the discharge does not demonstrate reasonable potential for antimony, arsenic, cadmium, chromium (III), chromium VI, copper, lead, mercury, nickel, selenium, silver, zinc, tributyltin, and bis(2-ethylhexyl) phthalate (Endpoint 2). Order No. R4-2015-0172 included effluent limitations for chromium (VI), mercury, and silver. Thus, as specified in the Ocean Plan, effluent limitations for these parameters have not been retained in this Order but monitoring is required for these parameters including the other parameters that yielded Endpoint 2.

For many of the Table 3 of the Ocean Plan parameters, most of the sampling events yielded non-detect results; there are a few parameters that had insufficient data for the RPA. Evaluation for these parameters using the *RPcalc* 2.2 software tool yielded Endpoint 3, which denotes an inconclusive RPA result. The Ocean Plan indicates monitoring for these parameters is required and that any existing effluent limitations for these parameters contained in Order R4-2015-0172 shall be retained. Order No. R4-2015-0172 did not include WQBELs for parameters that obtained Endpoint 3 results from the RPA. Therefore, effluent limitations for all parameters displaying Endpoint 3 have not been included in this Order; however, monitoring for each of them is included.

A summary of the RPA results is provided below for pollutants which were detected in the effluent and/or for which effluent limitations were included for Discharge Point 001 in Order No. R4-2015-0172.

Table F-17. RPA Results Summary

| Pollutant | Units | n (Note a) | MEC (Note b and c) | Most Stringent Criterion | RPA Endpoint (Note d) |
|---|-------|---------------|-----------------------|--------------------------|--------------------------|
| Objectives for Protection of Marine Aquatic Life | --- | --- | --- | --- | --- |
| Arsenic, Total Recoverable | µg/L | 10 | 2.2 | 8 | Endpoint 2 |
| Cadmium, Total Recoverable | µg/L | 10 | 0.0868 | 1 | Endpoint 2 |
| Chromium (Hexavalent), Total Recoverable | µg/L | 46 | 1.04 | 2 | Endpoint 2 |
| Copper, Total Recoverable | µg/L | 10 | 3.8 | 3 | Endpoint 2 |
| Lead, Total Recoverable | µg/L | 10 | 0.125 | 2 | Endpoint 2 |
| Mercury | µg/L | 45 | 0.18 | 0.04 | Endpoint 2 |
| Nickel, Total Recoverable | µg/L | 10 | 5.6 | 5 | Endpoint 2 |
| Selenium, Total Recoverable | µg/L | 10 | 2.8 | 15 | Endpoint 2 |
| Silver, Total Recoverable | µg/L | 47 | 0.289 | 0.7 | Endpoint 2 |
| Zinc, Total Recoverable | µg/L | 10 | 28.2 | 20 | Endpoint 2 |
| Cyanide | µg/L | 11 | 0.96 | 1 | Endpoint 3 |

| Pollutant | Units | n (Note a) | MEC (Note b and c) | Most Stringent Criterion | RPA Endpoint (Note d) |
|--|-------|---------------|------------------------|--------------------------|--------------------------|
| Total Chlorine Residual | µg/L | 0 | (Note e) | 2 | Endpoint 3 |
| Ammonia as N | µg/L | 12 | 69200 | 600 | Endpoint 1 |
| Acute Toxicity | TUa | 3 | 0.66 | 0.3 | Endpoint 1 |
| Chronic Toxicity | TUc | 15 | Pass | 1 | Endpoint 1 (Note f) |
| Objectives for Protection of Human Health – Non-Carcinogens | --- | --- | --- | --- | --- |
| Antimony | µg/L | 9 | 0.532 | 1200 | Endpoint 2 |
| Chromium (III) | µg/L | 9 | 0.414 | 190,000 | Endpoint 2 |
| Thallium | µg/L | 10 | 0.146 | 2 | Endpoint 3 |
| Tributyltin | µg/L | 11 | 0.0031 | 0.0014 | Endpoint 2 |
| Objectives for Protection of Human Health – Carcinogens | --- | --- | --- | --- | --- |
| Beryllium (Note g) | µg/L | 10 | 0.161 | 0.033 | Endpoint 3 |
| Bis(2-ethylhexyl) phthalate | µg/L | 10 | 20 (Note h) | 3.5 | Endpoint 2 |
| PCBs (Note i) | µg/L | 11 | <0.35 | 0.000019 | Endpoint 3 |
| TCDD equivalents (Note j) | µg/L | 9 | 0.455x10 ⁻⁸ | 3.9x10 ⁻⁹ | Endpoint 3 |

Footnotes for Table F-17

- Number of data points available for the RPA.
- The highest reported value is summarized in the table.
- Note that the reported MEC does not account for dilution. The RPA does account for dilution; therefore, it is possible for a parameter with an MEC in exceedance of the most stringent criteria not to present an Endpoint 1.
- Endpoint 1 – RP determined, limit required, monitoring required.
Endpoint 2 – no RP, monitoring may be established.
Endpoint 3 – RPA was inconclusive, carry over previous limitations if applicable, and establish monitoring.
- No monitoring data was collected for this pollutant because no chlorination occurred during the term of Order No. R4-2015-0172.
- Chronic toxicity possesses reasonable potential based on Step 13 (other available information) of Ocean Plan and the special terms and conditions required in the CWA 301(g) variance for chlorine, which is contingent upon the discharge at Discharge Point 001 meeting a chronic toxicity limit of 7.5 TU_c as a daily maximum.
- The MEC for beryllium is based on one estimated detected value of 0.161 ug/L.
- The MEC for bis(2-ethylhexyl) phthalate is based on suspected sampling and/or laboratory contamination that has been addressed through improved sampling and handling procedures in the subsequent monitoring periods.
- PCBs shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.
- TCDD Equivalents shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners.

$$\text{Dioxin Concentration} = \sum_{i=1}^{17} (TEQ_i) = \sum_{i=1}^{17} (CI_i)(TEF_i)$$

Where:

C_x = concentration of dioxin or furan congener x

TEF_x = TEF for congener x

Toxicity Equivalency Factors

| Isomer Group | Toxicity Equivalency Factor (TEF) |
|---------------------|-----------------------------------|
| 2,3,7,8-tetra CDD | 1.0 |
| 2,3,7,8-penta CDD | 0.5 |
| 2,3,7,8-hexa CDDs | 0.1 |
| 2,3,7,8-hepta CDD | 0.01 |
| Octa CDD | 0.001 |
| 2,3,7,8 tetra CDF | 0.1 |
| 1,2,3,7,8 penta CDF | 0.05 |
| 2,3,4,7,8 penta CDF | 0.5 |
| 2,3,7,8 hexa CDFs | 0.1 |
| 2,3,7,8 hepta CDFs | 0.01 |
| Octa CDF | 0.001 |

End of Footnotes for Table F-17

4.3.4. WQBEL Calculations

From the Table 3 - Water Quality Objectives of the Ocean Plan (2019), the effluent limitations are calculated according to Equation 1 of the Ocean Plan for all parameters, except for acute toxicity (if applicable) and radioactivity:

$$C_e = C_o + D_m(C_o - C_s)$$

Where:

C_e = the effluent limitation ($\mu\text{g/L}$)

C_o = the water quality objective to be met at the completion of initial dilution ($\mu\text{g/L}$)

C_s = background seawater concentration ($\mu\text{g/L}$)

D_m = minimum probable initial dilution expressed as parts seawater per part wastewater

As discussed in sections 2.2 and 4.3.3.b of this Fact Sheet, the D_m of 6.5:1, was previously approved by the State Water Board and the Regional Water Board based on the Mixing Zone Study submitted to the Regional Water Board on September 11, 2017.

Table 3 of the Ocean Plan establishes background concentrations (represented as " C_s ") for some pollutants to be used when determining reasonable potential. In accordance with Table 3 implementation procedures, C_s equals zero for all

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pollutants that do not have background concentrations in Table 3. The background concentrations provided in Table 3 are summarized below:

Table F-18. Background Seawater Concentrations (Cs)

| Parameter | Ocean Plan Table 3 Background Concentration (µg/L) |
|-----------|---|
| Arsenic | 3 |
| Copper | 2 |
| Mercury | 0.0005 |
| Silver | 0.16 |
| Zinc | 8 |

Section III.C.8.d of the Ocean Plan describes compliance determination for Table 3 pollutants for dischargers that use a large volume of ocean water for once-through cooling and states:

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

In accordance with Ocean Plan implementation procedures for dischargers using a large volume of ocean water for once-through cooling, this Order establishes WQBELs applicable to the combined discharge through Discharge Point 001 as concentration-based limitations for all Ocean Plan Table 3 parameters requiring instantaneous maximum; and as both concentration- and mass-based limitations for all Table 3 parameters requiring 6-month median, daily maximum, and average monthly (30-day average) limitations. This Order also establishes WQBELs applicable to the low volume in-plant waste streams as mass-based limitations for all Table 3 parameters requiring 6-month median, average monthly (30-day average), and daily maximum effluent limitations, with compliance determined by the **total in-plant waste streams mass discharge** taken together, which will be calculated as the sum of the mass discharges from the individual in-plant waste streams.

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

Ammonia (as N)

Compute effluent concentration limitations and values at Discharge Point 001 using the Equation: $C_e = C_o + Dm(C_o - C_s)$:

$$C_e = 600 \text{ µg/L} + 6.5 (600 \text{ µg/L} - 0) = 4,500 \text{ µg/L (6-Month Median)}$$

$$C_e = 2400 \text{ µg/L} + 6.5 (2400 \text{ µg/L} - 0) = 18,000 \text{ µg/L (Daily Maximum)}$$

$$C_e = 6000 \mu\text{g/L} + 6.5 (6000 \mu\text{g/L} - 0) = 45,000 \mu\text{g/L} \text{ (Instantaneous Maximum)}$$

The mass-based limitations (L_e) applicable at the combined effluent flow at Discharge Point 001 are based on a maximum flow of 688.2 MGD at Monitoring Location EFF-001.

$$L_e = 4500 \mu\text{g/L} \times (688.2 \text{ MGD}) \times 0.00834 = 25,828 \text{ lb/day (6-Month Median)}$$

$$L_e = 18000 \mu\text{g/L} \times (688.2 \text{ MGD}) \times 0.00834 = 103,313 \text{ lb/day (Daily Maximum)}$$

Compute the total maximum mass emission limitations (L_t) of ammonia (as N) for the in-plant low volume waste streams based on a maximum combined flow of 0.94 MGD of all low volume wastes discharged at Monitoring Location INT-001A, and INT-001C:

$$L_t = 0.00834 \times 4500 \mu\text{g/L} \times 0.94 \text{ MGD} = 36.06 \text{ lbs/day (6-Month Median)}$$

$$L_t = 0.00834 \times 18000 \mu\text{g/L} \times 0.94 \text{ MGD} = 141.11 \text{ lbs/day (Daily Maximum)}$$

4.3.5. Temperature

The temperature limitations included in Order No. R4-2015-0172 were based on specific water quality objectives for existing coastal water dischargers in the Thermal Plan and are retained in this Order. For existing dischargers, the Thermal Plan requires that “[e]levated temperature wastes shall comply with limitations necessary to assure protection of the beneficial uses and areas of special biological significance.”

In compliance with the Thermal Plan and in accordance with Regional Water Board specifications, a thermal effect study of the discharge was completed in 1984. The study demonstrated that wastes discharges from the power plant were in compliance with the Thermal Plan and beneficial uses of the receiving waters are protected, as required by section 316(a) of the CWA. Thus, the power plant with temperature discharges prescribed in the Order is in compliance with the Thermal Plan.

4.3.6. Whole Effluent Toxicity

Whole effluent toxicity (WET) testing protects receiving waters from the aggregate toxic effect of a mixture of pollutants in the effluent or pollutants that are not typically monitored. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a short or a longer period of time and may measure a sublethal endpoint such as reproduction or growth in addition to mortality. A constituent present at low concentrations may exhibit a chronic effect; however, a higher concentration of the same constituent may be required to produce an acute effect.

Although chronic toxicity data did not demonstrate statistical reasonable potential, Regional Water Board staff has determined that chronic toxicity possesses reasonable potential based on Step 13 (other available information) from the Ocean Plan and the special terms and conditions required in the CWA 301(g) variance for chlorine, which is contingent upon the discharge at Discharge Point 001 meeting a chronic toxicity limit of 7.5 TUc as a daily maximum (or TST Pass at an IWC of $100/(6.5+1) = 13.3$ percent effluent). Order No. R4-2015-0172 contained chronic toxicity limitation based on the

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implementation of the U.S. EPA's 2010 Test of Significant Toxicity (TST) statistical approach. The chronic toxicity effluent limitations are as stringent as necessary to protect the Ocean Plan Water Quality Objective for chronic toxicity.

The Ocean Plan addresses the application of chronic and acute toxicity requirements based on the minimum initial dilution factor for ocean discharges. The minimum probable initial dilution (D_m) for Discharge Point 001 is 6.5:1, which is below 100:1. In accordance with the Ocean Plan, dischargers are required to conduct chronic toxicity monitoring with minimum initial dilution factors below 100:1. The Ocean Plan establishes a daily maximum chronic toxicity objective of $1.0 TU_c = 100/(\text{No Observed Effect Concentration (NOEC)})$ using a 5-concentration hypothesis test. This Order evaluates chronic toxicity using U.S. EPA's 2010 Test of Significant Toxicity (TST) hypothesis testing statistical approach. This statistical approach is consistent with the Ocean Plan in that it provides the maximum protection to the environment, since it more reliably identifies acute and chronic toxicity than the current NOEC hypothesis-testing approach (See Ocean Plan, Section III.F and Appendix I).

In June 2010, U.S. EPA published a guidance document titled *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010), in which they recommend the following: "Permitting authorities should consider adding the TST approach to their implementation procedures for analyzing valid WET data for their current NPDES WET Program." The TST approach is another statistical option for analyzing valid WET test data. Use of the TST approach does not result in any changes to U.S. EPA's WET test methods. Section 9.4.1.2 of U.S. EPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/0136, 1995), recognizes that, "the statistical methods recommended in this manual are not the only possible methods of statistical analysis." The TST approach can be applied to acute (survival) and chronic (sublethal) endpoints and is appropriate to use for both freshwater and marine U.S. EPA WET test methods. The TST statistical approach is the superior statistical approach for addressing statistical uncertainty when used in combination with U.S. EPA's toxicity test methods and is implemented in federal permits issued by U.S. EPA Region 9.

USEPA's WET testing program and acute and chronic WET methods rely on the measurement result for a specific test endpoint, not upon achievement of specified concentration-response patterns to determine toxicity. USEPA's WET methods do not require achievement of specified effluent or ambient concentration-response patterns prior to determining that toxicity is present. See, Supplementary Information in support of the Final Rule establishing WET test methods at 67 Fed. Reg. 69952, 69963, November 19, 2002. Nevertheless, USEPA's acute and chronic WET methods require that effluent and ambient concentration-response patterns generated for multi-concentration acute and chronic toxicity tests be reviewed - as a component of test review following statistical analysis - to ensure that the calculated measurement result for the toxicity test is interpreted appropriately. (EPA-821-R-02-012, section 12.2.6.2;

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EPA-821-R-02-013, section 10.2.6.2.). In 2000, USEPA provided guidance for such reviews to ensure that test endpoints for determining toxicity based on the statistical approaches utilized at the time the guidance was written (NOEC, LC50's, IC25's) were calculated appropriately (EPA 821-B-00-004).

USEPA designed its 2000 guidance as a standardized step-by step review process that investigates the causes for 10 commonly observed concentration-response patterns and provides for the proper interpretation of the test endpoints derived from these patterns for NOECs, LC50s, and IC25s, thereby reducing the number of misclassified test results. The guidance provides one of three determinations based on the review steps: (1) that calculated effect concentrations are reliable and should be reported, (2) that calculated effect concentrations are anomalous and should be explained, or (3) that the test was inconclusive and should be repeated with a newly collected sample. The standardized review of the effluent and receiving water concentration-response patterns provided by USEPA's 2000 guidance decreased discrepancies in data interpretation for NOEC, LC50, and IC25 test results, thereby lowering the chance that a truly nontoxic sample would be misclassified and reported as toxic.

Appropriate interpretation of the measurement result from USEPA's TST statistical approach (pass/fail) for effluent and receiving water samples is, by design, independent from the concentration-response patterns of the toxicity tests for those samples. Therefore, when using the TST statistical approach, application of USEPA's 2000 guidance on effluent and receiving waters concentration-response patterns will not improve the appropriate interpretation of TST results as long as all Test Acceptability Criteria and other test review procedures - including those related to Quality Assurance for effluent and receiving water toxicity tests, reference toxicity tests, and control performance (mean, standard deviation, and coefficient of variation) - described by the WET test methods manual and TST guidance, are followed. The 2000 guidance may be used to identify reliable, anomalous, or inconclusive concentration-response patterns and associated statistical results to the extent that the guidance recommends review of test procedures and laboratory performance already recommended in the WET test methods manual. The guidance does not apply to single-concentration (IWC) and control statistical t-tests and does not apply to the statistical assumptions on which the TST is based. The Regional Water Board will not consider a concentration-response pattern as sufficient basis to determine that a TST t- test result for a toxicity test is anything other than valid, absent other evidence. In a toxicity laboratory, unexpected concentration-response patterns should not occur with any regular frequency and consistent reports of anomalous or inconclusive concentration-response patterns or test results that are not valid will require an investigation of laboratory practices.

Any Data Quality Objectives or Standard Operating Procedure used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent or receiving water toxicity test measurement results from the TST statistical approach which include a consideration of concentration-response patterns and/or PMSDs must be submitted for review by the Regional

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Water Board, in consultation with USEPA and the State Water Board's Quality Assurance Officer and Environmental Laboratory Accreditation Program (40 CFR section 122.41(h)).

As discussed in section 4.3.3 of this Fact Sheet, the three acute toxicity test results during the previous permit cycle displayed reasonable potential to cause or contribute to an excursion above water quality objectives for acute toxicity. However, because the chronic toxicity test described above is protective of both the chronic and acute toxicity objectives applicable to the receiving water, this Order does not establish a separate toxicity limitation for acute toxicity. This Order retains the effluent limitations for chronic toxicity established in Order R4-2015-0172. Nevertheless, this Order contains a reopener to allow the Regional Water Board and U.S EPA to modify the permit in the future, if necessary, to make it consistent with any new policy, plan, law, or regulation.

4.4. Final Effluent Limitation Considerations

4.4.1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR § 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, except for chromium VI, mercury, and silver at Discharge Point 001. The effluent limitations for these pollutants have been removed from the Order. Based on available effluent monitoring data collected during the term of Order No. R4-2015-0172, there is no reasonable potential for these parameters (Endpoint 2); therefore, removal of the effluent limitations is appropriate and consistent with CWA section 402(o)(2)(B)(i). Nonetheless, this Order retains effluent monitoring requirements for these parameters to identify any elevated levels of these parameters that may occur in the discharge so that it can be addressed appropriately. The relaxations of effluent limitations are consistent with the anti-backsliding exceptions of the CWA and federal regulations.

4.4.2. Antidegradation Policies

40 CFR Section 131.12 requires that 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. The Regional Water Board's Basin Plan and the Ocean Plan implements, and incorporates by reference, both the state and federal antidegradation policies. Specifically, the Ocean Plan Purpose and Authority indicates "The Board finds further that this plan shall be reviewed at least every three years to guarantee that the current standards are adequate and are not allowing degradation to marine species or posing a threat to public health." As such, compliance with the standards set forth in the Ocean Plan will ensure the discharge does not create degradation of marine species, including demersal fish,

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benthic invertebrates, or attached algae. Compliance with the standards will also result in the use of best practicable treatment or control of the discharge.

This Order does not provide for an increase in the permitted design flow or allow for a reduction in the level of treatment. Treatment at the Facility has not been reduced relative to that contemplated under Order No. R4-2015-0172. Therefore, no net increase in the quantity of flow discharged or decrease in level of treatment is permitted under this Order. The final limitations in this Order hold the Discharger to performance levels that will not cause or contribute to water quality impairment or degradation of water quality, and compliance with the requirements in this Order will result in the best practicable treatment or control of the discharge. The removal of effluent limitations for chromium VI, mercury, and silver will not allow degradation of the receiving water because these pollutants are present in the effluent at levels below background concentrations or at very low concentrations after considering the allowable dilution factor and the volume of the discharge. Therefore, the permitted discharge is consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution 68-16.

4.4.3. **Mass-based Effluent Limitations**

40 CFR § 122.45(f)(1) requires that, except under certain conditions, or for certain pollutants, all permit limits, 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 limitation on a case-by-case basis limitation based on mass are infeasible because the mass or pollutant cannot be related to a measure of production, and permit conditions ensure that dilution will not be used as a substitution for treatment.

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

$$\text{Mass (lbs/day)} = \text{flow rate (MGD)} \times 8.34 \times \text{effluent limitation (mg/L)}$$

where: Mass = mass limitation for a pollutant (lbs/day)

Effluent limitation = concentration limit for a pollutant (mg/L)

Flow rate = discharge flow rate (MGD)

Mass-based effluent limitations applicable to Discharge Point 001 are calculated based on a total permitted discharge flow of 688.2 MGD. Compliance of these mass-based effluent limitation shall be met at the effluent through Discharge Point 001, as measured at the Effluent Monitoring Location EFF-001.

4.4.4. **Stringency of Requirements for Individual Pollutants**

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on free available chlorine, oil and grease, PCBs, pH, and TSS. Restrictions on these pollutants are discussed in section 4.2 of this Fact Sheet. This

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Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The procedures for calculating the individual water quality-based effluent limitations are based on the Ocean Plan, most recently amended, effective January 26, 2016. All beneficial uses and water quality objectives contained in the Ocean Plan were approved under state law and submitted to and approved by U.S. EPA and are applicable water quality standards pursuant to 40 CFR 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.

4.4.5. Summary of Final Effluent Limitations

Table F-19. Summary of Final Effluent Limitations for Combined Discharge at Discharge Point 001 (Monitoring Location EFF-001)

| Parameter | Units | 6-Month Median | Maximum Daily | Instantaneous Minimum / Maximum | Basis (Note a) |
|---|---|----------------|-----------------------|---------------------------------|----------------|
| pH | pH Units | --- | --- | 6.0 / 9.0 | E, OP, ELG |
| Total Residual Chlorine (Notes b and c) | mg/L | --- | --- | 0.399 (Note d) | E, 301(g), ELG |
| Free Available Chlorine (Note c) | mg/L | 0.2 (Note e) | --- | 0.5 | E, ELG |
| Chronic Toxicity (Note f) | Pass or Fail, % Effect (Test of Significant Toxicity (TST)) | --- | Pass or % Effect < 50 | --- | E, BP, TST |
| Ammonia (as N) | µg/L (Note g) | 4,500 | 18,000 | 45,000 | OP |
| Ammonia (as N) | lbs/day (Note h) | 25,828 | 103,313 | ---- | OP |
| Temperature (Note i) | °F | --- | --- | --- | E, TP |
| PCBs (Note j and k) | µg/L | --- | --- | --- | ELG |
| Radioactivity (Note l) | pCi/L | --- | --- | --- | E, OP |

Footnotes for Table F-19

a. Abbreviations:

BPJ = Best Professional Judgment,
OP = Ocean Plan (2019),
BP = Basin Plan,
ELG = Effluent Limitation Guidelines and Standards (40 CFR part 423),
301(g) = 301(g) Variance and State Water Board Resolution 88-80,

E = Existing Order No. R4-2015-0172,
TP = Thermal Plan
TST = TST: Test of Significant Toxicity.

- b. If other oxidants are used, this shall be the total of all oxidants reported as residual chlorine.
- c. Discharge is limited to 2 hrs/day/unit. Simultaneous discharge of chlorine from multiple units is prohibited.
- d. This limit is applicable to the sampling during periods of chlorination. Each condenser half (two in a single unit) is chlorinated for up to 20 minutes per chlorination cycle, and there is a maximum of one chlorination cycle per 24-hour period. For chlorine discharges of up to 20 minutes per condenser half, the instantaneous maximum limit is 0.399 mg/l. For chlorine discharges exceeding 20 minutes, the maximum total residual chlorine limitation shall be the BAT limitation of 0.2 mg/L
- e. Applied as an average limitation during the chlorine release period.
- f. Pass” or “Fail” and “% Effect” for Maximum Daily Effluent Limitation (MDEL). During a calendar month, exactly three independent toxicity tests are required for routine monitoring when one toxicity test results in “Fail”.
- g. The concentration limits were calculated based on the Ocean Plan, using the Equation:

$$C_e = C_o + D_m(C_o - C_s)$$
 Where: C_e = the effluent limitation ($\mu\text{g/L}$)
 C_o = the water quality objective to be met at the completion of initial dilution ($\mu\text{g/L}$)
 C_s = background seawater concentration ($\mu\text{g/L}$)
 D_m = minimum probable initial dilution expressed as parts seawater per part wastewater (6.5:1)
- h. The mass-based limitations are based on a maximum combined effluent flow from Discharge Point 001 of 688.2 MGD and are calculated as follows:
 Mass-based limitation (lbs/day) = $C \times Q_m \times 0.00834$
 Where:
 C = Concentration-based limitations ($\mu\text{g/L}$) calculated in the combined discharge (cooling water and in-plant wastes).
 Q_m = 688.2 MGD, the maximum flow for the combined cooling water and low volume wastes discharge to Discharge Point 001.
- i. The temperature of wastes discharged shall not exceed 105°F during normal operation of the Facility. During heat treatment, the temperature of wastes discharged shall not exceed 125°F except during adjustment of the recirculation gate at which time the temperature of wastes discharged shall not exceed 135°F. Temperature fluctuations during gate adjustment above 125°F shall not last more than 30 minutes.
- j. The Discharge of PCBs is prohibited (See Order, Prohibitions section 3.9).
- k. PCBs mean the sum of Aroclor-1016, 1221, 1232, 2342, 1248, 1254, and 1260.
- l. Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, section 30253, California Code of Regulations.

End of Footnotes for Table F-19

Table F-20. Summary of Final Effluent Limitations for Low Volume Wastes and Storm Water from Retention Basin at Monitoring Location INT-001A

| Parameter | Units | Average monthly (30-day average) | Maximum Daily | Instantaneous Minimum / Maximum | Basis (Note a) |
|-----------|----------|----------------------------------|---------------|---------------------------------|----------------|
| pH | pH Units | --- | --- | 6.0 / 9.0 | E, ELG |

| Parameter | Units | Average monthly (30-day average) | Maximum Daily | Instantaneous Minimum / Maximum | Basis (Note a) |
|---------------------|------------------|----------------------------------|---------------|---------------------------------|----------------|
| PCBs (Note b and c) | µg/L | --- | --- | --- | E, ELG |
| TSS | mg/L | 30.0 | 100.0 | --- | E, ELG |
| TSS | lbs/day (Note d) | 205 | 684 | --- | E, ELG |
| Oil and Grease | mg/L | 15.0 | 20.0 | --- | E, ELG |
| Oil and Grease | lbs/day (Note d) | 103 | 137 | --- | E, ELG |

Footnotes for Table F-20

- E = Existing Order No. R4-2015-0172, ELG = Effluent Limitation Guidelines and Standards (40 CFR part 423).
- PCBs mean the sum of Aroclor-1016, 1221, 1232, 2342, 1248, 1254, and 1260.
- There shall be no discharge of PCBs (See Order, Prohibitions section 3.9).
- The mass-based limitations are based on a maximum low volume wastes and storm water flow from the retention basins of 0.82 MGD and are calculated as follows:

$$\text{Mass-based limitation (lbs/day)} = C \times Q_m \times 0.00834$$

Where:

C = Concentration-based limitations (µg/L) as prescribed in 40 CFR Part 423.

Q_m = 0.82 MGD, the maximum flow for low volume wastes and storm water from the retention basins at INT-001A.

End of Footnotes for Table F-20

Table F-21. Summary of Effluent Limitations for Seal Water Low Volume Wastes (Monitoring Location INT-001C)

| Parameter | Units | Average Monthly (30-Day Average) | Maximum Daily | Instantaneous Minimum / Maximum | Basis (Note a) |
|---------------------|------------------|----------------------------------|---------------|---------------------------------|----------------|
| pH | pH Units | --- | --- | 6.0 / 9.0 | E, ELG |
| TSS | mg/L | 30.0 | 100.0 | --- | E, ELG |
| TSS | lbs/day (Note b) | 30.0 | 100.1 | --- | E, ELG |
| Oil and Grease | mg/L | 15.0 | 20.0 | --- | E, ELG |
| Oil and Grease | lbs/day (Note b) | 15.0 | 20.0 | --- | E, ELG |
| PCBs (note c and d) | µg/L | --- | --- | --- | E, ELG |

Footnotes for Table F-21

- E = Existing Order, ELG = Effluent Limitation Guidelines and Standards (40 CFR part 423)
- The mass-based limitations are based on a maximum seal water low volume wastes flow of **0.12 MGD** and are calculated as follows:
Mass-based limitation (lbs/day) = Flow (mgd) x Concentration (µg/L) x 0.00834 (conversion factor)
Where:
Concentration ((µg/L) = the concentration-based limitations as prescribed in 40 CFR Part 423.
Flow (mgd) = 0.12 MGD, the maximum flow for seal water low volume wastes at INT- 001C.
- PCBs mean the sum of Aroclor-1016, 1221, 1232, 2342, 1248, 1254, and 1260 when monitoring using U.S. EPA method 608.
- There shall be no discharge of PCBs (See Order Prohibitions section I3.9).

End of Footnotes for Table F-21

Table F-22. Summary of Effluent Limitations for In-Plant Waste Streams (Total) (Note a)

| Pollutant | Units (Note b) | 6-month median | Maximum Daily | Basis (Note c) |
|----------------|-------------------|----------------|---------------|-------------------|
| Ammonia (as N) | lbs/day | 36.06 | 141.11 | OP |

Footnotes for Table F-22

- a. Compliance shall be determined from the sum of mass discharges of each parameter in the individual in-plant low volume waste streams.
Total Mass Emission per day (lb/day) = Mass Emission at INT-001A (calculated using flow measured at INT-001A) (lb/day) + Mass Emission at INT-001C (calculated using flow measured at INT-001C) (lb/day)
The Total Mass Emission per day (lb/day) of each day will be compared with the maximum daily effluent limitations as set forth in this table for compliance determination; compliance with the 6-month median effluent limitations shall be determined by the median of Total Mass Emission per day values over any 180-day period.
- b. The mass-based limitations are based on a maximum combined flow of 0.94 MGD for all in-plant waste streams, and are calculated as follows:
Mass-based limitation (lbs/day) = $C \times Q_m \times 0.00834$
Where:
C = Concentration-based limitations (µg/L) calculated in the combined discharge (cooling water and in-plant wastes).
 Q_m = 0.94 MGD, the maximum combined flow for all in-plant waste streams.
- c. OP = Ocean Plan

End Footnotes for Table F-22

4.5. Interim Effluent Limitations – Not Applicable

4.6. Land Discharge Specifications – Not Applicable

5. RATIONALE FOR RECEIVING WATER LIMITATIONS

5.1. Surface Water

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

5.2. Groundwater– Not Applicable

6. RATIONALE FOR PROVISIONS

6.1. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR section 122.41, and additional conditions applicable to specified categories of permits

in accordance with 40 CFR 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 CFR 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) of 40 CFR allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 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).

6.2. Special Provisions

6.2.1. Reopener Provisions

These provisions are based on 40 CFR part 123. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new regulations, modification in sludge use or disposal practices, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan and/or Ocean Plan.

6.2.2. Special Studies and Additional Monitoring Requirements

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

6.2.3. Best Management Practices and Pollution Prevention

Storm Water Pollution Prevention Plan (SWPPP). This Order requires the Discharger to update, as necessary, and continue to implement a SWPPP. The SWPPP will outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff from being discharged directly into the Pacific Ocean at Ormond Beach. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with storm water. SWPPP requirements are included as Attachment G, based on 40 CFR 122.44(k).

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

Spill Contingency Plan (SCP). This Order requires the Discharger to develop or update and implement a SCP to control the discharge of pollutants. The SCP

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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.

6.2.4. Construction, Operation, and Maintenance Specifications

Climate Change Effects Vulnerability Assessment and Mitigation Plan:

The Discharger plans to retire the Facility to comply with the OTC Policy by the final compliance date established in Section 3.E, Table 1 of the OTC Policy. As of the date of the adoption of this Order, the final compliance date for this Facility is December 31, 2023. If the Permittee is authorized by the OTC Policy to continue operations for another permit term, the Permittee shall consider the impacts of climate change as it affects the operation of the treatment facility due to flooding, wildfire, or other climate-related changes. The Permittee shall develop a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) to assess and manage climate change related effects associated with the Facility operation, water quality and beneficial uses.

6.2.5. Special Provisions

a. Once-Through Cooling Water Compliance Schedule

i. Compliance Date and Alternatives

Under Track 1 of the State Water Board's *Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling* (OTC Policy), an existing power plant must reduce the intake flow rate to a level commensurate with closed-cycle wet cooling such that the through-screen intake velocity does not exceed 0.5 foot per second. Track 1 requires a minimum 93 percent reduction in intake flow rate compared to the unit's design intake flow rate for each unit.

Track 2 is available to existing plants that demonstrate that Track 1 is infeasible, and such plants must generally reduce impingement and entrainment by 90 percent of the reduction required under Track 1 (i.e. 83.7 percent) unless the California Independent System Operator, California Energy Commission, or Public Utilities Commission (CPUC) 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.³ In the interim, the OTC Policy requires plants to implement measures to mitigate impingement and entrainment impacts.

³ On October 9, 2014, the State Water Board and NRG entered a Settlement Agreement where the Parties agreed that Track 2 compliance could be achieved by an 83.7% or greater reduction in impingement mortality and entrainment using screens or other technology controls and operational measures pursuant to Policy section 2.A.(2)(a)(ii) and 2.A.(2)(b)(ii). ("Settlement Agreement and Release Regarding Water Quality Control Policy on the Use of Coastal And Estuarine Waters for Power Plant Cooling Between State Water Resources Control Board and NRG", § 2.2.4.)

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. According to its implementation plan, the Facility consists of two units: Unit 1 is rated 745 MW and Unit 2 is rated 775 MW, and both use ocean water for once-through cooling. Per its original implementation plan, the Discharger proposed compliance using Track 2. However, as discussed in section 2.5 of this Fact Sheet the Discharger is opting to comply with the OTC Policy by retiring the Facility by the final compliance date for the Facility established in Section 3.E, Table 1 of the OTC Policy, or any later date established in accordance with the Final Compliance Date suspension provisions in Section 2.B(2) of the OTC Policy).

On September 1, 2020, the State Water Board considered the SACCWIS recommendation and adopted an amendment to the OTC Policy that established a final compliance date for the Discharger of December 31, 2023.

This Order requires the Discharger to provide annual progress reports to the Regional Water Board to document the Facility's progress towards compliance with the OTC Policy:

Table F-23. Progress Update Schedule for Compliance with OTC Policy

| Task | Compliance Date | Completion Date |
|---|---|-------------------|
| Submit Workplan for OTC compliance under Track 2. | December 1, 2016 | November 29, 2016 |
| Submit first progress report. | December 1, 2017 | December 1, 2017 |
| Submit second progress report on compliance actions | December 1, 2018 | October 29, 2018 |
| Submit third progress report on compliance actions | December 1, 2019 | November 26, 2019 |
| Submit fourth progress report on compliance actions | December 1, 2020 | --- |
| Submit fifth progress report on compliance actions | December 1, 2021 | --- |
| Submit sixth progress report on compliance actions | December 1, 2022 | --- |
| Achieve full compliance with Units 1 and 2; submit final progress report. | Date established in § 3.E, Table 1 of the OTC Policy (currently December 31, 2023), or any later date established in accordance with the Final Compliance Date suspension provisions in Section 2.B(2) of the OTC Policy. | --- |

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ii. **OTC Policy Immediate and Interim Requirements:**

The OTC Policy further requires the immediate and interim requirements:

- (a) 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 than nine inches, or install other exclusion devices, deemed equivalent by the State Water Board.
- (b) 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.
- (c) 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.

The implementation plan and subsequent correspondence submitted by the Discharger indicated that there is an existing large organism exclusion device installed at the Facility. This device originally had bars spaced on 14" centers. Under section 2(C)(1) of the Policy, the Discharger was required to retrofit this installation with bars spaced no greater than 9" on center no later than October 1, 2011. The Discharger completed engineering of the design modifications and scheduled modification to be completed by May 31, 2011, well in advance of the October 1 deadline.

With regards to intake flows when the generating units are offline and no longer generating power, the Discharger's implementation plan indicated that the Facility flows (and corresponding operations) are typically concentrated in the hottest summer months, when demand for generation is highest. However, the Facility may be dispatched at any time, and there has not been a single month in the last five years where there have been no power generation-related flows, and consumption during the same month varies considerably from year to year. Accordingly, while a discussion of monthly generation trends can indicate when flows are more or less likely to occur during the year based on likely electrical demand, they are only illustrative, and the Discharger cannot guarantee that the annual generation profile in a given year will look exactly the same as another year. The Facility operating procedures have been modified as of October 1, 2011, to specifically require circulating water pumps (CWPs) to be removed from service whenever the units are not directly engaged in power-generating activities or critical system maintenance, as such terms are defined in the Policy. The Facility has certain essential equipment that is directly

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related to power generation, such as air compressors, that continue to operate even if the units are offline, and a low-volume stream bearing cooling water that is required to service this equipment. In addition, a low-volume 45-gallon per minute pump at the intake is also used to provide flows for the bearing cooling water heat exchangers when the units are out of service, but this flow is returned to the intake structure and does not increase intake flows. In addition, the Facility must start a circulator as a requirement of its NPDES permit, and consistent with the Ocean Plan, whenever onsite retention basins must be drained to maintain minimum required freeboard. These low-volume flows are directly related to power generation and critical system maintenance and permit requirements.

In compliance with OTC Policy Section 2(C)2, the Discharger does not operate the OTC system unless it is directly engaged in power generating activities or is performing critical system maintenance. In addition, the Discharger complies with OTC Policy Section 2(C)3b, by providing funding to the California Coastal Conservancy, working with the California Ocean Protection Council, for mitigation projects directed toward increases in marine life associated with the State's Marine Protected Areas.

6.2.7. Compliance Schedules (Not Applicable)

7. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 CFR 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.

7.1. Influent Monitoring

This Order requires the Discharger to conduct an Impingement Survey.

The Once-Through Cooling (OTC) Policy requires owners or operators of existing power plants to implement measures to mitigate interim impingement and entrainment impacts resulting from their cooling water intake structures. The interim mitigation period commenced on October 1, 2015, and continues up to and until owners or operators achieve final compliance with the OTC Policy.

Consistent with the settlement agreement of October 9, 2014, with the State Water Board, the Discharger proposed to comply with interim mitigation for its Ormond Beach Generating Station by providing funding for mitigation projects directed towards increasing marine life in marine protected areas in the geographic region of the facility. The Discharger provides annual impingement data to the State Water Board to calculate the interim mitigation fee.

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7.2. Effluent Monitoring

7.2.1. Discharge Point 001 (Monitoring Location EFF-001)

- a. Periodic monitoring has been established for pollutants where effluent limitations at Discharge Point 001 (Monitoring Location EFF-001) have been established, on a continuous basis (temperature), daily basis (i.e., flow, free available chlorine, and total residual chlorine), weekly basis (i.e., pH), monthly basis (i.e., ammonia and PCBs), and quarterly basis (i.e., chronic toxicity). This monitoring is necessary to determine compliance with effluent limitations and to provide data for evaluating reasonable potential for the discharge to cause or contribute to an exceedance of applicable water quality objectives contained in the Ocean Plan during future permit reissuances. Monitoring for pollutants with limits have been increased from quarterly to monthly to assure that sufficient information is available to definitively establish reasonable potential or the absence thereof.
- b. Semiannual monitoring for total coliform, fecal coliform, and *Enterococcus*, and semiannual monitoring for nitrate are established in this Order to assess the impact of bacteria and nitrogen in the discharge on the beneficial uses of the receiving water.
- c. Monitoring for the remaining pollutants contained in Table 1 of the Ocean Plan which do not have effluent limitations have a monitoring frequency of twice per year (except radioactivity, which has a monitoring frequency of once per year) per Ocean Plan requirements. Data generated from this monitoring is necessary for evaluating reasonable potential for the discharge to cause or contribute to an exceedance of applicable water quality objectives contained in the Ocean Plan for future permit reissuances.

7.2.2. Low Volume Wastes (Monitoring Locations INT-001A, and INT-001C)

- a. Monitoring requirements for low volume wastes in Order No. R4-2015-0172 have been retained in the MRP (Attachment E). These monitoring requirements are necessary to determine compliance with effluent limitations established in this Order.
- b. Monthly monitoring has been established for those pollutants where effluent limitations at Monitoring Location INT-001A, and INT-001C are established in this Order (i.e., pH, total suspended solids, oil and grease, ammonia, and PCBs). These monitoring frequencies are necessary to determine compliance with the effluent limitations.
- c. Monitoring for the remaining pollutants contained in Table 3 of the Ocean Plan which do not have effluent limitations at Monitoring Location INT-001A, and INT-001C, have a monitoring frequency of twice per year per Ocean Plan requirements. Data generated from this monitoring is necessary for evaluating reasonable potential for the discharges in future permit reissuances.
- d. The Discharger is required to monitor all in-plant waste flows prior to them commingling with other waste streams. This Order requires monitoring at

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Monitoring Locations INT-001A, and INT-001C to assess compliance with internal in-plant waste streams effluent limitations.

- e. Monitoring of the total mass emission of ammonia for the in-plant waste streams is required before combining with once-through cooling water flow. Compliance shall be determined by the total mass emission for each parameter reported, calculated as the sum of the mass emissions from the individual in-plant waste streams as measured in INT-001A, and INT-001C, utilizing the actual flow rates of the individual in-plant waste streams.

7.3. Whole Effluent Toxicity Testing Requirements

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

The chronic toxicity IWC for Discharge Point 001 is $100/(6.5+1) = 13.3$ percent effluent.

Section III.C.3.c.(4) of the Ocean Plan requires dischargers to conduct chronic toxicity testing if the minimum initial dilution of the effluent is below 100:1. The Facility has an initial dilution ratio of 6.5 to 1. Therefore, this Order includes monitoring requirements for chronic toxicity in the MRP (Attachment E).

This Order retains additional requirements to treat samples with chlorine to simulate effluent chlorine concentrations greater than BAT levels. This requirement is based on conditions for the 301(g) variance approval as stated in U.S. EPA's *Final Analysis of 301(g) Variance Application for the Southern California Edison Company Ormond Beach Generating Station*, on May 23, 1996. The chlorine treatment is only required if any of the effluent chlorine results from the previous three months exceed BAT limitations of 0.2 mg/L.

7.4. Receiving Water Monitoring

7.4.1. Water Quality Monitoring

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

7.4.2. Benthic Sediments Monitoring

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

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7.4.3. Bioaccumulation Monitoring

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

7.4.4. Zone of Initial Dilution

As per section II.A.3 of the Ocean Plan, compliance with the water quality objectives as included in the Ocean Plan shall be determined from samples collected at stations representative of the area within the waste field where initial dilution is completed (outside the zone of initial dilution). Southern California Edison (SCE), the former owner of the Facility, conducted a series of thermal studies spanning from 1968 to 1975 for the Facility in which they observed the rate of spreading of the effluent field, using temperature data from multiple receiving water monitoring stations of the thermal plume spread and aerial observation of the tracer dye patch spread, over time, as a result of discharges from the Facility. The studies showed that 80% of the temperature decay was attained within about 400 feet of the discharge site. Based on this study, it was determined that the boundary of the zone of initial dilution was likely approximately 400 feet from the point of discharge. In addition, SCE conducted a mixing zone study for three representative generation stations in the 1980s, the results of which were applied to this Facility to determine the appropriate dilution factor for the final combined discharge; a dilution ratio of 6.5 for this Facility was approved by the State Water Board that was utilized in Order No. 01-092 and was retained in Order No. R4-2015-0172. (refer to section 2.2 of this Fact Sheet). Order No. R4-2015-0172 required the Discharger to perform a supplemental mixing zone study and collect additional receiving water monitoring data to supplement the dilution studies previously conducted for the Facility in an effort to identify the location of the boundary of the zone of initial dilution (ZID) based on modelling results. On September 11, 2017, the Discharger submitted a “Supplemental Mixing Zone Study” (Mixing Zone Study) and the Regional Water Board determined that the current dilution ratio of 6.5 for the Facility remains appropriate. Based on the data provided in the Mixing Zone Study, the Regional Water Board also determined that the ZID radius at 328 feet from the discharge terminus is appropriate and shall be designated as Monitoring Location ZID-001 for future compliance monitoring.

This Order is incorporating a minimum probable initial dilution (Dm) of 6.5:1 for discharges through Discharge Point 001 and designates the ZID radius at 328 feet as Monitoring Location ZID-001. The monitoring data will be used to demonstrate compliance with the water quality objectives as set forth by the provisions of the Ocean Plan.

7.4.5. Regional Monitoring Program

Regional monitoring is focused on questions that are best answered by a region-wide approach that incorporates coordinated survey design and sampling techniques. The major objective of regional monitoring is to collect information required to assess how safe it is to swim in the ocean, how safe it is to eat

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seafood from the ocean, and whether the marine ecosystem is being protected. Key components of regional monitoring include elements to address pollutant mass emission estimations, public health concerns, monitoring of trends in natural resources, assessment of regional impacts from all contaminant sources, and protection of beneficial uses. The final design of regional monitoring programs is developed by means of steering committees and technical committees comprised of participating agencies and organizations and is not specified in this Order/Permit. Instead, for each regional component, the degree and nature of participation of the Permittee is specified. For this Order/Permit, these levels of effort are based upon the Permittee's past participation in regional monitoring programs.

7.5. Other Monitoring Requirements

7.5.1. Monitoring for Discharge of Calcareous Material

Monitoring during the discharge of calcareous material (excluding heat treatment discharge) has been retained from Order No. R4-2015-0172. This monitoring is necessary to evaluate the effect of the discharge on the beneficial uses of the receiving water.

7.5.2. Outfall Inspection

The Discharger shall perform periodic inspections, at least once during this permit term, of the integrity of the final discharge ocean outfall structure and perform any maintenance necessary to prevent deviation from the flow conditions used in modelling the final discharge from the Facility in the mixing zone study.

7.6. Reporting Requirements

7.6.1. Other Reports

On August 15, 2014, USEPA promulgated regulations for cooling water intake regulations. (40 CFR Chapter part 125 and section 122.21(r).) These regulations established application requirements for permit applications and renewals submitted on or after October 14, 2014. In accordance with the regulations, existing facilities that use more than 25 percent of total intake water for cooling purposes and have a design intake flow rate greater than 125 MGD formation must submit information described in 40 CFR 122.21(r)(2) through (r)(13) in order for the Regional Board to determine if the Facility meets the federal standards for impingement and entrainment. Applications for new units must submit information consistent with 40 CFR 122.21(r)(14). Both new units and existing units must submit the information in 40 CFR 125.95(h). The permitting authority has discretion to waive certain requirements where the facility intends to shut down.

The monitoring and reporting requirements in this Order implement the application requirements in the 122.21(r) and 40 CFR 125.95(f). This information is only required if the Discharger seeks to add a new unit at the Facility or decides to continue operation of the Facility beyond the current permit term. Because the Discharger intends to retire the Facility to comply with the OTC Policy, the Regional Water Board has waived all of the information required by 122.21(r)(9) through (13).

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8. PUBLIC PARTICIPATION

The Regional Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the Ormond Beach Power, LLC, Ormond Beach 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.

8.1. 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 and recommendations. Notification was provided through the following:

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/>.

8.2. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Regional Water Board at the address on the cover page of this Order, or by email submitted to losangeles@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 October 19, 2020**

8.3. 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: November 12, 2020
Time: 09:00 a.m.
Location: Remote meeting; no physical location

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.

8.4. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street

Sacramento, CA 95812-0100

Or by email at waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a petition for review, see:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.s.html

8.5. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board at the address below or by calling (213) 576-6600.

Los Angeles Regional Water Quality Control Board
320 W. 4th Street, Suite 200
Los Angeles, CA 90013-2343

The tentative WDRs, comments received and response to comments are also available on the Regional Water Board's website at:

http://www.waterboards.ca.gov/losangeles/board_decisions/tentative_orders/index.shtml

8.6. 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, and phone number.

8.7. Additional Information

Requests for additional information or questions regarding this order should be directed to Rosario Aston via email at rosario.aston@waterboards.ca.gov.

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ATTACHMENT G – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. 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 no later than 90 days from the date of the submittal of the SWPPP to the Regional Water Board (whichever comes first).

2. 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.

3. PLANNING AND ORGANIZATION

3.1 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.

3.2 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 permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this Permit. As examples, facility operators whose facilities are subject to federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

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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4. 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.

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, skim ponds, 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 6.1.4. 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.

5. LIST OF SIGNIFICANT MATERIALS

The SWPPP shall include a list of significant materials¹ 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

¹ "Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); any chemical the facility is required to report pursuant to section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

6. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

The SWPPP shall include a narrative description of the facility's industrial activities, as identified in section 4.5. 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:

- A. **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.
- B. **Material Handling and Storage Areas.** Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.
- C. **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.
- D. **Significant Spills and Leaks.** Describe materials that have spilled or leaked in significant quantities in storm water discharges or authorized non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 Code of Federal Regulations (CFR), part 302) that have been discharged to storm water as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 CFR, 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.

- E. **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 authorized non-storm water discharges and associated drainage area.

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Non-storm water discharges that are not authorized by this Permit, other waste discharge requirements, or other NPDES permits are prohibited. The SWPPP must include BMPs to prevent or reduce contact of authorized non-storm water discharges with significant materials (as defined in Footnote 1 of section 5 above) or equipment.

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

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

7. ASSESSMENT OF POTENTIAL POLLUTANT SOURCES

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

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

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 section 8 below.

8. 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 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 similarly to Table B.

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

8.1 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 8.2. below). Below is a list of non-structural BMPs that should be considered:

- A. Good Housekeeping.** Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility.

- B. Preventive Maintenance.** Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, skim ponds, etc.) as well as other facility equipment and systems.
- C. 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.
- D. 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.
- E. 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.
- F. Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.
- G. 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.
- H. 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.
- I. 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.
- J. Quality Assurance.** This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

8.2 Structural BMPs

Where non-structural BMPs as identified in section 8.1. 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:

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- A. 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.
- B. Retention Ponds.** This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.
- C. Control Devices.** This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.
- D. Secondary Containment Structures.** This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.
- E. Treatment.** This includes inlet controls, infiltration devices, skim ponds, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

9. ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The Facility operator shall conduct one comprehensive site compliance evaluation each year. The SWPPP shall be revised, as appropriate, and submitted to the Regional Water Board along with the annual monitoring report. The revisions shall be implemented no later than 90 days after submission. The evaluation is subject to review by the Regional Water Board Executive Officer and modifications may be required. 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 10.E., for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this 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 5.4.5 of Attachment D.

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10. 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.
- 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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