

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

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX**

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**ORDER R4-2018-XXX
NPDES NO. CA0063401**

**WASTE DISCHARGE REQUIREMENTS AND
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
FOR WEST BASIN MUNICIPAL WATER DISTRICT,
EDWARD C. LITTLE WATER RECYCLING FACILITY,
DISCHARGE TO THE PACIFIC OCEAN,
VIA THE HYPERION TREATMENT PLANT (HTP) “FIVE-MILE OUTFALL”**

The following Permittee is subject to state Waste Discharge Requirements (WDRs) and federal National Pollutant Discharge Elimination System (NPDES) permit requirements, as set forth in this Order:

Table 1. Discharger Information

| | |
|-------------------------|--|
| Discharger | West Basin Municipal Water District ¹ |
| Name of Facility | Edward C. Little Water Recycling Facility (LWRF) |
| Facility Address | 1935 South Hughes Way |
| | El Segundo, CA 90245 |
| | Los Angeles County |

Table 2. Discharge Location

| Discharge Point | Effluent Description | Discharge Point Latitude (North) | Discharge Point Longitude (West) | Receiving Water |
|---|--|-------------------------------------|--|--|
| HTP discharge pipe between the gravity valve and the Ocean outfall diffuser ² | Untreated brine waste (from reverse osmosis treatment) | 33.909722 | 118.392222 | HTP secondary-treated effluent |
| 001 ³ (HTP Discharge Point 002) North Leg South Leg | Untreated brine waste commingled with HTP secondary-treated effluent | 33.911967 33.919333 33.900650 | 118.521450 118.528483 118.527267 | Pacific Ocean |
| SW-002 and SW-003 ⁴ Storm sewer at South Hughes Way | Storm_water runoff | 33.9086 33.90887 | 118.3927 118.391748 | El Segundo retention basin/ Dominguez Channel |

- 1 The West Basin Municipal Water District (West Basin) is a public agency providing wholesale potable water and recycled water, to local water utility companies, industries, municipalities, and a seawater intrusion barrier project.
- 2 The HTP gravity valve is located near Gate B at HTP. LWRF brine effluent enters the discharge brine pipeline to the “five-mile outfall”, downstream of the gravity valve, before the pump station discharge.
- 3 Discharge Point 001 in this Order and previous Order No. R4-2012-0026 corresponds to HTP Discharge Point 002 (“five-mile outfall”) in the HTP Order R4-2017-0045 (NPDES No. CA0109991).
- 4 Storm_water runoff is discharged through Discharge Points [SW-002](#) and [SW-003](#) to an El Segundo storm drain which discharges to an unlined retention basin. Automatically controlled pumps transfer the

Table 3. Administrative Information for State Order

| | |
|--|---|
| The first <u>joint</u> hearing for this Order was held on: | April 12, 2018 |
| This Order was adopted on: | June 14, 2018 |
| This Order shall become effective on: | September 1, 2018 |
| This Order shall expire on: | August 31, 2023 |
| 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 (Title 40, Code of Federal Regulations, part 122.21(d)) |
| The United States Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows: | Major |

I, Deborah J. Smith~~XXXXXX~~, 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 June 14, 2018.

Deborah J. Smith~~XXXXXX~~, Executive Officer

Table 4. Administrative Information for Federal Permit

| | |
|---|--|
| The first <u>joint</u> hearing for this Order was held on: | April 12, 2018 |
| This Permit was adopted on: | June 14, 2018 |
| This Permit shall become effective on: | September 1, 2018 |
| This Permit shall expire on: | August 31, 2023 |
| The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDR's in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than: | 180 days prior to the Permit expiration date (Title 40, Code of Federal Regulations, part 122.21(d)) |
| The United States Environmental Protection Agency and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows: | Major |

I, Tomás Torres, do hereby certify that this Permit with all attachments is a full, true, and correct copy of the Order adopted by the United States Environmental Protection Agency Region IX, on:

Date

Tomás Torres, Water Division Director

contents of the basin to a storm sewer discharging to Dominguez Channel if the liquid level exceeds a high level setpoint. The storm water does not comingle with process water or brine effluent.

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I. FACILITY INFORMATION

Information describing the Edward C. Little Water Recycling Facility (LWRF) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

The California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) and the United States Environmental Protection Agency (USEPA), find:

- A. 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 shall serve 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.
- B. Background and Rationale for Requirements.** The Regional Water Board and USEPA 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.
- C. Notification of Interested Parties.** The Regional Water Board and USEPA have notified the West Basin Municipal Water District (West Basin) and interested agencies and persons of its intent to prescribe this Order 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.
- D. 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. R4-2012-0026, except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the CWC (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Permittee is authorized to discharge from the identified facility and outfalls into waters of the United States and shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board or USEPA from taking enforcement action for past violations of the previous Order.

III. DISCHARGE PROHIBITIONS

- A.** The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into the ocean is prohibited.
- B.** Discharge to designated Areas of Special Biological Significance is prohibited.
- C.** Pipeline discharge of sludge to the ocean is prohibited by federal law. The discharge of municipal and industrial waste sludge directly to the ocean, or into a waste stream that discharges to the ocean, is prohibited by the California Ocean Plan. The discharge of sludge digester supernatant directly to the ocean, or to a waste stream that discharges to the ocean without further treatment, is prohibited.

- D. The treatment, use and disposal of sewage sludge shall be carried out in the manner found to have the least adverse impact on the total natural and human environment.
- E. The by-passing of untreated wastes containing concentrations of pollutants in excess of those in Table 1 or Table 2 of the California Ocean Plan is prohibited.
- F. The bypass or overflow of untreated wastewater or wastes to surface waters or surface water drainage courses is prohibited, except as allowed in Standard Provision I.G. of Attachment D, Standard Provisions.
- G. The discharge of waste that is not brine waste or storm water is prohibited.
- H. The discharge of brine waste at any location different from Discharge Point 001, or storm water at Discharge Points SW-002 or SW-003, is prohibited and constitutes a violation of this Order/Permit. Waste discharged from Discharge Point 001 shall be limited to a maximum of 5.2 MGD of brine waste. The brine waste discharged through Discharge Point 001 shall be discharged in a manner that provides sufficient initial dilution to minimize the concentrations of substances not removed in treatment.
- I. The discharge shall not cause a violation of any applicable federal CWA water quality requirement, or water quality standard adopted by the Regional Water Board or State Water Board as required by the CWA and regulations adopted thereunder. If a more stringent applicable water quality standard is promulgated or approved pursuant to CWA section 303 and amendments thereto, the Regional Water Board and USEPA will revise and modify this Order in accordance with the more stringent standard.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

Effluent limitations for Discharge Point 001 are specified below. The discharge of treated wastewater with constituents in excess of effluent limitations is prohibited.

1. Final Effluent Limitations for Discharge Point 001

- a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, also known as HTP’s “five-mile outfall”, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program, Attachment E.

Table 5. Effluent Limitations¹

| Parameter | Units | Average Monthly ² | Average Weekly | Maximum Daily ³ | 6-month median | Annual Average | Instantaneous Minimum | Instantaneous Maximum ⁴ |
|------------------------------|----------------------|------------------------------|----------------|----------------------------|----------------|----------------|-----------------------|------------------------------------|
| Total Suspended Solids (TSS) | mg/L | 60 | -- | -- | -- | -- | -- | -- |
| | lbs/day ⁵ | 2,600 | -- | -- | -- | -- | -- | -- |

¹ The minimum dilution ratio used to calculate effluent limitations for nonconventional and toxic pollutants for Discharge Point 001 is based on two mixing events, one as the effluent mixes with Hyperion effluent in the pumping facility (40:1) and another where the combined effluents are discharged into the Ocean (96:1), for an entire dilution ratio of $(40 \times (96+1)) = 3,880$ parts seawater and effluent to one part brine.

² For intermittent discharges, the daily value used to calculate the average monthly values shall be considered to equal zero for days on which no discharge occurred.

³ The maximum daily effluent limitations shall apply to 24-hour composite samples.

⁴ The instantaneous maximum effluent limitations shall apply to grab samples.

| Parameter | Units | Average Monthly ² | Average Weekly | Maximum Daily ³ | 6-month median | Annual Average | Instantaneous Minimum | Instantaneous Maximum ⁴ |
|--|----------------------|------------------------------|----------------|----------------------------|----------------|----------------------|-----------------------|------------------------------------|
| pH | standard units | -- | -- | -- | -- | -- | 6.0 | 9.0 |
| Oil and Grease | mg/L | 25 | 40 | -- | -- | -- | -- | 75 |
| | lbs/day ⁵ | 1,080 | 1,730 | -- | -- | -- | -- | 3,250 |
| Settleable Solids | ml/L | 1.0 | 1.5 | -- | -- | -- | -- | 3.0 |
| Turbidity | NTU | 75 | 100 | -- | -- | -- | -- | 225 |
| Ammonia | mg/L | -- | -- | 7,500 | 346 | -- | -- | -- |
| | lbs/day ⁵ | -- | -- | 325,000 | 15,000 | -- | -- | -- |
| Chlorine Residual | µg/L | -- | -- | 32,000 | 8,000 | -- | -- | 239,000 |
| | lbs/day ⁵ | -- | -- | 1,400 | 350 | -- | -- | 109,400 |
| DDT | g/yr | -- | -- | -- | -- | 10.1*Q ⁶ | -- | -- |
| Total Polychlorinated Biphenyls (PCBs) | g/yr | -- | -- | -- | -- | 0.271*Q ⁶ | -- | -- |

- b. **Temperature:** The temperature effluent limitation for LWRP shall not exceed a maximum daily value of 100°F.
- c. **Radioactivity:** 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. Reference to section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.
- d. The Permittee shall ensure that bacterial concentrations in the effluent discharged from Discharge 001 do not result in an exceedance of [the HTP's waste load allocation of zero \(0\) days exceedance of single sample numeric limits or geometric mean limits](#) (based on Basin Plan bacteria objectives for marine waters designated REC-1, see Section V.A.1.b [and Santa Monica Bay Bacteria TMDL](#)) at shoreline

⁵ The mass emission rates are calculated using 5.2 MGD, consistent with the water-quality based limits in the previous permit: lbs/day = 0.00834 x Ce (effluent concentration in µg/L) x Q (flow rate in MGD).

⁶ The total mass load for DDT and PCB from the Joint Water Pollution Control Plant, HTP, and West Basin's Water Recycling Plants shall not be more than 14,567 g/yr for DDT and 351 g/yr for PCB. The Discharger is deemed in compliance with these group water quality based effluent limitations (WQBELs) for DDT and PCBs if it is in compliance with the individual mass-based WQBELs for DDT and PCBs in Table 5 Effluent Limitations. This is the Waste Load Allocation (WLA) and the final effluent limitation for LWRP in accordance with the *Santa Monica Bay Total Maximum Daily Load for DDTs and PCBs (Santa Monica Bay TMDL for DDTs and PCBs)* promulgated by USEPA on March 26, 2012.

$$\text{LWRP WLA} = C_{\text{HTP}} * Q_{\text{HTP to LWRP}}$$

Where:

C_{HTP} is the concentration-based WLA for the Hyperion effluent

$Q_{\text{HTP to LWRP}}$ is the flow diverted from Hyperion to LWRP

For DDTs: $\text{LWRP WLA} = C_{\text{HTP}} * Q_{\text{HTP to LWRP}} = 10.1 * Q_{\text{HTP to LWRP}}$

For PCBs: $\text{LWRP WLA} = C_{\text{HTP}} * Q_{\text{HTP to LWRP}} = 0.271 * Q_{\text{HTP to LWRP}}$

compliance points, as specified in Regional Water Board Resolutions Nos. 2002-004 and 2002-022.

- e. Waste discharged to the ocean must be essentially free of:
 - i. Material that is or will become floatable upon discharge.
 - ii. Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.
 - iii. Substances that will accumulate to toxic levels in marine waters, sediments or biota.
 - iv. Substances that significantly decrease the natural light to benthic communities and other marine life.
 - v. Materials that result in aesthetically undesirable discoloration of the ocean surface.

2. Interim Effluent Limitations (Not applicable)

B. Land Discharge Specifications (Not applicable)

C. Recycling Specifications

Recycling specifications are not established with this Order. West Basin produces recycled water under two separate Orders: Order R4-2006-0069 for groundwater injection and Order 01-043 for irrigation and industrial uses of Title 22 non-potable water.

V. RECEIVING WATER LIMITATIONS

The Permittee shall not cause a violation of the following water quality objectives.

A. Surface Water Limitation

Compliance with these water quality objectives shall be determined by samples collected at monitoring stations outside the zone of initial dilution and identified in the HTP Order R4-2017-0045. The receiving water monitoring is conducted by the City of Los Angeles to ensure the combined HTP effluent and LWRF brine discharge is in compliance with receiving water limitations and to characterize the water quality of the receiving water. Requirements are based on the Ocean Plan and the Basin Plan.

1. Bacterial Characteristics

- a. USEPA Primary Recreation Criteria in Federal Waters

Ocean waters beyond the outer limit of the territorial sea shall not exceed the following 304(a)(1) criteria for *Enterococcus* density beyond the zone of initial dilution in areas where primary contact recreation, as defined in USEPA guidance, occurs. USEPA describes the "primary contact recreation" use as protective when the potential for ingestion of, or immersion in, water is likely. Activities usually include swimming, water-skiing, skin-diving, surfing, and other activities likely to result in immersion. (*Water Quality Standards Handbook*, EPA-823-B-94-005a, 1994, p. 2-2.)

- i. 30-day Geometric Mean (per 100 mL): 35

- ii. Single sample Maximum (per 100 mL): 104 for designated bathing beach; 158 for moderate use; 276 for light use; 501 for infrequent use.

b. State/Regional Water Contact Standards⁷

Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Regional Water Board or USEPA (i.e., waters designated as REC-1), but including all kelp beds, the following bacterial objectives shall be maintained throughout the water column.

i. 30-day Geometric Mean Limits

- (a) Total coliform density shall not exceed 1,000/100 mL.
- (b) Fecal coliform density shall not exceed 200/100 mL.
- (c) *Enterococcus* density shall not exceed 35/100 mL.

ii. Single Sample Maximum Limits (SSM)

- (a) Total coliform density shall not exceed 10,000/100 mL.
- (b) Fecal coliform density shall not exceed 400/100 mL.
- (c) *Enterococcus* density shall not exceed 104/100 mL.
- (d) Total coliform density shall not exceed 1,000/100 mL, if the ratio of fecal-to-total coliform exceeds 0.1.

The geometric mean values should be calculated based on a statistically sufficient number of samples (generally not less than 5 samples equally spaced over a 30-day period). If any of the single sample limits are exceeded, the Regional Water Board and USEPA may require repeat sampling on a daily basis until the sample falls below the single sample limit in order to determine the persistence of the exceedance. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period will be used to calculate the geometric mean.

- c. The Initial Dilution Zone for any wastewater outfall shall be excluded from designation as kelp beds for purposes of bacterial standards. Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacterial standards
- d. State Water Resources Control Board, Division of Drinking Water (DDW) Standards
DDW has established minimum protective bacteriological standards for coastal waters adjacent to public beaches and for public water-contact sports areas in

⁷ The State Water Resource Control Board (SWRCB) proposes to revise the water quality standards for bacteria in the Ocean Plan by adopting an Amendment to the Water Quality Control Plan for Ocean Waters of California—Bacteria Provisions and a Water Quality Standards Variance Policy (Bacteria Ocean Plan Amendment). If such an amendment is adopted, [and should it apply to discharge from LWRF](#), this Order may be reopened to revise the bacteria limits (see VI.C.1.p).

ocean waters. These standards are found in the California Code of Regulations, Title 17, section 7958, and they are identical to the objectives contained in subsection b, above. When a public beach or public water-contact sports area fails to meet these standards, DDW or the local public health officer may post with warning signs or otherwise restrict use of the public beach or public water-contact sports area until the standards are met. DDW regulations impose more frequent monitoring and more stringent posting and closure requirements on certain high-use public beaches that are located adjacent to a storm drain that flows in the summer.

For beaches not covered under AB 411 regulations (this incorporation by reference is prospective including future changes to the incorporated provisions as changes take effect), DDW imposes the same standards as contained in Title 17, California Code of Regulations, and requires weekly sampling but allows the county health officer more discretion in making posting and closure decisions.

e. Shellfish Harvesting Standards

At all areas where shellfish may be harvested for human consumption, as determined by the Regional Water Board and USEPA, the following bacterial objectives shall be maintained 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.

2. **Physical Characteristics**

The waste discharged shall not:

- a. cause floating particulates and oil and grease to be visible;
- b. cause aesthetically undesirable discoloration on the ocean surface;
- c. significantly reduce the transmittance of natural light at any point outside the initial dilution zone; and
- d. change the rate of deposition of inert solids and the characteristics of inert solids in ocean sediments such that benthic communities are degraded.

3. **Chemical Characteristics**

The waste discharged shall not:

- a. cause the dissolved oxygen concentration at any time to be depressed more than 10 percent from that which occurs naturally, as a result of the discharge of oxygen demanding waste;
- b. change the pH of the receiving waters at any time more than 0.2 units from that which occurs naturally;
- c. cause the dissolved sulfide concentration of waters in and near sediments to be significantly increased above that present under natural conditions.
- d. cause concentration of substances (as set forth in Chapter II, Table 1 of the 2015 Ocean Plan) in marine sediments to be increased to levels that would degrade indigenous biota;
- e. cause the concentration of organic materials in marine sediments to be increased to levels that would degrade marine life;
- f. contain nutrients at levels that will cause objectionable aquatic growths or degrade indigenous biota;

- g. cause total chlorine residual exceeding 0.1 mg/L in the receiving water and shall not persist in the receiving water at any concentration that causes impairment of beneficial uses as a result of the discharge;
- h. produce concentrations of substances in the receiving water that are toxic to or cause detrimental physiological responses in human, animal, or aquatic life; and
- i. contain individual pesticides or combinations of pesticides in concentrations that adversely affect beneficial uses.

4. Biological Characteristics

The waste discharged shall not:

- a. degrade marine communities, including vertebrate, invertebrate, and plant species;
- b. alter the natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption;
- c. cause the concentration of organic materials in fish, shellfish or other marine resources used for human consumption to bioaccumulate to levels that are harmful to human health; and
- d. contain substances that result in biochemical oxygen demand that adversely affects the beneficial uses of the receiving water.

5. Radioactivity

Discharge of radioactive waste shall not degrade marine life.

B. Groundwater Limitations -- (Not applicable)

C. Storm Water Requirements

Compliance with these water quality objectives shall be determined by samples collected at monitoring location Storm Sampling Points SSP-001 and SSP-002 (at Discharge Points SW-002 and SW-003).

- 1. Industrial storm water discharges from Discharge Points SW-002 and SW-003 and authorized non-storm water discharges (NSWDs) shall not cause or contribute to an exceedance of any applicable water quality standards in any affected receiving water.
- 2. Industrial storm water discharges from Discharge Points SW-002, and SW-003 and authorized NSWDs shall not adversely affect human health or the environment.
- 3. Industrial storm water discharges from Discharge Points SW-002, and SW-003 and authorized NSWDs shall not contain pollutants in quantities that threaten to cause pollution or a public nuisance.

VI. PROVISIONS

A. Standard Provisions

- 1. The Permittee shall comply with all Standard Provisions included in Attachment D of this Order.
- 2. **Regional Water Board Standard Provisions.** The Permittee 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. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by section 13050 of the CWC.

- b. Odors, vectors, and other nuisances of sewage or sludge origin beyond the limits of the treatment plant site or the sewage collection system due to improper operation of facilities, as determined by the Regional Water Board and USEPA, are prohibited.
- c. All facilities used for collection, transport, treatment, or disposal of wastes shall be adequately protected against damage resulting from overflow, washout, or inundation from a storm or flood having a recurrence interval of once in 100 years.
- d. Collection, treatment, and disposal systems shall be operated in a manner that precludes public contact with wastewater.
- e. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer of the Regional Water Board and USEPA.
- f. The provisions of this Order are severable. If any provision of this Order or the application of any provision of this Order is found invalid, the remainder of this Order shall not be affected.
- g. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities or penalties established pursuant to any applicable state law or regulation under authority preserved by section 510 of the CWA.
- h. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities or penalties to which the Permittee is or may be subject to under section 311 of the CWA.
- i. Discharge of wastes to any point other than specifically described in this Order is prohibited.
- j. The Permittee 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, 403, and 405 of the federal CWA and amendments thereto.
- k. 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.
- l. Oil or oily material, chemicals, refuse, or other polluting materials shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.
- m. A copy of these waste discharge specifications shall be maintained at the discharge Facility so as to be available at all times to operating personnel.
- n. If there is any storage of hazardous or toxic materials or hydrocarbons at this Facility and if the Facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.
- o. The Permittee shall file with the Regional Water Board and USEPA a Report of Waste Discharge at least 120 days before making any proposed change in the character, location or volume of the discharge.

- p. The Permittee shall comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management program developed to comply with NPDES permits issued by the Regional Water Board and USEPA to local agencies.
- q. In the event of any change in name, ownership, or control of these waste disposal facilities, the Permittee shall notify the Regional Water Board and USEPA of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Regional Water Board and USEPA, 30 days prior to taking effect.
- r. The CWC provides that any person who violates a waste discharge requirement or a provision of the CWC is subject to civil penalties of up to \$5,000 per day, \$10,000 per day, or \$25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to \$10 per gallon per day or \$25 per gallon per day of violation, or some combination thereof, depending on the violation, or upon the combination of violations. Violation of any of the provisions of the NPDES program or of any provisions of this Order may subject the violator to any of the penalties described herein, or any combinations thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.
- s. CWC section 13387 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 Order, including monitoring reports or reports of compliance or noncompliance, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained in this Order is subject to a fine of not more than \$25,000 or imprisonment of not more than two years, or both. For a second conviction, such a person shall be punished by a fine of not more than \$25,000 per day of violation, or by imprisonment of not more than four years, or by both.
- t. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this Order.
- u. The Permittee shall notify the Executive Officer in writing no later than 6 months prior to 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.

- v. 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 Permittee to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Permittee to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
- w. In the event the Permittee does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this Order that may endanger health or the environment, the Permittee shall notify the Chief of the Municipal NPDES Permitting Unit at the Regional Water Board by telephone (213) 576-6616, or by fax at (213) 576-6660 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing to the Regional Water Board 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. The written notification shall also be submitted via email with reference to CI-7449 to losangeles@waterboards.ca.gov. Other noncompliance requires written notification as above at the time of the normal monitoring report.
- x. CWC section 13385(h)(i) requires the Regional Water Board to assess a mandatory minimum penalty of three-thousand dollars (\$3,000) for each serious violation. Pursuant to CWC section 13385(h)(2), a “serious violation” is defined as any waste discharge that violates the effluent limitations contained in the applicable waste discharge requirements for a Group II pollutant by 20 percent or more, or for a Group I pollutant by 40 percent or more. Appendix A of 40 CFR § 123.45 specifies the Group I and II pollutants. Pursuant to CWC section 13385.1(a)(1), a “serious violation” is also defined as “a failure to file a discharge monitoring report required pursuant to section 13383 for each complete period of 30 days following the deadline for submitting the report, if the report is designed to ensure compliance with limitations contained in waste discharge requirements that contain effluent limitations.”
- y. CWC section 13385(i) requires the Regional Water Board to assess a mandatory minimum penalty of three-thousand dollars (\$3,000) for each violation whenever a person violates a waste discharge requirement effluent limitation in any period of six consecutive months, except that the requirement to assess the mandatory minimum penalty shall not be applicable to the first three violations within that time period.
- z. Pursuant to CWC section 13385.1(d), for the purposes of section 13385.1 and subdivisions (h), (i), and (j) of section 13385, “effluent limitation” means a numeric restriction or a numerically expressed narrative restriction, on the quantity, discharge rate, concentration, or toxicity units of a pollutant or pollutants that may be discharged from an authorized location. An effluent limitation may be final or interim, and may be expressed as a prohibition. An effluent limitation, for these purposes, does not include a receiving water limitation, a compliance schedule, or a best management practice.
- aa. Violation of any of the provisions of this Order may subject the Permittee to any of the penalties described herein or in Attachment D of this Order, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.

3. The Permittee shall comply with the following USEPA Region 9 Standard Conditions
 - a. The following condition has been established to enforce applicable requirements of the Resource Conservation and Recovery Act. POTWs may not receive hazardous waste by truck, rail, or dedicated pipe except as provided under 40 CFR § 270. Hazardous wastes are defined at 40 CFR § 261 and include any mixture containing any waste listed under 40 CFR § 261.31 through § 261.33. The Domestic Sewage Exclusion (40 CFR § 261.4) applies only to wastes mixed with domestic sewage in a sewer leading to a POTW and not to mixtures of hazardous wastes and sewage or septage delivered to the treatment plant by truck.
 - b. **Transfers by Modification:** Except as provided in 40 CFR § 122.61(b), this Permit may be transferred by the Permittee to a new owner or operator only if the Permit has been modified or revoked and reissued (under 40 CFR § 122.62(b)(2)), or a minor modification made (under 40 CFR § 122.63(d)), to identify the new permittee and incorporate such other requirements as may be necessary under the CWA. (40 CFR § 122.61(a).)
 - c. **Automatic Transfers:** As an alternative to transfers under 40 CFR § 122.61(a), this Permit may be automatically transferred to a new permittee if: the notice includes a written agreement between the Discharger and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and the Water Division Director does not notify the Discharger and the proposed new permittee of his/her intent to modify or revoke and reissue the Permit. A modification under this paragraph may also be a minor modification under 40 CFR § 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement between the Discharger and the new permittee. (40 CFR § 122.61(b).)
 - d. **Minor Modification of Permits:** Upon the consent of the Permittee, the Water Division Director may modify the Permit to make the corrections or allowances for changes in the permitted activity listed under 40 CFR § 122.63(a) through (g), without following the procedures of 40 CFR § 124. Any permit modification not processed as a minor modification under 40 CFR § 122.63 must be made for cause and with 40 CFR § 124 draft permit and public notice as required in 40 CFR § 122.62. (40 CFR § 122.63.)
 - e. **Termination of Permits:** The causes for terminating a permit during its term, or for denying a permit renewal application are found at 40 CFR § 122.64(a)(1) through (4). (40 CFR § 122.64.)
 - f. **Availability of Reports:** Except for data determined to be confidential under 40 CFR § 2, all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the Regional Water Board and USEPA. As required by the CWA, permit applications, permits, and effluent data shall not be considered confidential. (Pursuant to CWA section 308.)
 - g. **Removed Substances:** Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters. (Pursuant to CWA section 301.)
 - h. **Severability:** The provisions of this Order are severable, and if any provision of this Order or the application of any provision of this Order to any circumstance is held

invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby. (Pursuant to CWA section 512.)

- i. **Civil and Criminal Liability:** Except as provided in standard conditions on Bypass and Upset, nothing in this Order shall be construed to relieve the Permittee from civil or criminal penalties for noncompliance. (Pursuant to CWA section 309.)
- j. **Oil and Hazardous Substances Liability:** Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject under CWA section 311.
- k. **State or Tribal Law:** Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any applicable State or Tribal law or regulation under authority preserved by CWA section 510.

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

- a. This Order may be reopened and modified to incorporate new limits based on future reasonable potential analyses to be conducted based on on-going monitoring data collected by the Permittee and evaluated by the Regional Water Board and USEPA.
- b. This Order may be reopened and modified to incorporate new mass emission rates based on an increase in LWRF design capacity of 5.2 MGD provided that the Permittee requests and conducts an antidegradation analysis to demonstrate that the change is consistent with the state and federal antidegradation policies
- c. This Order may be modified, in accordance with the provisions set forth in 40 CFR § 122 to 124, to include new minimum levels (MLs).
- d. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments or the adoption of a TMDL for Santa Monica Bay Watershed Management Areas.
- e. The Regional Water Board or USEPA 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.
- f. This Order may be modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR § 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order, endangerment to human health or the environment resulting from the permitted activity, or acquisition of newly obtained information which would have justified the application of different conditions if known at the time of Order adoption and issuance. The filing of a request by the Discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

- g. This Order may be modified, or revoked and reissued, based on the results of Magnuson-Stevens Fishery Conservation and Management Act and/or Endangered Species Act section 7 consultation(s) with the National Marine Fisheries Service and/or the U.S. Fish and Wildlife Service.
- h. This Order may be reopened and modified to incorporate conforming monitoring requirements and schedule dates for implementation of the Comprehensive Monitoring Program for Santa Monica Bay (Santa Monica Bay Restoration Commission, January 2007).
- i. This Order may be modified, revoked and reissued, or terminated 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 by failure to disclose fully all relevant facts; or
 - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- j. The filing of a request by the Permittee for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.
- k. 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 and USEPA may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.
- l. 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 and USEPA will revise and modify this Order in accordance with such standards.
- m. 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.
- n. 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 be consistent with the Toxicity Plan that is subsequently adopted by the State Water Board promptly after USEPA-approval of such plan.
- o. This Order may be reopened for modification, or revocation and reissuance, as a result of TST "Fail" results.
- p. This Order will be reopened and modified to the extent necessary, to be consistent with new policies, a new state-wide plan, new laws, or new regulations. For example, this permit may be reopened to revise the Bacteria limitations contained in section V.A.1.b of this Order if the State Water Board's proposed Amendment to the Water Quality Control Plan for Ocean Waters of California - Bacteria Provisions and a Water Quality Standards Variance Policy is adopted by the SWRCB and is subsequently approved by OAL and USEPA.

- q. The Regional Water Board and USEPA will reconsider the ammonia limits and may reopen the Order if the Permittee has demonstrated that conservation efforts and recycling projects have caused an increase in the ammonia concentration, the plant is optimized with respect to ammonia control, and the Permittee provides justification that the proposed modification will not impact the beneficial uses of the receiving water.
- r. This Order may be reopened and modified, to remove the storm water requirements from this Order, provided the Discharger successfully enrolls for coverage under the Statewide General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

- i. Hyperion Ammonia and Acute Toxicity Special Study: In coordination with the City of Los Angeles, the Permittee shall participate in the special study, described in Hyperion Order R4-2017-0045, that evaluates the projected effects of water conservation and planned recycling on effluent acute toxicity and ammonia, including a mass balance of nitrogen species through both the HTP and the LWRF and an assessment of operational and/or process alternatives (e.g. treatment optimization, additional treatment, additional dilution credits) to address projected compliance with acute toxicity and ammonia water quality objectives. The Permittee shall actively participate in this study to identify and evaluate the nitrogen species material balance at the LWRF for both the current and future scenarios identified in the City of Los Angeles' workplanwork plan. In addition, LWRF shall supply brine effluent samples and any other technical information required to fully evaluate ammonia and acute toxicity in the combined effluent from the HTP and the LWRF brine. As required by the Hyperion Order R4-2017-0045, the Ammonia and Acute Toxicity Special Study Draft Work Plan is due from City of LA to the Regional Water Board Executive Officer and the USEPA Water Division Director by April 1st, 2018. The draft work plan was received on March 13, 2018, and is under review by Regional Water Board and USEPA staff. If necessary, the Permittee shall be required to submit a supplement to the City's draft Work Plan to include the contributions to the study concerning the LWRF and to address any associated comments from the Regional Water Board. The combined special study report shall be submitted no later than April 1st, 2020.
- ii. LWRF Combined Effluent Chronic Toxicity Special Study: The Discharger shall repeat the chronic toxicity monitoring study, conducted in 2015, to monitor the impact of the combined West Basin LWRF brine and Hyperion Treatment Plant effluent on chronic toxicity at Discharge Point 001, as specified in Section V of the Monitoring and Reporting Program (Attachment E). The singular and synergistic toxic effects will be documented through toxicity tests at varying brine and HTP effluent concentrations. A draft LWRF Combined Effluent Toxicity Special Study Work Plan, including a proposed schedule, shall be submitted no later than October-December 15, 2018, with the City of Los Angeles' participation, for approval by the Regional Water Board Executive Officer and the USEPA Water Division Director. The special study report shall be submitted no later than June-December 14, 2020.

The Permittee shall also prepare and submit a copy of the Permittee's initial investigation Toxicity Reduction Evaluation (TRE) work plan in accordance with Monitoring and Reporting Program section V.

b. Fire Retardant Special Study

The Permittee shall propose a special study that evaluates polybrominated diphenyl ethers (PBDE), which are flame retardants and chemicals of emerging concern, in the effluent concentration and mass loadings to the receiving water. The Permittee shall submit a Special Study Work Plan for approval by the Regional Water Board Executive Officer and the USEPA Water Division Director within one year of the effective date of this Order and submit the special study report no later than two years before the permit expires. The Discharger may complete the study independent of the City of Los Angeles. The study shall include the following:

- i. Composite sampling of LWRF brine on at least two occasions, ~~which are coincident with sampling of PBDE for a special study described in the Hyperion Treatment Plant Order R4-2017-0045,~~
- ii. Description of the analytical technique used to characterize PBDE and a discussion of its advantages and limitations.
- iii. Identification of the flow from LWRF and the flow from HTP on the sample days, with a calculation of the mass discharged from LWRF.

c. Treatment Plant Capacity (Not Applicable)

3. Best Management Practices and Pollution Prevention

a. Storm Water Pollution Prevention Plan (SWPPP) and Best Management Practices Plan (BMPP) – Refer to Attachment I

The Discharger shall submit, within ~~90~~120 days, of the effective date of this Order:

- i. A 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 I of this Order.
- ii. A BMPP that will be implemented to reduce the discharge of pollutants and/or trash to the receiving water. The BMPP may be included within the SWPPP as a description of best management practices (BMPs). Attachment I provides information regarding the description of BMPs. The BMPP shall include site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the state. Further, the Discharger shall assure that the storm water discharges from the Facility would neither cause, nor contribute to the exceedance of water quality standards and objectives, nor create conditions of nuisance in the receiving water, and that any potential 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

- iii. A sampling program for all storm water that enters containment structures where percolation may allow contamination of underlying groundwater which has a designated municipal beneficial use.
- iv. Plans 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. The Discharger shall describe the activities in each area and the potential for contamination of storm water runoff and the discharge of hazardous waste/material.

The Discharger shall implement the SWPPP and BMPP 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 SWPPP and the BMPP shall be reviewed annually. Updated information shall be submitted to the Regional Water Board within 30 days of revision.

~~b.~~ **Spill Clean-up Contingency Plan (SCCP)**

~~Within 90 days of the effective date of this Order, the Permittee is required to submit a SCCC. The SCCC shall describe the activities and protocols to address clean-up of spills, overflows, and bypasses of untreated wastewater from the Permittee's collection system or treatment facilities that reach water bodies including dry channels and beach sands. At a minimum, the plan shall include sections of spill clean-up and containment measures, public notifications, and monitoring. The Permittee shall review and amend the plan as appropriate after each spill from the Facility or in the service area of the Facility. The Permittee shall include a discussion in the annual summary report of any modifications to the plan and the application of the plan to all spills during the year.~~

~~c.b.~~ **Pollutant Minimization Program**

Reporting protocols in the MRP describe sample results that are to be reported as Detected but Not Quantified (DNQ) or Not Detected (ND). Definitions for a reported ML and Method Detection Limit (MDL) are provided in the Ocean Plan. These reporting protocols and definitions are used in determining the need to conduct a PMP as follows:

The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity at the instream waste concentration, health advisories for fish consumption, or results of benthic or aquatic organism tissue sampling) that a pollutant is present in the effluent above an effluent limitation and either:

- i. The concentration of the pollutant is reported as DNQ and the effluent limitation is less than the reported ML;
- ii. The concentration of the pollutant is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section X.

The goal of the PMP shall be to reduce all potential sources of a pollutant through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the 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 and USEPA may consider cost-effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan (PPP), if required pursuant to CWC section 13263.3(d), shall be considered to fulfill the PMP requirements.

The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board and USEPA:

- i. An annual review and semi-annual monitoring of potential sources of the reportable pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;
- ii. Quarterly monitoring for the reportable pollutant(s) in the influent to the wastewater treatment system;
- iii. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable pollutant(s) in the effluent at or below the effluent limitation;
- iv. Implementation of appropriate cost-effective control measures for the reportable pollutant(s), consistent with the control strategy; and
- v. An annual status report that shall be sent to the Regional Water Board and USEPA including:
 - (a) All PMP monitoring results for the previous year;
 - (b) A list of potential sources of the reportable pollutant(s);
 - (c) A summary of all actions undertaken pursuant to the control strategy; and
 - (d) A description of actions to be taken in the following year.

4. Construction, Operation and Maintenance Specifications.

- a. Wastewater treatment facilities subject to this Order shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to CCR, title 23, division 3, chapter 26 (CWC sections 13625 – 13633).
- b. The Permittee shall provide safeguards to assure that, should there be a reduction, loss, or failure of electric power, the Permittee shall comply with the terms and conditions of this Order/Permit. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures or other means.

5. Special Provisions for Biosolids

- a. **Biosolids Disposal Requirements – Refer to Attachment H**

6. Spills or Unauthorized Discharges

- a. **Major Spills (more than 50,000 gallons)**

The Permittee shall immediately (but no later than two hours) notify the Regional Water Board and County Health or the local health department, if applicable, by telephone or electronic means of an unauthorized discharge of more than fifty thousand (>50,000) gallons. The DDW must be contacted if a drinking water source is threatened by the spill. If the environment is endangered by the spill, the California State Department of Fish and Wildlife must be contacted. Written confirmation must be provided electronically (e.g., email or fax) to all agencies within three (3) business days from the date of notification. The phone number for reporting spills to the Regional Water Board is (213) 576-6657. The phone numbers for after hours and weekend reporting of spills to the Regional Water Board are (213) 305-2284 and (213) 305-2253.

Information provided shall include the date and time the spill began and ended, the location of the spill, if the spill entered a storm drain or receiving water, the estimated volume of the spill or flow if the spill is ongoing, the estimated time of repair, the cause of the spill, the agencies involved with repair and clean-up, and corrective actions taken or plans for corrective actions.

7. Other Special Provisions (Not applicable)

8. Compliance Schedules (Not applicable)

VII. COMPLIANCE DETERMINATION

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

A. 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 Permittee shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the corresponding effluent limitation and greater than or equal to the reporting level (RL) or minimum level (ML).

B. 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, the Permittee shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

C. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given

parameter, this will represent a single violation, though the Permittee may be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is collected during the calendar month and the analytical result for that sample exceeds the AMEL, the Permittee may be considered out of compliance for that calendar month. For those average monthly effluent limitations that are based on the 6-month median water quality objectives in the 2015 Ocean Plan, the daily value used to calculate these average monthly values for intermittent discharges, shall be considered to equal zero for days on which no discharge occurred. The Permittee 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 collected, 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 Permittee 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 Permittee 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.

D. Average Weekly Effluent Limitation (AWEL)

If the average of daily discharges over a calendar week exceeds the AWEL for a given parameter, a potential violation will be flagged and the Permittee will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. The average of daily discharges over the calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. If only a single sample is collected during the calendar week and the analytical result for that sample exceeds the AWEL, the Permittee will be considered out of compliance for that calendar week. For any one calendar week during which no sample (daily discharge) is collected, no compliance determination can be made for that calendar week with respect to the AWEL.

A calendar week will begin on Sunday and end on Saturday. Partial calendar weeks at the end of calendar month will be carried forward to the next month in order to calculate and report a consecutive seven-day average value on Saturday.

E. Maximum Daily Effluent Limitation (MDEL)

If a 24-hour composite sample exceeds the MDEL for a given parameter, a potential violation will be flagged and the Permittee will be considered out of compliance for that parameter for that one day only within the reporting period. 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.

F. 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 Permittee 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 collected 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).

G. 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 Permittee 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 collected 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).

H. 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 Permittee 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 collected. If only a single sample is collected during a given 180-day period and the analytical result for that sample exceeds the six-month median, the Permittee will be considered out of compliance for the 180-day period. For any 180-period during which no sample is collected, no compliance determination can be made for the six-month median effluent limitation.

I. Annual Average Effluent Limitation

If the annual average of monthly discharges over a calendar year exceeds the annual average effluent limitation for a given parameter, a potential violation will be flagged and the Permittee will be considered out of compliance for each month of that year for that parameter. A potential violation of the annual average effluent limitation will be considered one violation for the purpose of assessing State mandatory minimum penalties. If no sample (daily discharge) is collected over a calendar year, no compliance determination can be made for that year with respect to effluent violation determination, but compliance determination can be made for that month with respect to reporting violation determination.

J. Percent Removal

The average monthly percent removal is the removal efficiency expressed in percentage across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of pollutant concentrations (C in mg/L) of influent and effluent samples collected at about the same time using the following equation:

$$\text{Percent Removal (\%)} = [1 - (C_{\text{Effluent}}/C_{\text{Influent}})] \times 100 \%$$

When preferred, the Permittee may substitute mass loadings and mass emissions for the concentrations.

K. 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.

L. Compliance with Single Constituent Effluent Limitations

Permittees may be considered out of compliance with the effluent limitation if the concentration of the pollutant (see section B “Multiple Sample Data Reduction” above) in the monitoring sample is greater than the effluent limitation and greater than or equal to the ML or RL.

M. Compliance with effluent limitations expressed as a sum of several constituents

Permittees are out of compliance with an effluent limitation which applies to the sum of a group of chemicals (e.g., PCB’s) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as ND or DNQ.

N. Compliance with Total Maximum Daily Loads (TMDLs)

The NPDES regulations at 40 CFR § 122.44(d)(1)(vii)(B) require that NPDES permits include effluent limitations developed consistent with the assumptions and requirements of any WLA that has been assigned to the discharge as part of an approved TMDL. There are three TMDLs for the Santa Monica Bay: the *Santa Monica Bay Beaches Bacteria TMDL*, the *Santa Monica Bay Nearshore and Offshore Debris TMDL*, and the *Santa Monica Bay TMDL for DDT and PCBs*.

Santa Monica Bay Beaches Bacteria TMDL. WLAs in the *Santa Monica Bay Beaches Bacteria TMDL* are expressed as an allowed number of exceedance days and Hyperion has an individual WLA of zero days of exceedances during both summer dry weather and winter dry weather.

Santa Monica Bay Nearshore and Offshore Debris TMDL. The MS4 permit for Los Angeles County (Order No. R4-2012-0175, NPDES No. CAS004001) includes shoreline monitoring to ensure that HTP meets the WLA of 0 days of exceedances contained in the Santa Monica Bay Beaches Bacteria TMDL. For point sources, the debris TMDL is implemented through the LA County MS4 and Ventura County MS4 permits (i.e. no Waste Load allocation for Hyperion or West Basin’s Edward C. Little Water Recycling Facility (LWRF)).

Santa Monica Bay TMDL for DDT and PCBs. The *Santa Monica Bay TMDL for DDT and PCBs* includes WLAs for LWRF. The total loads of DDT and PCBs from the HTP, the Joint Water Pollution Control Plant, and West Basin's Water Recycling Plants (including LWRF and the West Basin Carson facility) shall not be more than 14,567 g/yr for DDT and 351 g/yr for PCBs. To account for these mass transfers, the TMDL recommends that annual "floating" WQBELs (in g/yr) for the LWRF be established as:

$$\text{LWRF WLA} = C_{\text{HTP}} (Q_{\text{HTP to Little}})$$

where:

C_{HTP} is the concentration-based WLA for the Hyperion effluent (10.1 ng/L for DDT and 0.271 ng/L for PCBs)

$Q_{\text{HTP to LWRF}}$ is the flow diverted from Hyperion to LWRF

The *Santa Monica Bay TMDLs for DDTs and PCBs* requires that all discharges with WLAs be considered by NPDES permit writers to have reasonable potential under 40 CFR 122.44(d); that the concentration-based WLAs for DDT and PCBs be implemented as monthly average WQBELs in permits for plants discharging to the ocean; that permit writers should not further adjust the WLAs for dilution or background seawater concentration when calculating WQBELs; that the mass-based WLAs be directly implemented as annual average WQBELs in permits.; and that the annual mass emissions (in g/year) for DDT and PCBs discharges be

calculated and reported as the sum of monthly emissions on a calendar year basis according to the following formula:

$$\text{Annual Mass Emission, g/year} = \sum (\text{Monthly Mass Emission Rates, g/month})$$

For discharges with less frequent DDT and PCBs monitoring than monthly, the annual mass emission (in g/yr) should be calculated using the arithmetic average of available monthly mass emissions as follows:

$$\text{Annual Mass Emission, g/year} = \left(\frac{\sum \text{Monthly Mass Emission, g/mo}}{\text{Number of Monthly Mass Emissions Calculated}} \right) * 12 \text{ mo/year}$$

where:

$$\text{Monthly Mass Emission, kg/mo} = \left(\frac{3,785}{N} \right) * \left(\sum_{i=1}^N Q_i C_i \right) * 30.5 = \frac{0.1154425}{N} * \left(\sum_{i=1}^N Q_i C_i \right)$$

and where:

C_i = DDT or PCBs concentration of each individual sample, ng/l

Q_i = discharger flow rate on date of sample, million gallons per day (mgd)

N = number of samples collected during the month
 0.003785 = conversion factor to convert (ng/l)*(mgd) into g/day

30.5 = number of days in a standard month

0.1154425 = product of (conversion factor)·(number of standard days per month)

and where Q_i for intermittent discharges (dischargers who do not discharge every day in a calendar month, or have no discharge for an entire month ($Q_i = 0$)) should be calculated as follows:

$$Q_i = \left(\frac{\sum_{d=1}^D Q_d}{30.5} \right)$$

where:

Q_d = is the total flow for the day when discharge occurred, million gallons per day (mgd)

D = total number of days where discharge occurred in a month

30.5 = number of days in a standard month

Consistent with the federal requirement and with the *NPDES Permit Writer's Manual* (EPA-833-K-10-001, September 2010), Average Monthly and Annual Average mass based effluent limitations have been included in this Order/Permit for DDT and Total PCBs. Consistent with the TMDL, concentration based effluent limits are not established.

O. Mass Emission Rate

The mass emission rate shall be obtained from the following calculation for any calendar day:

$$\text{Mass emission rate (lbs/day)} = \frac{8.34}{N} \sum_{i=1}^N Q_i C_i$$

$$\text{Mass emission rate (kg/day)} = \frac{3.79}{N} \sum_{i=1}^N Q_i C_i$$

in which 'N' is the number of samples analyzed in any calendar day. 'Q_i' and 'C_i' are the flow rate (MGD) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' grab samples, which may be collected on any calendar day. If a composite sample is taken, 'C_i' is the concentration measured in the composite sample and 'Q_i' is the average flow rate occurring during the period over which samples are composited.

The daily concentration of all constituents shall be determined from the flow-weighted average of the same constituents in the combined waste streams as follows:

$$\text{Daily concentration} = \frac{1}{Q_t} \sum_{i=1}^N Q_i C_i$$

in which 'N' is the number of component waste streams. 'Q_i' and 'C_i' are the flow rate (MGD) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' waste streams. 'Q_t' is the total flow rate of the combined waste streams.

P. Bacterial Standards and Analysis

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.

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.
3. Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 CFR § 136, unless alternate methods have been approved by USEPA pursuant to 40 CFR § 136, or improved methods have been determined by the Executive Officer and/or USEPA.
4. Detection methods used for *Enterococcus* shall be those presented in Table 1A of 40 CFR § 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.
5. The existing water quality objectives for bacteria may be superseded by the *Ocean Plan Bacteria Amendment* following completion of the adoption and approval processes.

Q. Single Operational Upset (SOU)

A SOU that leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation and limits the Permittee's liability in accordance with the following conditions:

1. A SOU is broadly defined as a single unusual event that temporarily disrupts the usually satisfactory operation of a system in such a way that it results in violation of multiple pollutant parameters.
2. A Permittee may assert SOU to limit liability only for those violations which the Permittee submitted notice of the upset as required in Provision V.E.2 (b) of Attachment D – Standard Provisions.
3. For purpose outside of CWC section 13385 subdivisions (h) and (i), determination of compliance and civil liability (including any more specific definition of SOU, the requirements for Permittees to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with USEPA Memorandum "Issuance of Guidance Interpreting Single Operational Upset" (September 27, 1989).
4. For purpose of CWC section 13385 (h) and (i), determination of compliance and civil liability (including any more specific definition of SOU, the requirements for Permittees to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with CWC section 13385 (f)(2).

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ATTACHMENT A – DEFINITIONS

Arithmetic Mean

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

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

Areas of Special Biological Significance (ASBS)

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

Average Monthly Effluent Limitation (AMEL)

The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)

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

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.

Biosolids

Sewage sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulators as a soil amendment for agricultural, silvicultural, horticultural, and land reclamation activities as specified under 40 C.F.R. Part 503.

Carcinogenic

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

Chlordane

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

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, 24-hour

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

Composite sample, for other than flow rate measurements:

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

The compositing period shall equal 24 hours.

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

Daily Discharge

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

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

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

DDT

The sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

Degrade

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)

Sample results that are less than the reported Minimum Level, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dichlorobenzenes

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

Downstream Ocean Waters

Waters downstream with respect to ocean currents.

Dredged Material

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

Enclosed Bays

Indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between 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.

Endosulfan

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

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 and Coastal Lagoons

Waters 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 CWC 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

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

Halomethanes, Total

The sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

HCH

The sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

Initial Dilution

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

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

For shallow water submerged discharges, surface discharges, and non-buoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily

from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Water Board, whichever results in the lower estimate for initial dilution.

Instantaneous Maximum Effluent Limitation

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

Instantaneous Minimum Effluent Limitation

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

In-stream Waste Concentration (IWC)

The concentration of a toxicant or the parameter toxicity in the receiving water after mixing.

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.

Mariculture

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

Material

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

Maximum Daily Effluent Limitation (MDEL)

The highest allowable daily discharge of a pollutant, 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 = $(Xn/2 + X(n/2+1))/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL)

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

Minimum Level (ML)

The concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the

lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Natural Light

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

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.

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 congener in a co-elution: PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206.

PCBs, Total

For compliance with the final effluent limitations based on the TMDL WLAs, Total PCBs shall be PCBs as Aroclors or PCBs as congeners, whichever concentration is greater.

Persistent Pollutants

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

Phenolic Compounds (chlorinated)

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

Phenolic Compounds (non-chlorinated)

The sum of 2,4-dimethylphenol, 2-nitrophenol, 4-nitrophenol, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, and phenol.

Pollutant Minimization Program (PMP)

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 and USEPA may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to CWC section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention

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 CWC 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), Regional Water Board, or USEPA.

Publicly Owned Treatment Works.

A treatment works as defined by section 212 of the CWA, which is owned by a State or municipality (as defined by section 502(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality which has jurisdiction over the Indirect Discharges to and the discharges from such treatment works (40 CFR § 403.3(q)).

Reported Minimum Level

The reported ML (also known as the Reporting Level or RL) is the ML (and its associated analytical method) chosen by the Permittee for reporting and compliance determination from the MLs included in this Order/Permit. The MLs included in this Order/Permit correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board and USEPA either from Appendix II of the Ocean Plan in accordance with section III.C.5.a. of the Ocean Plan or established in accordance with section III.C.5.b. of the Ocean Plan. The ML is based on the proper application of method-specific 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 where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the reported ML. (See Ocean Plan section III.C.6.)

Satellite Collection System

The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Shellfish

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

Significant Difference

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

Six-Month Median Effluent Limitation

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

State Water Quality Protection Areas (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.

TCDD Equivalents

The sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below:

| Isomer Group | Toxicity Equivalence Factor |
|---------------------|-----------------------------|
| | 1.0 |
| 2,3,7,8-tetra CDD | |
| 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 |

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.

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 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 TIE may be required as part of the TRE, if appropriate.

Waste

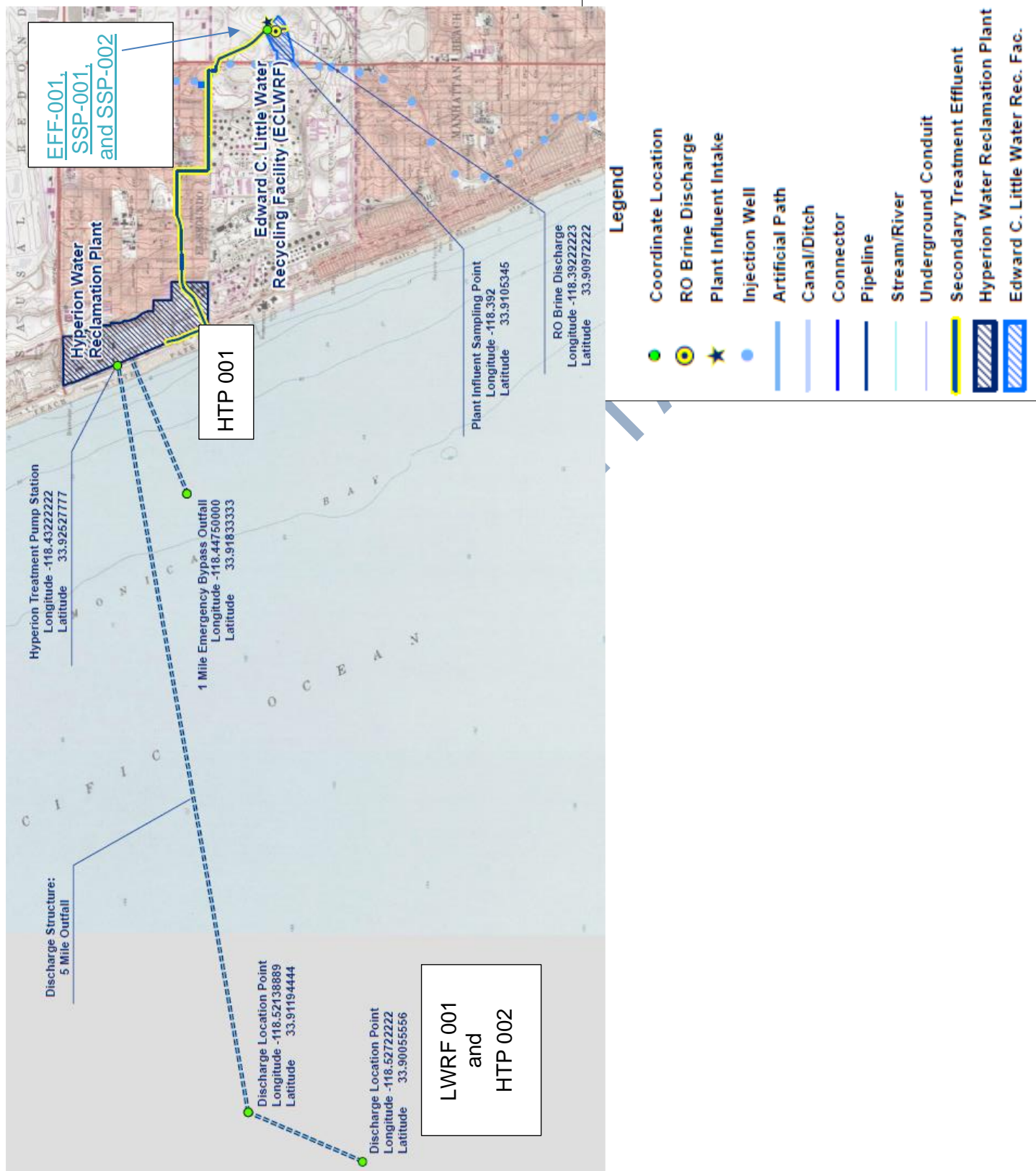
As used in the Ocean Plan, waste includes a Discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

Water Recycling

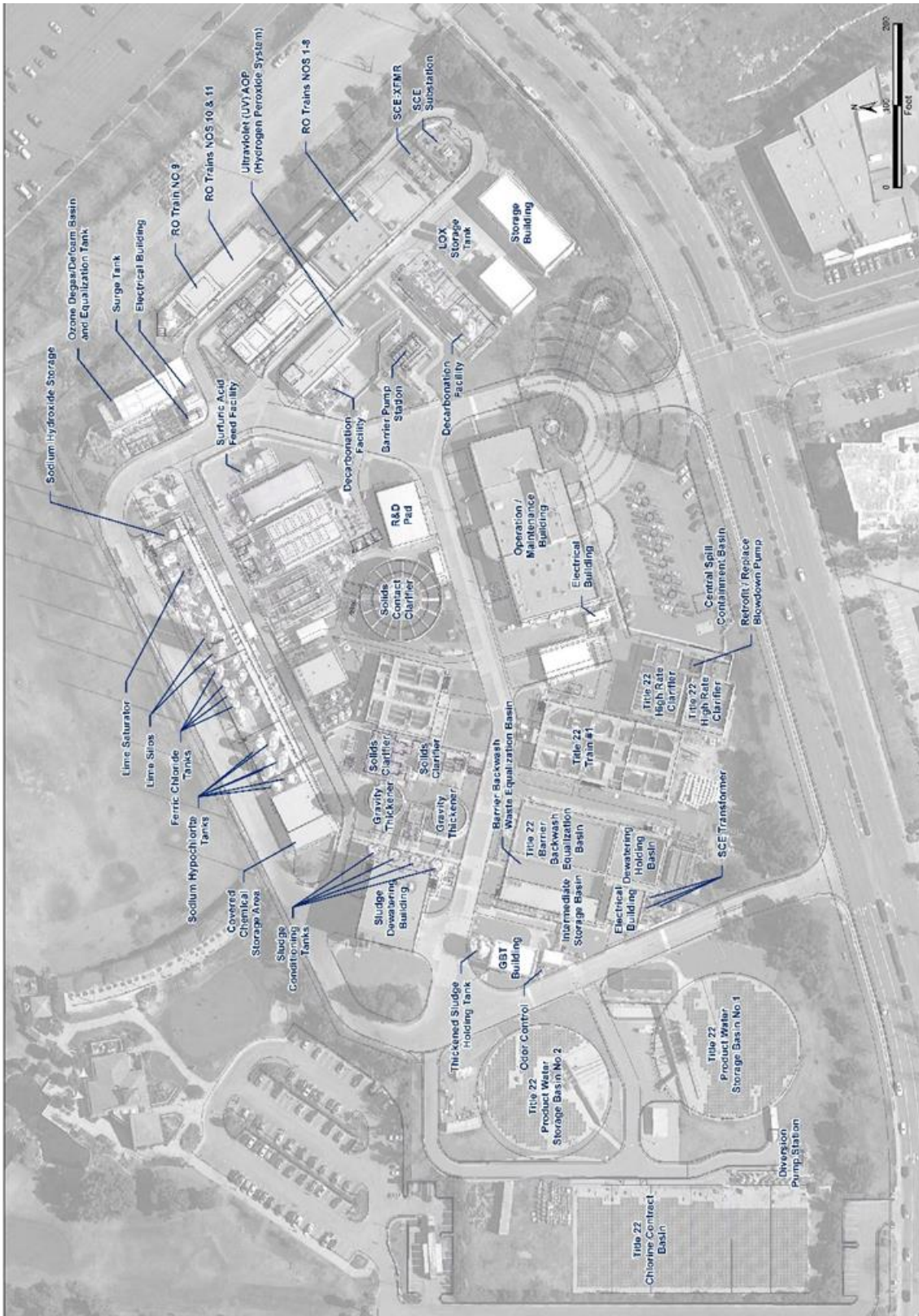
The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

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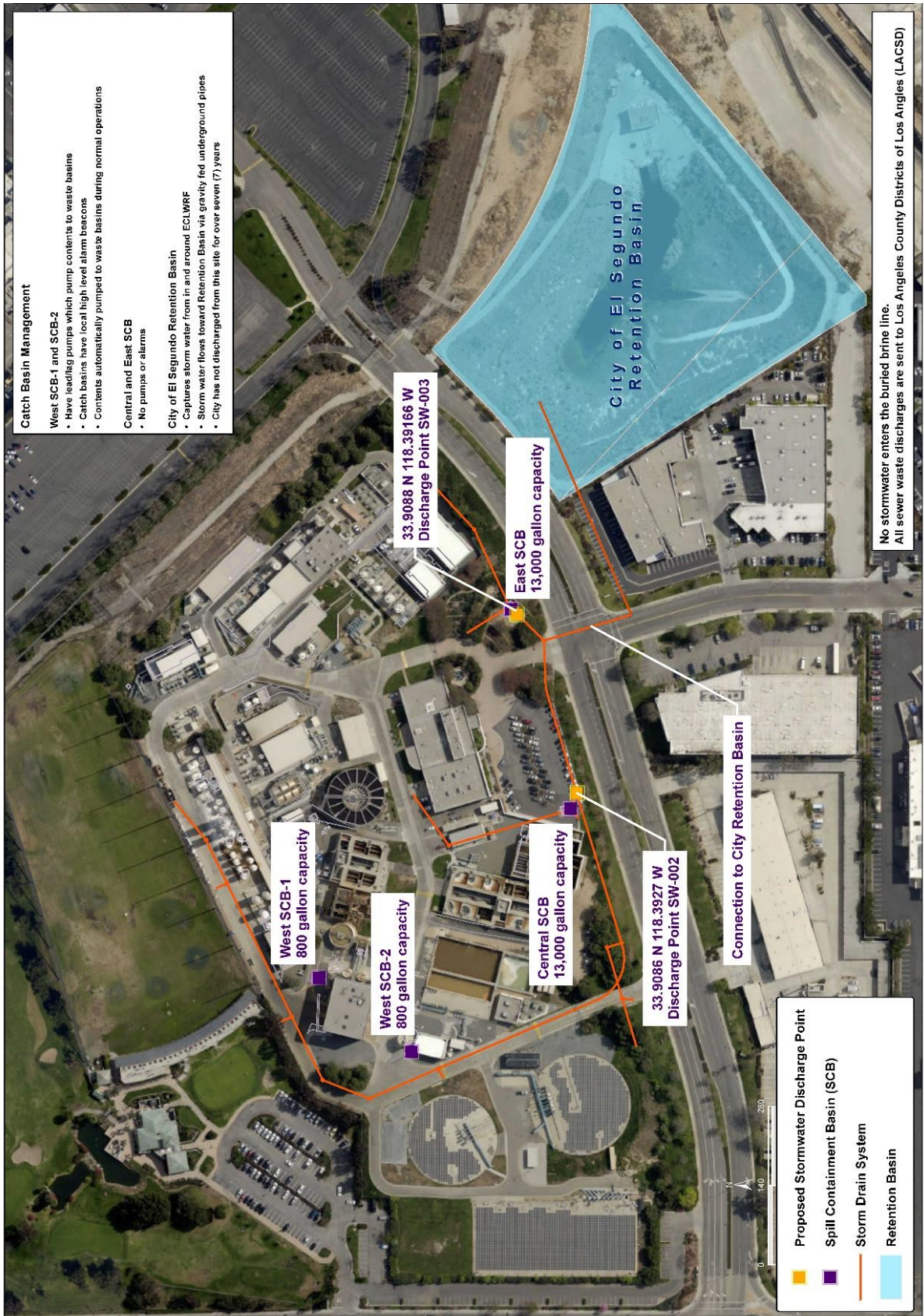
ATTACHMENT B-1 – LOCATION MAP



ATTACHMENT B-2 – SITE LAYOUT

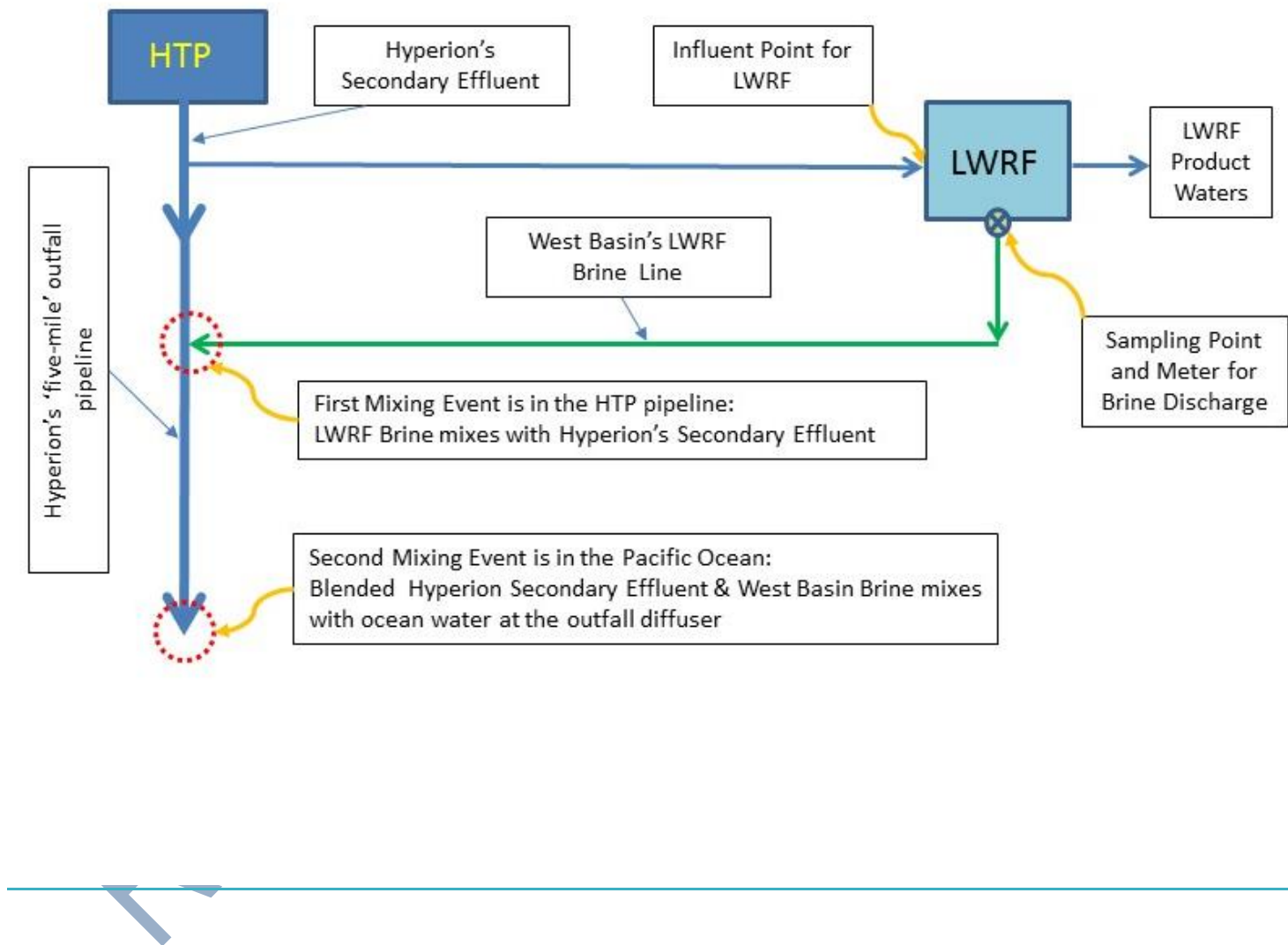


ATTACHMENT B-3 – STORM WATER COLLECTION AND DISCHARGE MAP

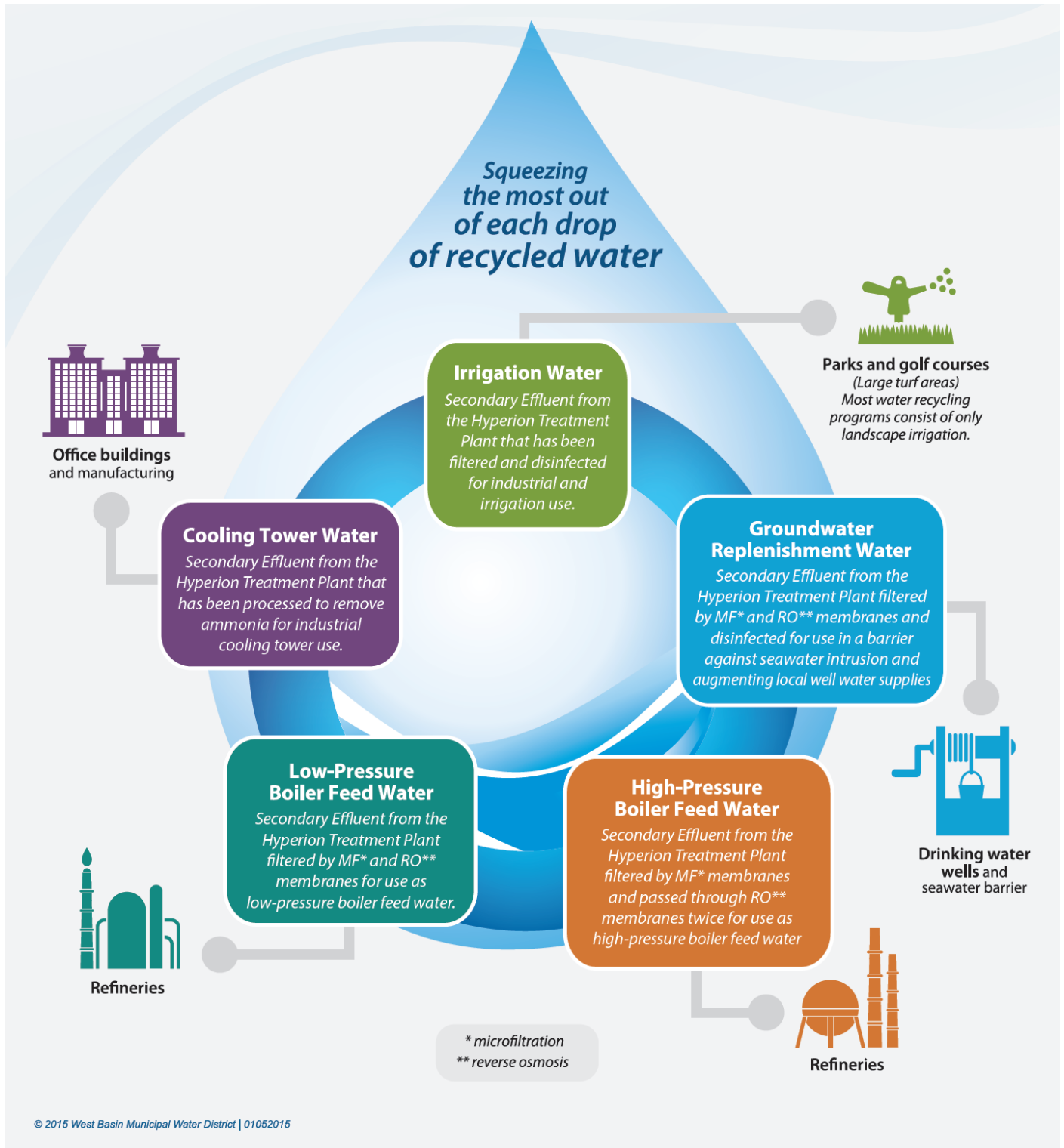


ATTACHMENT C-1 – GENERAL FLOW SCHEMATIC

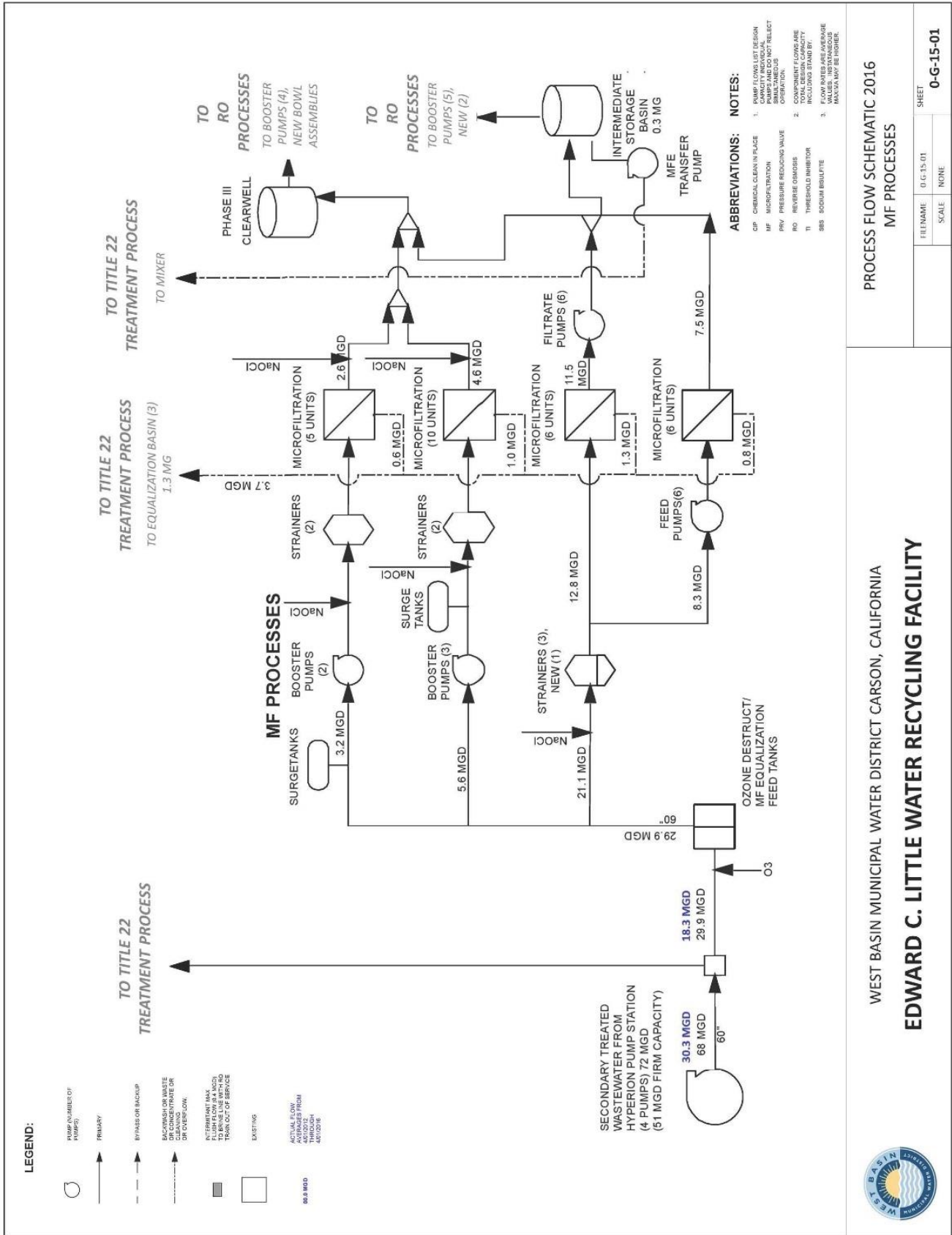
**Hyperion Treatment Plant (HTP) Secondary Effluent and
and West Basin MWD’s LWRF Brine Line**



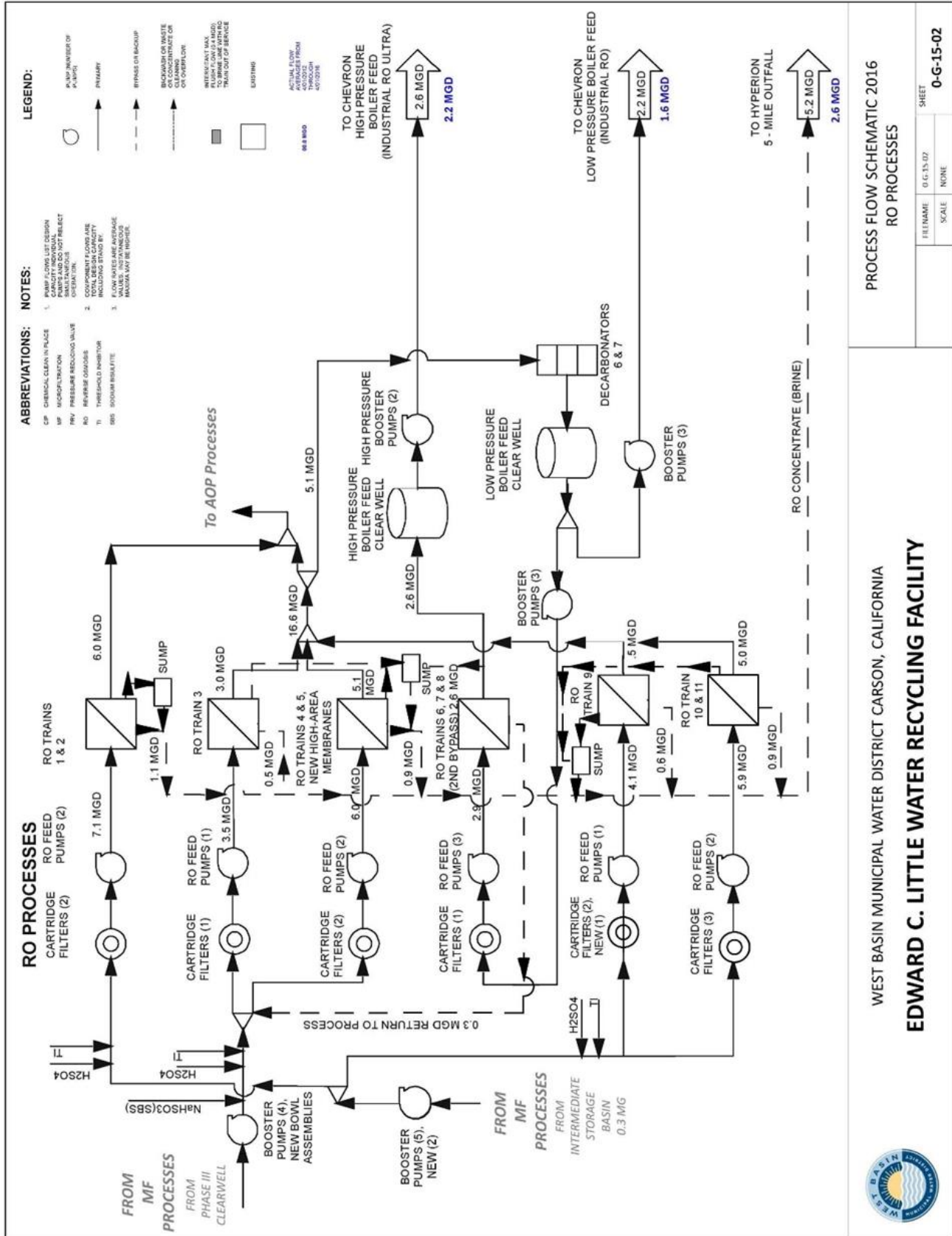
ATTACHMENT C-2 – RECYCLED WATER PRODUCTION



ATTACHMENT C-3 – FLOW SCHEMATIC -- MICROFILTRATION PROCESSES



ATTACHMENT C-4 – FLOW SCHEMATIC –REVERSE OSMOSIS PROCESSES



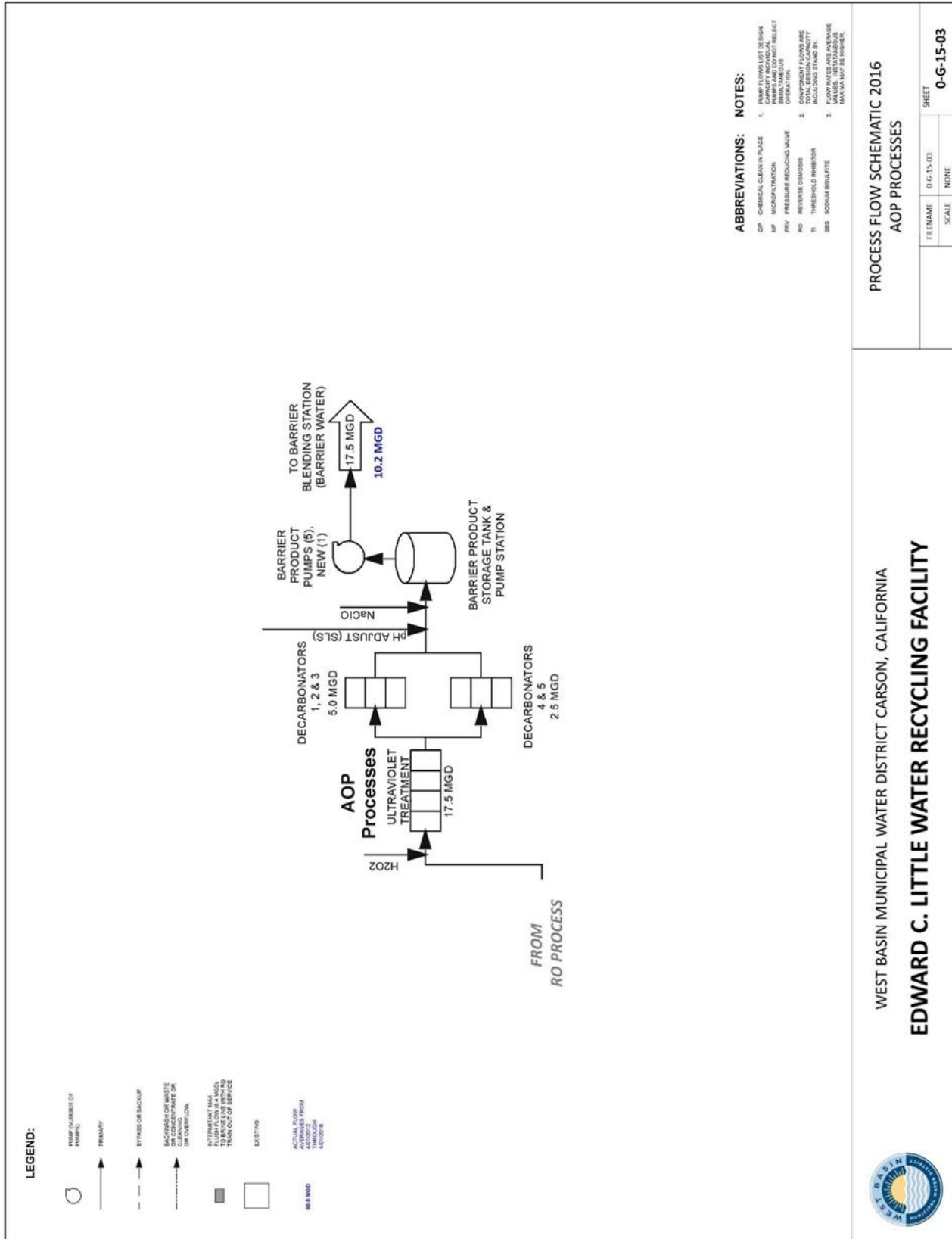
WEST BASIN MUNICIPAL WATER DISTRICT CARSON, CALIFORNIA
EDWARD C. LITTLE WATER RECYCLING FACILITY

PROCESS FLOW SCHEMATIC 2016
RO PROCESSES

SHEET
FILE NAME: 0-G-15-07
SCALE: NONE
DATE: 0-G-15-02



ATTACHMENT C-5 – FLOW SCHEMATIC – ADVANCED OXIDATION PROCESSES



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Permittee must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA), its regulations, and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 CFR § 122.41(a); California Water Code (CWC) sections 13261, 13263, 13264, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

F. Inspection and Entry

The Permittee 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 be required by law, to (33 U.S.C. section 1318(a)(4)(B); 40 CFR § 122.41(i); CWC sections 13267 and 13383):

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

G. Bypass

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

5. Notice

- a. *Anticipated bypass.* If the Permittee knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. As of December 21, 2020 all notices must be submitted electronically by the Permittee to the initial recipient, as defined in 40 CFR § 127.2(b), in compliance with this section and 40 CFR part 3 (including, in all cases, subpart D of part 3), § 122.22, and 40 CFR part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Permittee may be required to report electronically if specified by a particular permit or if required to do so by state law. (40 CFR § 122.41(m)(3)(i).)
- b. *Unanticipated bypass.* The Permittee shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice) As of December 21, 2020 all notices must be submitted electronically by the Permittee to the initial recipient, as defined in 40 CFR § 127.2(b), in compliance with this section and 40 CFR part 3 (including, in all cases, subpart D of part 3), § 122.22, and 40 CFR part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Permittee may be required to report electronically if specified by a particular permit or if required to do so by state law. (40 CFR § 122.41(m)(3)(ii).)

H. Upset

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

1. **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)
2. **Conditions necessary for a demonstration of upset.** A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
 - b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
 - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)
3. **Burden of proof.** In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

This Order is not transferable to any person except after notice to the 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 C.F.R. §§ 122.41(l)(3), 122.61.)

III. STANDARD PROVISIONS – MONITORING

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

B. Monitoring must be conducted according to test procedures approved under 40 CFR part 136 for the analyses of pollutants unless another method is required under 40 CFR subchapters N or O. 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 or O. For the purposes of this paragraph, a method is sufficiently sensitive when:

1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
2. For situations in which none of the USEPA-approved methods for a pollutant can achieve the MLs necessary to assess reasonable potential or to monitor compliance with a permit limit, the method that has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter 1, subchapter N or O for the measured pollutant or pollutant parameter, shall be used.

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, subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 C.F.R. §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR part 503), the Permittee 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 or USEPA Water Division Director at any time. (40 CFR § 122.41(j)(2).)

B. Records of monitoring information shall include:

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

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

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Permittee 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 Permittee shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); CWC §§ 13267 and 13383.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, V.B.5, and V.B.6 below. (40 CFR § 122.41(k).)
2. All permit applications submitted to the Regional Water Board or USEPA shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR § 122.22(a)(3).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard

Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 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, and USEPA. (40 CFR § 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board, State Water Board, and USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR § 122.22(c).)
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

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

Any person providing the electronic signature for documents described in Standard Provisions - V.B.1, V.B.2, or V.B.3 that are submitted shall meet all relevant requirements of Standard Provisions – Reporting V.B, 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).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J and comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. 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 C.F.R. § 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
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 C.F.R. § 122.41(l)(6)(ii)(A).)
 - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

F. Planned Changes

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

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR § 122.41(l)(1)(ii).)
3. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are neither subject to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 C.F.R. § 122.41(l)(1)(ii).)
4. 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).)

G. 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 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above.

I. Other Information

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

J. 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 C.F.R. part 127 to the initial recipient defined in 40 C.F.R. 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 C.F.R. section 127.2(c)]. USEPA will update and maintain this listing. (40 C.F.R. § 122.41(l)(9).)

VI. STANDARD PROVISIONS – ENFORCEMENT

- A. The Regional Water Board and USEPA are authorized to enforce the terms of this Order under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.
- B. 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, 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).

- C. Any person may be assessed an administrative penalty by the Administrator of USEPA, or an administrative civil liability by 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).)
- D. 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).)
- E. 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).)

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

- A. **Publicly-Owned Treatment Works (POTWs) – Not applicable.**

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) No. 7449

Section 308(a) of the federal Clean Water Act 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. California Water Code (CWC) 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 federal and California laws and/or regulations.

I. GENERAL MONITORING PROVISIONS

- A. All samples shall be representative of the waste discharge under conditions of peak load. Quarterly influent and effluent analyses shall be performed during the first quarter (January, February, and March), the second quarter (April, May, and June), the third quarter (July, August, and September), and the fourth quarter (October, November, and December). Semiannual influent and effluent analyses shall be performed during the first quarter (January, February, and March) and third quarter (July, August, and September). Annual analyses shall be performed during the third quarter (July, August, and September). Should there be instances when monitoring could not be performed during these specified months, the Permittee must notify the Regional Water Board and USEPA, 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-4 of the MRP.
- B. 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.
- C. 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 actually analyzed. The Permittee shall retain the QA/QC documentation in its files and make available for inspection and/or submit this documentation when requested by the Regional Water Board and/or USEPA. Proper chain of custody procedures must be followed and a copy of this documentation shall be submitted with the monthly report.
- D. The Permittee shall calibrate and perform maintenance procedures on all monitoring instruments to insure accuracy of measurements, or shall ensure that both equipment activities will be conducted.
- E. 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 method or procedure used must be specified in the monitoring report.
- F. Each monitoring report must affirm in writing that “all analyses were conducted at a laboratory certified for such analyses under the Environmental Laboratory Accreditation Program (ELAP), or approved by the Executive Officer and in accordance with current USEPA guideline procedures or as specified in this monitoring and reporting program.”

- G.** 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 2015 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.
- H.** 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 2015 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.
- I.** The Permittee 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 lower calibration standard. At no time is the Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
- J.** The Permittee shall develop and maintain a record of all spills or bypasses according to the requirements in the WDRs of this Order. This record shall be made available to the Regional Water Board and USEPA upon request and a spill summary shall be included in the annual summary report.
- K.** If the permittee samples and performs analyses (other than for process/operational control, startup, research, or equipment testing) on any influent, or effluent, constituent more frequently than required by this Order using approved analytical methods, the results of those analyses shall be included in the monitoring report. These results shall be reflected in the calculation of the average (or median) used in demonstrating compliance with limitations set forth in this Order.
- L.** For all bacterial standards 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 coliforms, 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. Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 CFR § 136, unless alternate methods have been approved in advance by the USEPA pursuant to 40 CFR § 136.
 - 2. Detection methods for *E. coli* shall be those presented in Table 1A of 40 CFR § 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 Regional Water Board and USEPA to be appropriate.
- M.** This monitoring program for the LWRF is comprised of requirements to demonstrate compliance with the conditions of the NPDES permit, ensure compliance with State water quality standards, and mandate participation in regional monitoring and/or area-wide studies.

II. MONITORING LOCATIONS

The Permittee 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 |
|---|-------------------------------------|---|
| -- | INF-001 | A sampling station shall be established at the point of inflow to the treatment plant and shall be located upstream of any in-plant return flows and where representative samples of the influent can be obtained. (33.9105345N, -118.392W) |
| 001 ¹ (HTP Discharge Point 002) | EFF-001 | The effluent sampling station is adjacent to the EC Little Plant (33.9097N, -118.3922W,) and before commingling with the secondary-treated effluent from the Hyperion Treatment Plant (HTP) and discharge at 001 (33.9119N, -118.5214W) |
| SW-002 and SW-003 ² LWRF storm water point source discharge at South Hughes Way | SSP-001 and SSP-002 | The storm water sampling locations are located between the LWRF combined storm water sewer prior to exiting the facility (33.90867N, -118.392748W and 33.9088N, -118.39166W) |

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

III. INFLUENT MONITORING REQUIREMENTS

Influent monitoring is required to identify changes in influent water quality and volume so as to assess and improve plant performance, and to conduct reasonable potential analyses for toxic pollutants.

A. Monitoring Location INF-001

The Discharger shall monitor the constituents in Table E-2 at INF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level.

Table E-2. Influent Monitoring

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method and (Minimum Level, units), respectively |
|------------------|-------|-----------------|----------------------------|--|
| Total flow | MGD | Recorder | Continuously ³ | |
| Ammonia nitrogen | mg/L | 24-hr composite | Monthly | ⁴ |

1 Discharge Point 001 corresponds to HTP Discharge Point 002 (HTP “5-mile outfall”) in the HTP NPDES Order R4-2017-0045.
 2 Storm water runoff is discharged through Discharge Points [SW-002 and SW-003](#) to the El Segundo storm water sewer which drains to a retention basin. The storm water does not commingle with process water or brine effluent.
 3 When continuous monitoring of flow is required, total daily flow, monthly average flow, and instantaneous peak daily flow (24-hour basis) shall be reported. Actual monitored flow shall be reported (not design capacity).
 4 Pollutants shall be analyzed using the analytical methods described in 40 CFR § 136; where no methods are specified for a given pollutant, by methods approved by this Regional Water Board, the State Water

IV. EFFLUENT MONITORING REQUIREMENTS

Effluent monitoring is required to determine compliance with National Pollutant Discharge Elimination System (NPDES) permit conditions and water quality standards; assess and improve plant performance, and identify operational problems; provide information on wastewater characteristics and flows for use in interpreting water quality and biological data; and to conduct reasonable potential analyses for toxic pollutants.

A. Monitoring Location EFF-001

The Discharger shall monitor the constituents in Table E-2 at EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level.

Table E-3. Effluent Monitoring

| Parameter | Units | Sample Type | Minimum Sampling Frequency ⁵ | Required Analytical Test Method |
|--------------------------------|---------|-------------------|---|---------------------------------|
| Total brine waste flow | MGD | Recorder | Continuously ⁶ | |
| Oil and Grease ⁸ | mg/L | Grab | Monthly | 7 |
| pH | pH unit | Grab | Monthly | 7 |
| Temperature | °F | Grab | Monthly | 7 |
| Settleable solids ⁸ | mL/L | Grab | Monthly | 7 |
| Chlorine Residual ⁹ | µg/L | Grab | Monthly | 7 |
| Total suspended solids | mg/L | 24-hr composite | Monthly | 7 |
| Ammonia nitrogen | mg/L | 24-hr composite | Monthly | 7 |
| Nitrate nitrogen ¹⁰ | mg/L | 24-hr composite | Monthly | 7 |
| Organic nitrogen ¹⁰ | mg/L | 24-hr composite | Monthly | 7 |
| Total nitrogen | mg/L | 24-hour composite | Monthly | 7 |

Board, and USEPA Region 9. For any pollutant whose effluent limitation is lower than all the MLs specified in Appendix II of the Ocean Plan, the analytical method with the lowest ML must be selected.

⁵ For the effluent, monthly sampling shall be arranged so that each day of the week, except Saturday and Sunday, is represented over a seven month period. The schedule should be repeated every seven months.

⁶ When continuous monitoring of flow is required, total daily flow, monthly average flow, and instantaneous peak daily flow (24-hour basis) shall be reported. Actual monitored flow shall be reported (not design capacity).

⁷ Pollutants shall be analyzed using the analytical methods described in 40 CFR § 136; where no methods are specified for a given pollutant, by methods approved by this Regional Water Board, the State Water Board, and USEPA Region 9. For any pollutant whose effluent limitation is lower than all the MLs specified in Appendix II of the Ocean Plan, the analytical method with the lowest ML must be selected.

⁸ Oil and grease and settleable solids monitoring shall consist of a single grab sample at peak flow over a 24-hour period.

⁹ Monitoring required due to reasonable potential, but not required in R4-2012-0026.

¹⁰ In a January 12, 2018, formal consultation between the National Ocean Atmospheric Administration and USEPA identified the chemicals of emergent concern called polybrominated diphenyl ethers (PBDE), flame retardants, and total nitrogen as chemicals with the potential for toxic impacts on aquatic life in Santa Monica Bay. Therefore monthly total nitrogen is required. Failure to conduct sampling may trigger additional requirements for consultation. However, the discharger may apply to the Executive Officer to decrease or remove this sampling requirement if monitoring demonstrates the total nitrogen loading is at or below 9,900 kg/yr in combination with HTP effluent.

| Parameter | Units | Sample Type | Minimum Sampling Frequency ⁵ | Required Analytical Test Method |
|--|--------------------|--|---|---------------------------------|
| Turbidity | NTU | Grab | Monthly | 7 |
| Salinity | % | 24-hr composite | Monthly | 7 |
| DDTs | ng/L ¹¹ | Grab | Semiannually | 7 |
| PCBs | ng/L ¹¹ | Grab | Semiannually | 7 |
| Remaining pollutants in Table B of the 2015 Ocean Plan (excluding chronic and acute toxicity) ^{12 13} | µg/L | 24-hr composite or grab, as applicable, according to 40 CFR part 136 | Semiannually | 7 |

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

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 test is conducted over a short or longer period of time and may measure sublethal endpoints 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. Because of the nature of industrial discharges into the HTP sewershed, toxic constituents (or a mixture of constituents exhibiting toxic effects) maybe present in the LWRF brine.

A. Ammonia and Acute Toxicity

The LWRF brine effluent does not show reasonable potential to exceed 2015 Ocean Plan water quality objectives for toxicity and acute toxicity limits are not required by the Ocean Plan at initial dilutions above 99. However, the HTP does exhibit reasonable potential for acute toxicity related to ammonia. Because the toxicity at the “five-mile outfall” could be affected by LWRF, West Basin is required to participate in the Hyperion Acute Toxicity and Ammonia Special Study described on page 27 of the HTP permit, R4-2017-0045, as follows:

“In coordination with the West Basin Municipal Water District, the Permittee [The City of Los Angeles] shall propose a special study that evaluates the projected effects of water conservation and planned recycling on effluent acute toxicity and ammonia, including a mass balance of nitrogen species through the treatment plant and an assessment of operational alternatives (e.g. treatment optimization, additional treatment, additional dilution credits) to address projected compliance with acute toxicity and ammonia water quality objectives. A Special Study Work Plan, including a proposed schedule, shall be submitted for approval by the Regional Water Board Executive Officer and the USEPA Water Division Director no later than one year from the effective date of this Order. The special study report shall be submitted no later than two years before the permit expires.”

¹¹ The results for DDTs and PCBs shall be reported in ng/L and grams/year to assess compliance with the *Santa Monica Bay TMDL for DDTs and PCBs*. See section VIII of this Order/Permit and Attachment A for definition of terms.

¹² USEPA Method 1613 shall be used to analyze TCDD equivalents.

¹³ These constituents did not show reasonable potential. The minimum frequency for effluent analysis remains as “semiannually”.

The Discharger shall participate in this study with HTP, providing a mass balance of nitrogen species throughout the LWRP for both the current and future scenarios identified in the City of Los Angeles' workplanwork plan and an assessment of operational and/or process alternatives (eg. treatment optimization, additional treatment, additional dilution credits) to address projected compliance with acute toxicity and ammonia water quality objectives. The Permittee shall also supply LWRP brine effluent samples and any other technical information required to fully evaluate ammonia and acute toxicity in the combined effluent from the HTP and the LWRP brine.

B. Chronic Toxicity Monitoring Study of Combined Effluents

During this permit term, the Permittee shall conduct a 4410-month chronic toxicity monitoring study to review the impact of the combined West Basin brine and Hyperion Treatment Plant effluents on chronic toxicity, following initial mixing with the receiving water body, under critical dilution conditions. The Permittee, in coordination with the City of Los Angeles, Hyperion Treatment Plant, shall prepare a detailed workplanwork plan for this monitoring study describing the steps the Permittee will follow to measure the chronic toxicity of the combined effluents, under critical dilution conditions. This workplanwork plan shall include the elements specified below. By DecemberOctober 145, 2018, the Permittee shall submit their detailed workplanwork plan for this monitoring study to the Regional Water Board Executive Officer and USEPA Water Division Director for review and approval. The workplanwork plan shall be immediately implemented by the Permittee following approval by the Executive Officer and Water Division Director. The final report shall be submitted to the Executive Officer and Water Division Director, as an attachment to the monthly SMR/DMR due June December 14, 2020.

1. As part of this monitoring study, the Permittee shall conduct chronic toxicity tests on manually composited samples of combined West Basin and Hyperion Treatment Plant effluents every other month, for a 4410-month period. This testing shall be done concurrently with monthly chronic toxicity tests conducted under the 2017 Order/Permit for Hyperion Treatment Plant (NPDES No. CA0109991). During this study period, splits of the combined effluent samples for chronic toxicity testing shall be analyzed for all parameters on the monitoring schedule specified in Table E-3 of the MRP (Attachment E). Species and short-term test methods for estimating the chronic toxicity of NPDES effluents are found in the first edition of *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) and the 2015 Ocean Plan. The Permittee shall conduct a static renewal toxicity test with the topmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.0); a static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Germ-Tube Length Test Method 1009.0); and a toxicity test with an invertebrate species selected from the following list and used for the monthly chronic toxicity test required by the 2017 Order/Permit for Hyperion Treatment Plant:

- Static renewal toxicity test with the mysid, *Holmesimysis costata* (Survival and Growth Test Method 1007.0);
- Static non-renewal toxicity test with the Pacific oyster, *Crassostrea gigas*, or the mussel, *Mytilus* spp. (Embryo-larval Shell Development Test Method 1005.0);
- Static non-renewal toxicity test with the red abalone, *Haliotis rufescens* (Larval Shell Development Test Method);

- Static non-renewal toxicity tests with the purple sea urchin, *Strongylocentrotus purpuratus*, or the sand dollar, *Dendraster excentricus* (Embryo-larval Development Test Method); or
 - Static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, or the sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0).
2. There is no chronic toxicity WQBEL prescribed for the West Basin brine waste discharge because the permitting authorities have determined that—after authorized dilution occurs—the West Basin effluent does not show reasonable potential for chronic toxicity (see Attachment F – Fact Sheet). Unacceptable toxicity was not observed at the chronic toxicity in-stream waste concentration (IWC) for the combined discharge during the 14-month chronic toxicity monitoring study conducted under the 2012 Order/Permit. For the combined West Basin and Hyperion Treatment Plant effluents, the chronic toxicity IWC is 1.04% effluent (i.e., 100% combined effluent divided by the HTP “five-mile outfall” dilution factor of 96). This combined effluent sample for chronic toxicity testing is a manual composite comprised of 2.44% West Basin brine waste effluent and 97.56% Hyperion Treatment Plant undisinfected secondary treated effluent. The permitting authorities have chosen these values because under critical conditions in the HTP “five-mile outfall”, 2.44% of the combined effluent flow is from the West Basin discharge [5.2 MGD, highest brine waste flow rate following recycling plant expansion divided by (208 MGD + 5.2 MGD), lowest monthly average Hyperion Treatment Plant effluent flow rate and highest brine waste flow rate, x 100] and 97.56% of the combined effluent flow rate is from the Hyperion Treatment Plant discharge (100% – 2.44%).
 3. The purpose of this study is to provide information for the ongoing evaluation of chronic toxicity at the combined effluent IWC (1.04%), the focus of this study. For this Order/Permit, the Permittee shall report chronic toxicity monitoring study results using the Test of Significant Toxicity (TST) hypothesis testing statistical approach (Appendices A and B in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document*, EPA 833-R-10-003, June 2010) and TUC (i.e., NOEC hypothesis testing and point estimate statistical approaches). All effluent chronic toxicity test results shall be reported as: Pass or Fail based on the t value calculated using Welch’s t-test with TST at the combined discharge IWC (1.04% effluent) (TST Implementation Document, Fig. A-1), sublethal percent (%) effect at this IWC (TST Implementation Document, p. A-3), TUC = 100/NOEC, NOEC, TUC = 100/EC25, and EC25.
 4. As an appendix to the final report, each effluent and reference toxicant chronic toxicity test result—whether identified as valid or otherwise—shall be reported with the complete toxicity laboratory report prepared using the format and content of the test methods manual chapter called Report Preparation. The complete toxicity laboratory report shall include: summary water quality measurements for each toxicity test; raw toxicity test data; statistical program analyses and results; and, for the previous 12-month period, control charting information (tabular and graphical) for the control (coefficient of variation, standard deviation, mean) and reference toxicant (EC25, % MSD, etc.). Quality assurance measures, instructions, and other recommendations and requirements are found in the West Coast test methods manual previously referenced. Additional requirements are specified, below.
 - a. The chronic toxicity IWC for the combined West Basin and Hyperion Treatment Plant discharge is 1.04% effluent. The combined effluent sample for chronic toxicity testing is a manual composite comprised of 2.44% West Basin brine waste effluent

and 97.56% Hyperion Treatment Plant undisinfected secondary treated effluent. The sample for West Basin brine waste effluent is a 24-hour composite effluent sample collected at Effluent Monitoring Location EFF-001. The sample for Hyperion Treatment Plant undisinfected secondary treated effluent is a 24-hour composite effluent sample collected at Effluent Monitoring Location EFF-002, in the 2017 Order/Permit for Hyperion Treatment Plant (R4-2017-0045). A series of at least five effluent dilutions and proper controls shall be tested. At minimum, the dilution series shall include the combined discharge IWC for chronic toxicity and two dilutions above and below this IWC.

- b. For the combined effluents, dilution water shall be prepared as specified in the Hyperion Treatment Plant permit for conducting Hyperion Treatment Plant chronic toxicity tests. The dilution water described above and proper control waters should be prepared and used as specified in the test methods manual, *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, August 1995). If the dilution water is different from test organism culture water, then a second control using culture water shall also be used. If the use of artificial sea salts is considered provisional in the test method, then artificial sea salts shall not be used to increase the salinity of the effluent sample prior to toxicity testing without written approval by the Regional Water Board and USEPA.
- c. Monthly reference toxicant testing is sufficient. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.). Each chronic toxicity reference toxicant result shall be reviewed and reported using the EC_{25} ¹⁴.
- d. If either the reference toxicant test or effluent toxicity test does not meet all Test Acceptability Criteria (TAC) in the test method (EPA/600/R-95/136, 1995), then the Permittee must resample and retest within 14 days.
- e. Because this Order/Permit requires 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, August 1995), within test variability is reviewed for acceptability and an upper-bound variability criterion (% MSD) is applied as directed by test method TAC.
- f. If the discharged effluent is chlorinated, then chlorine shall not be removed from the effluent prior to toxicity testing without written approval by the permitting authorities.
- g. Where total ammonia concentrations in the effluent are >5 mg/L, toxicity may be contributed by unionized ammonia. pH drift during the toxicity test may contribute to artifactual toxicity when ammonia or other pH dependent toxicants (e.g., metals) are present. If sample toxicity is confirmed to be artifactual and due to pH drift (as determined through parallel toxicity testing described in Section 11.3.6.1 of the test methods manual *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA-821-R-02-013, October 2002)), then, following written approval by the permitting authorities, the Permittee

¹⁴ EC_{25} 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.

may use procedures outlined in Section 11.3.6.2 of the test methods manual to control sample pH during the toxicity test.

5. Preparation of an Initial Investigation Toxicity Reduction Evaluation (TRE) WorkplanWork Plan
 - a. ~~By October 15, 2018, t~~The Permittee, ~~in coordination with the City of Los Angeles, Hyperion Treatment Plant,~~ shall prepare and submit for Regional Water Board Executive Officer and USEPA Water Division Director review, within 90 days of the effective date of this permit, a copy of its Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan. If this workplanwork plan is not disapproved by the permitting authorities within 60 days of submission, it shall become effective. This plan shall include steps the Permittee, in coordination with the City of Los Angeles, Hyperion Treatment Plant, intends to follow if chronic toxicity is measured below the combined discharge IWC of 1.04% effluent (NOEC or EC25), or the TST null hypothesis for chronic toxicity at the combined discharge IWC of 1.04% effluent is not statistically rejected. At a minimum, this plan shall address the provisions in Attachment G – Toxicity Reduction Evaluation (TRE) Work Plan Outline and include: a description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
 - b. A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the facility.
 - c. If a Toxicity Identification Evaluation (TIE) is necessary, an indication of who would conduct the TIEs (i.e., an in-house expert or outside contractor).
6. As explained directed by the Regional Water Board Executive Officer and USEPA Water Division Director in the Fact Sheet, V, B.2(c), the Permittee shall, in coordination with the City of Los Angeles, Hyperion Treatment Plant, conduct a TRE/TIE using the same species and test method(s) and, as guidance and based on the type of treatment facility, EPA manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA 833-B-99-002, August 1999) or USEPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, April 1989).

In conjunction, the Permittee, in coordination with the City of Los Angeles, Hyperion Treatment Plant, shall develop and implement a Detailed TRE WorkplanWork Plan which shall include: further actions undertaken by the Permittee to investigate, identify, and correct the causes of toxicity; actions the Permittee will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and a schedule for these actions. The Permittee may initiate a Toxicity Identification Evaluation (TIE) as part of a TRE to identify the causes of toxicity, using as guidance USEPA manuals: *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F, May 1992); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, September 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, September 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, September 1996).

The Regional Water Board Executive Officer and USEPA Water Division Director shall be notified by the Permittee no later than 30 days from completion of each aspect of TRE/TIE analyses. Prior to completion of the final TRE/TIE report, the Permittee shall

provide status updates with the monthly DMR/SMR indicating which TRE/TIE steps are underway and which are complete.

7. Reporting

The Self-Monitoring Report (SMR) submitted, following the 4410-month chronic toxicity study, shall include a full laboratory report for each toxicity test. This report shall be prepared using the format and content of the test methods manual chapter called Report Preparation, and shall include:

- a. The valid toxicity test results for the TST statistical approach, reported as "Pass" or "Fail" and "Percent Effect" for five dilutions of the discharge. All toxicity test results (whether identified as valid or otherwise), including those conducted during the 4410-month chronic toxicity monitoring study, shall be reported in the next SMR due date specified in Table E-4.
- b. Summary water quality measurements for each toxicity test (e.g. pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).
- c. The statistical analysis used 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.
- d. TRE/TIE results. The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. Prior to completion of the final TIE/TRE report, the Permittee shall provide status updates in the monthly monitoring reports, indicating which TIE/TRE steps are underway and which steps have been completed.
- e. Statistical program (e.g., TST calculator, Comprehensive Environmental Toxicity Information System, etc.) output results, including graphical plots, for each toxicity test.
- f. Graphical plots and tabular data clearly showing the laboratory's performance of the reference toxicant for the previous 20 tests and the laboratory's performance of the control mean, control standard deviation, and control coefficient of variation, for each solution, for the previous 12-month period.
- g. Any additional QA/QC documentation or any additional chronic toxicity-related information, upon written request of the Regional Water Board Chief Deputy Executive Officer or Executive Officer.

C. Ammonia Removal

1. Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from bioassay samples. The Permittee must demonstrate the effluent toxicity is caused by ammonia because of increasing test pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following may be steps to demonstrate that the toxicity is caused by ammonia and no other toxicants before the Executive Officer would allow for control of pH in the test.
 - a. There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.
 - b. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.

- c. Conduct graduated pH tests as specified in the toxicity identification evaluation methods. For example, mortality should be higher at pH 8 and lower at pH 6.
 - d. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.
2. When it has been demonstrated that toxicity is due to ammonia because of increasing test pH, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent, after submitting a written request to the Regional Water Board, and receiving written permission expressing approval from the Executive Officer of the Regional Water Board.

D. Chlorine Removal

Except with prior approval from the Executive Officer of the Regional Water Board, chlorine shall not be removed from bioassay samples.

VI. LAND DISCHARGE MONITORING REQUIREMENTS (NOT APPLICABLE)

VII. RECYCLING MONITORING REQUIREMENTS (NOT APPLICABLE)

VIII. RECEIVING WATER MONITORING REQUIREMENTS (NOT APPLICABLE)

IX. OTHER MONITORING REQUIREMENTS

A. Biosolids and Sludge Management

The Permittee must comply with all Clean Water Act and regulatory requirements of 40 CFR § 257, 258, 501, and 503, including all applicable monitoring, record keeping, and reporting requirements. The Permittee must comply with the requirements in Attachment H of this Order.

B. Storm Wwater

The Discharger shall monitor discharges of storm water runoff from the LWRF through Discharge Points SW-002 and SW-003 at monitoring location SSP-001 and SSP-002 north of South at Hughes Road between the El Segundo Retention Basin and the facility. Table E-4 shows the effluent monitoring requirements. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level.

Table E-4. Storm water Water Monitoring

| Parameter | Units | Sample Type | Minimum Sampling Frequency ¹⁵ | Required Analytical Test Method |
|-----------------------------|---------|-------------|--|---------------------------------|
| Oil and Grease ⁸ | mg/L | Grab | 1/Discharge Event | 7 |
| pH | pH unit | Grab | 1/Discharge Event | 7 |
| Total suspended solids | mg/L | Grab | 1/Discharge Event | 7 |

¹⁵ During periods of extended discharge, no more than one sample per month needs to be taken. If, for safety reasons, a sample cannot be obtained during the first hour of discharge, then a sample shall be obtained at the first safe opportunity during daylight hours (Monday through Friday) of discharge. If there is no discharge to the El Segundo storm drain, the Discharger will indicate in the corresponding monitoring report, under penalty of perjury, that no effluent was discharged during the reporting period.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Permittee shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. If there is no discharge during any reporting period, the report shall so state.
3. 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.
4. The Permittee shall inform the Regional Water Board and USEPA well in advance of any proposed construction or maintenance activity, or modification to the LWRF that could potentially affect compliance with applicable requirements.
5. The date and time of sampling (as appropriate) shall be reported with the analytical values determined.
6. The laboratory conducting analyses shall be certified by the State Water Resources Control Board, Division of Drinking Water, Environmental Laboratory Accreditation Program (ELAP), in accordance with CWC section 13176, or approved by the Regional Water Board Executive Officer, in consultation with the State Water Board's Quality Assurance Program, and USEPA for that particular parameter and must include quality assurance/quality control (QA/QC) data in their reports. A copy of the laboratory certification shall be provided each time a new/renewal certification is obtained from ELAP and must be submitted with the annual summary report. Each monitoring report must affirm in writing that: "All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health, or approved by the Regional Water Board Executive Officer (in consultation with the State Water Board's Quality Assurance Program) and USEPA, and in accordance with current USEPA guideline procedures or as specified in this MRP.
7. Non-detect levels reported for the LWRF brine effluent are generally higher than effluent limitations or water quality objectives for DDT, chlordane, PCBs and PAHs. Therefore, the Permittee shall strive for lower analytical detection levels than those specified in Appendix II of the 2015 Ocean Plan to facilitate pollutant load quantification for the DDT and PCBs TMDL.
8. Upon request by the Permittee, the Regional Water Board, in consultation with the State Water Board's Quality Assurance Program and/or USEPA, may establish an ML that is not contained in Appendix II of the 2015 Ocean Plan, to be included in the Permittee's NPDES permit, in any of the following situations:
 - a. When the pollutant under consideration is not included in Appendix II;
 - b. When the Permittee agrees to use a test method that is more sensitive than those specified in 40 CFR § 136 (most recent revision);
 - c. When the Permittee agrees to use an ML lower than those listed in Appendix II;
 - d. When the Permittee demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Appendix II and proposes an appropriate ML for their matrix; or

- e. When the Permittee uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the USEPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, Regional Water Board, State Water Board and USEPA shall agree on a lowest quantifiable limit, and that limit will substitute for the ML for reporting and compliance determination purposes.
9. The Permittee 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 this Order.
10. The Permittee shall attach a cover letter to the monitoring reports. The information contained in the cover letter shall clearly identify violations of the Order; 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.
11. Discharge Monitoring Report – Quality Assurance (DMR-QA) Study Program: Under the authority of section 308 of the CWA (33 U.S.C. § 1318), U.S. EPA requires major and selected minor dischargers under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by U.S. EPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website at 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.
2. The Permittee shall report in the SMR the results for all monitoring specified in this Order. The Permittee shall submit monthly, 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 Permittee monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule, except where specific monitoring periods and reporting dates are required elsewhere in the Order:

Table E-5. Monitoring Periods and Reporting Schedule

| Sampling Frequency | Monitoring Period Begins | Monitoring Period | SMR Due Date |
|--------------------|---|---|--|
| Continuous | Order effective date | All | Submit with quarterly SMR |
| Monthly | First day of calendar month following permit effective date or on Order effective date if that date is first day of the month | 1st day of calendar month through last day of calendar month | Submit with quarterly SMR |
| Quarterly | Closest of January 1, April 1, July 1, or October 1 following (or on) Order effective date | January 1 to March 31 April 1 to June 30 July 1 to September 30 October 1 to December 31 | June 15 September 15 December 15 March 15 |
| Semiannually | Closest of January 1 or July 1 following (or on) Order effective date | January 1 to June 30 July 1 to December 31 | September 15 March 15 |
| Annually | January 1 following (or on) Order effective date | January 1 through December 31 | April 15 |

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

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

- a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

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

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
- d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the

Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. **Compliance Determination.** Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order/Permit. For purposes of reporting and administrative enforcement by the Regional Water Board and State Water Board, the Permittee shall be deemed out of compliance with effluent limitations if the concentration of the reportable pollutant in the monitoring sample is greater than the corresponding effluent limitation and greater than or equal to the reported Minimum Level (ML).
6. **Multiple Sample Data.** When determining compliance with a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses and the data set contains one or more reported determinations of DNQ or ND, the Permittee 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).
 - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.
7. The Discharger shall submit 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.

C. Discharge Monitoring Reports (DMRs)

DMRs are USEPA reporting requirements. The Permittee 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 at: http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring.

D. Other Reports

1. Special Studies

The Permittee shall report the results of any special studies, chronic toxicity testing, TRE/TIE, Pollutant Minimization Program (PMP), and Pollution Prevention Plan required by Special Provisions – WDR section VI.C. The Permittee shall submit reports in compliance with SMR reporting requirements described in subsection X.B. above.

2. Hauling Reports

- a. In the event wastes are transported to a different disposal site during the reporting period, the following shall be reported:
 - i. Types of wastes and quantity of each type;
 - ii. Name and either the address or the State registration number for each hauler of wastes (or the method of transport if other than by hauling); and
 - iii. Location of the final point(s) of disposal for each type of wastes.
- b. If no wastes are transported off site during the reporting period, a statement to that effect shall be submitted.

3. Annual Summary Report

By April 15 of each year, the Permittee shall submit an annual report containing a discussion of the previous year's influent/effluent analytical results (including the average and peak flow for the year), and a recycled water progress report describing any updates to the development of increased recycled water production. The annual report shall contain an overview of any plans for upgrades to the treatment plant's collection system, the treatment processes, the outfall system, or any changes that may affect the quality of the final effluent. The Permittee shall submit annual reports to the Regional Water Board and USEPA in accordance with the requirements described in subsection X.B.7. above.

Each annual monitoring report shall contain a separate section titled "Reasonable Potential Analysis" which discusses whether or not reasonable potential was triggered for pollutants which do not have a final effluent limitation in the NPDES permit. This section shall contain the following statement: "The analytical results for this sampling period did/did not trigger reasonable potential." If reasonable potential was triggered, then the following information should also be provided:

- a. A list of the pollutant(s) that triggered reasonable potential;
 - b. The Ocean Plan or Basin Plan criteria that was exceeded for each given pollutant;
 - c. The concentration of the pollutant(s);
 - d. The test method used to analyze the sample; and,
 - e. The date and time of sample collection.
4. The Permittee shall submit to the Regional Water Board and USEPA, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect this waste discharge, including quantities of each. Any significant subsequent changes in types and/or quantities thereafter, shall be reported promptly.

5. Technical Report on Preventive and Contingency Plans

The Regional Water Board requires the Permittee to file with the Regional Water Board and USEPA, within 90 days after the effective date of this Order, a technical report on its

preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. The technical report should:

- a. Identify the possible sources of accidental loss, untreated waste bypass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks, and pipes should be considered.
- b. Evaluate the effectiveness of present facilities and procedures and state when they become operational.
- c. Describe facilities and procedures needed for effective preventive and contingency plans.
- d. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule contingent interim and final dates when they will be constructed, implemented, or operational.

REVISED TENTATIVE

ATTACHMENT F – FACT SHEET

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REVISED TENTATIVE

ATTACHMENT F – FACT SHEET

As described in section I of this Order, the Regional Water Board and USEPA incorporate this Fact Sheet as findings of the Regional Water Board and USEPA supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Edward C. Little Recycling Facility (LWRF).

Table F-1. Facility Information

| | |
|---|---|
| WDID | 4B190137001 |
| Discharger | West Basin Municipal Water District |
| Current Operator | Suez Water Environment Services |
| Name of Facility | Edward C. Little Water Recycling Facility (LWRF) |
| Facility Address | 1935 South Hughes Way El Segundo, CA 90245 |
| Facility Contact, Title and Phone | Uzi Daniel, Environmental Quality Supervisor, (310) 660-6245 |
| Authorized Person to Sign and Submit Reports | Shivaji Deshmukh, Assistant General Manager (310) 660-6234 |
| Mailing Address | 17140 S. Avalon Blvd., Suite 210, Carson, CA 90746 |
| Billing Address | 17140 S. Avalon Blvd., Suite 210, Carson, CA 90746 |
| Operator Contact | Antoine Vuillermet, (310) 910-8628 |
| Type of Facility | Advanced Water Treatment Recycling Plant |
| Major or Minor Facility | Major |
| Threat to Water Quality | 3 |
| Complexity | C |
| Pretreatment Program | No |
| Recycling Requirements | Producer |
| Facility Permitted Flow | 5.2 million gallons per day (MGD) of brine waste |
| Facility Design Flow | 5.2 MGD of brine waste |
| Watershed | Santa Monica Bay Watershed Management Area |
| Receiving Water | Pacific Ocean |
| Receiving Water Type | Ocean waters |

- A. The West Basin Municipal Water District (hereinafter Discharger or West Basin) is the owner of the Edward C. Little Water Recycling Facility (hereinafter Facility or LWRF), an advanced water treatment facility producing recycled water from secondary effluent wastewater. USEPA and the Regional Water Board have classified LWRF as a major discharger. It has a Threat to Water Quality and Complexity rating of 3-C pursuant to California Code of

Regulations (CCR), Title 23, section 2200.

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

- B.** The Facility discharges untreated brine waste from reverse osmosis treatment to the Pacific Ocean, a water of the United States and of the State. This Discharger was previously regulated by Order R4-2012-0026 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0063401 adopted on February 8, 2012, expired on January 10, 2017, and administratively extended until the adoption of this Order. The Facility also directs storm water runoff from areas of the facility to the storm water sewer which drains to the El Segundo earthen-bottom retention basin. When the basin is full, discharge pumps transfer the excess storm water to Dominguez Channel which drains to the Pacific Ocean. The high level setpoint to start the pump(s) is set to prevent flooding in the areas draining to the retention basin.

Attachment B provides maps of the area around the Facility, including the storm water discharge. Attachment C provides flow schematics of the Facility.

- C.** The Discharger filed a report of waste discharge and submitted an application for reissuance of its waste discharge requirements (WDRs) and NPDES permit on June 23, 2016. The application was deemed complete on July 21, 2016. A site visit was conducted on September 28, 2017, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.
- D.** The Permittee is authorized to discharge subject to waste discharge requirements in this Order at the discharge location described in Table 2 of this Order.
- E.** Regulations at 40 C.F.R. section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. However, pursuant to California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.
- F. Dilution Credits.** LWRF discharges brine from the treatment facility through the “five-mile outfall” of the Hyperion Treatment Plant (HTP), which is owned and operated by the City of Los Angeles. The LWRF brine effluent mixes with HTP secondary effluent before entering the Ocean, so the zone of initial dilution identified for HTP is critical to establishing limits which protect ocean water quality objectives. The City of Los Angeles submitted the “Five-Mile Outfall” Dilution Study on April 06, 2016. Regional Water Board staff reviewed the study, consulted with the USEPA, and approved the 96:1 dilution ratio for limited applications. For the Hyperion permit, the 96:1 dilution ratio was only applied to the effluent limitations for ammonia and chronic toxicity. For the LWRF effluent limitations, the 96:1 dilution ratio at the diffuser of the “five-mile outfall” has only been applied to the limitations for ammonia and chlorine residual.

LWRF brine discharges into the HTP effluent at LWRF Outfall 001. Additional mixing takes place during the time it takes to travel through the 5-mile outfall to the diffuser. Therefore, the discharge undergoes two dilution events, which are used to estimate the minimum probable initial dilution value (Dm) and to calculate effluent limits as shown in Table F-2. Additional discussion can be found in this attachment at II.B and IV.C.5.

Table F-2. Dilution Ratios and Brine Percentages

| Mixing Events | Dilution Ratio Calculations ¹ | Percentage of Brine Waste in Diluted Stream |
|---|--|---|
| 1. Brine waste mixes with HTP secondary effluent in the pipeline which discharges to the “five-mile outfall” (first mixing event) | 5.2 MGD : 450 MGD \cong 1 : 86.54 (design flows) | 1.14% |
| | 5.2 MGD : 208 MGD \cong 1 : 40 (minimum current HTP flow) | 2.44% |
| 2. Comingled Brine waste & HTP secondary effluent in HTP outfall mixes with the Pacific Ocean at the diffuser discharge (second mixing event) | 1 : (86.54 \times [96+1]) ² \cong 1 : 8394 (design flows) | 0.012% |
| | 1 : (40 \times [96+1]) \cong 1 : 3880 (minimum current HTP flow) | 0.026% |

II. FACILITY DESCRIPTION

The Plant is owned by the Discharger and is located at 1935 [South](#) Hughes Way, El Segundo, California. The Plant treats secondary effluent provided by the City of Los Angeles’ HTP to supply recycled water of varying quality depending on the end-use. Attachment C-2 indicates the five different recycled water products, their beneficial reuse as well as the treatment trains required. The end-uses include Title 22 irrigation water; high and low pressure boiler feed water for Chevron El Segundo Refinery boilers; cooling tower makeup water for refineries, and groundwater direct injection for the West Coast Basin Barrier Project. The brine waste permitted by this Order is generated by the reverse osmosis treatment systems needed to produce the boiler feedwater and the groundwater replenishment water.

A. Description of Wastewater and Solids Treatment and Controls

1. The Facility currently has a total wastewater treatment design capacity of 62.5 MGD and produces recycled water using ~~two-three~~ treatment processes; 1) a Title 22 [disinfected tertiary system treatment](#), 2) ~~and~~ an advanced treatment train [producing an industrial boiler feed water with ozone, which includes microfiltration, and reverse osmosis, and 3\) and advanced treatment train including ozone, microfiltration, reverse osmosis, and](#)

¹ In the first mixing event, the LWRF brine mixes with the Hyperion secondary effluent within the discharge pipe during flow to the diffuser of the “five-mile’ outfall”. In the second mixing event, the combined effluents mix with the Ocean within the ‘zone of initial dilution’, [defined in the Ocean plan as the volume within which rapid and irreversible turbulent mixing of ocean and effluent waters takes place and quantified for this outfall in the 2016 5-mile Outfall Dilutions Study CORMIX model described in HTP R4-2017-0045 section I. F.](#)—The Ocean Plan water quality objectives are to be obtained outside that ‘zone of initial dilution’, so the effluent limits are established to meet the Ocean Plan objectives after two dilution events.

² The 96:1 dilution factor modeling of the “five-mile outfall” at the 450 MGD design capacity was approved by USEPA and Regional Water Board staff for limited applications prior to the 2017 adoption of the Hyperion Order R4-2017-0045.

advanced oxidation for injection into the West Coast Groundwater Basin as a seawater intrusion barrier. The schematics for the advanced treatment train are provided in Attachments C-3, C-4 and C-5. The brine waste stream is a byproduct of the reverse osmosis treatment, as shown in Attachment C-4.

2. The advanced treatment facilities ~~currently treats-produce~~ up to 17.5 MGD of secondary effluent indirect potable reuse water from secondary effluent for the West Coast Basin Barrier Project and ~~treats~~ another 4.65 MGD of secondary effluent reverse osmosis permeate for refinery boiler feed water makeup. As shown in Attachment C-5, the advanced oxidation process is only needed for groundwater injection and includes ultraviolet with hydrogen peroxide, decarbonation, and lime stabilization.
3. Currently, a daily maximum of 4.22 MGD of brine waste generated from the reverse osmosis trains of the advanced treatment facility was discharged to the Pacific Ocean between 2012 and 2016.
4. Solids generated from the above-mentioned processes are dewatered onsite using two plate-and-frame presses. It is then hauled off-site to be beneficially reused at either a soil remediation facility as construction mix soil, or as "Alternate Daily Cover" at a landfill.

B. Discharge Points and Receiving Waters

1. Reverse osmosis brine waste produced at the Facility is discharged through Discharge Point 001 to the Pacific Ocean, a water of the United States. Discharge Point 001 corresponds to the Hyperion Treatment Plant (HTP) "five-mile outfall", named Discharge Point 002 in the HTP Order R4-2017-0045. Table E-1 includes a description of Discharge Point 001, which is identical to the HTP "five-mile outfall". When the "five-mile outfall" was taken out of service for repairs at the effluent pumping plant in 2015, the brine waste was temporarily discharged through the 1-mile outfall and regulated during that bypass by Resolution R15-009. A location map of the Facility is provided in Attachment B of this Order.

- a. Discharge Point 001

Discharge Point 001 is commonly referred to as the "five-mile outfall". It is a 12-foot diameter outfall terminating approximately 26,525 feet (8.1 km) west-southwest of the treatment plant at a depth of approximately 187 feet (57m) below the ocean surface. This outfall ends in a "Y" shaped diffuser consisting of two 3,840-foot legs (Latitude 33.911967 N, Longitude: 118.521450 W) (North terminus of "Y" structure – Latitude 33.919333 N, Longitude 118.528483 W; South terminus of "Y" structure – Latitude 33.900650 N, Longitude 118.527267 W). This is the only outfall permitted for the discharge of LWRP brine mingled with Hyperion's uninfected secondary treated effluent.

- b. Discharge Points SW-002 and SW-003

Storm water runoff at the Facility is either collected, treated and reused or discharged directly to the El Segundo storm water sewer (SW-002 at Latitude 33.90867N, Longitude 118.392748W, SW-003 at Latitude 33.9088N, Longitude 118.39166W) which drains to the earthen-bottom El Segundo Retention Basin as shown in Attachment B-3.

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

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

Table F-3. Discharge Point 001 - Historic Effluent Limitations and Monitoring Data

| Parameter | Units | Effluent Limitation | | | Monitoring Data (From December 31, 2012 To December 31, 2016) | | |
|-------------------------------|-------------------------|---------------------|----------------|------------------|---|----------------------------------|-------------------------|
| | | Average Monthly | Average Weekly | Maximum Daily | Highest Average Monthly Discharge | Highest Average Weekly Discharge | Highest Daily Discharge |
| Conventional/Non-Conventional | | | | | | | |
| Total Suspended Solids | mg/L | -- | 60 | -- | 4 | 4 | 4 |
| Oil & Grease | mg/L | 25 | 40 | 75 ³ | 3 | 3.1 | 3.1 |
| Settleable Solids | ml/L | 1.0 | 1.5 | 3.0 | 1 | 1 | 1 |
| pH | pH Unit | 6.0 – 9.0 | 7.7 | -- | 7.1 | -- | 7.5 |
| Temperature | °F | -- | -- | 100 | 88.3 | -- | 90 |
| Turbidity | NTU | 75 | 100 | 225 ² | 2.7 | 2.7 | 2.7 |
| Marine Aquatic Life | | | | | | | |
| Arsenic (As) | µg/L | -- | -- | -- | 19.7 | -- | 19.7 |
| Cadmium (Cd) | µg/L | -- | -- | -- | <0.0003 | -- | <0.0003 |
| Chromium Total (Cr) | µg/L | -- | -- | -- | 49.1 | -- | 49.1 |
| Copper (Cu) | µg/L | -- | -- | -- | 45.6 | -- | 45.6 |
| Lead (Pb) | µg/L | -- | -- | -- | 0.52 | -- | 0.52 |
| Mercury (Hg) | µg/L | -- | -- | -- | 0.85 | -- | 0.85 |
| Nickel (Ni) | µg/L | -- | -- | -- | 73.1 | -- | 73.1 |
| Selenium (Se) | µg/L | -- | -- | -- | 16.2 | -- | 16.2 |
| Silver (Ag) | µg/L | -- | -- | -- | <0.000178 | -- | <0.000178 |
| Zinc (Zn) | µg/L | -- | -- | -- | 180 | -- | 180 |
| Cyanide | µg/L | -- | -- | -- | 22 | -- | 22 |
| Residual Chlorine | µg/L mg/L | -- | -- | -- | 3,540 | -- | 3,540 |
| Ammonia-N | mg/L | 350 ⁴ | -- | 7,970 | 243 | -- | 270 |
| Acute Toxicity | TUa | -- | -- | -- | -- | -- | Pass |
| Chronic Toxicity | TUc | -- | -- | -- | -- | -- | Pass |
| Non-Cl Phenolic Compounds | µg/L | -- | -- | -- | 22 | -- | 22 |
| Cl Phenolic Compounds | µg/L | -- | -- | -- | <0.6 | -- | <0.6 |
| Endosulfan | µg/L | -- | -- | -- | <0.0038 | -- | <0.0038 |
| Endrin | µg/L | -- | -- | -- | <0.056 | -- | <0.056 |

³ This number represents an instantaneous maximum.

⁴ This is a 6-month median limit.

| Parameter | Units | Effluent Limitation | | | Monitoring Data (From December 31, 2012 To December 31, 2016) | | |
|--------------------------------------|-------|---------------------|----------------|---------------|---|----------------------------------|-------------------------|
| | | Average Monthly | Average Weekly | Maximum Daily | Highest Average Monthly Discharge | Highest Average Weekly Discharge | Highest Daily Discharge |
| HCH ⁵ | µg/L | -- | -- | -- | <1.5 | -- | <1.5 |
| Gross Alpha | pCi/L | -- | -- | -- | 190 | -- | 190 |
| Gross Beta | pCi/L | -- | -- | -- | 290 | -- | 290 |
| Human Health - Noncarcinogens | | | | | | | |
| Bis(2-chloro-isopropyl) ether | µg/L | -- | -- | -- | <0.38 | -- | <0.38 |
| Chlorobenzene | µg/L | -- | -- | -- | <0.21 | -- | <0.21 |
| Chromium III (Cr) | µg/L | -- | -- | -- | 48.3 | -- | 48.3 |
| Di-n-Butyl phthalate | µg/L | -- | -- | -- | 0.55 | -- | 0.55 |
| Dichlorobenzene | µg/L | -- | -- | -- | <0.5 | -- | <0.5 |
| Diethyl phthalate | µg/L | -- | -- | -- | 0.79 | -- | 0.79 |
| Dimethyl phthalate | µg/L | -- | -- | -- | <0.18 | -- | <0.18 |
| 4,6-Dinitro-2-methylphenol | µg/L | -- | -- | -- | <0.26 | -- | <0.26 |
| 2,4-Dinitrophenol | µg/L | -- | -- | -- | <1.6 | -- | <1.6 |
| Ethylbenzene | µg/L | -- | -- | -- | <0.17 | -- | <0.17 |
| Fluoranthene | µg/L | -- | -- | -- | <2 | -- | <2 |
| Hexachloro-cyclopentadiene | µg/L | -- | -- | -- | <1.5 | -- | <1.5 |
| Nitrobenzene | µg/L | -- | -- | -- | 1.1 | -- | 1.1 |
| Thallium | µg/L | -- | -- | -- | <0.0001 | -- | <0.0001 |
| Toluene | µg/L | -- | -- | -- | 3.8 | -- | 3.8 |
| Tributyltin | µg/L | -- | -- | -- | 0.0019 | -- | 0.0019 |
| 1,1,1-Trichloroethane | µg/L | -- | -- | -- | <0.38 | -- | <0.38 |
| Bis(2-chloroisopropyl) ether | µg/L | -- | -- | -- | <0.38 | -- | <0.38 |
| Chlorobenzene | µg/L | -- | -- | -- | <0.21 | -- | <0.21 |
| Chromium VI (Cr) | µg/L | -- | -- | -- | 1.7 | -- | 1.7 |
| Di-n-Butyl phthalate | µg/L | -- | -- | -- | <0.24 | -- | <0.24 |
| Human Health - Carcinogens | | | | | | | |
| Acrylonitrile | µg/L | -- | -- | -- | <1.8 | -- | <1.8 |
| Aldrin | µg/L | -- | -- | -- | <0.003 | -- | <0.003 |
| Benzene | µg/L | -- | -- | -- | <0.23 | -- | <0.23 |
| Benzidine | µg/L | -- | -- | -- | <3.7 | -- | <3.7 |
| Beryllium (Be) | µg/L | -- | -- | -- | <0.00041 | -- | <0.00041 |
| Bis(2-chloroethyl) ether | µg/L | -- | -- | -- | <0.27 | -- | <0.27 |

⁵ See Attachment A for definition of terms.

| Parameter | Units | Effluent Limitation | | | Monitoring Data (From December 31, 2012 To December 31, 2016) | | |
|-----------------------------|-------|---------------------|----------------|---------------|---|----------------------------------|-------------------------|
| | | Average Monthly | Average Weekly | Maximum Daily | Highest Average Monthly Discharge | Highest Average Weekly Discharge | Highest Daily Discharge |
| Bis(2-ethylhexyl) phthalate | µg/L | -- | -- | -- | <0.15 | -- | <0.15 |
| Carbon tetrachloride | µg/L | -- | -- | -- | <0.33 | -- | <0.33 |
| Chlordane ^{5,67} | µg/L | -- | -- | -- | <0.16 | -- | <0.16 |
| Chlorodibromomethane | µg/L | -- | -- | -- | 5.6 | -- | 5.6 |
| Chloroform | µg/L | -- | -- | -- | 23 | -- | 23 |
| DDT ^{5,66} | µg/L | -- | -- | -- | <0.05 | -- | <0.05 |
| 1,4-Dichlorobenzene | µg/L | -- | -- | -- | 0.39 | -- | 0.39 |
| 3,3-Dichlorobenzidine | µg/L | -- | -- | -- | <1.2 | -- | <1.2 |
| 1,2-Dichloroethane | µg/L | -- | -- | -- | <0.24 | -- | <0.24 |
| 1,1-Dichloroethylene | µg/L | -- | -- | -- | <0.39 | -- | <0.39 |
| Dichlorobromomethane | µg/L | -- | -- | -- | 3.6 | -- | 3.6 |
| Dichloromethane | µg/L | -- | -- | -- | 2.2 | -- | 2.2 |
| 1,3-Dichloropropene | µg/L | -- | -- | -- | <0.22 | -- | <0.22 |
| Dieldrin | µg/L | -- | -- | -- | <0.0042 | -- | <0.0042 |
| 2,4-Dinitrotolulene | µg/L | -- | -- | -- | <0.18 | -- | <0.18 |
| 1,2-Diphenylhydrazine | µg/L | -- | -- | -- | <0.25 | -- | <0.25 |
| Halomethanes | µg/L | -- | -- | -- | 3.8 | -- | 3.8 |
| Heptachlor | µg/L | -- | -- | -- | <0.0034 | -- | <0.0034 |
| Heptachlor epoxide | µg/L | -- | -- | -- | <0.0038 | -- | <0.0038 |
| Hexachlorobenzene | µg/L | -- | -- | -- | <0.49 | -- | <0.49 |
| Hexachlorobutadiene | µg/L | -- | -- | -- | <0.47 | -- | <0.47 |
| Hexachloroethane | µg/L | -- | -- | -- | <0.52 | -- | <0.52 |
| Isophorone | µg/L | -- | -- | -- | <0.21 | -- | <0.21 |
| N-Nitrosodimethylamine | µg/L | -- | -- | -- | <0.14 | -- | <0.14 |
| N-Nitrosodi-N-propylamine | µg/L | -- | -- | -- | <0.26 | -- | <0.26 |
| N-Nitrosodiphenylamine | µg/L | -- | -- | -- | 1.3 | -- | 1.3 |
| PAH ^{5,6} | µg/L | -- | -- | -- | <0.4 ⁶ | -- | <0.4 |
| PCB ^{5,6} | µg/L | -- | -- | -- | <0.5 | -- | <0.5 |

⁶ Non-detect levels reported for the effluent are generally higher than effluent limitations or water quality objectives for DDT, chlordane, PCBs and PAHs

| Parameter | Units | Effluent Limitation | | | Monitoring Data (From December 31, 2012 To December 31, 2016) | | |
|-------------------------------|-------|---------------------|----------------|---------------|---|----------------------------------|-------------------------|
| | | Average Monthly | Average Weekly | Maximum Daily | Highest Average Monthly Discharge | Highest Average Weekly Discharge | Highest Daily Discharge |
| TCDD equivalents ⁵ | µg/L | -- | -- | -- | 0.00001 | -- | 0.00001 |
| 1,1,2,2-Tetrachloroethane | µg/L | -- | -- | -- | <0.18 | -- | <0.18 |
| Tetrachloroethylene | µg/L | -- | -- | -- | 3.9 | -- | 3.9 |
| Toxaphene | µg/L | -- | -- | -- | <0.24 | -- | <0.24 |
| Trichloroethylene | µg/L | -- | -- | -- | <0.37 | -- | <0.37 |
| 1,1,2-Trichloroethane | µg/L | -- | -- | -- | 0.35 | -- | 0.35 |
| 2,4,6-Trichlorophenol | µg/L | -- | -- | -- | <0.22 | -- | <0.22 |
| Vinyl chloride | µg/L | -- | -- | -- | <0.33 | -- | <0.33 |

D. Compliance Summary

Data submitted show that there were no violations between December 2012 and December 2016.

E. Planned Changes

In addition to the normal operation of changing out the microfiltration filters and the reverse osmosis membranes, the Discharger is also adding some additional filters as a temporary measure to increase the produced flow from the advanced treatment facility to design capacity over the next two years. To address higher than expected Total Organic Carbon in the reverse osmosis permeate, the membranes are being replaced with a different type of membrane. There currently is no plan to increase the design flow of 5.2 MGD of brine discharged while these changes are being implemented.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS.

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

A. Legal Authorities

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC) (commencing with Section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, Chapter 4, Division 7 of the California Water Code (commencing with Section 13260). Although Discharge Point 001 is beyond the limit of State-regulated ocean waters, effluent plume migration into State waters warrants joint regulation of the discharge by USEPA and the Regional Water Board.

B. California Environmental Quality Act (CEQA)

Under CWC section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code 21100-21177.

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

- 1. Water Quality Control Plan.** The Regional Water Board adopted a Water Quality Control Plan for the Los Angeles Region (Basin Plan) on June 13, 1994 that has been occasionally amended and designates beneficial uses, establishes water quality objectives (WQOs), establishes prohibitions, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan including its subsequent amendments. Beneficial uses applicable to the receiving water are as follows.

Table F-4. Basin Plan Beneficial Uses

| Water Body Designation | Receiving Water Name | Beneficial Use(s) |
|---|------------------------------|---|
| 180701040601 (Formerly Hydro. Unit No. 405.12) | Dockweiler Beach | <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), and wildlife habitat (WILD). <u>Potential:</u> Spawning, reproduction, and/or early development (SPWN). |
| 180701040601 (Formerly Hydro. Unit No. 405.12) | Pacific Ocean Nearshore Zone | <u>Existing:</u> IND, NAV, REC-1, REC-2, COMM, MAR, WILD, preservation of biological habitats (BIOL), rare endangered or threatened (RARE), migration of aquatic organisms (MIGR), SPWN, and shellfish harvesting (SHELL). <u>Potential:</u> None. |
| 180701040601 (Formerly Hydro. Unit No. 405.12) | Pacific Ocean Offshore Zone | <u>Existing:</u> IND, NAV, REC-1, REC-2, COMM, MAR, WILD, RARE, MIGR, SPWN, and SHELL. <u>Potential:</u> None. |

- 2. California Thermal Plan.** In 1972, the State Water Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (hereinafter Thermal Plan), as amended. This plan contains temperature objectives for coastal and inland surface waters. Requirements of this Order implement the Thermal Plan and best professional judgement and maintain the existing temperature limit.
- 3. California Ocean Plan.** In 1972, the State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (hereinafter Ocean Plan), as amended. The latest amendment became effective on January 28, 2016. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean waters of the State and to federal waters, which may impact waters of the State, when state requirements are more stringent. Ocean Plan beneficial uses applicable to ocean waters of the State are shown in Table F-5:

Table F-5. Ocean Plan Beneficial Uses

| Discharge Point | Receiving Water | Beneficial Uses |
|--|-----------------|---|
| 001 (Hyperion Treatment Plant Discharge Point 002) | Pacific Ocean | IND, REC-1, REC-2, NAV, COMM, mariculture, preservation and enhancement of designated Area of Special Biological Significance (ASBS), RARE, MAR, MIGR, SPWN, and SHELL. |

To protect the beneficial uses in ocean water, the Ocean Plan establishes water quality objectives and a program implementation. Requirements of this Order implement the 2015 Ocean Plan.

- 4. Santa Monica Bay Restoration Plan.** The LWRF discharges through the HTP “five-mile outfall” into Santa Monica Bay, one of the most heavily used recreational areas in California. Recognizing the importance of the Bay as a national resource, the State of California and USEPA nominated Santa Monica Bay in the National Estuary Program, and Congress subsequently included Santa Monica Bay in the program. The USEPA, with support from the Santa Monica Bay Restoration Commission (formerly the Santa Monica Bay Restoration Project) developed the Bay Restoration Plan (BRP), which serves as a blueprint for restoring and enhancing the Bay. The Regional Water Board plays a lead role in the implementation of the BRP through adoption and enforcement of NPDES permits. Three of the proposed priorities of the BRP are reduction of pollutants of concern at the source (including municipal wastewater treatment plants), attainment of full secondary treatment at the City of Los Angeles’ HTP and the County Sanitation Districts of Los Angeles County’s Joint Water Pollution Control Plant, and implementation of the mass emission approach for discharges of pollutants to the Bay.
- 5. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes (40 CFR § 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 USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.
- 6. Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA and California Ocean Plan. Individual pollutant restrictions consist of technology-based effluent limitations (TBELs) and water quality-based effluent limitations (WQBELs). The TBELs applied here are for total suspended solids (TSS), oil and grease, settleable solids, turbidity and pH as limited in the Ocean Plan. The minimum applicable federal technology-based requirements for POTWs, such as BOD and percent removal of BOD and TSS, do not apply at LWRF because it does not include primary and secondary treatment to remove biological solids a POTW and Table 2 of the Ocean Plan does not include limits for BOD and percent removal of BOD. As a result, BOD and percent removal of BOD are not applied. The influent water is secondary treated effluent which has already met those requirements through compliance with HTP Order R4-2017-0045. This Order’s technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

WQBELs for ammonia and total residual chlorine have been scientifically derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law and are the applicable federal water quality standards. All beneficial uses and WQOs contained in the Basin Plan and the Ocean Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless “applicable water quality standards for purposes of the CWA” pursuant to 40 CFR § 131.21(c)(1). Collectively, this Order’s restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

Mass limits are included for DDT and PCB as specified by the *Santa Monica Bay PCB and DDT TMDL*, which determined the constituents have exhibited reasonable potential to exceed water quality objectives.

- 7. Antidegradation Policy.** Federal regulation 40 CFR § 131.12 requires that state water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California’s antidegradation policy in State Water Board Resolution 68-16 (“Statement of Policy with Respect to Maintaining the Quality of the Waters of the State”). 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 discharges permitted in this Order are consistent with the antidegradation provisions of 40 CFR § 131.12 and State Water Board Resolution 68-16 and is described in further detail in Section IV.D.2. of this Fact Sheet.
- 8. Anti-Backsliding Requirements.** CWA sections 402(o) and 303(d), and 40 CFR § 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. The applicability of these requirements to this Order is discussed in detail in section IV.[ED.21](#). of this Fact Sheet.
- 9. Endangered Species Act (ESA) 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 under either the California ESA (Fish and Wildlife Code, sections 2050 to 2097) or the Federal ESA (16 USC sections 1531 to 1544). USEPA made a “may affect, not likely to adversely affect” determination for the southern California steelhead, North American green sturgeon, the scalloped hammerhead shark, [Guadalupe fur seal](#), blue whale, fin whale, humpback whale, gray whale, leatherback turtle, loggerhead turtle, white abalone, [black abalone](#) and olive ridley sea turtle. USEPA made a “no effect” determination for the remaining listed species (*i.e.* [Sei whale](#), [sperm whale](#), [riverside fairy shrimp](#), [California least tern](#), [coastal California gnatcatcher](#), and the [least bell’s vireo](#)) under the National Marine Fisheries Service and the U.S. Fish and Wildlife Service jurisdictions. [USEPA requested concurrence with these effect determinations for the discharge of brine on March 20, 2018 as part of informal consultation and received concurrence from the National Marine Fisheries Service on May 9, 2018 for these effect determinations. This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Permittee is responsible for meeting all requirements of the applicable ESA. A formal](#)

~~consultation between USEPA and the United States Fish and Wildlife Service and the National Marine Fisheries Service is ongoing for the discharges from the HTP, which includes an analysis of the West Basin discharge of brine. USEPA requested concurrence with these effect determinations for the discharge of brine on March 19, 2018 as part of informal consultation. This Order includes a reopener clause if changes to this permit are warranted based on the result of the completed consultation. This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Permittee is responsible for meeting all requirements of the applicable ESA.~~

- 10. Monitoring and Reporting.** 40 CFR § 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and state requirements. This MRP is provided in Attachment E.
- 11. Federal Permit Renewal Contingency.** The renewal of the Permittee's permit by USEPA is contingent upon determination by the U.S. Fish and Wildlife Service and NOAA National Marine Fisheries Service that the proposed discharge is consistent with the: (1) federal Endangered Species Act; (2) the Magnuson-Stevens Fishery Conservation and Management Act (MSA); and (3) the Regional Water Board's certification/concurrence that the discharge will comply with applicable State water quality standards.

USEPA's reissuance of NPDES No. CA0063401 to the West Basin Municipal Water District for LWRF is subject to requirements of the MSA and ESA. In November 2015, USEPA requested updated information related to: (1) essential fish habitat and managed and associated species, and (2) threatened and endangered species and their designated critical habitats, in the vicinity of the Hyperion outfalls from the National Marine Fisheries Service and the U.S. Fish and Wildlife Service (collectively, the Services). USEPA may decide that changes to this permit are warranted based on the results of an ongoing consultation and a reopener provision to this effect has been included in the Order.

Joint issuance of an NPDES permit which incorporates both federal requirements and State waste discharge requirements will serve as the State's concurrence that the discharge complied with State water quality standards. The California Coastal Commission has indicated that it is not necessary to obtain a consistency certification pursuant to the Coastal Zone Management Act for the issuance of this permit authorizing the discharge of brine.

- 12. Water Recycling.** In accordance with statewide policies concerning water reclamation⁷, this Regional Water Board strongly encourages, wherever practicable, water recycling, water conservation, and use of storm water and dry-weather urban runoff. The Permittee shall investigate the feasibility of recycling, conservation, and/or alternative disposal methods of wastewater and/or use of storm water and dry-weather urban runoff.

⁷ See, e.g., CWC sections 13000 and 13550-13557, State Water Board Resolution No. 77-1 (Policy with Respect to Water Reclamation in California), and State Water Board Resolution No. 2009-0011 (Recycled Water Policy).

13. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR § 122.41, and additional conditions applicable to POTWs in accordance with 40 CFR § 122.42, are provided in Attachment D. The Regional Water Board and USEPA have also included in this Order Special Provisions applicable to the Permittee. The rationale for the Special Provisions contained in this Order is provided in the attached Fact Sheet

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

The 303(d) list identifies water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations by point sources (water quality limited bodies). The State Water Board proposed the California 2012 Integrated Report from a compilation of the adopted Regional Water Boards' Integrated Reports containing 303(d) List of Impaired Waters and 305(b) Reports following recommendations from the Regional Water Boards and information solicited from the public and other interested parties. The Regional Water Boards' Integrated Reports were used to revise their 2010 303(d) List. On April 6, 2015, the State Water Board adopted Resolution No. 2015-0021 approving the California 2012 Integrated Report. On July 30, 2015, the USEPA approved California 2012 Integrated Report Section 303(d) List of Impaired Waters requiring Total Maximum Daily Loads (TMDL) for the Los Angeles Region. On April 6, 2018, the 2014-2016 Integrated Report Section 303(d) list of Impaired waters was approved by USEPA. The 303(d) List can be viewed at the following link:

https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2012.shtml

~~The Santa Monica Bay (Offshore and Nearshore) is on the 2014 and 2016 303(d) list for the following pollutants/stressors from point and non-point sources: mercury, and, arsenic and trash. DDT (tissue & sediment), debris, fish consumption advisory, PCBs (tissue & sediment), and sediment toxicity. Total Maximum Daily Loads (TMDLs) for mercury and, arsenic, sediment toxicity and fish consumption advisory have not been scheduled for beaches in the Santa Monica Bay. The Santa Monica Bay Beaches Bacteria TMDLs were approved by USEPA in 2003, as described in section III.E.4. of this Fact Sheet. DDT and PCB are on the 2014-2016 list, but are recommended for removal because~~ The Santa Monica Bay TMDL for DDT and PCBs was approved and adopted by USEPA on March 26, 2012, ~~and is~~ further described in section III.E.5 of the Fact Sheet. Trash is not recommended for removal from the 303(d) list despite ongoing implementation of the Santa Monica Bay Debris TMDL approved by USEPA on March 20, 2012. The USEPA has determined that a TMDL is not required for the Santa Monica Bay sediment toxicity listing based on the lack of toxicity in regional surveys in 1994, 1998, 2003, 2008.

E. Other Plans, Polices and Regulations

1. Storm Water.

General Industrial Storm Water Order No. 2014-0057-DWQ requires Dischargers, like LWRF, to implement minimum BMPs and applicable advanced BMPs as defined in that Order. This approach is consistent with U.S. EPA's 2008 MultiSector General Permit for Storm Water Discharges Associated with Industrial Activity (2008 MSGP).

This Order requires Dischargers to implement BMPs as required by section VI.C.3 of the WDR, in order to support attainment of water quality standards. The use of BMPs to control or abate the discharge of pollutants is authorized by 40 Code of Federal Regulations section 122.44(k)(3) because numeric effluent limitations are infeasible and implementation of BMPs is reasonably necessary to achieve effluent limitations and water quality standards, and to carry out the purposes and intent of the Clean Water Act. (40 C.F.R. § 122.44(k)(4).)

The facility may reenroll in General Industrial Storm ~~water~~[Water](#) Order 2014-0057-DWQ at a future date. Following their enrollment, this Order may be reopened and revised to remove the storm ~~water~~ requirements from this Order, consistent with the permit reopener contained in section VI.C.1.r of the WDR.

2. Sanitary Sewer Overflows (SSOs). (Not Applicable)

3. Sewage Sludge/Biosolids Requirements. Section 405 of the CWA and implementing regulations at 40 CFR § 503 require that producers of sewage sludge/biosolids meet certain reporting, handling, and use or disposal requirements. The State has not been delegated the authority to implement this program; therefore, USEPA is the implementing agency. This Order contains sewage sludge/biosolids requirements pursuant to 40 CFR § 503 that are applicable to the Permittee.

4. Santa Monica Bay Beaches Bacteria Total Maximum Daily Loads (TMDLs). The Regional Water Board has adopted two TMDLs to reduce bacteria at Santa Monica Bay beaches during dry and wet weather. The Regional Water Board adopted the Dry Weather and Wet Weather TMDLs on January 24, 2002, and December 12, 2002, respectively (Resolution Nos. 2002-004 and 2002-022). These TMDLs were approved by the State Water Board, State OAL and USEPA Region 9 and became effective on July 15, 2003.

The LWRF discharges through the “five-mile outfall” of the HTP. The City of Los Angeles, as the owner of HTP, is identified as a responsible jurisdiction in these TMDLs. In these TMDLs, HTP is assigned a WLA of zero days of exceedance of the single sample bacterial objectives during all three identified periods – summer dry weather, winter dry weather and wet weather. HTP’s WLA of zero exceedance days requires that no discharge from its outfalls cause or contribute to any exceedances of the single sample bacterial objectives at the shoreline compliance points identified in the TMDL and subsequently approved Coordinated Shoreline Monitoring Plan (dated April 7, 2004) submitted by responsible agencies and jurisdictions under the TMDLs. Because LWRF’s effluent mingles with HTP effluent, LWRF must also comply with the zero days of exceedance of the single sample bacterial objectives at the shoreline. The shoreline monitoring data collected as part of the Los Angeles County MS4 Order No. R4-2012-0175 will be used to demonstrate compliance with the WLAs in these TMDLs.

5. Santa Monica Bay TMDL for DDTs and PCBs

The USEPA adopted the Santa Monica Bay Total Maximum Daily Loads for DDT and PCBs on March 26, 2012. The concentrations of DDT and PCBs in the wastewater effluent, including this discharge of brine, are currently at or near the detection limits; however, due to historic discharges of DDT and PCBs to the Santa Monica Bay, these constituents continue to persist in the environment, particularly in the ocean sediments. The concentrations of PCBs and DDT in surface sediments have decreased substantially since the 1970s as much of the contamination has been carried away by currents, buried

below the active sediment layer, or degraded as a result of natural processes. Despite the decreasing trend, the concentrations of DDT and PCBs in surface sediments today are at levels that can still accumulate in fish tissues at levels of concern for safe human health consumption. The LWRF is identified as a responsible jurisdiction in this TMDL and as such, the TMDL sets Average Annual WLAs for DDT and PCBs for LWRF. However, the TMDL specifically states that concentration-based waste load allocations are not to be applied to the LWRF.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 CFR § 122.44(a) requires that permits include applicable technology-based limitations and standards, and 40 CFR § 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. Where numeric water quality objectives have not been established, 40 CFR § 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a); proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information may be used; or an indicator parameter may be established.

A. Discharge Prohibitions

Discharge prohibitions in this Order are based on the requirements in section III.I of the 2015 Ocean Plan.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing regulations at 40 CFR 122.44 require that NPDES permits include effluent limitations and conditions which meet applicable technology-based requirements, at minimum, and any more stringent effluent limitations necessary to achieve water quality standards and state requirements. The discharge authorized by this Order/Permit must meet applicable minimum federal technology-based requirements based on several levels of control:

- a. Best practicable treatment control technology (BPT) represents the average of the best performance by well operated plants within an industrial category. BPT standards apply to toxic, conventional, and nonconventional pollutants.
- b. Best available technology economically achievable (BAT) represents the very best control and treatment measures that have been or are economically achievable within an industrial category. BAT standards apply to toxic and nonconventional pollutants.
- c. Best conventional pollutant control technology (BCT) represents the very best control and treatment measures that have been or are economically achievable within an industrial category. BCT standards apply to conventional pollutants.
- d. New source performance standards (NSPS) represent the best available demonstrated control technology, process, operating methods, or other alternatives, including where practicable, standards permitting no discharge of pollutants. The

intent of NSPS is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop national technology-based standards of performance representing the application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR 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 industrial facilities. Where BPJ is used, the permit writer must consider factors outlined in 40 CFR 125.3

2. Applicable Technology-Based Effluent Limitations (TBELs)

The technology-based effluent limitations in this Order/Permit are established in accordance with 40 CFR 125.3 and based on Table 2 of the 2015 Ocean Plan (see Table F-6). These technology-based effluent limitations apply directly to the Discharger's brine effluent.

Table F-6. Technology Based Effluent Limitations 2015 Ocean Plan

| Parameter | Unit | Average Monthly | Average Weekly | Instantaneous Maximum |
|-------------------|---------------------|-----------------|----------------|-----------------------|
| Oil & Grease | mg/L | 25 | 40 | 75 |
| TSS | mg/L | 60 | -- | -- |
| Settleable Solids | mL/L | 1.0 | 1.5 | 3.0 |
| Turbidity | NTU | 75 | 100 | 225 |
| pH | 6.0 to 9.0 pH units | | | |

The following table summarizes the technology-based effluent limitations for the brine discharge from the Facility:

Table F-7. Summary of TBELs for the LWRP

| Parameter | Unit | Effluent Limitations | | | |
|-------------------|---------------------|----------------------|----------------|-----------------------|-----------------------|
| | | Average Monthly | Average Weekly | Instantaneous Minimum | Instantaneous Maximum |
| Turbidity | NTU | 75 | 100 | -- | 225 |
| TSS | mg/L | 60 | -- | -- | -- |
| Oil and Grease | mg/L | 25 | 40 | -- | 75 |
| Settleable Solids | mL/L | 1.0 | 1.5 | -- | 3.0 |
| pH | 6.0 to 9.0 pH units | | | | |

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and 40 CFR § 122.44(d) require that permits include limitations more stringent than applicable technology-based requirements where necessary to achieve water quality standards and State requirements. 40 CFR § 122.44(d)(1)(i) requires that permits include water quality-based effluent limitations (WQBELs) for all pollutants which are or may be discharged at levels having the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives or criteria within a standard. USEPA has applied CWA section 403(c) and 40 CFR § 125, Subpart M, following 40 CFR § 122.

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 standards contained in the Ocean Plan. Where reasonable potential has been established for a pollutant, but there is no numeric objective or criterion for the pollutant, WQBELs must be established using: 1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; 2) an indicator parameter for the pollutant of concern; or 3) a calculated numeric water quality criterion, supplemented with other relevant information, as provided in 20 CFR 122.44(d)(1)(vi).

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan and Ocean Plan establish the beneficial uses and Water Quality Objectives for ocean waters of the State. The beneficial uses of the receiving waters affected by the discharge have been described previously in this Fact Sheet. The Basin Plan contains Water Quality Objectives for bacteria for water bodies designated for water contact recreation and the Ocean Plan contains water quality objectives for bacterial, physical, chemical, and biological characteristics, and radioactivity. The Water Quality Objectives from the Ocean Plan and Basin Plan were incorporated into this Order as either final effluent limitations (based on reasonable potential) or receiving water limitations.

3. Expression of WQBELS

The WQBELs for marine aquatic life toxics contained in this Order are based on Table 1 water quality objectives contained in the 2015 Ocean Plan and are expressed as six-month median, monthly average, daily maximum, and instantaneous maximum water quality objectives.

4. Determining the Need for WQBELS

Order No. R4-2012-0026 contains effluent limitations for non-conventional and toxic pollutant parameters in Table 1 of the Ocean Plan. For this Order, the need for effluent limitations based on water quality objectives in Table 1 of the 2015 Ocean Plan was reevaluated in accordance with the Reasonable Potential Analysis (RPA) procedures contained in Appendix VI of the 2015 Ocean Plan. This statistical RPA method (RPcalc version 2.2) accounts for the averaging period of the water quality objective, accounts for and captures the long-term variability of the pollutant in the effluent, accounts for limitations associated with sparse data sets, accounts for uncertainty associated with censored data sets, and assumes a lognormal distribution of the facility-specific effluent data. The program calculates the upper confidence bound (UCB) of an effluent population percentile after complete mixing. In the evaluation employed in this Order, the UCB is calculated as the one-sided, upper 95 percent confidence bound for the 95th percentile of the effluent distribution after complete mixing. The calculated UCB95/95 is then compared to the appropriate objective to determine the potential for an exceedance of that objective and the need for an effluent limitation. Using this statistical procedure, in combination with effluent data provided by the Permittee from December 2012 to December 2016, and the dilution ratios defined in Section I.F., the Regional Water Board staff and USEPA have determined that chlorine residual has reasonable potential. The MRP (Attachment E) of this Order also requires the Permittee to continue to monitor all pollutants with effluent limits.

In general, for constituents that have been determined to have no reasonable potential to cause, or contribute to, excursions of water quality objectives, no numerical limits are prescribed; instead a narrative statement to comply with all Ocean Plan requirements is provided and the Permittee is required to monitor for these constituents to gather data for use in RPAs for future Order renewals and/or updates.

The USEPA *Technical Support Document For Water Quality-based Toxics Control* (TSD) RPA procedures were also used to determine reasonable potential in some instances. Chapter 3 of the TSD states that, “when determining whether or not a discharge causes, has the reasonable potential to cause, or contribute to an excursion of a numeric or narrative water quality criterion for individual toxicants or for toxicity, the regulatory authority can use a variety of factors and information.” In the case of ammonia, the following information exists to justify a final effluent limitation: influent ammonia concentrations for LWRF are rising, ammonia toxicity was documented at HTP’s ‘five-mile outfall,’ the effluent and influent concentrations at HTP have increased enough that an ammonia limit was set in the 2017 Order, and an ongoing consultation between the National Ocean Atmospheric Administration and USEPA has identified nitrogen species as potentially toxic to marine life in Santa Monica Bay. Further, a special study is required to evaluate causes and mitigation measures for ammonia.

Taking into consideration the [very large 84:1](#) dilution credit for the HTP “five-mile outfall,” the temperature effluent limitation for the West Basin discharge continues to be set at 100°F, based on the Thermal Plan and best professional judgment. An effluent limitation for radioactivity is established based on the Ocean Plan and best professional judgment.

5. **WQBEL Calculations**

The West Basin brine effluent undergoes two mixing events during discharge to the Pacific Ocean. The first mixing event occurs when the West Basin and HTP effluents combine and mix inside the discharge brine pipeline. The second mixing event occurs immediately following discharge of the combined effluents (i.e. brine and secondary effluent) from the HTP “five-mile outfall” with the Pacific Ocean. Because the West Basin brine effluent undergoes two mixing events during discharge, both mixing events are considered when developing WQBELs.

Second Mixing Event Calculation

From the Table 1 water quality objectives in the 2015 Ocean Plan, effluent limitations are calculated according to the following equation for all pollutants, except for acute toxicity (if applicable). The following equation is used to calculate the ammonia effluent concentrations allowed by the 96:1 dilution ratio, provided by ocean waters after a mixture of LWRF brine and Hyperion effluent is discharged through the “five-mile outfall”.

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

Where:

C_e = effluent limitation (mg/L)

C_o = water quality objective to be met at the completion of initial dilution (mg/L)

C_s = background seawater concentration (mg/L)

As site-specific water quality data are not available, C_s equals zero for the following WQBEL calculations for ammonia and chlorine residual.

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

Ammonia

Water quality objectives from the 2015 Ocean Plan.

Table F-8. Ocean Plan Objectives for Ammonia

| Constituent | 6-Month Median | Daily Maximum | Instantaneous Maximum |
|----------------|----------------|---------------|-----------------------|
| Ammonia (as N) | 0.6 mg/L | 2.4 mg/L | 6.0 mg/L |

$C_o = 0.6 \text{ or } 2.4 \text{ or } 6.0 \text{ mg/L}$

$C_s = 0$

$D_m = 96$

$C_e = 0.6 + 96 (0.6 - 0) = 58.2 \text{ mg/L (6-month median)}$

$C_e = 2.4 + 96 (2.4 - 0) = 232.8 \text{ mg/L (daily maximum)}$

First Mixing Event Calculation

Additional dilution takes place when the West Basin brine and HTP effluent combine and mix inside the HTP discharge brine pipeline and the “five-mile outfall”. Calculation of the dilution relies on minimal effluent concentrations and flow data for HTP and maximum design West Basin capacity to provide a conservative result.

HTP’s lowest monthly flow average between 2012 and 2017 (208 MGD, June 2016) and West Basin’s maximum discharge flow value (5.2 MGD design flow) have been used to represent the worst-case flow scenario during the first mixing event. The dilution factor is 208/5.2 or 40.0. Based on past performance, 48.3 mg/L was the one-sided upper confidence bound (95% for the 95th population percentile) for the Hyperion effluent, as calculated by Minitab 14. Since ammonia concentrations are expected to increase, an 98th population percentile (98% for the 98th population percentile) of 51 mg/L is used in the calculations below.

These inputs are used to calculate final WQBELs for ammonia, which considers the dilution provided by the two mixing events. The Ocean Plan formula, $C_e = C_o + D_m (C_o - C_s)$, is again used. C_o is set equal to the previously calculated ammonia effluent concentrations allowed by 96:1 dilution for the Ocean mixing with the combined effluents. D_m is set equal to the dilution factor 40, for the dilution of the brine by the Hyperion effluent. C_s is set equal to the critical background concentration for ammonia calculated for the Hyperion Treatment Plant effluent (51 mg/L).

$C_o = 58.2 \text{ or } 232.8 \text{ mg/L}$

$C_s = 51 \text{ mg/L}$

$D_m = 40$

$C_e = 58.2 + 40(58.2 - 51) = 346.2 \text{ mg/L} \approx 342 \text{ mg/L (6-Month Median)}$

$C_e = 232.8 + 40(232.8 - 51) = 7,500 \text{ mg/L} \approx 7,500 \text{ mg/L (Daily Maximum)}$

Other Limit Calculations

Chlorine Residual

While the previous Order did not contain a limit for chlorine residuals in the effluent after disinfection, additional chlorination is now used to protect aging microfiltration

membranes from biofouling. The maximum concentration was 1900 µg/L between 2006 and 2011 and 3540 µg/L between 2012 and 2016. Chlorine residual exhibited reasonable potential to exceed the Ocean Plan limits in the 2015 Ocean Plan.

Table F-9. Ocean Plan Objectives for Total Chlorine Residual

| Constituent | 6-Month Median | Daily Maximum | Instantaneous Maximum |
|-------------------------|----------------|---------------|-----------------------|
| Total Chlorine Residual | 2 µg/L | 8 µg/L | 60 µg/L |

Second Mixing Event Calculation

The impact of the second mixing event is calculated using the equation, $C_e = C_o + D_m (C_o - C_s)$. D_m is the dilution of 96: 1, which takes place when the mixed brine and HTP effluent exit the diffuser:

$C_o = 2 \text{ or } 8 \text{ or } 60 \text{ µg/L}$

$C_s = 0$

$D_m = 96$

$C_e = 2 + 96 (2 - 0) = 194 \text{ µg/L (6 Month Median)}$

$C_e = 8 + 96 (8 - 0) = 776 \text{ µg/L (Daily Maximum)}$

$C_e = 60 + 96 (60 - 0) = 5820 \text{ µg/L (Instantaneous Maximum)}$

The first mixing event is characterized using the equation, $C_e = C_o + D_m (C_o - C_s)$. The HTP does not disinfect their effluent, so no chloride residual is present in the HTP effluent.

$C_o = 194 \text{ or } 776 \text{ or } 5820 \text{ µg/L}$

$C_s = 0$

$D_m = 40$

$C_e = 194 + 40(194 - 0) = 7954 \text{ µg/L} \approx \mathbf{8,000 \text{ µg/L}} = 8 \text{ mg/L (6 Month Median)}$

$C_e = 776 + 40(776 - 0) = 31,816 \text{ µg/L} \approx \mathbf{32,000 \text{ µg/L}} = 32 \text{ mg/L (Daily Maximum)}$

$C_e = 5820 + 40(5820 - 0) = 238,620 \text{ µg/L} \approx \mathbf{239,000 \text{ µg/L}} = 239 \text{ mg/L (Instantaneous Maximum)}$

A chlorine residual limit is needed to establish an upper limit for operational additions of chlorine and to ensure that water quality objectives are met after mixing is complete.

DDT and PCB

DDT is Dichlorodiphenyltrichloroethane or the sum of 4,4' DDT, 2,4' DDT, 4,4' DDE, 2,4' DDE, 4,4' DDD, and 2,4' DDD). PCBs are the sum of aroclors or congeners, whichever concentration is greater. PCB aroclors are 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 is the sum of the following 41 individually quantified PCB congeners or mixtures of isomers of a single congener in a co-elution: PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77,

81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206.

The existing Order R4-2012-0026 was adopted on February 8, 2012, before the *Santa Monica Bay TMDL for DDTs and PCBs* was adopted on March 26, 2012.

Section 6.2, Page 48 of that TMDL identifies WLAs for West Basin Municipal Water District:

“To avoid creating an impediment to water reclamation, concentration-based WLAs are not specified for West Basin's water recycling plants (WRP). The JWPCP, HTP, and West Basin's water recycling plants are all part of an interconnected water recycling system. West Basin WRPs take secondary effluent from HTP and further treat it at Edward C. Little WRP and Carson Regional WRP. Reverse osmosis (RO) brine from the Little WRP is discharged into the Hyperion outfall and RO brine from the Carson WRP is discharged into the JWPCP outfall. As both WRPs are simply concentrating secondary effluent from the HTP (and potentially from the JWPCP in the future), there is no increase in DDT or PCBs loads from these outfalls. To avoid double counting pollutant loads, the "floating" mass-based WLAs for West Basin's water recycling plants in Table 6-2 incorporate the concentration-based WLAs for HTP and JWPCP. The total loads of DDT and PCBs from HTP, JWPCP, and West Basin's WRPs shall not be more than 14,567 g/yr for DDT and 351 g/yr for PCBs.”

Table 6-2: *Waste Load Allocations for specified individual POTW and industrial NPDES permits*, under Footnote 3, on page 48 of that TMDL, also states the following:

“The total loads of DDT and PCBs from JWPCP, HTP, and West Basin's WRPs shall not be more than 14,567 g/yr for DDT and 351 g/yr for PCBs. To account for the mass transfers that occur during water recycling activities, “floating” WLAs (in g/yr) for each of West basin's WRPs are established as:

$$\text{Little WRP WLA} = C_{\text{HTP}} * Q_{\text{HTP to Little WRP}}$$

Where:

C_{HTP} is the concentration-based WLA for the Hyperion effluent

$Q_{\text{HTP to Little WRP}}$ is the flow diverted from Hyperion to the Little WRP

Table 6-2 of the TMDL also specifies that $C_{\text{HTP}} = 10.1$ ng/L for DDT and $C_{\text{HTP}} = 0.271$ ng/L for PCBs. Therefore, the mass-based WLAs for LWRF would be as follows:

$$\text{For DDTs: LWRF WLA} = C_{\text{HTP}} * Q_{\text{HTP to LWRF}} = 10.1 * Q_{\text{HTP to LWRF}}$$

$$\text{For PCBs: LWRF WLA} = C_{\text{HTP}} * Q_{\text{HTP to LWRF}} = 0.271 * Q_{\text{HTP to LWRF}}$$

Since the wasteload allocation and therefore the effluent limit is expressed in grams/year, the annual mass emission (in grams/year) shall be computed as follows:

$$\text{Annual Mass Emission, g/year} = \sum (\text{Monthly Mass Emission Rates, g/month})$$

For discharges with less frequent DDT and PCBs monitoring than monthly, the annual mass emission (in g/yr) should be calculated using the arithmetic average of available monthly mass emissions as follows:

$$\text{Annual Mass Emission, g / year} = \left(\frac{\sum \text{Monthly Mass Emission, g / mo}}{\text{Number of Monthly Mass Emissions Calculated}} \right) * 12 \text{ mo / year}$$

where:

$$\text{Monthly Mass Emission, kg / mo} = \left(\frac{3,785}{N} \right) * \left(\sum_{i=1}^N Q_i C_i \right) * 30.5 = \frac{0.1154425}{N} * \left(\sum_{i=1}^N Q_i C_i \right)$$

and where:

C_i = DDT or PCBs concentration of each individual sample, ng/l

Q_i = discharger flow rate on date of sample, million gallons per day (mgd)

N = number of samples collected during the month
 0.003785 = conversion factor to convert (ng/l)*(mgd) into g/day

30.5 = number of days in a standard month

0.1154425 = product of (conversion factor)-(number of standard days per month)

and where Q_i for intermittent discharges (dischargers who do not discharge every day in a calendar month, or have no discharge for an entire month ($Q_i = 0$)) should be calculated as follows:

$$Q_i = \left(\frac{\sum_{d=1}^D Q_d}{30.5} \right)$$

where:

Q_d = is the total flow for the day when discharge occurred, million gallons per day (mgd)

D = total number of days where discharge occurred in a month

30.5 = number of days in a standard month

No concentration-based WLA limits are added to this Order for DDT or PCBs because the TMDL already accounted for the West Basin contribution when the waste load allocation was established for the Hyperion Treatment Plant. The mass-based final effluent limitations for DDT or PCBs are based on the TMDL mass-based WLA formula.

Final WQBELs for ammonia and chlorine residual are based on the water quality objectives in the 2015 Ocean Plan, the dilution of the LWRF brine by the Hyperion effluent provided within the discharge brine pipeline, and the dilution provided by the Ocean beyond the diffusers of the HTP "five-mile outfall". A summary of WQBELs are shown below.

Table F-10. Summary of Calculated WQBELs for Discharge Point 001

| Constituent | 6 Month Median | Daily Maximum | Instantaneous Maximum | Annual Mass in g/yr |
|--------------------|----------------|---------------|-----------------------|---------------------|
| Ammonia (as N)* | 346 mg/L | 7,500 mg/L | -- | -- |
| Chlorine residual* | 8,000 µg/L | 32,000 µg/L | 239,000 µg/L | -- |
| DDT | -- | -- | -- | calculated |
| PCB | -- | -- | -- | calculated |

* The mass emission rates are calculated using 5.2 MGD: lbs/day = 8.34 X Ce (effluent concentration in mg/L) X Q (flow rate in MGD).

6. Whole Effluent Toxicity (WET)

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 lethality. A chronic toxicity test is conducted over a short or longer period of time and measures a sublethal endpoint (e.g., fertilization, reproduction, growth), although some chronic WET methods also measure lethality. A constituent present at low concentrations may exhibit a chronic effect; a higher concentration of the same constituent may be required to produce an acute effect. Because of the nature of industrial discharges into the HTP sewershed and the makeup of the LWRF brine waste discharge, toxic constituents, or a toxic mix of constituents, may be present in the LWRF brine effluent.

West Basin’s effluent is subject to two mixing events and this overall dilution is considered when evaluating chronic toxicity under this Order/Permit (see Table F-2). Order R4-2012-0026 required the Discharger, in coordination with the City of Los Angeles, to conduct a 14-month chronic toxicity monitoring study to simulate and evaluate chronic toxicity levels of the combined West Basin and Hyperion Treatment Plant (HTP) effluents following dilution with ocean waters. The in-stream waste concentration (IWC) for chronic toxicity testing was 1.19%, based on HTP’s dilution ratio at the time of the testing (Dm = 84) and critical flows for West Basin and Hyperion discharges.

In the 104-month study, effluent samples collected from both treatment plants for eight separate weeks between June 2015 and August 2016 were combined and analyzed to provide chronic toxicity results expressed in TUc (NOEC, EC25) and TST (Pass/Fail). The combined effluent concentrations tested were 20, 7.14, 1.19, 0.7 and 0.35%. For comparison, a 20% concentration of Hyperion effluent, alone, was tested.

No toxicity (TUc = NOEC, EC25 or TST) was identified at the regulatory IWC for the combined discharge with either Pacific topmelt reproduction (or the approved alternate species, inland silverside), giant kelp germination, or red abalone shell development. No toxicity (TUc, TST) was identified for giant kelp germ tube length, except for the June 2016 sample, where the TUc result identified toxicity, but the TST result did not. This difference in results is a predictable outcome for TST when the % effect is 7.4 at the regulatory IWC, as it was for the June 2016 sample.

The 2015 Ocean Plan addresses the application of chronic and acute toxicity requirements based on minimum probable dilutions (Dm) for ocean discharges. Chronic toxicity monitoring is specified for ocean discharges with Dm factors ranging from 99 to 349 and Regional Water Boards may require acute toxicity monitoring in addition to chronic toxicity monitoring. Dischargers with Dm factors below 99 are required to conduct

only chronic toxicity testing. For the 104-month chronic toxicity monitoring study required under this Order/Permit, the chronic toxicity IWC is 1.04% effluent (2.44% West Basin brine and 97.56% HTP undisinfected secondary effluent (Refer to Table F-2). This Order/Permit does not require a chronic toxicity WQBEL for the LWRF brine waste discharge because the discharge does not show reasonable potential to cause or contribute to an exceedance of the chronic toxicity objective after mixing with the HTP effluent in the HTP “five-mile outfall” and initial dilution upon ocean discharge, consistent with 40 CFR § 122.44(d)(1)(v) and the Ocean Plan.

However, due to concern over rising ammonia concentrations in the HTP effluent resulting from increased water recycling and conservation, the effect of the addition of LWRF brine waste discharge on the chronic toxicity of the combined West Basin and HTP effluents discharged through the HTP “five-mile outfall” will again be investigated. This special study also supports the chronic toxicity testing required by the Ocean Plan where dilution is less than 100:1 or has a dilution factor of 99.

Within three years of adoption of this Order/Permit, the Discharger will conduct a 4410-month chronic toxicity monitoring study every other month to review the impact of the combined effluents on chronic toxicity, as specified in Section V of the MRP (Attachment E). The chronic toxicity IWC of 1.04% effluent has been updated to reflect the revised Dm value of 96 used for chronic toxicity in HTP’s 2017 Order/Permit and updated critical flow values for LWRF and HTP discharges to the “five-mile” outfall. Reporting study results for the combined discharge with continue in both TUC (NOEC, EC25) and TST (Pass/Fail) (see *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010).

While HTP Order R4-2017-0045 contains final maximum daily WQBELs for chronic toxicity for two discharge points, this Order/Permit and the existing LWRF Order/Permit do not. During the term of this Order/Permit, the Regional Water Board and USEPA anticipate possible changes in effluent quality and chronic toxicity at both treatment plants in response to residential, commercial and industrial activities in the HTP collection system; treatment optimization at these facilities; and changes in pollutant loadings resulting from water reclamation. Consequently, this Order/Permit contains a reopener to allow the Regional Water Board and USEPA to modify the permit, if necessary, to make it consistent with any new policy, plan, law, or regulation addressing toxicity or if unacceptable toxicity occurs.

D. Final Effluent Limitation Considerations

1. **Anti-Backsliding Requirements**

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(f) 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 final effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order No. R4-~~2010~~2012-02000026. Effluent limits continue to be consistent with the Ocean Plan Water Quality Objectives and will not unreasonably affect present and anticipated beneficial uses of the Santa Monica Bay. ~~This is consistent with the antidegradation policy and therefore meets the backsliding exception under CWA section 402(o)(1)/303(d)(4).~~

2. Antidegradation Policies

This Order includes both narrative and numeric final effluent limitations, receiving water limitations and load limits to maintain the chemical, physical, and biological characteristics, and to protect the beneficial uses, of the receiving water. These requirements ensure that all water quality objectives are being met outside the zone of initial dilution, thereby maintaining the beneficial uses. The Ocean Plan allows for minimal degradation within the zone of initial dilution as long as the water quality objectives are maintained just outside the zone of initial dilution. The minimal degradation [within the zone of initial dilution](#) permitted by the Ocean Plan is consistent with the antidegradation policy because it maintains maximum benefit to the people of the State, it will not unreasonably affect the present and anticipated beneficial uses, and it will not result in water quality less than that prescribed in the policies.

[The specific, limited, area of initial dilution was defined for the Hyperion-EC Little combined effluent discharge plume using USEPA-approved CORMIX model following analytical procedures and modeling described in Initial Mixing Characteristics of Municipal Ocean Discharges Volume 1 Procedures and Applications, EPA-600/3-85-073a, November 1985, and related subsequent guidance documents collected at National Service Center for Environmental Publications under Mixing Zones. This mixing zone is defined in the 2015 California Ocean Plan as the volume within 'which rapid and irreversible turbulent mixing of wastewater is completed around the point of discharge'. The Order complies with antidegradation concerns by ensuring that the measurable concentrations outside the zone of initial dilution, will not cause an adverse effect on the aquatic community or beneficial uses. The acceptable concentrations of those constituents are defined in the 2015 Ocean Plan narrative and Tables 1 and 2. The effluent limitations in EC Little Order are set to ensure discharge concentrations do not cause or contribute to an exceedance of those concentrations, and in fact, the effluent did not exceed those limitations in 2012-2017. While the higher dilution of 96:1 is applied to the ammonia effluent limitation, the mass load of ammonia is not increased because the concentration limit is lowered in this Order.](#)

The zone of initial dilution for mingled LWTP and HTP effluent was found to be underestimated by the April 6, 2016 City of Los Angeles' *five-mile Outfall Dilution Study*. The initial dilution ratio for the 'five-mile' Hyperion Outfall Discharge Point 002 was revised from 84:1 to 96:1 in the 2017 Order based upon additional modeling and recent monitoring results for ammonia and chronic toxicity effluent limits. However, reduced flows from HTP resulted in an overall reduction in the dilution factor for LWTP effluent from 1: 4100 in R4-2012-0026 to 1: 3880 proposed here. This revision of initial dilution is consistent with State and federal antidegradation policies in that it does not result in an increase to any final effluent limitations, nor does it result in a relaxation of the quality of treatment. The maximum allowable dilution for chronic toxicity analysis, as measured with dilution from HTP effluent alone, slightly decreases with the in-stream waste concentration dropping from 1.19% to 1.14%, but this is not expected to make a difference in determining toxicity.

The Order includes a new limit for chlorine residual, as calculated by Ocean Plan methods, because occasional bleach treatment of filters resulted in pulses of effluent chlorine residual with a maximum effluent concentration (MEC) as high as 3.5 mg/L. Even though the MEC did not exceed the proposed 8 mg/L six-month median limit, the range of data is sufficiently wide to trigger a statistical finding that the effluent has a reasonable potential to exceed Ocean Plan limits. The reasonable potential calculation

is based solely on residual chlorine concentration measurements, collected prior to the point where the brine discharge mixes with the Hyperion effluent, and without consideration of any degradation of chlorine which may occur as the brine travels through the discharge brine pipeline and then through a five-mile ocean outfall. Since the residual chlorine measurement is taken before the brine discharge mixes with HTP effluent and oxidation of chlorine will occur prior to the point of entry into the ocean, the actual concentrations of residual chlorine discharged to the ocean will be much lower. Therefore, the residual chlorine concentration from the brine discharge is not expected to degrade the receiving water.

Consistent with the antidegradation policy, State Water Board Resolution 68-16, and the guidance issued by the State Water Quality Control Board Administrative Procedures Update (APU 90-004), an abbreviated a simple antidegradation analysis is appropriate for evaluating the increase in dilution for ammonia because “the reduction in water quality is spatially localized or limited with respect to the waterbody, e.g., confined to the mixing zone.” ~~a~~Any lowered water quality is insignificant, as degradation is confined to the zone of initial dilution (as authorized by the Ocean Plan), a limited area, and effluent limits will ensure beneficial uses are not unreasonably affected.

The Order/Permit also contains a more stringent ammonia limit than the previous Order/Permit due to conservative flow scenarios. See section IV.C.5 of the Fact Sheet.

The Regional Board also has determined that water quality outside of the zone of initial dilution will not be reduced by the continued discharge of brine waste.

The mass-based final effluent limitations continue to be based on the 2012 brine waste design flow rate of 5.2 MGD based on full implementation of the Phase V expansion. The quantity of pollutants discharged and the quality of the discharge are expected to remain relatively constant during the permit term.

Federal regulations clarify that different antidegradation requirements apply in different receiving water situations, defined as Tiers 1-3 in EPA’s Water Quality Standards Handbook⁸. Section 131.12(a)(1), or “Tier 1”, protects existing uses, applying the minimum level of protection to all water uses, including the CWA Section 101(a)(2) goals that all waters should be “fishable/swimmable” and other existing uses⁹. An existing use is one that has occurred in the water since November 28, 1975, or the water quality is suitable to allow the use to be attained. Since Santa Monica Bay is impaired for DDTs, PCBs, trash, arsenic, and mercury, Tier 1 protection applies and existing uses must be maintained.¹⁰

The impairments due to DDT, PCBs, and debris are being addressed through implementation of TMDLs. Specifically, the impairments due to DDT and PCBs are being addressed by the Santa Monica Bay Total Maximum Daily Load for DDTs and PCBs.

⁸ EPA. Office of Water. Water Quality Standards Handbook. EPA 820-B-14-008 and EPA 820-B-15-001. See <https://www.epa.gov/wqs-tech/water-quality-standards-handbook>.

⁹ 40 CFR 131.12 states that a State’s antidegradation policy shall be consistent with: 1) existing instream uses and the level of water quality necessary to protect the existing uses shall be maintained and protected and 2) where the water quality exceeds levels necessary to support “fishable/swimmable” uses, that allowing lower water quality is necessary to accommodate important or social development in the area in which the waters are located and that existing uses are protected.

¹⁰ The 2014 – 2016 303(d) list, approved by USEPA on April 6, 2016, shows that Santa Monica Bay is impaired for DDT, PCBs, trash, arsenic, and mercury. The 2012 303(d) list included “fish consumption advisory”, specifying it was due to DDT and PCBs.

which includes WLAs applicable to the discharge from the LWRF¹¹. These WLAs have been incorporated into the Order/Permit as water quality-based effluent limitations to ensure implementation of the TMDL and achievement of water quality objectives. Refer to Fact Sheet sections III.C.6, III.E.5 and IV.C.5. The TMDL notes that targets are set “for water quality and sediment contaminant concentrations to meet fish tissue concentration targets that would allow safe human fish consumption” (see page iv of the TMDL). This is also noted in the December 2015 State of the Bay report by the Santa Monica Bay Restoration Commission¹², which states, “the EPA’s TMDL for Santa Monica Bay is focused on PCB and DDT contamination of fish, and establishes concentration targets for both tissue and sediment that are intended to minimize the health risk of consuming seafood. Ongoing inputs of these legacy contaminants are very small, most fish contamination is due to existing sediment contamination, a result of legacy discharges of contamination from wastewater outfalls and other sources. Reduction in fish contamination is therefore dependent on natural processes of contaminant degradation and burial by sedimentation, which are predicted to take more than 30 years to achieve TMDL targets.” The TMDL also notes that, “USEPA has determined that a TMDL is not required for the Santa Monica Bay sediment toxicity listing. This determination is based on lack of toxicity in regional surveys (1994, 1998, 2003, 2008)” (refer to page 3 of the TMDL).

The impairment due to trash is being addressed by the Santa Monica Bay Nearshore and Offshore Debris TMDL¹³. For point sources, the debris TMDL is implemented through the LA County MS4 and Ventura County MS4 permits (i.e. no Waste Load allocation is included for Hyperion of LWRF). In addition, the permit includes a prohibition to discharge any wastes other than brine waste or storm water (see section III.G.), and a BMP plan is required as part of the SWPPP to reduce discharges of trash from storm water to receiving waters (see section VI.C.3.a.ii).

For arsenic and mercury, the Regional Board finds that the discharge will not lower water quality with respect to these pollutants. Specifically, the highest arsenic concentration measured in the discharge was 19.7 µg/l and combined with the dilution of 1:3880 (96:1 plus 40:1), the resultant concentration is 0.0051 µg/l, which is less than 0.1% of the COP WQO California Ocean Plan Water Quality Objective (WQO) of 8 µg/l. The highest mercury concentration measured in the discharge was 0.85 µg/l and combined with the dilution of 1:3880, the resultant concentration is 0.00022 µg/l, which is less than 1% of the COP WQO of 0.04 µg/l. Also, the Order/Permit does not authorize an increase in the amount of brine discharged and therefore, the pollutant load is not expected to increase. If a TMDL is developed for arsenic and mercury, as prescribed in the 303(d) list, the Order/Permit may be reopened to include any WLA applicable to LWRF. If new information demonstrates that the discharge has reasonable potential to cause or contribute to an exceedance of WQO, the Order/Permit may be reopened to include WQBELs.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions

¹¹ The Santa Monica Bay Total Maximum Daily Loads for DDTs and PCBs. USEPA Region IX. March 26, 2012.

¹² Wang, G., and L. Protopapadakis (2015). State of the Bay Report. “Executive Summary: At a Glance.” *Urban Coast* 5(1): ES1-6.

¹³ The Santa Monica Bay Nearshore and Offshore Debris TMDL. California Regional Water Quality Control Board, Los Angeles Region. October 25, 2010.

on TSS, pH, oil and grease, settleable solids, and turbidity. Restrictions on these technology-based effluent limits are discussed in section IV.B.2. this Fact Sheet. This Order’s technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements.

The water-quality based effluent limitations consist of temperature, ammonia, total residual chlorine, DDT, and PCBs. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The scientific procedures for calculating individual water quality-based effluent limitations for priority pollutants are based on the 2015 Ocean Plan, which became effective on January 28, 2016. All beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and approved by USEPA. Collectively, this Order’s restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA and applicable water quality standards.

Table F-11. Summary of Final Effluent Limitations for Discharge Point 001

| Parameter | Units | Effluent Limitations | | | | | | Basis |
|------------------------|-------------------------|---|-----------------|----------------|-----------------------------|-------------------------------------|----------------------|--------------------------------------|
| | | 6 Month Median | Average Monthly | Average Weekly | Maximum Daily ¹⁴ | Instantaneous Maximum ¹⁵ | Annual Average | |
| Total Suspended Solids | mg/L | -- | 60 | -- | -- | -- | -- | Existing/ Ocean Plan Table 2 |
| | lbs/day ¹⁶ | -- | 2,600 | -- | -- | -- | -- | |
| pH | standard units | 6.0 (instantaneous minimum) – 9.0 (instantaneous maximum) | | | | | | Existing/ Ocean Plan Table 2 |
| Oil and Grease | mg/L | -- | 25 | 40 | -- | 75 | -- | Existing/ Ocean Plan Table 2 |
| | lbs/day | -- | 1,080 | 1,730 | -- | 3,250 | -- | |
| Settleable Solids | ml/L | -- | 1.0 | 1.5 | -- | 3.0 | -- | Existing/ Ocean Plan Table 2 |
| Turbidity | NTU | -- | 75 | 100 | -- | 225 | -- | Existing/ Ocean Plan Table 2 |
| Ammonia ¹⁷ | mg/L | 346 | -- | -- | 7500 | -- | -- | RP/Ocean Plan |
| | lbs/day ^{16,9} | 15,000 | -- | -- | 325,00 | -- | -- | |
| Temperature | °F | -- | -- | -- | 100 | -- | -- | BPJ/ Thermal Plan |
| Chlorine Residual | µg/L | 8,000 | -- | -- | 32,000 | 239,000 | -- | RP/Ocean Plan |
| | lbs/day ¹⁶ | 350 | -- | -- | 1,400 | 10,4,000 | -- | |
| DDT | g/yr | -- | -- | -- | -- | -- | 10.1*Q ¹⁸ | Santa Monica Bay TMDL for DDT & PCBs |

¹⁴ The maximum daily effluent limitations shall apply to flow-weighted 24-hour composite samples.

¹⁵ The instantaneous maximum effluent limitations shall apply to grab samples.

¹⁶ The mass emission rates are calculated using 5.2 MGD, consistent with water-quality based limits in the previous permit: lbs/day = 0.00834 x Ce (effluent concentration in µg/L) x Q (flow rate in MGD).

¹⁷ The 6 month median limitations for ammonia are based on the water quality objectives in the 2015 Ocean Plan.

¹⁸ The total mass load for DDT and PCB from JWPCP, HTP, and West Basin's WRPs shall not be more than 14,567 g/yr for DDT and 351 g/yr for PCB. The Discharger is deemed in compliance with these group WQBELs for DDT and PCBs if it is in compliance with the individual mass-based WQBELs for DDT

| Parameter | Units | Effluent Limitations | | | | | | Basis |
|-----------|-------|----------------------|-----------------|----------------|-----------------------------|-------------------------------------|------------------------|--------------------------------------|
| | | 6 Month Median | Average Monthly | Average Weekly | Maximum Daily ¹⁴ | Instantaneous Maximum ¹⁵ | Annual Average | |
| PCBs | g/yr | -- | -- | -- | -- | -- | 0.271*Q ¹⁸² | Santa Monica Bay TMDL for DDT & PCBs |

4. Storm Water Discharge Specifications

Under General Industrial Storm Water Order 97-03-DWQ, the Discharger monitored the storm water at five sample points before the storm water runoff was discharged to the El Segundo retention basin via the storm drain. The retention basin is located off-site across the street from the LWRP and is operated by the City of El Segundo. Discharges from the El Segundo Retention Basin into Dominguez Channel are regulated under the Los Angeles County Municipal Separate Storm water Separate System (MS4) Order R4-2012-0175. LWRP staff do not have access to the storm water basin. Annual monitoring reports submitted from 2013 to 2015 by West Basin staff to the Regional Water Board on the Storm water Multiple Application and Report Tracking System (SMARTS) database, indicate that two of three constituents monitored, TSS and pH, were found at elevated levels compared to the Water Quality Objectives in the Ocean Plan. The Discharger communicated that recent facility modifications will minimize the amount of storm water that will flow off-site. For example, some storm water is diverted to the flow equalization basin and then to the treatment process for the Title 22 water for reuse. In the future, the Regional Water Board could establish Water Quality Based Effluent Limits (WQBELs) for the storm water discharge for TSS and pH after considering the factors listed in 40 C.F.R. sections 125.3(d). Monitoring of TSS, pH and Oil and Grease, as required by this Order, shall help determine whether or not WQBELs need to be added to this Order for Discharge Points [SW-002](#) and [SW-003](#). The implementation of the approved SWPPP shall contain adequate BMPs to minimize the discharge of pollutants so surface and ground water quality objectives are protected.

- E. Interim Effluent Limitations (Not Applicable)**
- F. Land Discharge Specifications (Not Applicable)**
- G. Recycling Specifications (Not Applicable)**

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

and PCBs. This is the Waste Load Allocation (WLA) and the final effluent limitation in accordance with the *Santa Monica Bay Total Maximum Daily Load for DDTs and PCBs (Santa Monica Bay TMDL for DDTs and PCBs)* promulgated by USEPA on March 26, 2012.

$$LWRP\ WLA = C_{HTP} * Q_{HTP\ to\ LWRP}$$

Where:

C_{HTP} is the concentration-based WLA for the Hyperion effluent

$Q_{HTP\ to\ LWRP}$ is the flow diverted from Hyperion to LWRP

For DDTs: $LWRP\ WLA = C_{HTP} * Q_{HTP\ to\ LWRP} = 10.1 * Q_{HTP\ to\ LWRP}$

For PCBs: $LWRP\ WLA = C_{HTP} * Q_{HTP\ to\ LWRP} = 0.271 * Q_{HTP\ to\ LWRP}$

Receiving water monitoring is conducted by the City of Los Angeles to ensure the combined HTP and LWRF brine discharge are in compliance with receiving water limitations and to characterize the water quality of the receiving water. Requirements are based on the Ocean Plan and the Basin Plan and contained in R4-2017-0045.

B. Groundwater (Not Applicable)

C. Storm Water Requirements

The receiving water limitations applicable to the LWRF storm water discharge at Discharger Points [SW-002](#) and [SW-003](#) are based on the General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm water Associated with Industrial Facilities (Order No. 2014-0057-DWQ). As stated above the Facility is no longer covered by Order No. 2014-0057-DWQ but has individual permit coverage under this Order. See 40 C.F.R. section 122.28(b)(3).

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR § 122.41, and additional conditions applicable to specified categories of NPDES permits in accordance with 40 CFR § 122.42, are provided in Attachment D to the Order. 40 CFR § 122.41(a) through (n) establish conditions that apply to all State-issued NPDES permits.

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) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR § 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR § 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

These provisions are based on 40 CFR § 123.25. The Regional Water Board and USEPA may reopen the Order to modify conditions and requirements. Causes for modifications can include, but are not limited to, 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 Ocean Plan and Basin Plan.

2. Special Studies and Additional Monitoring Requirements

a. Antidegradation Analysis and Engineering Report for Proposed Plant Expansion.

This provision is based on the State Water Board Resolution No. 68- 16, which requires the Regional Water Board in regulating the discharge of waste to maintain high quality waters of the state. The Permittee must demonstrate that it has implemented adequate controls (e.g., adequate treatment capacity) to ensure that high quality waters will be maintained. This provision requires the Permittee to clarify that it has increased plant capacity through the addition of new treatment

system(s) to obtain alternative effluent limitations for the discharge from the treatment system(s). This provision requires the Permittee to report specific time schedules for the plant's projects. This provision requires the Permittee to submit a report to the Regional Water Board for approval

b. Operations Plan for Proposed Expansion.

This provision is based on section 13385(j)(1)(D) of the CWC and allows a time period not to exceed 90 days in which the Permittee may adjust and test the treatment system(s). This provision requires the Permittee to submit an Operations Plan describing the actions the Permittee will take during the period of adjusting and testing to prevent violations.

~~c. Treatment Plant Capacity.~~

~~The treatment plant capacity study required by this Order shall serve as an indicator for the Regional Water Board and USEPA regarding the Facility's increasing hydraulic capacity and growth in the service area.~~

~~d.c. Toxicity Reduction Evaluation (TRE) Requirements.~~

~~The approved work plan for the Chronic Toxicity Monitoring Study of the Combined Effluents will identify the conditions under which a TRE shall be conducted. If those conditions occur, if the discharge, when mixed with HTP effluent, fails the TST statistical test for toxicity as specified in this Order, the Permittee shall conduct a TRE as directed by the Regional Water Board Executive Officer and USEPA, as detailed in section V of the MRP (Attachment E). The TRE will help the Permittee identify the possible source(s) of toxicity. The Permittee shall take all reasonable steps to reduce toxicity to the required level.~~

3. Best Management Practices and Pollution Prevention

~~a. Spill Clean-Up Contingency Plan (SCCP)~~

~~Since spills or overflows are a common event at a treatment facility, this Order requires the Permittee to review and update, if necessary, its SCCC after each incident. The Permittee shall ensure that the up-to-date SCCC is readily available to the operations personnel at all times and that the operations personnel are familiar with it.~~

~~b.a. Pollutant Minimization Program (PMP)~~

~~This provision is based on the requirements of section III.C.9 of the 2015 Ocean Plan.~~

4. Construction, Operation, and Maintenance Specifications

This provision is based on the requirements of 40 CFR §122.41(e) and the previous Order.

5. Special Provisions for Biosolids & Spills

- a. **Sludge (Biosolids) Requirements.** To implement CWA section 405(d), on February 19, 1993, USEPA promulgated 40 CFR § 503 to regulate the use and disposal of municipal sewage sludge. This regulation was amended on September 3, 1999. The regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. It is the responsibility of the

Permittee to comply with said regulations that are enforceable by USEPA, because California has not been delegated the authority to implement this program.

- b. **Spill Reporting Requirements.** This Order establishes a reporting protocol to regulatory agencies for major spills.

6. Compliance Schedules (Not Applicable)

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS.

Section 308(a) of the federal Clean Water Act 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. CWC sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The MRP establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements in the MRP for this facility.

A. Influent Monitoring

The Permittee is required to conduct monitoring of the influent from the HTP to monitor ammonia concentrations and mass loads into the facility.

B. Effluent Monitoring

The Permittee is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit limitations and conditions. Monitoring requirements are specified in the Monitoring and Reporting Program (Attachment E). This Order requires compliance with the Monitoring and Reporting Program, and is based on 40 CFR § 122.48, 122.44(i), 122.41(j), 122.62, 122.63, and 124.5. The Monitoring and Reporting Program is a standard requirement in ~~almost all~~ NPDES permits (including this Order) issued by the Regional Water Board or USEPA. In addition to containing definition of terms, it specifies general sampling/analytical protocols and the requirements of reporting spills, violation, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board and USEPA policies. The Monitoring and Reporting Program also contains sampling program specific for the Permittee's wastewater treatment plant. It defines the sampling stations and frequency, pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all pollutants for which effluent limitations are specified.

Monitoring for those pollutants expected to be present in the discharge from the facility, will be required as shown on the proposed Monitoring and Reporting Program (Attachment E) and as required in the Ocean Plan.

Monitoring frequency for the constituents is based on historic monitoring frequency, Best Professional Judgment, and the following criteria:

Criterion 1: Monitoring frequency will be monthly for those pollutants with reasonable potential to exceed water quality objectives (monitoring has shown an exceedance of the objectives);

Criterion 2: Monitoring frequency will be quarterly for those pollutants in which some or all of the historic effluent monitoring data detected the pollutants, but without reasonable potential to exceed water quality objectives;

Criterion 3: Monitoring frequency will be semiannually for those pollutants in which all of the historic effluent monitoring data are not detected and do not have reasonable potential to exceed water quality objectives.

Table F-12. Effluent Monitoring Frequency Comparisons

| Parameter | Monitoring Frequency (Order No. R4-2012-0026) | Monitoring Frequency (Order No. R4-2017-xxx) |
|---|---|--|
| Total brine waste flow | Continuous | Continuous |
| Salinity | Monthly | Monthly |
| Turbidity | Monthly | Monthly |
| Temperature | Monthly | Monthly |
| pH | Monthly | Monthly |
| Settleable solids | Monthly | Monthly |
| Suspended solids | Monthly | Monthly |
| Oil and grease | Monthly | Monthly |
| Chlorine residual | Semiannually | Monthly |
| Ammonia nitrogen | Monthly | Monthly |
| Nitrate nitrogen | -- | Monthly |
| Organic nitrogen | -- | Monthly |
| Total nitrogen | -- | Monthly |
| DDT | Semiannually | Semiannually |
| PCBs | Semiannually | Semiannually |
| Remaining pollutants in Table B of the Ocean Plan (except chronic and acute toxicity) | Semiannually | Semiannually |

C. Whole Effluent Toxicity Testing Requirements

The rationale for WET has been discussed extensively in section IV.C.6 of this Fact Sheet.

D. Receiving Water Monitoring

1. Surface Water

Receiving water monitoring is conducted by the City of Los Angeles to ensure the combined HTP and LWRF brine discharge are in compliance with receiving water limitations and to characterize the water quality of the receiving water. Requirements are based on the Ocean Plan and the Basin Plan.

2. Groundwater (Not Applicable)

E. Other Monitoring Requirements

1. DMR Quality Assurance Study

The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water 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

2. Biosolids and Sludge Management

Attachment H establishes monitoring and reporting requirements for the storage, handling and disposal practices of biosolids/sludge generated from the operation of this treatment facility.

VIII. PUBLIC PARTICIPATION

The Regional Water Board and the USEPA have considered the issuance of WDRs that will serve as an NPDES Order for the LWRF. As a step in the WDR and Order adoption process, the Regional Water Board and USEPA staff have developed tentative WDRs and NPDES Order and has encouraged public participation in the WDRs and Order adoption process.

A. Notification of Interested Parties

The Regional Water Board and USEPA have notified the Permittee and interested agencies and persons of its intent to prescribe WDRs and NPDES Order for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through posting at the LWRF Treatment Plant, and publication by the local newspaper.

The public had access to the agenda and any changes in dates and locations through the Regional Water Board's website at: <http://www.waterboards.ca.gov/losangeles/>.

B. Written Comments

Interested persons were invited to submit written comments concerning the tentative WDRs and NPDES Order as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Regional Water Board and USEPA at the addresses on the cover page of this Order, or by email submitted to losangeles@waterboards.ca.gov and Mitschele.Becky@epa.gov.

To be fully responded to by staff and considered by the Regional Water Board and USEPA, the written comments were due to the Regional Water Board and USEPA office by 5:00 p.m. on April 19, 2018; however, written and oral public comments were also accepted at the public hearing at the Regional Water Board's regular Board meeting on April 12, 2018.

C. Public Hearing

The Regional Water Board held the first of two ~~joint~~ public hearings on the tentative WDRs and NPDES Order during its regular Board meeting on the following date and time, and at the following location. The Regional Water Board will not consider adoption of the Order at the first hearing:

Date: April 12, 2018
Time: 9:00 a.m.
Location: Metropolitan Water District of Southern California Board Room
700 North Alameda Street
Los Angeles, California, 90013

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the discharge, WDRs and NPDES Order. For accuracy of the record, important testimony was requested in writing; however, neither the Regional Water Board nor the USEPA adopted the WDRs and Order at that hearing.

The Regional Water Board will hold a second public hearing on the tentative WDRs and NPDES Order during its regular Board meeting on the following date and time, and at the following location:

Date: June 14, 2018
Time: 9:00 a.m.
Location: Metropolitan Water District of Southern California Board Room
700 North Alameda Street
Los Angeles, California

Interested persons are invited to attend. ~~However, since the public comment period ended on April 19, 2018, oral testimony pertinent to the discharge, tentative WDR, and NPDES permit will not be heard at this second public hearing.~~

Please be aware that dates and venues may change. The Regional Water Board's web address is <http://www.waterboards.ca.gov/losangeles/> where interested persons can access the current agenda for changes in Board meeting dates, times, and locations.

The Regional Water Board will consider adoption of the Order at the second hearing.

The Regional Water Board's web address is www.swrcb.ca.gov/rwqcb4 where interested persons can access the current agenda for changes in Board meeting dates, times, and venues.

D. Reconsideration of Waste Discharge Requirements

Any aggrieved person by the adoption of the WDRs and Order may petition the State Water Board to review the decision of the Regional Water Board and USEPA regarding the final WDRs and Order. The petition must be received by the State Water Board at the following address within 30 calendar days of the Regional Water Board's action:

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

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

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

E. Federal NPDES Permit Appeals

When a final NPDES permit is issued by USEPA, it will become effective 33 days following the date it is mailed to the Permittee, unless a request for review is filed. If a request for review is filed, only those permit conditions which are uncontested will go into effect pending disposition of the request for review. Requests for review must be filed within 33 days following the date the final permit is mailed and must meet the requirements of 40 CFR part 124.19. All requests for review should be addressed to the Environmental Appeals Board (EAB) as follows. Requests sent through the U.S. Postal Service (except by Express Mail) must be addressed to the EAB's mailing address, which is:

U.S. Environmental Protection Agency
Clerk of the Board

Environmental Appeals Board (MC 1103B)
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460-0001

All filings delivered by hand or courier, including Federal Express, UPS, and U.S. Postal Express Mail, should be directed to the following address:

Environmental Appeals Board
U.S. Environmental Protection Agency
Colorado Building
1341 G Street, N.W., Suite 600
Washington, D.C. 20460

Those persons filing a request for review must have filed comments on the draft permit, or participated in the public hearing. Otherwise, any such request for review may be filed only to the extent of changes from the draft to the final permit decision.

F. Information and Copying

The Report of Waste Discharge), related documents, tentative effluent limitations and special conditions, comments received, and other information are on file and may be inspected at 320 West 4th Street, Suite 200, Los Angeles, California and 75 Hawthorne Street, San Francisco, California any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (213) 576-6600, or USEPA at (415) 972-3524.

G. 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.

H. Additional Information

Requests for additional information or questions regarding this order should be directed to Elizabeth Erickson at (213) 576-6665 or at Elizabeth.Erickson@waterboards.ca.gov or Becky Mitschele at Mitschele.Becky@epa.gov.

ATTACHMENT G – TOXICITY REDUCTION EVALUATION (TRE) WORK PLAN OUTLINE

1. Operations and Performance Review Information and Data Acquisition
 - A. NPDES permit requirement
 1. Effluent limitations
 2. Special conditions
 3. Monitoring data and compliance history
 - B. Treatment plant design criteria
 1. Hydraulic loading capacities
 2. Pollutant loading capacities
 3. Biodegradation kinetics calculations/assumptions
 - C. Influent and effluent conventional pollutant data
 1. Biochemical oxygen demand (BOD₅)
 2. Chemical oxygen demand (COD)
 3. Suspended solids (SS)
 4. Ammonia
 5. Residual chlorine
 6. pH
 - D. Process control data
 1. Primary sedimentation – hydraulic loading capacity and BOD and SS removal
 2. Activated sludge – Food to microorganism (F/M) ratio, mean cell residence time (MCRT), mixed liquor suspended solids (MLSS), sludge yield, and BOD and COD removal
 3. Secondary clarification – hydraulic and solids loading capacity, sludge volume index and sludge blanket depth
 - E. Operations information
 1. Operating logs
 2. Standard operating procedures
 3. Operations and maintenance practices
 - F. Process side stream characterization data
 1. Sludge processing side streams
 2. Tertiary filter backwash
 3. Cooling water
 - G. Combined sewer overflow (CSO) bypass data (Not Applicable)
 1. Frequency
 2. Volume
 - H. Chemical coagulant usage for wastewater treatment and sludge processing
 1. Polymer
 2. Ferric chloride
 3. Alum

2. ~~Influent and Effluent Characterization Data~~ Facility Performance Evaluation

- ~~A. Toxicity~~
- ~~B. Priority pollutants~~
- ~~C. Hazardous pollutants~~
- ~~D. Superfund Amendments and Reauthorization Act (SARA) 313 pollutants,~~
- ~~E. Other chemical-specific monitoring results~~

3. ~~Sewage Residuals (raw, digested, thickened and dewatered sludge and incinerator ash)~~ Characterization Data Toxicity Identification Evaluation

- ~~A. EP toxicity~~
- ~~B. Toxicity Characteristic Leaching Procedure (TCLP)~~
- ~~C. Chemical analysis~~

4. ~~Industrial Waste Survey (IWS)~~ Toxicity Control Evaluation

2.5. Toxicity Control Implementation

REVISED TENTATIVE

ATTACHMENT H – BIOSOLIDS AND SLUDGE MANAGEMENT

(Note: “Biosolids” refers to non-hazardous sewage sludge as defined in 40 CFR §503.9. Sewage sludge that is hazardous, as defined in 40 CFR part 261, must be disposed of in accordance with the Resource Conservation and Recovery Act (RCRA.) 40 CFR §503 requirements identified below are for information only and are not regulated by this Order.

I. GENERAL REQUIREMENTS

- A. All biosolids generated by the Permittee shall be reused or disposed of in compliance with the applicable portions of:
 1. 40 CFR part 503: for biosolids that are land applied, placed in surface disposal sites (dedicated land disposal sites or monofills), or incinerated; 40 CFR § 503 Subpart B (land application) applies to biosolids placed on the land for the purposes of providing nutrients or conditioning the soil for crops or vegetation. 40 CFR § 503 Subpart C (surface disposal) applies to biosolids placed on land for the purpose of disposal.
 2. 40 CFR part 258: for biosolids disposed of in a municipal solid waste landfill.
 3. 40 CFR part 257: for all biosolids use and disposal practices not covered under 40 CFR parts 258 or 503.
- B. The Permittee is responsible for assuring that all biosolids from its facility are used or disposed of in accordance with 40 CFR part 503, whether the Discharger uses or disposes of the biosolids itself, or transfers their biosolids to another party for further treatment, reuse, or disposal. The Discharger is responsible for informing subsequent preparers, appliers, and disposers of requirements they must meet under 40 CFR part 503.
- C. Duty to mitigate: The Permittee shall take all reasonable steps to prevent or minimize any biosolids use or disposal which may adversely impact human health or the environment.
- D. No biosolids shall be allowed to enter wetland or other waters of the United States.
- E. Biosolids treatment, storage, use or disposal shall not contaminate groundwater.
- F. Biosolids treatment, storage, use or disposal shall not create a nuisance such as objectionable odors or flies.
- G. The Permittee shall assure that haulers transporting biosolids off site for further treatment, storage, reuse, or disposal take all necessary measures to keep the biosolids contained.
- H. If biosolids are stored for over two years from the time they are generated, the Permittee must ensure compliance with all the requirements for surface disposal under 40 CFR part 503 Subpart C, or must submit a written request to USEPA with the information in part 503.20 (b), requesting permission for longer temporary storage.
- I. Sewage sludge containing more than 50 mg/kg PCBs shall be disposed of in accordance with 40 CFR part 761.

- J. There shall be adequate screening at the plant headworks and/or at the biosolids treatment units to ensure that all pieces of metal, plastic, glass, and other inert objects with a diameter greater than 3/8 inches are removed.

II. MONITORING

- A. Biosolids shall be monitored for the metals required in 40 CFR § 503.16 (for land application) or § 503.26 (for surface disposal), using the methods in "Test Methods for Evaluating Solids Waste, Physical/Chemical Methods" (SW-846), as required in 503.8(b)(4), at the following minimum frequencies:

| Amount of Sewage Sludge (Dry Metric Tons per 365-day period) | Frequency |
|---|------------------|
| Greater than 0 but less than 290 | Once per year |
| Equal to or greater than 290 but less than 1,500 | Once per quarter |
| Equal to or greater than 1,500 but less than 15,000 | Once per 60 days |
| Equal to or greater than 15,000 | Once per month |

For accumulated, previously untested biosolids, the Permittee shall develop a representative sampling plan, which addresses the number and location of sampling points, and collect representative samples.

Test results shall be expressed in milligrams pollutant per kilogram biosolids on a 100% dry weight basis.

Biosolids to be land applied shall be tested for organic nitrogen, ammonia nitrogen, and nitrate nitrogen at the frequencies required above.

- B. Biosolids shall be monitored for the following constituents at the frequency stipulated in 40 CFR § 503.16: arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, organic nitrogen, ammonia nitrogen, and total solids. If biosolids are removed for use or disposal on a routine basis, sampling should be scheduled for regular intervals throughout the year. If biosolids are stored for an extended period prior to use or disposal, sampling may occur at regular intervals, or samples of the accumulated stockpile may be collected prior to use or disposal, corresponding to the tons accumulated in the stockpile for that period.
- C. Class 1 facilities (facilities with pretreatment programs or others designated as Class 1 by the Regional Administrator) and Federal facilities with > 5 MGD influent flow shall sample biosolids for pollutants listed under section 307 (a) of the Clean Water Act (as required in the pretreatment section of the permit for POTWs with pretreatment programs).

III. PATHOGEN AND VECTOR CONTROL

- A. Prior to land application, the Permittee shall demonstrate that the biosolids meet Class A or Class B pathogen reduction levels by one of the methods listed in 40 CFR § 503.32. Prior to disposal in a surface disposal site, the Permittee shall demonstrate that the biosolids meet Class B levels or shall ensure that the site is covered at the end of each operating day.
- B. If pathogen reduction is demonstrated using a "Process to Further Reduce Pathogens," the Permittee shall maintain daily records of the operating parameters used to achieve this reduction. If pathogen reduction is demonstrated by testing for fecal coliform and/or pathogens, samples must be collected at the frequency specified

in Table 1 of 40 CFR § 503.16. If Class B is demonstrated using fecal coliform, at least seven grab samples must be collected during each monitoring period and a geometric mean calculated from these samples. The following holding times between sample collection and analysis shall not be exceeded: fecal coliform – 6 hours when cooled to <4 degrees Celsius (extended to 24 hours when cooled to <4 degrees Celsius for Class A composted, Class B aerobically digested, and Class B anaerobically digested sample types); Salmonella spp. Bacteria – 24 hours when cooled to <4 degrees Celsius (unless using Method 1682 – 6 hours when cooled to 10 degrees Celsius); enteric viruses – 6 hours when cooled to <10 degrees Celsius (extended to one month when cooled to <4 degrees Celsius).

- C. For biosolids that are land applied or placed in a surface disposal site, the Permittee shall track and keep records of the operational parameters used to achieve Vector Attraction Reduction requirements in 40 CFR § 503.33 (b).

IV. NOTIFICATIONS

The Permittee either directly or through contractual arrangements with their biosolids management contractors shall comply with the following 40 CFR part 503 notification requirements:

- A. Notification of Non-compliance

The Permittee shall require appliers of their biosolids to notify USEPA Region 9 and their state permitting agency of any noncompliance within 24 hours if the non-compliance may seriously endanger health or the environment. For other instances of non-compliance, the Permittee shall require appliers of their biosolids to notify USEPA Region 9 and their state permitting agency of the non-compliance in writing within 10 working days of becoming aware of the non-compliance.

- B. Interstate Notification

If bulk biosolids are shipped to another State or to Indian Lands, the Permittee must send written notice within 60 days of the shipment and prior to the initial application of bulk biosolids to the permitting authorities in the receiving State or Indian Land (the USEPA Regional Office for the area and the State/Indian authorities).

- C. Land Application Notification

Prior to using any biosolids from this facility (other than Class A EQ composted biosolids or heat dried biosolids) at a new or previously unreported site, the Permittee shall notify USEPA and the State. This notification shall include the description and topographic map of the proposed site(s), names and addresses of the applier, and site owner, and a listing of any State or local permits which must be obtained. It shall also include a description of the crops or vegetation to be grown, proposed loading rates, and a determination of agronomic rates.

Within a given monitoring period, if any biosolids do not meet the applicable metals concentration limits specified under 40 CFR § 503.13, then the Permittee must pre-notify USEPA, and determine the cumulative metals loadings at that site to date, as required by 40 CFR § 503.12.

- D. Surface Disposal Notification

Prior to disposal at a new or previously unreported site, the Permittee shall notify USEPA and the State. The notice shall include a description and topographic map of the

proposed site, depth to groundwater, whether the site is lined or unlined, site operator and site owner, and any state or local permits. It shall also describe procedures for ensuring grazing and public access restrictions for three years following site closure. The notice shall include a groundwater monitoring plan or description of why groundwater monitoring is not required.

V. **REPORTING**

The Permittee shall submit an annual biosolids report to USEPA Region 9 Biosolids Coordinator by February 19 of each calendar year. The report shall include:

- A. The amount of biosolids generated that year, in dry metric tons, and the amount accumulated from previous years.
- B. Results of all pollutant monitoring required in the Monitoring Section above. Results must be reported on a 100% dry weight basis.
- C. Descriptions of pathogen reduction methods, and vector attraction reduction methods, as required in 40 CFR § 503.17 and 503.27, and certifications.
- D. Results of any groundwater monitoring or certification by groundwater scientist that the placement of biosolids in a surface disposal site will not contaminate an aquifer.
- E. Except for Class A EQ composted and heat dried biosolids, names and addresses of land appliers and surface disposal site operators, and volumes applied (dry metric tons).
- F. Names and addresses of persons who received biosolids for storage, further treatment, disposal in a municipal waste landfill, deep well injection, or other reuse/disposal methods not covered above, and volumes delivered to each.

The following information must be submitted by the Permittee, unless the Permittee requires its biosolids management contractors to report this information directly to the USEPA Region 9 Biosolids Coordinator.

For land application sites (except sites where Class A EQ composted biosolids and heat dried biosolids are applied): locations of land application sites (with field names and numbers) used that calendar year, size of each field applied to, applier, and site owner; volumes applied to each field (in wet tons and dry metric tons), nitrogen applied, and calculated plant available nitrogen; crops planted, dates of planting, and dates of harvesting; for biosolids exceeding 40 CFR Part 503.13 Table 3 metals concentrations, the locations of sites where the biosolids were applied and cumulative metals loadings at the sites to date; certification of management practices at 40 CFR Part 503.14; and certifications of site restrictions at 40 CFR Part 503.32(b)(5).

For surface disposal sites: locations of sites, site operator and site owner, size of parcel on which biosolids were disposed, results of any groundwater monitoring, and certifications of management practices at 40 CFR Part 503.24.

- G. The annual biosolids report shall be submitted to USEPA using USEPA's NPDES Electronic Reporting Tool (NeT) and can be accessed at <http://www.epa.gov/compliance/national-pollutant-discharge-elimination-system-npdes-electronic-reporting-tool-net-fact>

ATTACHMENT I – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

I. IMPLEMENTATION SCHEDULE

A storm water pollution prevention plan (SWPPP) shall be developed and submitted to the Regional Water Board within [90-120](#) days following the [effective date](#) 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).

II. OBJECTIVES

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with facility 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 facility 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 facility activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

III. PLANNING AND ORGANIZATION

A. Pollution Prevention Team

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Attachment E of this Permit. The SWPPP shall clearly identify the Permit related responsibilities, duties, and activities of each team member. A specialized self-guided State Water Board-sponsored registration and training program is available as a training option for licensed professional civil, mechanical, industrial, and chemical engineers and professional geologists. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

B. Review Other Requirements and Existing Facility Plans

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, state, and federal requirements that impact, complement, or are consistent with the requirements of this 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 facility activities that generate dust or particulates.

IV. SITE MAP

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

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

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

Review monitoring information
Evaluate BMPs
Review and revise SWPPP

The following information shall be included on the site map.

- A. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.
- B. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.
- C. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.
- D. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in section VI.A.4 below have occurred.
- E. Areas of facility 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 facility activity which are potential pollutant sources.

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

VI. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

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

- 1. **Facility Processes.** Describe each process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the

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.

cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

2. **Material Handling and Storage Areas.** Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.
 3. **Dust and Particulate Generating Activities.** Describe all activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.
 4. **Significant Spills and Leaks.** Describe materials that have spilled or leaked in significant quantities in storm water discharges or authorized non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 Code of Federal Regulations (C.F.R.), part 302) that have been discharged to storm water as reported on U.S. Environmental Protection Agency (USEPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 C.F.R., parts 110, 117, and 302).
 5. 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.
 6. **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.
 7. 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.
 8. 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 V above) or equipment.
 9. **Soil Erosion.** Describe the facility locations where soil erosion may occur as a result of facility activity, storm water discharges associated with facility activity, or authorized non-storm water discharges.
 10. **Trash.** Describe the facility locations where trash may be generated as a result of facility operations and on-site activities.
- B. The SWPPP shall include a summary of all areas of facility activities, potential pollutant sources, and potential pollutants. This information should be summarized similar to Table B.

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

VII. ASSESSMENT OF POTENTIAL POLLUTANT SOURCES

- A. The SWPPP shall include a narrative assessment of all facility activities and potential pollutant sources as described in section VI above to determine:
1. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and
 2. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.
- B. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

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

VIII. STORM WATER BEST MANAGEMENT PRACTICES

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

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

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

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

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

A. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with facility 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 VIII.B. below). The discharger should implement BMPs at least as effective as those in the General Industrial Storm Water Order 2014-0057-DWQ. Below is a list of non-structural BMPs that should be considered:

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

B. Structural BMPs

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

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

IX. ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 10 days of approval by the Executive Officer or no later than 90 days after submission to the Regional Water Board, whichever comes first. Evaluations shall include the following:

- A. A review of all visual observation records, inspection records, and sampling and analysis results.
- B. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.
- C. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.
- D. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in section X.E., for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions V.D.5 of Attachment D.

X. SWPPP GENERAL REQUIREMENTS

- A. The SWPPP shall be retained on site and made available upon request of a representative of the 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 facility activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of facility activity at the facility to be exposed to storm water, or (iii) begin a facility 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 CWA.

REVISED TENTATIVE