

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

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**ORDER R4-2018-XXXX
NPDES NO. CA0064246**

**WASTE DISCHARGE REQUIREMENTS AND
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT FOR THE
WEST BASIN MUNICIPAL WATER DISTRICT, JUANITA MILLENDER-MCDONALD CARSON
REGIONAL WATER RECYCLING PLANT,
DISCHARGE TO THE PACIFIC OCEAN VIA THE JOINT WATER POLLUTION CONTROL PLANT**

The following Discharger is subject to 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
Name of Facility	Juanita Millender-McDonald Carson Regional Water Recycling Plant (Carson WRP)
Facility Address	21029 South Wilmington Avenue
	Carson, CA 90810
	Los Angeles County

Table 2. Discharge Location

Discharge Point ¹	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Reverse Osmosis Brine	33.689167 N	118.316667 W	Pacific Ocean
002		33.700833 N	118.338056 W	
003		33.700833 N	118.300000 W	
004		33.706111 N	118.328333 W	
SW-001 ²	Storm Water Runoff	33.8391 N	118.2369 W	Dominguez Channel Estuary

¹ Discharge Points 001, 002, 003, and 004 in this Order correspond to Outfall Nos. 001, 002, 003, and 004 in the Los Angeles County Sanitation Districts' Joint Water Pollution Control Plant (JWPCP) NPDES permit (CA0053813) Order No. R4-2017-0180, reissued on September 7, 2017.

² The storm water does not comingle with process water or brine effluent.

Table 3. Administrative Information

This Order was adopted on:	June 14, 2018
This Order shall become effective on:	September 01, 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 U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	Major

I, Deborah J. Smith, 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
Executive Officer

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I. FACILITY INFORMATION

Information describing the Juanita Millender-McDonald Carson Regional Water Recycling Plant (Facility or Carson WRP) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

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

- A. Legal Authorities.** This Order serves as 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 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 are also incorporated into this Order.
- C. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.
- 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. R4-2013-0046 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for violations of the previous Order.

III. DISCHARGE PROHIBITIONS

- A.** Discharges to Discharge Points 003 and 004 are prohibited, except during the following situations, provided that the use of Discharge Points 001 and 002 are maximized and that the Regional Water Board is notified as described below:
 - 1. Emergency discharge of the mixture of Carson WRP brine and JWPCP secondary effluent when the total flow rate in the discharge pipeline approaches the hydraulic capacity of Discharge Points 001 and 002 (675 million gallons per day).
 - 2. Emergency Discharge of the mixture of Carson WRP brine and JWPCP secondary effluent during power outages in which back-up power supplies are inoperable or insufficient to pump the total flow through Discharge Points 001 and 002.

3. Discharge of the mixture of Carson WRP brine and JWPCP secondary effluent during planned preventative maintenance such as routine opening and closing of the outfall gate valves for exercising and lubrication; or
 4. Discharge of the mixture of Carson WRP brine and JWPCP secondary effluent during major planned capital improvement projects when there is no other feasible alternative. Projects warranting such a diversion will be considered on a case-by-case basis and must be approved by the Executive Officer of the Regional Water Board prior to diverting flow to Outfalls 003 or 004.
- B.** The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into the ocean is prohibited.
 - C.** Discharge to designated Areas of Special Biological Significance is prohibited.
 - D.** 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.
 - E.** The bypassing 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 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.
 - G.** 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.
 - H.** Discharge of waste to Discharge Points 001, 002, 003, or 004, that is not brine waste is prohibited.
 - I.** Discharge of waste to Discharge Point SW-001 that is not storm water is prohibited.
 - J.** The discharge of brine waste at any location different from Discharge Points 001, 002, 003, or 004; or storm water at any location different from Discharge Point SW-001, is prohibited and constitutes a violation of this Order. Brine waste discharges shall be limited to a maximum flow of 1.2 MGD and shall be discharged in a manner that provides sufficient dilution to minimize the concentrations of substances not removed during treatment.
 - K.** Other than the brine waste discharge authorized by this Order, the discharge of water, materials, chemicals, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, radiological wastes, biological warfare agent, or other wastes to the Pacific Ocean, a storm drain system, or other waters of the State are prohibited.
 - L.** Neither the treatment nor the discharge of brine waste shall create a pollution, contamination, or nuisance as defined by section 13050 of the CWC.
 - M.** The discharge shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.
 - N.** 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 the 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 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, 002, 003, and 004, are specified below. The discharge of treated wastewater with constituents in excess of effluent limitations is prohibited.

1. Final Effluent Limitations – Discharge Points 001, 002, 003, and 004

- a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Points 001, 002, 003, and 004, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program, Attachment E:

Table 4. Effluent Limitations³

Parameter	Units	Effluent Limitations				
		Annual Average	Average Monthly ⁴	Average Weekly	Instantaneous Minimum	Instantaneous Maximum ⁵
Total Suspended Solids (TSS)	mg/L	--	60	--	--	--
	lbs/day ⁶	--	600	--	--	--
pH	standard units	--	--	--	6.0	9.0
Temperature	°F	--	--	--	--	100
Oil and Grease	mg/L	--	25	40	--	75
	lbs/day ⁶	--	250	400	--	750
Settleable Solids	ml/L	--	1.0	1.5	--	3.0
Turbidity	NTU	--	75	100	--	225

³ The minimum dilution ratio used to calculate effluent limitations for nonconventional and toxic pollutants for Discharge Points 001, 002, 003, and 004, is based on two mixing events, one as the effluent mixes with the Joint Water Pollution Control Plant’s effluent in the discharge pipe and another where the combined effluent is discharged into the Ocean. The most conservative dilution ratio of one-part effluent to 24,070 parts seawater was used to calculate the effluent limits and is described in more detail in section I.F. of the Fact Sheet.

⁴ 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.

⁵ The instantaneous maximum effluent limitations shall apply to grab samples.

⁶ The mass emission rates are based on the existing plant design discharge flow rate of 1.2 MGD, and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

Parameter	Units	Effluent Limitations				
		Annual Average	Average Monthly ⁴	Average Weekly	Instantaneous Minimum	Instantaneous Maximum ⁵
Total DDT ^{7,8}	g/year	10.1*Q	--	--	--	--
Total PCBs ^{7,8}	g/year	0.271*Q	--	--	--	--

- b. **Radioactivity:** Not to exceed the limits in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations (CCR). Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.
- c. The Discharger shall ensure that bacterial concentrations in the effluent discharged from Discharge Points 001 and 002 do not result in an exceedance of JWPCP'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 VI.A.1.b) at shoreline compliance points, as specified in Regional Water Board Resolutions Nos. 2002-004 and 2002-022.
- d. Waste discharged to the ocean must be essentially free of:
 - i. Material that is floatable 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. Final Effluent Limitations – Discharge Point SW-001

- a. If West Basin submits a Notice of Intent (NOI) for the Carson WRP and successfully enrolls for coverage under the Statewide General NPDES Permit No. CAS000001 and *Waste Discharge Requirements for Discharges of Storm Water Associated with*

⁷ See section VIII of this Order and Attachment A for definitions of terms.

⁸ The total mass load for DDTs and PCBs from the JWPCP, Hyperion Treatment Plant, and West Basin's Edward C. Little and Carson Regional Water Reclamation Plants shall not be more than 14,567 g/yr for DDT and 351 g/yr for PCBs. The Discharger is deemed in compliance with these group WQBELs for DDTs and PCBs if it is in compliance with the individual mass-based WQBELs for DDTs and PCBs, which have been assigned in this Order as final effluent limitations. This is the Waste Load Allocation and final effluent limitation in accordance with the *Santa Monica Bay Total Maximum Daily Load for DDTs and PCBs* (Santa Monica TMDL for DDTs and PCBs) promulgated by USEPA on March 26, 2012.

$$WLA \text{ for the Facility} = C_{HTP}Q_{(HTP \text{ to Carson})} + C_{JWPCP}Q_{(JWPCP \text{ to Carson})}$$

C_{HTP} = concentration WLA for the Hyperion effluent (ng/l)

C_{JWPCP} = concentration WLA for JWPCP effluent (ng/l)

$Q_{(HTP \text{ to Carson})}$ = effluent flow diverted from Hyperion to the Facility (MGD)

$Q_{(JWPCP \text{ to Carson})}$ = effluent flow diverted from JWPCP to the Facility = 0 MGD

Industrial Activities (Storm water Industrial General Order), then the effluent limitations for Discharge Point SW-001 in Tables 5, 6, and 7 below will not apply, since the discharge into Dominguez Channel Estuary would be regulated under the Storm water Industrial General Order rather than this Order.

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

Table 5. Effluent Limitations for Discharge Point SW-001

Parameter	Units	Effluent Limitations ^{9,10,11}					
		Annual Average	Average Monthly	Average Weekly	Instantaneous Minimum	Instantaneous Maximum	Maximum Daily
TSS	mg/L	--	--	--	--	--	75
Total Copper (wet weather)	µg/L	--	--	--	--	--	3.73
Total Lead (wet weather)	µg/L	--	--	--	--	--	8.52
Total Zinc (wet weather)	µg/L	--	--	--	--	--	85.6
PAHs	µg/L	--	--	--	--	--	0.049
Chlordane	µg/L	--	--	--	--	--	0.00059

⁹ These final effluent limitations are based on the waste load allocations prescribed for storm water discharges and other NPDES permits in the *Total Maximum Daily Load for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters (Dominguez Channel Toxics TMDL)*, Resolution No. R11-008, adopted by the Regional Water Board on May 5, 2011.

¹⁰ During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for copper, lead, zinc, 4,4'-DDT, total PCBs, or PAHs (i.e., benzo(a)anthracene, benzo(a)pyrene, chrysene, or pyrene) as specified in Table 5 of this Order, then the Discharger has not demonstrated compliance with the final sediment allocations (Monitoring Thresholds, Table 7, of this Order) specified by the Harbor Toxics TMDL, Resolution No. R11-008 (page 11, Item 3) and the Discharger is required to implement the effluent sediment monitoring program for that priority pollutant. The Discharger shall begin the effluent sediment monitoring program during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the interim sediment allocations (Monitoring Thresholds in Tables 7, of this Order), demonstrates compliance with the interim sediment allocation and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that exceeds the interim sediment allocation requires additional effluent sediment monitoring during discharge but not more frequently than once per year until the three-year average concentration for effluent sediment monitoring results is at or below the interim sediment allocation.

¹¹ During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for chlordane or dieldrin as specified in Table 5 of this Order, then the Discharger has not demonstrated compliance with the final concentration-based sediment WLAs (Table 6, of this Order) specified by the Harbor Toxics TMDL, Resolution No. R11-008 (page 21) and the Discharger is required to implement the effluent sediment monitoring program for that priority pollutant. The Discharger shall begin the effluent sediment monitoring program during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the final concentration-based sediment allocations in Tables 6, of this Order, demonstrates compliance with the final concentration-based sediment WLAs and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that is above the final concentration-based sediment WLAs for chlordane or dieldrin constitutes an exceedance of the final concentration-based sediment WLAs. Annual effluent sediment monitoring is required for the pollutant(s) until the data demonstrates compliance.

Parameter	Units	Effluent Limitations ^{9,10,11}					Maximum Daily
		Annual Average	Average Monthly	Average Weekly	Instantaneous Minimum	Instantaneous Maximum	
4,4'-DDT	µg/L	--	--	--	--	--	0.00059
Dieldrin	µg/L	--	--	--	--	--	0.00014
Total PCBs	µg/L	--	--	--	--	--	0.00017

3. Interim Effluent Limitations – Discharge Point SW-001

Resolution No. R11-008: *Total Maximum Daily Load for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters*, establishes water column concentration-based Waste Load Allocations (WLAs) for storm water dischargers and other NPDES dischargers, for copper, lead, zinc, PAHs, chlordane, 4,4'-DDT, dieldrin, and total PCBs. However, the TMDL does not establish interim water column concentration-based WLAs for discharges into the Dominguez Channel Estuary reach, only for discharges into the freshwater reach of Dominguez Channel. Since the Carson WRP discharges into the estuary reach, it does not have any interim WLA-based limitations.

4. Final Sediment Waste Load Allocations – Discharge Point SW-001

The following concentration-based sediment waste load allocations (WLAs) for bioaccumulative compounds (chlordane and dieldrin) are associated with the Dominguez Channel Estuary in the Harbor Toxics TMDL (Resolution No. R11-008). These WLAs are applicable to Discharge Point SW-001.

Table 6. Final Concentration-Based Sediment Waste Load Allocations – Discharge Point SW-001

Parameter	Sediment, Final Concentration-Based Waste Load Allocations	Units
Chlordane	0.5	µg/kg dry sediment
Dieldrin	0.02	µg/kg dry sediment

As indicated in footnote 11 of Table 5 in this Order, compliance with the TSS effluent limitations and CTR TMDL-based effluent limitations for chlordane or dieldrin demonstrates compliance with the final concentration-based sediment WLAs and the Discharger is not required to implement effluent sediment monitoring for that constituent. Otherwise, the Discharger shall demonstrate compliance with the final concentration-based sediment WLAs as described below.

Compliance with the final concentration-based sediment WLAs for chlordane and dieldrin may be demonstrated via one of four means:

- a. Fish tissue targets of 5.6 µg/kg wet fish tissue for chlordane and 0.46 µg/kg wet fish tissue for dieldrin are met in species resident to the TMDL waterbodies. (A site-special study to determine resident species shall be submitted to the Executive Officer for approval.)
- b. Final sediment allocations of chlordane (0.5 µg/kg) and dieldrin (0.02 µg/kg) are met in the effluent. The Discharger may collect sufficient effluent sample to provide an adequate amount of effluent sediments (suspended solids) for sediment analyses. The chlordane and dieldrin analytical results of the effluent sediment can be used for the direct comparison with sediment allocation of chlordane and dieldrin.

- c. Sediment numeric target of chlordane (0.5 µg/kg) and dieldrin (0.02 µg/kg) are met in bed sediments over a 3-year averaging period.
- d. Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Statewide Enclosed Bays and Estuaries Plan, as amended to address contaminants in resident finfish and wildlife.

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

The monitoring thresholds in Table 7 of this Order are based on the Harbor Toxics TMDL's interim sediment allocations (Dominguez Channel Estuary) for copper, lead, zinc, DDT, PAHs, and PCBs. Compliance with these thresholds shall be demonstrated in accordance with Footnote 10 to Table 5 of this Order. Regardless of these monitoring thresholds, the Discharger shall ensure that effluent concentrations and mass discharges do not exceed levels that can be attained by performance of the Facility's treatment technologies existing at the time of permit issuance, reissuance, or modification.

Table 7. Interim Sediment Monitoring Thresholds

Parameter	Sediment Allocations (mg/kg sediment)
Copper	220.0
Lead	510.0
Zinc	789.0
4,4'-DDT	1.727
PAHs	31.60
PCBs	1.49

B. Land Discharge Specifications – Not Applicable

C. Recycling Specifications

Recycling specifications are not established in this Order. West Basin produces and reuses recycled water under Order No. 01-043, which was subsequently amended by Order No. R4-2002-0173.

V. RECEIVING WATER LIMITATIONS

The Discharger shall not cause a violation of the following water quality objectives. Compliance with these water quality objectives shall be determined by samples collected at stations outside the zone of initial dilution and identified in the JWPCP Order No R4-2017-0180.

A. Surface Water Limitation

The receiving water monitoring is conducted by the Los Angeles County Sanitation Districts (LACSD) to ensure that the mixture of JWPCP effluent and Carson WRP 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. State/Regional Water Contact Standards¹²

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 (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 (SSM) Limits

- (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 fecal coliform to total coliform ratio 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 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.

During a wet-weather event, storm water runoff will impact inshore and offshore stations. The day of rain (0.1 inch and greater) plus three following days' worth of bacteriology data, shall be excluded from the single and geometric mean limits.

- b. 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 on waste discharge structures (e.g., outfall pipes and multiport diffusers) do not constitute kelp beds for purposes of bacterial standards.
- c. 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 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

¹² 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, this Order may be reopened to revise the bacteria limits (see VI.C.1.o).

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.

d. **Shellfish Harvesting Standards**

At all areas where shellfish may be harvested for human consumption, as determined by the Regional Water Board, 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.

During a wet-weather event, storm water runoff will impact areas where shellfish are harvested. The day of rain (0.1 inch and greater) plus three following days' worth of bacteriology data, shall be excluded from the single and geometric mean limits.

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; or
- 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 materials;
- 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;
- i. contain individual pesticides or combinations of pesticides in concentrations that adversely affect beneficial uses, or
- j. cause the numeric water quality objectives established in the 2015 Ocean Plan to be exceeded outside the zone of initial dilution.

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; or
- 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 Point SSP-001 (Discharge Point SW-001).

- 1. Industrial storm water discharges from Discharge Point SW-001 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 Point SW-001 and authorized NSWDs shall not adversely affect human health or the environment.
- 3. Industrial storm water discharges from Discharge Point SW-001 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 Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

2. **Regional Water Board Standard Provisions.** The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:
- a. 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 Discharger 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 Discharger from any responsibilities, liabilities or penalties to which the Discharger 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 Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to sections 301, 302, 303(d), 304, 306, 307, 316, 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 Discharger shall file with the Regional Water Board 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 Discharger 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 to local agencies.
- q. In the event of any change in name, ownership, or control of these waste disposal facilities, the Discharger shall notify the Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Regional Water Board 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 Discharger 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 Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
- w. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this Order that may endanger health or the environment, the Discharger shall notify the Chief of the Watershed Regulatory Section 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-7972 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 Discharger 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.

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 for modification to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above a California Ocean Plan (Ocean Plan) water quality objective.
- b. This Order may be modified, in accordance with the provisions set forth in 40 CFR § 122 to 124, to include new minimum levels (MLs).
- c. 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.
- d. The Regional Water Board may modify or revoke and reissue this Order if present or future investigations demonstrate that the discharge(s) governed by this Order will cause, have the potential to cause, or will contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters.
- e. 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.
- f. 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.
- g. 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).
- h. 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.
- i. 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.
- j. If an applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Regional Water Board may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.
- k. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments, thereto, the Regional Water Board will revise and modify this Order in accordance with such standards.
- l. 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.
- m. 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.
- n. This Order may be reopened for modification, or revocation and reissuance, as a result of TST "Fail" results.
- o. 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.a of this Order if the State Water Resource Control Board's (SWRCB'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 Office of Administrative Law (OAL) and USEPA.
- p. 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.
- q. This Order may be reopened upon submission by the Discharger of adequate information, as determined by the Regional Water Board, to provide for dilution credits, as may be appropriate. This Order may be reopened and modified to revise the receiving water monitoring program as a result of future other ocean outfalls being constructed in proximity to the existing LACSD Outfalls.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

If the discharge consistently exceeds the water quality objective for toxicity or an effluent limitation for an Ocean Plan Table B water quality objective specified in IV.A.1., the Discharger shall conduct a Toxicity Reduction Evaluation (TRE) defined in Attachment A. The TRE shall include all reasonable steps to identify the source of

toxicity. The Discharger shall take all reasonable steps to reduce toxicity to the required level once the source of toxicity is identified.

The Discharger shall prepare and submit a copy of the Discharger's initial investigation TRE work plan in accordance with Monitoring and Reporting Program section V.

b. Brine Discharge Data Comparison Study

Based on a decision made during the permit renewal in 2007, the Monitoring and Reporting Program in Order No. R4-2013-0046 and this Order includes grab sampling for all samples except for chronic toxicity. This decision was based on the assumption that reverse osmosis brine is not expected to contain variability over the course of a 24-hour period. To determine the current variability between a grab sample and a 24-hour composite sample, and whether a grab sample is still acceptable, the Discharger shall submit a work plan for a Brine Discharge Data Comparison Study within one year of the effective date of this Order for approval by the Regional Water Board Executive Officer prior to initiating the study.

c. Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary Compliance Monitoring

As defined in the Harbor Toxics TMDL, the Discharger is a "responsible party" because it is an "Individual Industrial Permittee". As such, either individually or with a collaborating group, the Discharger shall develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment and fish tissue in the Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary. These plans shall follow the "TMDL Element-Monitoring Plan" provisions in Attachment A to Resolution No. 11-008. The TMDL requires that the Monitoring Plan and QAPP shall be submitted 20 months after the effective date (March 23, 2012) of the TMDL for public review and subsequent Executive Officer approval. Since the effective date of this Order exceeds the deadline for the Monitoring Plan and QAPP, the Discharger shall join a group already formed or develop a site-specific monitoring plan. If the Discharger decides to join a group already formed, the Discharge shall notify the Regional Water Board within 90 days of the effective date of the Order, providing documentation of acceptance and/or expected activities from the collaborative group. If the Discharger decides to develop a site-specific Monitoring Plan with a QAPP, the Discharger shall notify the Regional Water Board within 90 days of the effective date of the Order and submit them to the Regional Water Board within 12 months of the effective date of the Order for public comment and the Regional Water Board approval. The Discharger shall begin monitoring 6 months after the Monitoring Plan and QAPP are approved by the Executive Officer, unless otherwise directed by the Executive Officer. The compliance monitoring program shall include water column, sediment, and fish tissue monitoring. The Discharger shall submit the annual monitoring report to the Regional Water Board by the specified date in the proposed Monitoring Plan. The annual monitoring report shall indicate compliance and non-compliance with waste load and/or load allocations.

The Compliance Monitoring Program shall include:

- i. **Water Column Monitoring.** Water and total suspended solids samples shall be collected at the outlet of the storm drains discharging to the estuary. Water column and total suspended solids samples shall be collected three times per

year, during two wet weather events and one dry weather event. The first large storm event of the season shall be included as one of the wet weather monitoring events. Water samples and total suspended solid samples shall be analyzed for a suite of compounds including, at a minimum, lead, zinc, copper, DDT, PCBs, benzo[a]anthracene, benzo[a]pyrene, chrysene, phenanthrene, and pyrene. Sampling shall be designed to collect sufficient volumes of suspended solids to allow for analysis of the pollutants in the bulk sediment.

In addition, temperature, dissolved oxygen, pH, and electrical conductivity, and receiving water flow shall be monitored during each sampling event.

- ii. **Sediment Monitoring.** Sediment samples shall be collected in the Dominguez Channel Estuary.
 - (a) If compliance will be determined based on achieving sediment quality targets, sediment chemistry samples shall be collected every two years for analysis of general sediment quality constituents and the full chemical suite as specified in the Water Quality Control Plan for Enclosed Bays and Estuaries, Part 1 (SQO Part 1). In addition, benthic community effects shall be assessed in the Dominguez Channel Estuary.
 - (b) If compliance will be determined based on the SQO compliance method, sediment chemistry samples shall also be collected every 5 years (in addition to, and in between, the sediment triad sampling events as described below), beginning after the first sediment triad event, to evaluate trends in general sediment quality constituents and listed constituents relative to sediment quality targets. Chemistry data without accompanying sediment triad data shall be used to assess sediment chemistry trends and shall not be used to determine compliance.

Sediment quality objective evaluation as detailed in the SQO Part 1 (sediment triad sampling) shall be performed every 5 years in coordination with the Biological Baseline and Bight regional monitoring programs, if possible. Sampling and analysis for the full chemical suite, two toxicity tests and four benthic indices as specified in the SQO Part 1 is observed, results shall be highlighted in annual reports and further analysis and evaluation to determine causes and remedies shall be required in accordance with the Executive Officer approved Monitoring Plan. Locations for sediment triad assessment and the methodology for combining results from sampling locations to determine sediment conditions shall be specified in the Monitoring Plan. The sampling design shall be in compliance with Section VII.E of SQO Part 1.

- iii. **Fish Tissue Monitoring.** Fish tissue samples shall be collected every two years from the Dominguez Channel Estuary and analyzed for chlordane, dieldrin, toxaphene, DDT, and PCBs. The target species in the Dominguez Channel Estuary shall be selected based on residency, local abundance and fish size at the time of field collection. Tissues analyzed shall be based on the most common preparation for the selected fish species.

d. **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 H

The Discharger shall submit, within 90 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 Discharger is required to submit a SCCP. The SCCP shall describe the activities and protocols to address clean-up of spills, overflows, and bypasses of untreated wastewater from the Discharger's influent 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, monitoring, and the procedures to be carried out if floatable material is visible on the water surface near the discharge point or has been washed ashore. The Discharger shall review and amend the plan as appropriate after each spill from

the Facility or in the service area of the Facility. The Discharger 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. 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 in-stream waste concentration, health advisories for fish consumption, 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.B.4.

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 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:

- 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 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 Discharger shall provide safeguards to assure that, should there be a reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.
- c. The Discharger shall update as necessary, the "Operation and Maintenance Manual (O&M Manual)" which it has developed for the treatment facility to conform to the latest plant changes and requirements. The O&M Manual shall be readily available to operating personnel onsite. The O&M Manual shall include the following:
 - i. Description of the treatment plant personnel organization and listing of emergency contacts.
 - ii. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.
 - iii. Process and equipment inspection and maintenance schedules.
 - iv. Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Discharger will be able to comply with requirements of this Order.
 - v. Reference to the most current SCCP.

5. Special Provisions for Publicly-Owned Treatment Works (POTWs) – Not Applicable

6. Collection System Requirements – Not Applicable

7. Spills or Unauthorized Discharges

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

The Discharger shall immediately (but no later than two hours after becoming aware of the release) 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 of brine waste. The State Water Resources Control Board, Division of Drinking Water (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.

8. Other Special Provisions – Not Applicable

9. 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 Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the 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 Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

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 Discharger 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 Discharger 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 Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is 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 Discharger will have demonstrated compliance with the AMEL for each day of that month for that parameter.

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

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

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 Discharger 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 Discharger 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 Discharger 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 Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples 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 Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples 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 Discharger will be considered out of compliance for each day of that 180-day period for that parameter. The next assessment of compliance will occur after the next sample is 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 Discharger 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 Discharger 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 an effluent violation determination, but compliance determination can be made for that month with respect to a 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 Discharger 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

Dischargers 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

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

N. Compliance with Total Maximum Daily Loads

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 JWPCP 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 JWPCP’s discharge 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 the Facility).

Santa Monica Bay TMDLs for DDTs and PCBs. The *Santa Monica Bay TMDLs for DDTs and PCBs* includes WLAs for the Carson WRP. The total loads for DDTs and PCBs from the Hyperion Treatment Plant, JWPCP, and West Basin’s water recycling plants (including the Edward C. Little Water Reclamation Plant and the Carson WRP) 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 Carson WRP be established as:

$$\text{Carson WLA} = C_{\text{HTP}}Q_{(\text{HTP to Carson})} + C_{\text{JWPCP}}Q_{(\text{JWPCP to Carson})}$$

Where:

C_{HTP} = concentration WLA for the Hyperion effluent

C_{JWPCP} = concentration WLA for JWPCP effluent

$Q_{(\text{HTP to Carson})}$ = effluent flow diverted from Hyperion to the Facility

$Q_{(\text{JWPCP to Carson})}$ = effluent flow diverted from JWPCP to the Facility

$$\begin{aligned} \text{For DDTs: Carson WLA} &= C_{\text{HTP}}Q_{(\text{HTP to Carson})} + C_{\text{JWPCP}} * Q_{\text{JWPCP to Carson}} \\ &= 10.1 * Q_{(\text{HTP to Carson})} + 15.8 * Q_{\text{JWPCP to Carson}} \end{aligned}$$

$$\begin{aligned} \text{For PCBs: Carson WLA} &= C_{\text{HTP}}Q_{(\text{HTP to Carson})} + C_{\text{JWPCP}} * Q_{\text{JWPCP to Carson}} \\ &= 0.271 * Q_{(\text{HTP to Carson})} + 0.351 * Q_{\text{JWPCP to Carson}} \end{aligned}$$

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 DDTs 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/yr) for discharges of DDTs and PCBs 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 DDTs 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:

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

Where:

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

C_i = DDT or PCB concentration of each individual sample (ng/L)

Q_i = discharger flow rate on date of sample (MGD)

N = number of samples collected during the month

For intermittent dischargers (dischargers who do not discharge every day in a calendar month or have no discharge for a calendar month ($Q_i = 0$)), Q_i is calculated as follows:

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

Where:

Q_d = total flow for the day when discharge occurred in a month (MGD)

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

Consistent with the federal requirement and with the NPDES Permit Writers Manual (EPA-833-K-10-001, September 2010), Annual Average mass-based effluent limitations have been included in this Order for DDTs and PCBs. Consistent with the TMDL, concentration-based effluent limitations 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 Discharger'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 Discharger may assert SOU to limit liability only for those violations which the Discharger 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 Dischargers 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 Dischargers to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with CWC section 13385 (f)(2).

ATTACHMENT A – DEFINITIONS

Areas of Special Biological Significance (ASBS)

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

Arithmetic Mean (μ)

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

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

Average Monthly Effluent Limitation (AMEL)

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

Average Weekly Effluent Limitation (AWEL)

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

Bioaccumulative

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

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:

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

The compositing period shall equal 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

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

Degrade

Degradation 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.

Dilution Credit

Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Downstream Ocean Waters

Waters downstream with respect to ocean currents.

Dredged Material

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

Enclosed Bays

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

Endosulfan

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

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

Grab Sample

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

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 = $(X_{n/2} + X_{(n/2)+1})/2$ (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 reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, 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 by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Regional Water Board.

Not Detected (ND)

Those sample results less than the laboratory's MDL.

Ocean Waters

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

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)

PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of Ocean Plan Table 1 pollutants through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent

bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

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 (RML)

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

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.

Standard Deviation (σ)

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

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

where:

x is the observed value;

μ is the arithmetic mean of the observed values; and

n is the number of samples.

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 Equivalentents

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)

A study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate.

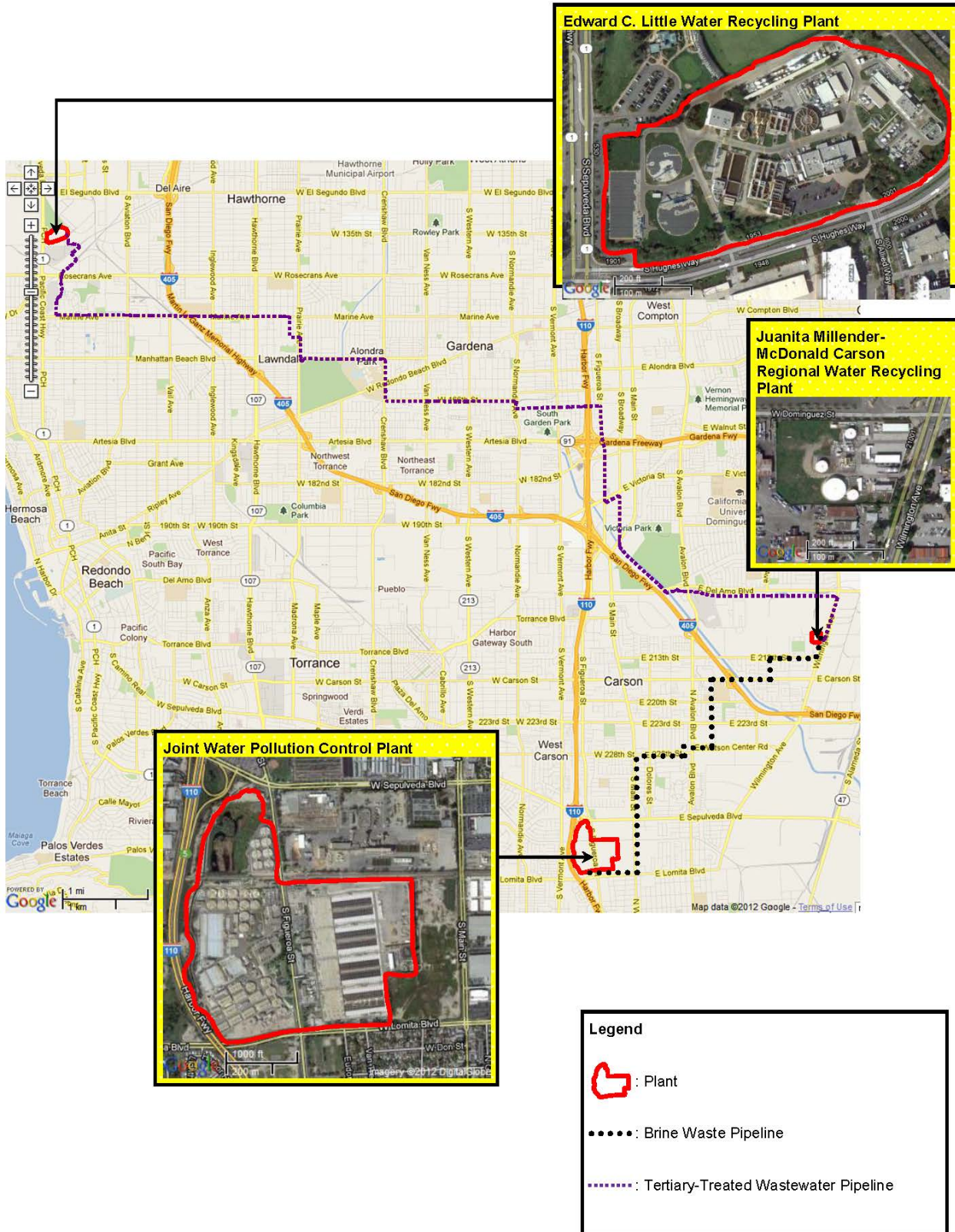
Waste

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

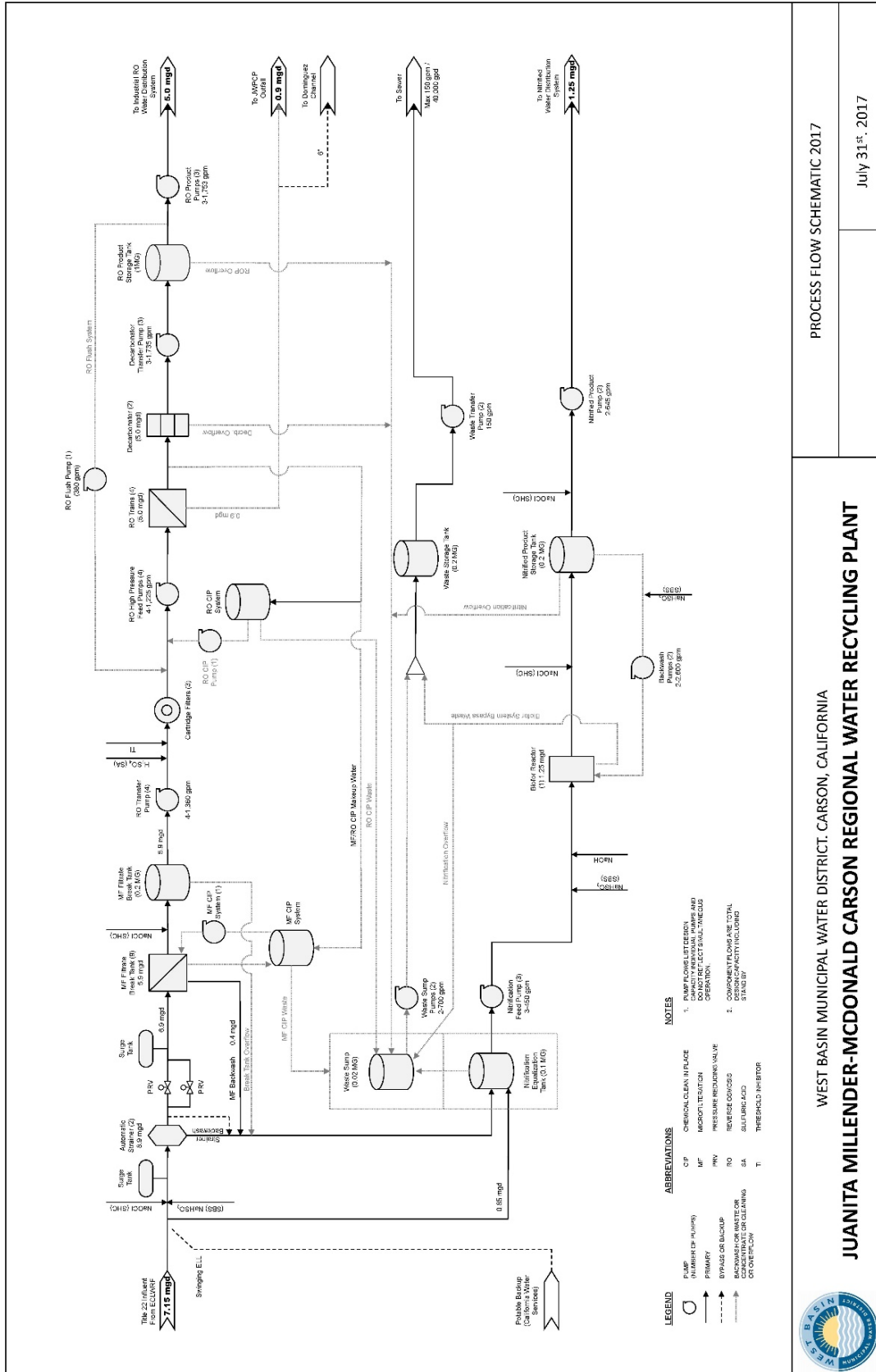
Water Recycling

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.

ATTACHMENT B – MAP OF FACILITY AND SURROUNDING AREA



ATTACHMENT C2 – FLOW SCHEMATIC



PROCESS FLOW SCHEMATIC 2017
 July 31st, 2017

WEST BASIN MUNICIPAL WATER DISTRICT, CARSON, CALIFORNIA
JUANITA MILLENDER-MCDONALD CARSON REGIONAL WATER RECYCLING PLANT



ATTACHMNET D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

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

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 CFR § 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 CFR § 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 CFR § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR § 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 CFR § 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be

required by law, to (33 U.S.C. § 1318(a)(4)(b); 40 CFR § 122.41(i); Wat. Code, §§ 13267, 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 CFR § 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 CFR § 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 CFR § 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 CFR § 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 CFR § 122.41(m)(1)(i).)
 - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR § 122.41(m)(1)(ii).)
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 CFR § 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 CFR § 122.41(m)(4)(i)):
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 122.41(m)(4)(i)(A));
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and
 - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR § 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 CFR § 122.41(m)(4)(ii).)

5. Notice

- a. *Anticipated bypass.* If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass. The notice shall be sent to the Regional Water Board. As of December 21, 2020, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 CFR. part 3, 40 CFR. section 122.22, and 40 C.F.R. part 127.
- b. *Unanticipated bypass.* The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the Regional Water Board. As of December 21, 2020, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, 40 CFR. section 122.22, and 40 CFR part 127. (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 CFR § 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 CFR § 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 CFR § 122.41(n)(3)):
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));
 - b. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));
 - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR § 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 CFR § 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 CFR § 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 CFR § 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 CFR §§ 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 CFR § 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 chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 CFR part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
2. The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter 1, subchapter N for the measured pollutant or pollutant parameter.

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

IV. STANDARD PROVISIONS – RECORDS

A. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 CFR § 122.41(j)(2).)

B. Records of monitoring information shall include:

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, V.B.5, and V.B.6 below. (40 CFR § 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive 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. (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 and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.” (40 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 electronically 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 CFR § 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 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 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 CFR part 136, or another method required for an industry-specific waste stream under 40 CFR chapter 1, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Regional Water Board or State Water Board. (40 CFR § 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR § 122.41(l)(4)(iii).)

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 CFR § 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 CFR § 122.41(l)(6)(ii)(A).)
 - b. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR § 122.41(l)(6)(ii)(B).)

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 CFR § 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 CFR § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)
3. The alteration or addition 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 CFR 122.41(l)(1)(ii).)
4. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different or absent in the existing permit, including notification and 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 CFR § 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 CFR part 127. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR § 122.41(l)(7).)

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 CFR § 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 CFR part 127 to the initial recipient defined in 40 CFR section 127.2(b). USEPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 CFR section 127.2(c)]. USEPA will update and maintain this listing. (40 CFR § 122.41(l)(9).)

VI. STANDARD PROVISIONS – ENFORCEMENT

- A.** The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.
- 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 – NOT APPLICABLE

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP), CI-7972

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

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 Discharger must notify the Regional Water Board, state the reason why monitoring could not be conducted, and obtain approval from the Executive Officer for an alternate schedule. Results of quarterly, semiannual, and annual analyses shall be reported by the due date specified in Table E-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 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 Discharger 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. Proper chain of custody procedures must be followed and a copy of this documentation shall be submitted with the monthly report.
- D. The Discharger 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 Discharger shall select the analytical method that provides an ML lower than the effluent limitation 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, or the lowest applicable water quality objective is lower than all the MLs in Appendix II of the 2015 Ocean Plan, the Discharger must select the method with the lowest ML for compliance purposes. The Discharger shall include in the annual summary reports a list of the analytical methods and MLs employed for each test.
- I.** The Discharger shall instruct its laboratories to establish calibration standards so that the ML (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lower calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
- J.** The Discharger 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 upon request and a spill summary shall be included in the annual summary report.
- K.** If the Discharger 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 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 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.

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

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point ¹ Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Composite sampling station of the Title 22 recycled water produced and sampled at E.C. Little Water Recycling Facility and delivered to the Carson WRP (Latitude 33.545260°N, Longitude 118.236653 °W)
001 002 003 004	EFF-001	The effluent sampling station (33.838611° N, 118.237222° W) is located at the southeast side of the RO facility before comingling with effluent from the Joint Water Pollution Control Plant.
SW-001	SSP-001	The storm water sampling location is located at the Carson WRP prior to exiting the facility and before the storm water enters the City's storm drain system along Wilmington Avenue (33.8391N, 118.2369W)

The coordinates 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.

¹ Discharge Points 001, 002, 003, and 004 in the Order correspond to Outfall No. 001, 002, 003, and 004 in the Los Angeles County Sanitation Districts' Joint Water Pollution Control Plant (JWPCP) NPDES permit (CA0053813) Order No. R4-2017-0180, reissued on September 7, 2017.

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 ²	--
Ammonia nitrogen	mg/L	24-hr composite	Monthly	³

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.

B. Monitoring Location EFF-001

1. The Discharger shall monitor the brine waste effluent 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 ⁴	Minimum Sampling Frequency ⁵	Required Analytical Test Method
Total Brine Flow	MGD	Recorder	Continuously ²	--
Oil and Grease	mg/L	Grab ⁶	Monthly	7
	lbs/day			
pH	pH unit	Grab	Monthly	7
Temperature	°F	Grab	Monthly	7
Settleable solids	mL/L	Grab ⁶	Monthly	7

² 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).

³ 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.

⁴ For discharge durations of less than 24 hours, individual grab samples may be substituted. A grab sample is an individual sample collected in less than 15 minutes.

⁵ Weekly and monthly sampling shall be arranged so that each day of the week is represented over a seven week or month period. The schedule should be repeated every seven weeks or months.

⁶ Oil and grease, and settleable solids monitoring shall consist of a single grab sample at peak flow over a 24-hour period.

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 and the State Water Board. 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.

Parameter	Units	Sample Type ⁴	Minimum Sampling Frequency ⁵	Required Analytical Test Method
Total suspended solids	mg/L	Grab	Monthly	7
	lbs/day			
Turbidity	NTU	Grab	Monthly	7
Salinity	‰	Grab	Monthly	7
Total residual chlorine	mg/L	Grab	Quarterly	7
Ammonia as Nitrogen	mg/L	Grab	Quarterly	7
Toxicity, Chronic	Pass or Fail, % Effect (TST)	24-hr composite	Annually ⁸	7
Arsenic	µg/L	Grab	Quarterly	7
Cadmium	µg/L	Grab	Quarterly	7
Chromium VI ⁹	µg/L	Grab	Quarterly	7
Copper	µg/L	Grab	Quarterly	7
Lead	µg/L	Grab	Quarterly	7
Mercury ¹⁰	µg/L	Grab	Quarterly	7
Nickel	µg/L	Grab	Quarterly	7
Selenium	µg/L	Grab	Quarterly	7
Silver	µg/L	Grab	Quarterly	7
Zinc	µg/L	Grab	Quarterly	7
Cyanide	µg/L	Grab	Quarterly	7
Phenolic Compounds (non-chlorinated) ¹¹	µg/L	Grab	Semiannually	7
Chlorinated Phenolics ¹¹	µg/L	Grab	Semiannually	7
Endosulfan ¹¹	µg/L	Grab	Semiannually	7
Endrin	µg/L	Grab	Semiannually	7
Hexachlorocyclohexane (HCH) ¹¹	µg/L	Grab	Semiannually	7

⁸ Chronic toxicity analysis shall be conducted on the manually composited sample (Carson WRP brine and JWPCP secondary effluent mixture) as described in section V of this MRP.

⁹ The Discharger may, at its option, meet the hexavalent chromium limitation by analyzing for total chromium rather than hexavalent chromium.

¹⁰ USEPA Method 1631E, with a quantitation level of 0.5 ng/L, shall be used to analyze total mercury.

¹¹ See Attachment A for definition of terms.

Parameter	Units	Sample Type ⁴	Minimum Sampling Frequency ⁵	Required Analytical Test Method
Radioactivity (including gross alpha, gross, beta, combined radium-226 & radium-228, tritium, strontium-90 and uranium) ¹²	pCi/L	Grab	Semiannually	7
Acrolein	µg/L	Grab	Semiannually	7
Antimony	µg/L	Grab	Quarterly	7
Bis(2-chloroethoxy) methane	µg/L	Grab	Semiannually	7
Bis(2-chloroisopropyl) ether	µg/L	Grab	Semiannually	7
Chlorobenzene	µg/L	Grab	Semiannually	7
Chromium (III)	µg/L	Grab	Quarterly	7
Di-n-butyl phthalate	µg/L	Grab	Quarterly	7
Dichlorobenzenes ¹¹	µg/L	Grab	Semiannually	7
Diethyl phthalate	µg/L	Grab	Semiannually	7
Dimethyl phthalate	µg/L	Grab	Quarterly	7
4,6-dinitro-2-methylphenol	µg/L	Grab	Semiannually	7
2,4-dinitrophenol	µg/L	Grab	Semiannually	7
Ethylbenzene	µg/L	Grab	Semiannually	7
Fluoranthene	µg/L	Grab	Semiannually	7
Hexachlorocyclopentadiene	µg/L	Grab	Semiannually	7
Nitrobenzene	µg/L	Grab	Semiannually	7
Thallium	µg/L	Grab	Quarterly	7
Toluene	µg/L	Grab	Quarterly	7
Tributyltin	ng/L	Grab	Quarterly	7
1,1,1-Trichloroethane	µg/L	Grab	Semiannually	7
Acrylonitrile	µg/L	Grab	Semiannually	7
Aldrin	µg/L	Grab	Semiannually	7
Benzene	µg/L	Grab	Semiannually	7
Benzidine	µg/L	Grab	Semiannually	7
Beryllium	µg/L	Grab	Quarterly	7
Bis(2-chloroethyl) ether	µg/L	Grab	Semiannually	7
Bis(2-ethylhexyl) phthalate	µg/L	Grab	Quarterly	7
Carbon tetrachloride	µg/L	Grab	Quarterly	7
Chlordane ¹¹	µg/L	Grab	Semiannually	7
Chlorodibromomethane	µg/L	Grab	Quarterly	7
Chloroform	µg/L	Grab	Quarterly	7
DDT ¹¹	µg/L	Grab	Semiannually	11
	g/yr	Calculated	Annually ¹³	
1,4-dichlorobenzene	µg/L	Grab	Semiannually	7
3,3'-dichlorobenzidine	µg/L	Grab	Semiannually	7

Parameter	Units	Sample Type ⁴	Minimum Sampling Frequency ⁵	Required Analytical Test Method
1,2-Dichloroethane	µg/L	Grab	Semiannually	7
1,1-Dichloroethylene	µg/L	Grab	Semiannually	7
Dichlorobromomethane	µg/L	Grab	Quarterly	7
Dichloromethane	µg/L	Grab	Quarterly	7
1,3-Dichloropropene	µg/L	Grab	Semiannually	7
Dieldrin	µg/L	Grab	Semiannually	7
2,4-dinitrotoluene	µg/L	Grab	Semiannually	7
1,2-diphenylhydrazine	µg/L	Grab	Semiannually	7
Halomethanes ¹¹	µg/L	Grab	Quarterly	7
Heptachlor	µg/L	Grab	Semiannually	7
Heptachlor epoxide	µg/L	Grab	Semiannually	7
Hexachlorobenzene	µg/L	Grab	Semiannually	7
Hexachlorobutadiene	µg/L	Grab	Semiannually	7
Hexachloroethane	µg/L	Grab	Semiannually	7
Isophorone	µg/L	Grab	Semiannually	7
N-Nitrosodimethylamine	µg/L	Grab	Quarterly	7
N-Nitrosodi-n-propylamine	µg/L	Grab	Semiannually	7
N-Nitrosodiphenylamine	µg/L	Grab	Semiannually	7
Polycyclic Aromatic Hydrocarbons (PAHs) ¹¹	µg/L	Grab	Semiannually	7
Polychlorinated Biphenyls (PCBs) as Aroclors ¹¹	µg/L	Grab	Semiannually	7
	g/yr	Calculated	Annually ¹³	

¹² Analyze these radiochemicals by the following USEPA methods: method 900.0 for gross alpha and gross beta, method 903.0 or 903.1 for radium-226, method 904.0 for radium-228, method 906.0 for tritium, method 905.0 for strontium-90, and method 908.0 for uranium. Analysis for combined radium-226 & 228 shall be conducted only if gross alpha and gross beta results for the same sample exceed 15 pCi/L or 50 pCi/L, respectively. If radium-226 & 228 exceeds the stipulated criteria, then analyze for tritium, strontium-90, and uranium.

¹³ The corresponding average discharge flow rate on the date of sample collection and calculated effluent limitation shall also be reported.

Parameter	Units	Sample Type ⁴	Minimum Sampling Frequency ⁵	Required Analytical Test Method
PCBs as Congeners ^{11,14,15}	pg/L	Grab	Semiannually	7
	g/yr	Calculated	Annually ¹³	
TCDD Equivalents ^{11,16}	pg/L	Grab	Semiannually	7
1,1,2,2-Tetrachloroethane	µg/L	Grab	Semiannually	7
Tetrachloroethylene	µg/L	Grab	Quarterly	7
Toxaphene	µg/L	Grab	Semiannually	7
Trichloroethylene	µg/L	Grab	Semiannually	7
1,1,2-Trichloroethane	µg/L	Grab	Semiannually	7
2,4,6-Trichlorophenol	µg/L	Grab	Quarterly	7
Vinyl chloride	µg/L	Grab	Semiannually	7

Grab samples are required in this Order for all pollutants except for chronic toxicity. As determined during the 2007 permit renewal, the reverse osmosis brine discharge is not expected to contain much variability in a 24-hour period and a grab sample is considered representative of the effluent. Grab samples are also more cost-effective and may eliminate unnecessary monitoring costs. To determine the variation between the two sample types and to evaluate the acceptability of the grab samples, a requirement to conduct a Brine Discharge Data Comparison Study shall be conducted, refer to VI.C.2 of the Order.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

Whole Effluent Toxicity (WET) testing protects receiving waters from the aggregate toxic effect of a mixture of pollutants in the effluent or pollutants that are not typically monitored. An acute toxicity test is conducted over a short time period and measures mortality. A chronic 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 Hyperion sewershed, toxic constituents (or a mixture of constituents exhibiting toxic effects) may be present in the Carson WRP brine.

¹⁴ PCBs as congeners shall be individually quantified (or quantified as mixtures of isomers of a single congener in co-elutions as appropriate) using USEPA proposed method 1668c. PCBs as congeners shall be analyzed using method EPA 1668c for three years and an alternate method may be used if none of the PCB congeners are detected for three years using method EPA 1668c.

USEPA recommends that until USEPA proposed method 1668c for PCBs is incorporated into 40 CFR § 136, Permittees should use for discharge monitoring reports/State monitoring reports: (1) USEPA method 608 for monitoring data, reported as aroclor results, that will be used for assessing compliance with WQBELs (if applicable) and (2) USEPA proposed method 1668c for monitoring data, reported as 41 congener results, that will be used for informational purposes to help assess concentrations in the receiving water.

¹⁵ To facilitate interpretation of sediment/fish tissue data and TMDL development, PCB congeners whose analytical characteristics resemble those of PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be reported as a sum and individually quantified (or quantified as mixtures of isomers of a single congener in co-elutions as appropriate).

¹⁶ USEPA Method 1613 shall be used to analyze TCDD equivalents.

A. Acute Toxicity Testing – Not Applicable.

B. Chronic Toxicity Monitoring of Combined Effluents

The Discharger, in coordination with the Joint Water Pollution Control Plant (JWPCP), shall conduct annual chronic toxicity monitoring on manually composited samples of the combined Carson WRP brine and JWPCP secondary effluent samples, in accordance with USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). The objective of the chronic toxicity monitoring is to assess the impact of the combined effluent on the receiving water, following initial mixing and under critical conditions. This combined effluent sample is a manual composite comprised of 0.48%¹⁷ Carson WRP brine (24-hour composite) and 99.52% JWPCP secondary treated effluent (24-hour composite) collected on the same day. The annual chronic toxicity monitoring shall be conducted concurrently with monthly chronic toxicity tests conducted under the 2017 Order for the JWPCP (Order No. R4-2017-0180, NPDES No. CA0053813). The brine sample used to prepare the combined effluent shall also be analyzed for all parameters on the monitoring schedule specified in Table E-3 of the MRP (Attachment E).

1. There is no chronic toxicity WQBEL prescribed for the Carson WRP brine waste discharge because the permitting authorities have determined that—after authorized dilution occurs—the Carson WRP 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 monitoring that took place during the previous 2013 Order. For the combined Carson WRP brine and JWPCP secondary effluent mixture, the chronic toxicity IWC is: 0.5988% effluent (i.e., 100% combined effluent divided by the JWPCP dilution factor of 166) for Discharge Points 001 and 002; 0.6623% effluent for Discharge Point 003; and 0.8621% effluent for Discharge Point 004. This combined effluent sample for chronic toxicity testing is a manual composite comprised of 0.48% Carson WRP brine waste effluent and 99.52% JWPCP undisinfectated secondary treated effluent. The permitting authorities have selected these values because under critical conditions in the JWPCP outfall, 0.48% of the combined effluent flow is from the Carson WRP discharge [1.2 MGD, highest brine waste flow rate following recycling plant divided by (249 MGD + 1.2 MGD), lowest monthly average JWPCP effluent flow rate and highest Carson WRP brine waste flow rate, x 100] and 99.52% of the combined effluent flow rate is from the JWPCP discharge (100% - 0.48%).
2. For this Order, the Discharger shall report chronic toxicity monitoring 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). 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 (0.5988% effluent) (TST

¹⁷ The Regional Water Board has selected these values in consideration of two critical conditions, the lowest JWPCP monthly average effluent flow rate of 249 MGD (from 2012 to 2016) in the JWPCP outfall and the Carson WRP maximum design brine waste flow of 1.2 MGD. In the combined effluent, 0.48% of the flow is from the Carson WRP [$0.48\% = 1.2 \text{ MGD} / (249 \text{ MGD} + 1.2 \text{ MGD}) \times 100$] and 99.52% of the flow is from the JWPCP [$100\% - 0.48\% = 99.52\%$].

Implementation Document, Fig. A-1), sublethal percent (%) effect at this IWC (TST Implementation Document, p. A-3), and EC_{25} ¹⁸.

3. As an appendix to the annual 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 (EC_{25} , % 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 Carson WRP and JWPCP discharge is 0.5988% effluent for Discharge Points 001 and 002; 0.6623% effluent for Discharge Point 003; and 0.8621% effluent for Discharge Point 004. The combined effluent sample for chronic toxicity testing is a manual composite comprised of 0.48% Carson WRP brine waste effluent and 99.52% JWPCP undisinfectated secondary treated effluent. The sample for Carson WRP brine waste effluent is a 24-hour composite effluent sample collected at Effluent Monitoring Location EFF-001. The sample for JWPCP undisinfectated secondary treated effluent is a 24-hour composite effluent sample collected as specified in the 2017 Order for JWPCP (R4-2017-0180). 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 JWPCP permit for conducting JWPCP 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} .
 - 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 Discharger must resample and retest within 14 days.
 - e. Because this Order requires test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and*

¹⁸ 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.

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 Discharger may use procedures outlined in Section 11.3.6.2 of the test methods manual to control sample pH during the toxicity test.
4. Species Sensitivity Screening

Species sensitivity screening shall be conducted during this permit's first required sample collection and shall be conducted monthly until the most sensitive species has been determined. The Discharger shall prepare a single effluent sample comprised of 0.48% brine waste from the facility and 99.52% JWPCP effluent to initiate and concurrently conduct three toxicity tests using a vertebrate (topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.0)), an invertebrate (red abalone, *Haliotis rufescens* (Larval Shell Development Test Method)), and the alga species (giant kelp, *Macrocystis pyrifera* (Germination and Germ-Tube Length Test Method 1009.0)), as specified in Table E-4. This brine waste effluent sample shall also be analyzed for the parameters required on a monthly frequency for the discharge, during that given month. As allowed under the test method for the *Atherinops affinis*, a second and third sample may be prepared for use as test solution renewal water as the seven-day toxicity test progresses. If the result of all three species is "Pass", then the species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit cycle. If only one species fails, then that species shall be used for routine monitoring during the permit cycle. Likewise, if two or more species result in "Fail", then the species that exhibits the highest "Percent Effect" at the discharge IWC during the suite of species sensitivity screening shall be used for routine monitoring during the permit cycle, until such time as a rescreening is required.

Species sensitivity rescreening is required every 24 months if there has been discharge during dry weather conditions. If the discharge is intermittent and occurs only during wet weather, rescreening is not required. If rescreening is necessary, the Discharger shall rescreen with the marine vertebrate species, a marine invertebrate species, and the alga species previously referenced, and continue to monitor with the most sensitive species. If the first suite of rescreening tests demonstrates that the same species is the most sensitive then the rescreening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is ambiguity, then the Discharger may proceed with suites of screening tests for a minimum of three, but not to exceed five suites.

During the calendar month, toxicity tests used to determine the most sensitive test species shall be reported as effluent monitoring results for the chronic toxicity water quality objective.

5. Quality Assurance and Additional Requirements. Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.
 - a. The discharge is subject to determination of “Pass” or “Fail” from a chronic toxicity test using the Test of Significant Toxicity statistical t-test approach described in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1, and Appendix B, Table B-1. The null hypothesis (H_0) for the TST statistical approach is: Mean discharge IWC response $\leq 0.75 \times$ Mean control response. A test result that rejects this null hypothesis is reported as “Pass.” A test result that does not reject this null hypothesis is reported as “Fail.” The relative “Percent Effect” at the discharge IWC is defined and reported as: $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100$. This is a t-test (formally Student’s t-Test), a statistical analysis comparing two sets of replicate observations – in the case of a WET test, only two test concentrations (i.e. a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e. if the IWC or receiving water concentration differs from the control (the test result is “Pass” or “Fail”). The Welch’s t-test employed by the TST statistical approach is an adaptation of Student’s t-test and is used with two samples having unequal variances.
 - b. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms (EPA/600/R-95/136, 1995) (see Table E-3 below), then the Discharger must re-sample and re-test within 14 days.

Table E-4. USEPA Test Methods and Test Acceptability Criteria

Species & USEPA Test Method Number	Test Acceptability Criteria (TAC)
Topsmelt, <i>Atherinops affinis</i> , Larval Survival and Growth Test Method 1006.01. (Table 3 of Test Method)	≥80% survival in controls; average dry weight per surviving organism in reference and brine control chambers exceeds 0.85 mg (9-day old larvae); the mean weight of the preserved larvae must exceed 0.72 mg. LC50 with copper must be ≤ 205 µg/L, <25% MSD for survival and <50% MSD for growth. (required)
Red Abalone, <i>Haliotis rufescens</i> , Larval Shell Development Test Method (Table 3 of Test Method)	80% or greater normal shell development in the controls; must have statistical significant effect at 56 µg/L zinc and achieve a MSD of <20%. (required)
Giant Kelp, <i>Macrocystis pyrifera</i> , Germination and Growth Test Method 1009.0 (Table 3 of Test Method)	70% or greater germination in controls, ≥ 10 µm germ-tube length in controls, No Observed Effect Concentration (NOEC) must be below 35 µg/L in the reference toxicant test, and must achieve a

Species & USEPA Test Method Number	Test Acceptability Criteria (TAC)
	MSD of <20% for both germination and germ-tube length in the reference toxicant. (required)

- c. Dilution water and control water, including brine controls, shall be 1-µm-filtered uncontaminated natural seawater, hypersaline brine prepared using uncontaminated natural seawater, or laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.
 - d. Monthly reference toxicant testing is sufficient. All reference toxicant test results should be reviewed and reported using the EC₂₅.
 - e. The Discharger shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the Monitoring and Reporting Program and the rationale is explained in the Fact Sheet (Attachment F).
6. Preparation of an Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan
- The Discharger, in coordination with the LACSD for the JWPCP, shall prepare and submit a copy of the Discharger’s initial investigation TRE work plan to the Executive Officer of the Regional Water Board for approval within 90 days of the effective date of this permit. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use USEPA manual EPA/833B-99/002 (municipal) as guidance, or the most current version. This work plan shall include the steps that the Discharger, in coordination with LACSD for the JWPCP, intends to follow if the TST null hypothesis for chronic toxicity at the combined discharge IWC of 0.5988% effluent for Discharge Points 001 and 002; 0.6623% effluent for Discharge Point 003; or 0.8621% effluent for Discharge Point 004, is not statistically rejected. At a minimum, the TRE Work Plan must contain the applicable provisions in Attachment G. This work plan shall describe the steps that the Discharger intends to follow if toxicity is detected. At a minimum the work plan shall include:
- a. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
 - b. A description of the Facility’s methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the Facility; and,
 - c. If a TIE is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).
7. Toxicity Reduction Evaluation (TRE) Process
- In the event of a toxicity test “Fail,” the Permittee shall immediately implement the TRE process conditions the TRE process conditions set forth below. During the TRE Process, annual effluent monitoring shall resume and TST results (“Pass” or “Fail”) for chronic toxicity tests shall be reported to satisfy the chronic toxicity monitoring requirement.
- a. **Preparation and Implementation of Detailed TRE Work Plan.** The Discharger shall immediately initiate a TRE using, according to the type of treatment facility,

USEPA manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833/B-99/002, 1999) and, within 15 days, submit to the Executive Officer a detailed TRE Work Plan, which shall follow the generic Initial Investigation TRE Work Plan revised as appropriate for this toxicity event. It shall include the following information, and comply with additional conditions set by the Executive Officer:

- i. Further actions by the Discharger to investigate, identify, and correct the causes of toxicity.
 - ii. Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.
 - iii. A schedule for these actions, progress reports, and the final report.
- b. **TIE Implementation.** The Discharger, in coordination with the LACSD, may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test method and, as guidance, USEPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.
- c. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.
- d. The Discharger shall continue to conduct routine effluent monitoring for compliance determination purposes while the TIE and/or TRE is taking place. Additional accelerated monitoring and TRE work plans are not required once a TRE has begun.
- e. The Regional Water Board recognizes that toxicity may be episodic and identification of causes and reduction of sources of toxicity may not be successful in all cases. The TRE may be ended at any stage if monitoring finds there is no longer toxicity.

8. Reporting

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

- a. The valid toxicity test results for the TST statistical approach, reported as "Pass" or "Fail" and "Percent Effect" at the chronic toxicity IWC for the discharge. All toxicity test results (whether identified as valid or otherwise) shall be reported on the SMR due date specified in Table E-6.

- 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 Discharger 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, CETIS, etc.) output results, including graphical plots, for each toxicity test.
- f. Graphical plots 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 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 Discharger 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

The receiving water monitoring component for Discharge Points 001, 002, 003, and 004, is not prescribed in this Order because it is covered under the JWPCP NPDES permit (CA0053813), monitoring and reporting program CI-1758; however, receiving water monitoring is required in the Dominguez Channel Estuary due to storm water discharges from Discharge Point SW-001.

A. Monitoring Location RSW-001

The Discharger shall monitor the Dominguez Channel Estuary at RSW-001 as follows:

Table E-5 Receiving Water Monitoring Requirements for RSW-001

Parameter	Units	Sample Type	Minimum Sampling Frequency ¹⁹	Required Analytical Test Method
pH	Standard units	Grab	1/year	20,21
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/year	20,21
Temperature	°F	Grab	1/year	20,21
Dissolved Oxygen	Mg/L	Grab	1/year	20
Salinity	Ppt	Grab	1/year	20,21
Priority Pollutants ²²	µg/L	Grab	1/year	20
TCDD Equivalentents	µg/L	Grab	1/year	20

B. Bed Sediment Monitoring at SED-001

The Harbor Toxics TMDL encourages responsible parties to join a group of responsible parties to design and implement a collaborative monitoring plan. The Dominguez Channel Estuary responsible parties are each individually responsible for conducting water, sediment, and fish tissue monitoring. However, they are encouraged to collaborate or coordinate their efforts to avoid duplication and reduce associated costs. Dischargers interested in coordinated monitoring shall submit a coordinated monitoring plan that identifies monitoring to

¹⁹ Sampling shall be during the first hour of the first discharge event of the year. If, for safety reasons, a sample cannot be obtained during the first hour of discharge, a sample shall be obtained at the first safe opportunity, and the reason for the delay shall be included in the report. If there is no discharge to surface waters, no sampling is required. In that event, the Discharger shall indicate under penalty of perjury in the corresponding monitoring report that no effluent was discharged to surface water during the reporting period.

²⁰ Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. Part 136; for Priority Pollutants the methods must meet the lowest MLs specified in Attachment 4 of the SIP, provided as Attachment H. Where no methods are specified for a given pollutant, the methods must be approved by this Regional Water Board or the State Water Board.

²¹ Receiving water pH, salinity, ammonia, and temperature must be analyzed at the same time the samples are collected for Priority Pollutants analysis. A hand-held field meter may be used for pH and temperature, provided the meter utilizes an EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer’s instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility

²² Priority Pollutants as defined by the CTR, and included as Attachment I. Annual samples shall be collected during the first hour of discharge from the first storm event of the year. If, for safety reasons, a sample cannot be obtained during the first hour of discharge, then a sample shall be obtained, at first safe opportunity within 12 hours of the beginning of storm water discharge.

be implemented by the responsible parties. Under the coordinated monitoring option, the compliance point for the WLAs shall be storm drain outfalls or a point(s) in the receiving water that suitably represents the combined discharge of cooperating parties.

The details of the monitoring program including sampling locations and all methods shall be specified in the MRP to be approved by the Executive Officer.

The Discharger shall monitor bed sediment at a sampling location specified in the collaborative monitoring plan. As an option, the Discharger may choose to conduct additional bed sediment monitoring at Monitoring Location SED-001 in order to demonstrate compliance with sediment limitations by meeting sediment numeric targets of cadmium, chlordane and dieldrin in bed sediments over a 3-year averaging period (see section IV. B. of the Order). Surface grab samples containing the upper 5 centimeters of sediment shall be collected and analyzed for the following:

Table E-5 Bed Sediment Monitoring Requirements for SED-001

Parameter	Units	Sample Type	Minimum Sampling Frequency ²³	Required Analytical Test Method
Chlordane	mg/kg dry sediment	grab	1/year	24
Dieldrin	mg/kg dry sediment	grab	1/year	24

IX. OTHER MONITORING REQUIREMENTS

A. BIOSOLIDS – NOT APPLICABLE

B. STORM WATER

1. **Rainfall Monitoring.** The Discharger shall measure and record the rainfall on each day of the month or submit the data obtained from the nearest city/county operated rain gauge monitoring station. This information shall be included in the monitoring report for that month.
2. **Visual Observation.** The Discharger shall make visual observations of all storm water discharge locations on at least one storm event per month that produces a significant storm water discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor. A "significant storm water discharge" is a continuous discharge of storm water for a minimum of one hour, or the intermittent discharge of storm water for a minimum of 3 hours in a 12-hour period.
3. The Discharger shall monitor discharges of storm water runoff from the Carson WRP through Discharge Point SW-001 at monitoring location SSP-001. Table E-5 shows the effluent monitoring requirements. If more than one analytical test method is listed for a

²³ Sampling shall be during the first hour of the first discharge event of the year. If, for safety reasons, a sample cannot be obtained during the first hour of discharge, a sample shall be obtained at the first safe opportunity, and the reason for the delay shall be included in the report. If there is no discharge to surface waters, no sampling is required. In that event, the Discharger shall indicate under penalty of perjury in the corresponding monitoring report that no effluent was discharged to surface water during the reporting period.

²⁴ Pollutants shall be analyzed in accordance with USEPA or ASTM methodologies where such methods exist. Where no USEPA or ASTM methods exist, the State Water Board or Regional Water Board shall approve the use of other methods. Analytical tests shall be conducted by laboratories certified by the State Water Board in accordance with Water Code section 13176.

given parameter, the Discharger must select from the listed methods and corresponding Minimum Level.

Table E-5 Storm Water Monitoring at Discharge Point SW-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Oil and Grease	mg/L	Grab	1/Discharge Event ²⁵	7
pH	pH unit	Grab	1/Discharge Event ²⁵	7
Total Suspended Solids ^{26,27}	mg/L	Grab	3/Year ²⁸	7
Total Copper ²⁶	µg/L	Grab	3/Year ²⁸	7
Total Lead ²⁶	µg/L	Grab	3/Year ²⁸	7
Total Zinc ²⁶	µg/L	Grab	3/Year ²⁸	7

²⁵ During periods of extended discharge, no more than one sample per month needs to be collected. Sampling shall occur during the first hour of discharge. 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 and the reason for the delay shall be included in the report. If there is no discharge to the storm drain, no monitoring is required and the Discharger will indicate in the corresponding monitoring report, under penalty of perjury, that no effluent was discharged during the reporting period.

²⁶ During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit copper, lead, zinc, 4,4-DDT, total PCBs, or PAHs (i.e., benzo(a)anthracene, benzo(a)pyrene, chrysene, or pyrene) as specified in Table 4 of this Order, then the Discharger has not demonstrated compliance with the interim sediment allocations (Monitoring Thresholds, Table 6, page 15, of this Order) specified by the Harbor Toxics TMDL, Resolution No. R11-008 (page 11, Item 3). Therefore, the Discharger is required to implement the effluent sediment monitoring program for that priority pollutant. The Discharger shall begin the effluent sediment monitoring program during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the interim sediment allocations (Monitoring Thresholds) in Tables 6, page 15 of this Order, demonstrates compliance with the interim sediment allocation and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that exceeds the interim sediment allocation requires additional effluent sediment monitoring during discharge but not more frequently than once per year until the three-year average concentration for effluent sediment monitoring results is at or below the interim sediment allocation.

²⁷ During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit or performance goal for chlordane or dieldrin as specified in Table 4 of this Order, then the Discharger has not demonstrated compliance with the final concentration-based sediment waste load allocations (WLAs) (Table 5, page 8 of this Order) specified by the Harbor Toxics TMDL, Resolution No. R11-008 (page 21 for chlordane and dieldrin) and the Discharger is required to implement the effluent sediment monitoring program for that priority pollutant. The Discharger shall begin the effluent sediment monitoring program during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the final concentration-based sediment allocations in Tables 5, page 8 of this Order, demonstrates compliance with the final concentration-based sediment WLAs and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that is above the final concentration-based sediment WLAs for chlordane or dieldrin constitutes an exceedance of the final concentration-based sediment WLAs. Annual effluent sediment monitoring is required for the pollutant(s) until the data demonstrates compliance.

²⁸ The Discharger shall collect samples during two wet weather events and one dry weather event each year, as required in Attachment A of Resolution No. 11-008, the *Total Maximum Daily Load for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters (Dominguez Channel Toxics TMDL)*, Resolution No. R11-008, for storm water and NPDES discharges. The monitoring will determine compliance with the interim Waste Load Allocations applicable to storm water discharges and other NPDES permittees.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
DDT ²⁶	µg/L	Grab	3/Year ²⁸	7
PCBs ²⁶	µg/L	Grab	3/Year ²⁸	7
Benzo[a]anthracene ²⁶	µg/L	Grab	3/Year ²⁸	7
Benzo[a]Pyrene ²⁶	µg/L	Grab	3/Year ²⁸	7
Chrysene ²⁶	µg/L	Grab	3/Year ²⁸	7
Phenanthrene ²⁶	µg/L	Grab	3/Year ²⁸	7
Pyrene ²⁶	µg/L	Grab	3/Year ²⁸	7
Chlordane ²⁷	µg/L	Grab	3/Year ²⁸	7
Dieldrin ²⁷	µg/L	Grab	3/Year ²⁸	7
Temperature	°F	Grab	3/Year ²⁸	7
Dissolved oxygen	mg/L	Grab	3/Year ²⁸	7
pH	pH units	Grab	3/Year ²⁸	7
Electrical conductivity	µmhos/ cm	Grab	3/Year ²⁸	7

C. Effluent Sediment Monitoring at Monitoring Location SW-001

Effluent sediment monitoring is only required during years in which any exceedance occurs as described in Footnote 1 to the following table (Table E-3). If effluent sediment monitoring is not triggered by an exceedance, effluent sediment monitoring must be conducted as described here at least **once during the permit term**, if a discharge from the facility occurs.

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

Table E-6 Effluent Sediment Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Copper, Total Recoverable	mg/kg	Grab	1/year ²⁹	30
Lead, Total Recoverable	mg/kg	Grab	1/year ²³	24

²⁹ During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit copper, lead, zinc, 4,4-DDT, total PCBs, or PAHs (i.e., benzo(a)anthracene, benzo(a)pyrene, chrysene, or pyrene) as specified in Table 4 of this Order, then the Discharger has not demonstrated compliance with the interim sediment allocations (Monitoring Thresholds, Table 6, page 15, of this Order) specified by the Harbor Toxics TMDL, Resolution No. R11-008 (page 11, Item 3). Therefore, the Discharger is required to implement the effluent sediment monitoring program for that priority pollutant. The Discharger shall begin the effluent sediment monitoring program during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the interim sediment allocations (Monitoring Thresholds) in Table 6, page 15 of this Order, demonstrates compliance with the interim sediment allocation and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that exceeds the interim sediment allocation requires additional effluent sediment monitoring during discharge but not more frequently than once per year until the three-year average concentration for effluent sediment monitoring results is at or below the interim sediment allocation.

³⁰ Pollutants shall be analyzed in accordance with USEPA or ASTM methodologies where such methods exist. Where no USEPA or ASTM methods exist, the State Water Board or Regional Water Board shall approve the use of other methods. Analytical tests shall be conducted by laboratories certified by the California Department of Public Health in accordance with Water Code section 13176.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Zinc, Total Recoverable	mg/kg	Grab	1/year ²³	24
DDT ³¹	mg/kg	Grab	1/year ²³	24
PAHs ³²	mg/kg	Grab	1/year ²³	24
PCBs ³³	mg/kg	Grab	1/year ²³	24
Chlordane	mg/kg	Grab	1/year ²⁵	24
Dieldrin	mg/kg	Grab	1/year ²⁵	24

D. Regional Monitoring

The Discharger may be required to participate in the development of Regional Monitoring program(s) to address pollutants as specified in the Harbor Toxics TMDL. If the Discharger joins a group of stakeholders to complete this monitoring, the Discharger must provide documentation of participation and a description of applicable responsibilities. The Regional Water Board must also be provided with documentation of the availability of the reports associated with the implementation of the Monitoring Plan.

Regional monitoring programs for the Pacific Ocean have been developed and this Order may be reopened and modified to require the Discharger’s participation in one of these regional monitoring programs if the Regional Water Board determines that it is necessary.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. If there is no discharge during any reporting period, the report shall so state.
3. 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.

³¹ The State Water Board Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality, August 25, 2009, (known as Sediment Quality Plan, Attachment A) listed chemical analytes needed to characterize sediment contamination exposure and effect. According to Sediment Quality Plan, DDTs shall mean the sum of 4,4’DDT, 2,4’DDT, 4,4’DDE, 2,4’DDE, 4,4’DDD and 2,4’DDD.

³² According to Sediment Quality Plan, total PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthene, anthracene, biphenyl, naphthalene, 2,6-dimethylnaphthalene, fluorene, 1-methylnaphthalene, 2-methylnaphthalene, 1-methylphenanthrene, phenanthrene, benzo(a)anthracene, benzo(a)pyrene, benzo(e)pyrene, chrysene, dibenz(a,h)anthracene, fluoranthene, perylene, and pyrene

³³ According to Sediment Quality Plan, total PCBs (polychlorinated biphenyls) shall mean the sum of the following PCB congeners: 2,4'-dichlorobiphenyl, 2,2',5'-trichlorobiphenyl, 2,4,4'-trichlorobiphenyl, 2,2',3,5'-tetrachlorobiphenyl, 2,2',5,5'-tetrachlorobiphenyl, 2,3',4,4'-tetrachlorobiphenyl, 2,2',4,5,5'-pentachlorobiphenyl, 2,3,3',4,4'-pentachlorobiphenyl, 2,3',4,4',5-pentachlorobiphenyl, 2,2',3,3',4,4'-hexachlorobiphenyl, 2,2',3,4,4',5'-hexachlorobiphenyl, 2,2',4,4',5,5'-hexachlorobiphenyl, 2,2',3,3',4,4',5-heptachlorobiphenyl, 2,2',3,4,4',5,5'-heptachlorobiphenyl, 2,2',3,4',5,5',6-heptachlorobiphenyl, 2,2',3,3',4,4',5,6-octachlorobiphenyl, 2,2',3,3',4,4',5,5',6-nonachlorobiphenyl, and decachlorobiphenyl.

4. The Discharger shall inform the Regional Water Board well in advance of any proposed construction or maintenance activity, or modification to the Facility 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 Facility's effluent are generally higher than effluent limitations or water quality objectives for DDT, chlordane, PCBs and PAHs. Therefore, the Discharger 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 of the Discharger, the Regional Water Board and/or USEPA, in consultation with the State Water Board's Quality Assurance Program, may establish an ML that is not contained in Appendix II of the 2015 Ocean Plan, to be included in the Discharger's NPDES permit, in any of the following situations:
 - a. When the pollutant under consideration is not included in Appendix II;
 - b. When the Discharger agrees to use a test method that is more sensitive than those specified in 40 CFR § 136 (most recent revision);
 - c. When the Discharger agrees to use an ML lower than those listed in Appendix II;
 - d. When the Discharger 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 Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the USEPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, 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 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 this Order.
10. The Discharger 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.

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 (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 Discharger shall report in the SMR the results for all monitoring specified in this Order. The Discharger 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 Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule, except where specific monitoring periods and reporting dates are required elsewhere in the Order:

Table E-6. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins	Monitoring Period	SMR Due Date
Continuous	Order effective date	All	Submit with quarterly SMR
Hourly	Order effective date	Hourly	Submit with quarterly SMR
Daily	Order effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with quarterly SMR
Weekly	Sunday following Order effective date or on Order effective date if on a Sunday	Sunday through Saturday	Submit with quarterly SMR
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1 st 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	May 15 August 15 November 15 February 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	August 15 February 15

Sampling Frequency	Monitoring Period Begins	Monitoring Period	SMR Due Date
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 CFR § 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. For purposes of reporting and administrative enforcement by the Regional Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the 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 Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

- b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.
7. **The Discharger shall submit 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 instances of non-compliance or exceedances of effluent limitations in 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.

C. Discharge Monitoring Reports (DMRs)

DMRs are USEPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the DMR website at: http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring.

D. Other Reports

1. Special Studies

The Discharger shall report the results of any special studies, chronic toxicity testing, TRE/TIE, BMPs, Pollutant Minimization Program (PMP), and Storm Water Pollution Prevention Plan required by Special Provisions – section VI.C. The Discharger shall report the progress in satisfaction of compliance schedule dates specified in Special Provisions – VII.C.8. The Discharger shall submit reports in compliance with SMR reporting requirements described in subsection X.B. above.

2. Hauling Reports

- a. In the event that brine or other 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 hauling);
 - iii. Location of the final point(s) of disposal for each type of waste.
- 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 Discharger 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 Discharger shall submit annual reports to the Regional Water Board 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 Discharger shall submit to the Regional Water Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect the waste discharge, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly.
5. The Discharger shall report BMPs that are maintained or implemented at the facility including documentation of conditions prior to implementation, a description of the BMPs, and period of implementation. The Discharger shall maintain and make available to the Regional Water Board, upon request, a log of inspections for the following parameters monitored for the storm water collected on-site: oil and grease, pH total suspended solids, copper, lead, zinc, DDT, PCBs, benzo(a)anthracene, benzo(a)pyrene, chrysene, phenanthrene, pyrene, temperature, dissolved oxygen, and electrical conductivity. The Discharger shall certify within the report that the log has been maintained.
6. Technical Report on Preventative and Contingency Plans
- The Regional Water Board requires that the Discharger file with the Regional Water Board, 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 the 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.

TENTATIVE

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	4B190137004
Discharger	West Basin Municipal Water District
Operator	Suez Water Environmental Services
Name of Facility	Juanita Millender-McDonald Carson Regional Water Recycling Plant (Carson WRP)
Facility Address	21029 South Wilmington Avenue
	Carson, CA 90810
	Los Angeles County
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 South Avalon Boulevard, Suite 210, Carson, CA 90746
Billing Address	17140 South Avalon Boulevard, Suite 210, Carson, CA 90746
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	1.2 million gallons per day (MGD)
Facility Design Flow	1.2 MGD
Watershed	Santa Monica Bay
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean water

- A. The West Basin Municipal Water District (hereinafter Discharger) is the owner of the Juanita Millender-McDonald Carson Regional Water Recycling Plant (Facility or Carson WRP). The Regional Water Board has classified the Facility 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 reverse osmosis brine waste to the Pacific Ocean and storm water runoff into Dominguez Channel, both of which are waters of the United States. The Discharger was previously regulated by Order No. R4-2013-0046 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0064246 adopted on March 07, 2013 and expired on February 10, 2018, but was administratively extended until the adoption of this Order. Attachment B provides a map of the area around the Facility, Attachment C1 provides a site layout of the Facility, and Attachment C2 provides a flow schematic 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 August 03, 2017. Supplemental information was requested on September 20, 2017 and received on October 05, 2017. The application was deemed complete on September 20, 2017. A site visit was conducted on January 17, 2018, to observe operations and collect additional data to develop permit limitations and requirements for the waste discharge.
- D.** The Discharger 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 CFR 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

The brine waste effluent discharged from the Carson WRP first combines with secondary effluent from the Sanitation Districts of Los Angeles County’s (LACSD’s) Joint Water Pollution Control Plant’s (JWPCP’s) effluent at the surge tower (33.799667°N, 118.287361°W) and the combined effluent travels approximately six miles through tunnels prior to discharging into the Pacific Ocean via JWPCP’s four outfalls. There are two separate points of dilution for each outfall: 1) the point at which the effluent meets the JWPCP secondary effluent within the pipe and 2) the point at which the combined effluent meets the receiving water. Table F-2 identifies the appropriate dilution ratios for each outfall corresponding to both, the design capacity and the critical condition (minimum effluent flow recorded between 2012 and 2016 (249 MGD) at JWPCP).

All effluent from JWPCP travels through two tunnels under the Palos Verdes Peninsula to the Pacific Ocean shoreline, where an underground manifold system of valves connects the tunnels to four ocean outfalls. The manifold and the starting point for the four outfalls are located near White Point on the Palos Verdes Peninsula. The 120” outfall (001) lies to the south of the manifold and continuously discharges approximately 65% of the treated wastewater. The 90” outfall (002) lies southwest of the manifold and continuously discharges approximately 35% of the treated wastewater. The 72” outfall (003) is located between the 120” and 90” outfalls and is used during times of heavy rains to provide hydraulic relief to the outfall system. The 60” outfall (004) is also located between the 120” and 90” outfalls and serves as a standby outfall to provide additional hydraulic relief during the heaviest flows. All four of these outfalls terminate in diffuser sections that contain multiple ports with opposing discharge direction from a minimum diffuser depth of 100 feet for the 60” outfall to the maximum diffuser depth of 210 feet at the end of the 90” outfall. The diffusers lie at the outer

edge of a narrow shelf offshore of the Palos Verdes Peninsula. LACSD is required to conduct annual visual inspections of the JWPCP outfalls in Order No. R4-2017-0180.

On February 22, 2016, LACSD submitted a dilution study work plan to update the existing dilution study. An update to the dilution study was required because while the dilution study conducted for Order R4-2011-0151 was approved by the State Water Resources Control Board, it was later modified by LACSD in response to Regional Water Board concerns. On March 24, 2016, a work plan was approved for the *Joint Water Pollution Control Plant Outfalls Initial Dilution Calculation Study*.

On May 31, 2016, LACSD submitted the *Final Joint Water Pollution Control Plant Outfalls Initial Dilution Calculation Study (Final Report)*. Based on effluent water quality from the previous five years, and Santa Monica Bay ambient water quality data from the previous ten years, the Final Report calculated a dilution ratio of 1:164 for discharge points 001 and 002 using the mixing zone modeling software with a design flow of 400 MGD and the assumption that no currents influence the initial dilution. The initial dilution ratios of Discharge Points 003 and 004, during the combined discharge at a hydraulic maximum 675 MGD, were 1:148 and 1:116, respectively. The recalculated values are very close to the initial dilution values (D_m) used in Order R4-2011-0151: Outfalls 001 and 002 had a D_m of 1:166, Outfall 003 had a D_m of 1:150, and Outfall 004 had a D_m of 1:115. Regional Water Board staff reviewed the report, consulted with USEPA, and the Regional Water Board approved the continued use of the existing dilution ratios in Order No. R4-2013-0046.

The same study projected a different future minimum dilution ratio of 1:245 resulting from decreased discharges from 400 MGD to 87 MGD by 2035 due to recycled water use and increased reverse osmosis brine waste discharge. Increased density of the discharge results in a deeper trapping depth. Although not modeled, increasing density could also result from additional brine discharge due to additional recycled water production at the proposed Metropolitan Water District of Southern California’s advanced treatment plant, the Los Angeles County Sanitation District’s Saugus and Valencia Water Reclamation Plants, and the West Basin Municipal Water District’s Juanita Millender-McDonald Carson Regional Water Recycling Plant.

The minimum dilution ratios based on the aforementioned dilution study Final Report (1:166, 1:166, 1:150, and 1:115 for Discharge Points 001, 002, 003, and 004, respectively) were used to determine reasonable potential and to calculate effluent limitations for nonconventional and toxic pollutants in the 2018 Order.

Table F-2. Dilution Ratios and Brine Percentages

Flow	Outfall	Parameter	Dilution Ratio	Percentage Brine Waste in Mixture
JWPCP Design Capacity 385 MGD	001 002 003 004	First Dilution: Carson WRP brine waste combines with JWPCP secondary effluent within discharge pipe	1.2 MGD: 385 MGD (Total = 386.2 MGD)	0.31%
	001 002	Second Dilution: Combined Carson WRP brine waste and JWPCP secondary effluent enters Pacific Ocean	1.2 : [386.2 x (166+1)] = 1 : 53,750	0.0019%

Flow	Outfall	Parameter	Dilution Ratio	Percentage Brine Waste in Mixture
	003	Second Dilution: Combined Carson WRP brine waste and JWPCP secondary effluent enters Pacific Ocean	$1.2 : [386.2 \times (150+1)]$ = 1 : 48,600	0.0021%
	004	Second Dilution: Combined Carson WRP brine waste and JWPCP secondary effluent enters Pacific Ocean	$1.2 : [386.2 \times (115+1)]$ = 1 : 37,330	0.0027%
JWPCP Minimum Flow 249 MGD	001 002 003 004	First Dilution: Carson WRP brine waste combines with JWPCP secondary effluent within discharge pipe	1.2 MGD : 249 MGD (Total = 250.2 MGD)	0.48%
	001 002	Second Dilution: Combined Carson WRP brine waste and JWPCP secondary effluent enters Pacific Ocean	$1.2 : [249 \times (166+1)]$ = 1 : 34,700	0.0029%
	003	Second Dilution: Combined Carson WRP brine waste and JWPCP secondary effluent enters Pacific Ocean	$1.2 : [249 \times (150+1)]$ = 1 : 31,300	0.0032%
	004	Second Dilution: Combined Carson WRP brine waste and JWPCP secondary effluent enters Pacific Ocean	$1.2 : [249 \times (115+1)]$ = 1 : 24,070	0.0042%

II. FACILITY DESCRIPTION

The Discharger is a public agency that provides wholesale water to local utility companies and municipal water departments within its service area. The Discharger provides potable water and recycled water to 17 cities and unincorporated areas of southwest Los Angeles County. The Facility is owned by the Discharger and is located at 21029 South Wilmington Avenue, Carson, California. The Facility provides advanced treatment of tertiary-treated Title 22 recycled water produced at the Discharger’s Edward C. Little Water Recycling Facility, located approximately 10 miles northwest of the Facility. The tertiary recycled water is continuously treated by microfiltration and reverse osmosis, or by nitrification at the Facility. The reverse osmosis brine is the only waste stream produced at the Facility that discharges to the Pacific Ocean (see section II.B of Attachment F for detailed information), via the JWPCP outfalls, a water of the United States. Storm water runoff is discharged to the County of Los Angeles storm drain system tributary to the Dominguez Channel Estuary, a water of the United States. All other wastes from the treatment processes at the Facility are discharged to the sanitary sewer.

A. Description of Wastewater and Biosolids Treatment and Controls

1. The Facility currently has a total design treatment capacity of 7.15 MGD and consists of two treatment trains. The first treatment train produces approximately 5 MGD advanced-treated recycled water by treating tertiary-treated effluent from the Edward C. Little Water Recycling Plant with microfiltration, reverse osmosis (MF/RO), and decarbonation. Approximately 0.9 MGD reverse osmosis brine is produced during this process and is

discharged to the ocean. The permeate (recycled water produced from the RO process) is used for boiler feed water or mixed with nitrified water for use in cooling towers at the neighboring refinery. The second treatment train produces approximately 1.25 MGD nitrified recycled water by treating tertiary-treated recycled water from the Edward C. Little Water Recycling Plant by using nitrification in a Biofor® biofiltration system and break-point chlorination. The recycled water from the nitrification system is used for cooling towers at the neighboring refinery. Storm water is discharged through SW-001 into Dominguez Channel Estuary. The other waste streams produced at the facility are discharged to the sanitary sewer.

2. Biosolids are only processed at the Edward C. Little Water Recycling Plant, not at the Carson WRP. Since the Carson WRP only processes tertiary-treated recycled water, biosolids requirements were not included in this Order.

B. Discharge Points and Receiving Waters

1. Reverse osmosis brine waste produced at the Facility is discharged to a brine line that leads to JWPCP’s surge tower, approximately 4 miles southwest of the Facility. The brine immediately commingles with JWPCP’s secondary effluent and the combined effluent exits the pipeline through JWPCP’s Discharge Points 001, 002, 003, and 004. These four discharge points are located at White Point off the Palos Verdes Peninsula. Discharge Points 001 and 002 are routinely used to discharge secondary-treated wastewater. Discharge Point 003 is used only during times of heavy rains to provide hydraulic relief to the system. Discharge Point 004 serves as a standby outfall to provide additional hydraulic relief during extremely high flows. Storm water runoff is discharged through SW-001 to a storm drain that leads to Dominguez Channel Estuary.
2. During periods of heavy rainfall and flooding when the flow at JWPCP exceeds the capacity of its outfalls, the Discharger has the infrastructure to bypass JWPCP’s outfalls and direct the brine to the Dominguez Channel. This Order prohibits the discharge of brine waste to the Dominguez Channel and any such discharge is subject to the terms and conditions of sections I.G. and V.E. of Attachment D: Standard Provisions.
3. Discharge Points 001, 002, 003, and 004 in this Order correspond to the discharge points in the JWPCP NPDES permit Order No. R4-2017-0180. The table below provides a description of the four JWPCP discharge points and the storm water discharge point.

Table F-3. Discharge Point Descriptions

Discharge Point	Description
001	<p>White Point 120-inch ocean outfall (Latitude 33.6892°N, Longitude 118.3167°W)</p> <p>This outfall routinely discharges approximately 65% of the combined effluent from the West Basin Water Recycling Plant and JWPCP. It discharges south of the shoreline of White Point, San Pedro. The outfall is 7,440 feet long to the beginning of a single L-shaped diffuser leg, which is 4,440 feet long. Depth at the beginning of the diffuser is 167 feet and at the end of the diffuser is 190 feet.</p>

Discharge Point	Description
002	White Point 90-inch ocean outfall (Latitude 33.7008°N, Longitude 118.3381°W) This outfall routinely discharges approximately 35% of the combined effluent from West Basin Water Recycling and JWPCP. It discharges southwest of the shoreline of White Point, San Pedro. The outfall is 7,982 feet long to the beginning of a Y-shaped diffuser with 2 legs. Each leg is 1,208 feet long. Depth at the beginning of the diffuser is 196 feet and at the end of the diffuser is 210 feet.
003	White Point 72-inch ocean outfall (Latitude 33.7008°N, Longitude 118.3300°W) This outfall is used only during times of heavy rains to provide hydraulic relief in the outfall system. When used, it discharges off the White Point Shoreline between Discharge Points 001 and 002, and about 160 feet below the ocean surface. The outfall is about 6,500 feet long and connects to a diffuser with two legs, each approximately 200 feet long.
004	White Point 60-inch ocean outfall (Latitude 33.7061°N, Longitude 118.3283°W) This is a standby outfall to provide additional hydraulic relief during the heaviest flows. When used, it discharges off the White Point shoreline between outfalls 002 and 003, and about 110 feet below the ocean surface. The outfall is about 5,000 feet long and connected to a single, very short diffuser.
SW-001	Storm water discharge (Latitude 33.8391° N, Longitude 118.2369° W) This is the discharge point used to discharge storm water from the site into the storm drain along South Wilmington Avenue, which drains to Dominguez Channel Estuary.

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

Effluent limitations contained in the existing Order (R4-2013-0046) for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Order are as follows:

Table F-4. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation in Order R4-2013-0046				Monitoring Data (From January 2013 To September 2017)		
		Average Monthly	Average Weekly	Annual Average	Instantaneous Maximum	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Conventional/Non-Conventional								
Oil & Grease	mg/L	25	40	--	75	10	10	11
Total Suspended Solids	mg/L	60	--	--	--	5	--	5
Settleable Solids	mL/L	1.0	1.5	--	3.0	<0.1	<0.1	<0.1
Turbidity	NTU	75	100	--	225	2	--	2
Salinity	ppt	--	--	--	--	7.3	--	7.3
pH	pH Unit	6.0 - 9.0				7.8	--	7.8
Temperature	°F	--	--	--	100	87.4	--	87.4
Marine Aquatic Life								
Arsenic	µg/L	--	--	--	--	14.3	--	14.3

Parameter	Units	Effluent Limitation in Order R4-2013-0046				Monitoring Data (From January 2013 To September 2017)		
		Average Monthly	Average Weekly	Annual Average	Instantaneous Maximum	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Cadmium	µg/L	--	--	--	--	0.736	--	0.736
Chromium, Total	µg/L	--	--	--	--	23.1	--	23.1
Copper	µg/L	--	--	--	--	47	--	47
Lead	µg/L	--	--	--	--	1.36	--	1.36
Mercury	µg/L	--	--	--	--	0.554	--	0.554
Nickel	µg/L	--	--	--	--	94.2	--	94.2
Selenium	µg/L	--	--	--	--	13.5	--	13.5
Silver	µg/L	--	--	--	--	1.31 (DNQ)	--	1.31 (DNQ)
Zinc	µg/L	--	--	--	--	63.2	--	63.2
Cyanide	µg/L	--	--	--	--	140	--	140
Total Residual Chlorine	mg/L	--	--	--	--	8.25	--	8.25
Ammonia-N	mg/L	--	--	--	--	248	--	248
Non-Cl Phenolic Compounds	µg/L	--	--	--	--	53	--	53
Cl Phenolic Compounds	µg/L	--	--	--	--	<8.1	--	<8.1
Endosulfan	µg/L	--	--	--	--	<0.0019	--	<0.0019
Endrin	µg/L	--	--	--	--	<0.14	--	<0.14
HCH ¹	µg/L	--	--	--	--	<0.0031	--	<0.0031
Chronic Toxicity	TUc	--	--	--	--	167	--	167
Radioactivity								
Gross Alpha	pCi/L	--	--	--	--	160	--	160
Gross Beta	pCi/L	--	--	--	--	190	--	190
Human Health – Non-Carcinogens								
Acrolein	µg/L	--	--	--	--	<2.2	--	<2.2
Antimony	µg/L	--	--	--	--	13.6	--	13.6
Bis (2-Chloroethoxy) methane	µg/L	--	--	--	--	<6.5	--	<6.5
Bis (2-Chloroisopropyl) ether	µg/L	--	--	--	--	<7.3	--	<7.3
Chlorobenzene	µg/L	--	--	--	--	<0.21	--	<0.21
Chromium III	µg/L	--	--	--	--	23.09	--	23.09
Di-n-Butyl Phthalate	µg/L	--	--	--	--	0.69 (DNQ)	--	0.69 (DNQ)
Dichlorobenzene ¹	µg/L	--	--	--	--	<0.37	--	<0.37

¹ See Attachment A for definition of terms.

Parameter	Units	Effluent Limitation in Order R4-2013-0046				Monitoring Data (From January 2013 To September 2017)		
		Average Monthly	Average Weekly	Annual Average	Instantaneous Maximum	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Diethyl phthalate	µg/L	--	--	--	--	<7.4	--	<7.4
Dimethyl phthalate	µg/L	--	--	--	--	2.1	--	2.1
4,6-Dinitro-2-methylphenol	µg/L	--	--	--	--	<7.1	--	<7.1
2,4-Dinitrophenol	µg/L	--	--	--	--	<7.6	--	<7.6
Ethylbenzene	µg/L	--	--	--	--	<0.25	--	<0.25
Fluoranthene	µg/L	--	--	--	--	<9.1	--	<9.1
Hexachloro-cyclopentadiene	µg/L	--	--	--	--	<13	--	<13
Nitrobenzene	µg/L	--	--	--	--	<4.4	--	<4.4
Thallium	µg/L	--	--	--	--	0.999	--	0.999
Toluene	µg/L	--	--	--	--	0.55	--	0.55
Tributyltin	µg/L	--	--	--	--	<0.03	--	<0.03
1,1,1-Trichloroethane	µg/L	--	--	--	--	<0.38	--	<0.38
Human Health - Carcinogens								
Acrylonitrile	µg/L	--	--	--	--	<1.8	--	<1.8
Aldrin	µg/L	--	--	--	--	<0.0075	--	<0.0075
Benzene	µg/L	--	--	--	--	<0.28	--	<0.28
Benzidine	µg/L	--	--	--	--	<41	--	<41
Beryllium (Be)	µg/L	--	--	--	--	0.057	--	0.057
Bis (2-Chloroethyl) ether	µg/L	--	--	--	--	<5.8	--	<5.8
Bis(2-ethylhexyl)-phthalate	µg/L	--	--	--	--	8.4	--	8.4
Carbon tetrachloride	µg/L	--	--	--	--	0.49	--	0.49
Chlordane ¹	µg/L	--	--	--	--	<0.4	--	<0.4
Chlorodibromomethane	µg/L	--	--	--	--	29	--	29
Chloroform	µg/L	--	--	--	--	140	--	140
DDT ¹	µg/L	--	--	--	--	<10	--	<10
1,4-Dichlorobenzene	µg/L	--	--	--	--	<5.5	--	<5.5
3,3'-Dichlorobenzidine	µg/L	--	--	--	--	<20	--	<20
1,2-Dichloroethane	µg/L	--	--	--	--	<0.33	--	<0.33
1,1-Dichloroethylene	µg/L	--	--	--	--	<0.39	--	<0.39

Parameter	Units	Effluent Limitation in Order R4-2013-0046				Monitoring Data (From January 2013 To September 2017)		
		Average Monthly	Average Weekly	Annual Average	Instantaneous Maximum	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Dichlorobromomethane	µg/L	--	--	--	--	28	--	28
Dichloromethane	µg/L	--	--	--	--	2.1	--	2.1
1,3-Dichloropropene	µg/L	--	--	--	--	<0.37	--	<0.37
Dieldrin	µg/L	--	--	--	--	<0.01	--	<0.01
2,4-Dinitrotoluene	µg/L	--	--	--	--	<8.2	--	<8.2
1,2-Diphenylhydrazine	µg/L	--	--	--	--	<5.4	--	<5.4
Halomethanes ¹	µg/L	--	--	--	--	8.4	--	8.4
Heptachlor	µg/L	--	--	--	--	<0.0085	--	<0.0085
Heptachlor epoxide	µg/L	--	--	--	--	<0.0095	--	<0.0095
Hexachlorobenzene	µg/L	--	--	--	--	<5.5	--	<5.5
Hexachlorobutadiene	µg/L	--	--	--	--	<4.7	--	<4.7
Hexachloroethane	µg/L	--	--	--	--	<6.2	--	<6.2
Isophorone	µg/L	--	--	--	--	<3.6	--	<3.6
N-Nitrosodimethylamine	µg/L	--	--	--	--	7.2	--	7.2
N-Nitrosodi-N-propylamine	µg/L	--	--	--	--	<9.9	--	<9.9
N-Nitrosodiphenylamine	µg/L	--	--	--	--	<6.2	--	<6.2
PAHs ¹	µg/L	--	--	--	--	<12	--	<12
PCBs ¹	ng/L	--	--	--	--	<0.75	--	<0.75
TCDD equivalents ¹	pg/L	--	--	--	--	<10.6	--	<10.6
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	--	<0.25	--	<0.25
Tetrachloroethylene	µg/L	--	--	--	--	1.6	--	1.6
Toxaphene	µg/L	--	--	--	--	<0.6	--	<0.6
Trichloroethylene	µg/L	--	--	--	--	<0.37	--	<0.37
1,1,2-Trichloroethane	µg/L	--	--	--	--	<0.39	--	<0.39
2,4,6-Trichlorophenol	µg/L	--	--	--	--	<1.6	--	<1.6
Vinyl chloride	µg/L	--	--	--	--	<0.33	--	<0.33

D. Compliance Summary

There were three monitoring deficiencies and one spill reported during the previous permit term. There were no additional violations reported during the permit term.

On July 31, 2013, the air release valve to the brine waste line along Watson Center Drive was damaged and caused a spill of approximately 1,200 gallons over a 2-hour period. The storm drain was protected with sand bags and felt material to prevent silt and debris intrusion and a dechlorination agent (Captor) was introduced into the discharge prior to the water entering the storm drain. The Cal Water crew isolated the flow with a line stop tool and completed a temporary repair by installing an isolation valve in order to avoid interruption of service of the Facility. The plumbing serving the air release valve was repaired on August 01, 2013.

E. Planned Changes

Due in part to the impact of drought, water conservation efforts, and industrial water demands on the quality of product water, West Basin is currently in the process of evaluating the need to make facility modifications to produce a higher quality product water for the neighboring refinery. A new proposed 2.0 MGD tertiary membrane bioreactor (tMBR) would produce higher quality water by reducing the concentrations of ammonia as nitrogen in the recycled water that is supplied to the Tesoro Refinery cooling towers. The reduction of ammonia content is intended to help prevent corrosion in the cooling towers. The waste from the tMBR will be conveyed to the Los Angeles County Sanitation Districts Sewer system. In addition, the existing 5.88 MGD microfiltration process will be replaced with a new 5.88 MGD microfiltration system that utilizes polyvinylidene difluoride (PVDF) membranes. These changes are not expected to impact the quality or the total amount of brine waste produced.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit 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. California Environmental Quality Act (CEQA)

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

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

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

Table F-5. Basin Plan Beneficial Uses

Water Body Designation	Receiving Water Name	Beneficial Use(s)
180701060102 (Formerly Hydro Unit No. 405.12)	Dominguez Channel Estuary	<p><u>Existing:</u> REC-1; REC-2; COMM; Estuarine habitat (EST); MAR; WILD; RARE, MIGR, and SPWN.</p> <p><u>Potential:</u> NAV.</p>
180701040601 (Formerly Hydro. Unit No. 405.12)	Point Vicente Beach Royal Palms Beach White Point Beach	<p><u>Existing:</u> Navigation (NAV); water contact recreation (REC-1); non-contact water recreation (REC-2); commercial and sport fishing (COMM); marine habitat (MAR); wildlife habitat (WILD); and shellfish harvesting (SHELL).</p> <p><u>Potential:</u> Spawning, reproduction, and/or early development (SPWN)</p>
180701040601 (Formerly Hydro Unit No. 405.12)	Pacific Ocean Nearshore Zone	<p><u>Existing:</u> Industrial service supply (IND); NAV; REC-1; REC-2; COMM; MAR; WILD; preservation of biological habitats (BIOL); rare, threatened, or endangered species (RARE); migration of aquatic organisms (MIGR); SPWN; and SHELL.</p> <p><u>Potential:</u> None.</p>
180701040601 (Formerly Hydro Unit No. 405.12)	Pacific Ocean Offshore	<p><u>Existing:</u> NAV; REC-1; REC-2; COMM; MAR; WILD; RARE, MIGR, SPWN, and SHELL.</p> <p><u>Potential:</u> None.</p>

2. **Thermal Plan.** The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan), on January 7, 1971, and amended this plan on September 18, 1975. This plan contains temperature objectives for coastal and inland surface waters. Requirements of this Order implement the Thermal Plan.
3. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, 2012, and 2015. The State Water Board adopted the latest Ocean Plan amendment, to incorporate a Desalination Amendment, on May 6, 2015, and it became effective on January 28, 2016. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the state to be protected as summarized below:

Table F-6. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001 002 003 004	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish migration; fish spawning; and shellfish harvesting.

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

4. **Santa Monica Bay Restoration Plan.** This permit authorizes the discharge of brine waste to Santa Monica Bay, one of the most heavily used recreational areas in California. Recognizing the importance of Santa Monica 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' Hyperion Treatment Plant and the County Sanitations 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 (WQS) become effective for CWA purposes (40 CFR part 131.21, 65 Federal Register 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to 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 are 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 consist of restrictions on Total Suspended Solids (TSS), oil and grease, settleable solids, turbidity, and pH. The rationale for TBELs in this Order are discussed further in Section IV.B.2. of this Fact Sheet.

WQBELs are scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives are approved pursuant to federal law and are the applicable federal water quality standards. All beneficial uses and water quality objectives 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 water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless

“applicable water quality standards for purposes of the CWA” pursuant to 40 CFR part 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.

WQBELs for DDT and PCBs have also been included in this Order based on the WLAs in the *Santa Monica Bay Total Maximum Daily Loads for DDTs and PCBs*. All discharges with WLAs specified in a TMDL are to be considered to have reasonable potential under 40 CFR 122.44(d) and require WQBELs. Storm water WQBELs for copper, lead, zinc, PAHs, Chlordane, 4,4-DDT, dieldrin, and Total PCBs have also been described in this Order based on the WLAs in the *Total Maximum Daily Load for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters (Dominguez Channel Toxics TMDL)*.

7. **Antidegradation Policy.** Federal regulation 40 CFR § 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California’s antidegradation policy in State Water Board Resolution 68-16 (“Statement of Policy with Respect to Maintaining High Quality of Waters in California”). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board’s Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The discharge permitted under this Order are consistent with the antidegradation provisions in 40 CFR § 131.12 and State Water Board Resolution 68-16, and is described further in section IV.D.2. of the Fact Sheet.
8. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. The applicability of these requirements to the order is discussed in detail in section IV.D.1. of the Fact Sheet.

In conformance with reasonable potential analysis procedures identified in State Water Board and USEPA documents, effluent limitations for some constituents are not carried forward in this Order because presently there is no reasonable potential for the constituents to cause or contribute to an exceedance of water quality standards. Without reasonable potential, there is no longer a need to maintain prior WQBELs under NPDES regulations, anti-backsliding provisions, and antidegradation policies. The accompanying monitoring and reporting program requires continued data collection and if monitoring data show reasonable potential for a constituent to cause or contribute to an exceedance of water quality standards, the Order will be reopened to incorporate WQBELs. Such an approach ensures that the discharge will adequately protect water quality standards for designated beneficial uses and conform to antidegradation policies and anti-backsliding provisions.

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

- 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. The MRP is provided in Attachment E.
- 11. Water Recycling.** In accordance with statewide policies concerning water reclamation, the 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 (such as groundwater injection), and/or use of storm water and dry-weather urban runoff.
- 12. 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 also included in this Order Special Provisions applicable to the Discharger. 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 State Water Board proposed the California 2012 Integrated Report from a compilation of the adopted Regional Water Boards' Integrated Reports containing CWA section 303(d) List of impaired Waters and section 305(b) Reports following recommendations from the Regional Water Boards and information solicited from the public and other interested persons. The Regional Water Boards' Integrated Reports were used to revise their 2010 303(d) List. On April 08, 2012, the State Water Board adopted the California 2012 Integrated Report. On June 26, 2015, the USEPA approved California's 2012 Integrated Report Section 303(d) List of Impaired Waters requiring Total Maximum Daily Loads (TMDLs) for the Los Angeles Region. The CWA section 303(d) list can be viewed at the following link:

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

Santa Monica Bay (offshore and nearshore) is on the 303(d) list for the following pollutants/stressors from point and non-point sources: DDT (tissue & sediment), debris, fish consumption advisory, PCBs (tissue & sediment), and sediment toxicity. Total Maximum Daily Loads (TMDLs) for 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.3. of this Fact Sheet. The *Santa Monica Bay Nearshore and Offshore Debris TMDL* was approved by USEPA on March 20, 2012, and more details are provided in section III.E.4. of the Fact Sheet. The *Santa Monica Bay TMDL for DDTs 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. 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, and 2008.

Dominguez Channel (lined portion above Vermont Ave.) is on the 303(d) list for the following pollutants/stressors from point and non-point sources: [Calwater 40351000/USGS HUC 18070104] - Ammonia, copper, diazinon, indicator bacteria, lead, toxicity, zinc (sediment).

Dominguez Channel Estuary (unlined portion below Vermont Ave.) is on the 303(d) list for the following pollutants/stressors from point and non-point sources: [Calwater 40512000/USGS HUC 18070104] - Ammonia, benthic community effects,

benzo(a)anthracene, benzo(a)pyrene, chlordane (tissue), chrysene, coliform bacteria, dieldrin (tissue), PCBs, Phenanthrene, Pyrene, sediment toxicity, zinc (sediment).

1. **Santa Monica Bay Beaches Bacteria TMDLs.** The Regional Water Board has adopted two TMDLs to reduce bacteria in the Santa Monica Bay beaches during dry and wet weather. The Regional Water Board adopted the Dry and Wet weather TMDLs on January 24, 2002, and December 12, 2002, respectively (Resolution No. 2002-004 and 2002-022). These TMDLs were approved by the State Water Board, OAL, and USEPA Region 9, and became effective on July 15, 2003.

In these TMDLs, Waste Load Allocations (WLAs) are expressed as the number of sample days at a shoreline monitoring site that may exceed the single sample targets for total coliform, fecal coliform, and *Enterococcus* identified under "Numeric Target" in the TMDLs. WLAs are expressed as allowable exceedance days because the bacterial density and frequency of single sample exceedances are the most relevant to public health protection at beaches. The final shoreline compliance point for the WLAs in the TMDLs is the wave wash where there is a freshwater outlet (i.e. publically-owned storm drain or natural creek) to the beach, or at ankle depth at beaches without a freshwater outlet.

LACSD, as the owner of the JWPCP, is identified as a responsible jurisdiction in these TMDLs. In these TMDLs, JWPCP is assigned a WLA of zero days of exceedances of the single sample bacterial objectives during all three identified periods – summer dry weather, winter dry weather, and wet weather. JWPCP's WLA of zero exceedance days requires that no discharge from its outfalls may 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. The shoreline monitoring data collected as part of the Los Angeles County MS4 permit will be used to demonstrate compliance with the bacteria WLAs in these TMDLs.

2. **Santa Monica Bay Inshore and Offshore Debris TMDL.** The Regional Water Board adopted the *Santa Monica Bay Inshore and Offshore Debris TMDL* on November 04, 2010, to eliminate trash in the Santa Monica Bay. The Waste Load Allocations (WLAs) assigned in this TMDL are applicable to the Municipal Separate Storm Sewer System (MS4) permittees. These WLAs are regulated under the Los Angeles County MS4 permit No. R4-2012-01753. **Santa Monica Bay TMDLs for DDTs and PCBs.** The USEPA adopted the *Santa Monica Bay Total Maximum Daily Loads for DDTs and PCBs* on March 26, 2012. The concentrations of DDTs and PCBs in the wastewater effluent and brine waste are currently at or near the detection limits; however due to historic discharges of DDTs and PCBs to the Santa Monica Bay, these constituents continue to persist in the environment, particularly in ocean sediments. The concentrations of DDTs and PCBs 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. West Basin is identified as a responsible jurisdiction in this TMDL and as such, the TMDL sets Average Annual WLAs for DDTs and PCBs. The TMDL also indicates that all dischargers with WLAs identified in Table 6-2 of the TMDL are to be considered by NPDES permit writers to have reasonable potential under 40 CFR 122.44(d) and require WQBELs based on the TMDL WLAs. In conformance with the requirements of the *Santa Monica Bay Total Maximum Daily Loads for DDTs and PCBs*,

WLAs for DDT and PCBs have been incorporated into this Order as final effluent limitations for Discharge Points 001, 002, 003 and 004.

- 4. Total Maximum Daily Load for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters.** On May 5, 2011, the Regional Water Board adopted the *Total Maximum Daily Load for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters (Harbor Toxics TMDL)*, Resolution No. R11-008. The Waste Load Allocations (WLAs) assigned in the *Harbor Toxics TMDL* are applicable to storm water dischargers (Municipal Separate Storm Sewer System (MS4) permittees, California Department of Transportation (Caltrans), general construction and general industrial dischargers), and other NPDES dischargers, such as the Carson WRP. The *Harbor Toxics TMDL* which was approved by USEPA, under section 303(d) of the Clean Water Act, on March 23, 2012, became effective upon USEPA approval. The twenty-year compliance schedule provision of the *Dominguez Channel Toxics TMDL* was subsequently approved by USEPA under CWA section 303(c), on November 8, 2012. In conformance with the requirements of the *Harbor Toxics TMDL*, WLAs for copper, lead, zinc, PAHs, chlordane, 4,4'-DDT, dieldrin, and total PCBs have been incorporated into this Order as final effluent limitations for Discharge Point SW-001.

Implementation of the Harbor Toxics TMDL

The provisions of this Order implement and are consistent with the assumptions and requirements of all waste load allocations (WLAs) established in the Harbor Toxics TMDL. This Order requires final WQBELs that are statistically-calculated based on salt water column final concentration-based WLAs (in µg/L, total metal) for copper (3.73), lead (8.52), zinc (85.6), PAHs [benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene] (0.049), chlordane (0.00059), 4,4'-DDT (0.00059), dieldrin (0.00014), and total PCBs (0.00017) (referred to in this Order as CTR TMDL-based WLAs), converted from saltwater CTR criteria using CTR saltwater default translators, and relevant implementation provisions in section 1.4 of the State Implementation Policy. CTR human health criteria were not established for total PAHs. Therefore, the CTR criterion for individual PAHs of 0.049 µg/L is applied individually to benzo(a)anthracene, benzo(a)pyrene, and chrysene. The CTR criterion for pyrene of 11,000 µg/L is assigned as an individual WLA to pyrene.

The TMDL includes provisions for a 20 year implementation schedule when warranted. However, this Order includes final WQBELs that are based on salt water column final concentration-based WLAs specified in the Harbor Toxics TMDL. The Discharger did not request, or submit justification supporting, a compliance schedule.

This Order also includes monitoring thresholds based on the Harbor Toxics TMDL's interim sediment allocations (in mg/kg sediment) for copper (220.0) lead (510.0), zinc (789.0), DDT (1.727), PAHs (31.60), and PCBs (1.490), and associated sediment monitoring requirements for the effluent. Regardless of these monitoring thresholds, the Discharger shall ensure that effluent concentrations and mass discharges do not exceed levels that can be attained by performance of the Facility's treatment technologies existing at the time of permit issuance, reissuance, or modification. The TMDL's final sediment allocations were developed to ensure that the beneficial uses of the Dominguez Channel Estuary are preserved.

During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for copper, lead, zinc, PAHs [benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene], DDT, or total PCBs as specified in Table 4 of this Order, then the Discharger has not demonstrated compliance with the interim sediment allocations (Monitoring Thresholds, **Table 6** of this Order) specified by the Harbor Toxics

TMDL, Resolution No. R11-008 (page 11, Item 3) and the Discharger is required to implement the effluent sediment monitoring program for that priority pollutant. The Discharger shall begin the effluent sediment monitoring program during the first discharge event following the effluent exceedances. An effluent sediment monitoring result at or below the interim sediment allocations (monitoring thresholds) in **Table 6**, of this Order demonstrates compliance with the interim sediment allocation and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that exceeds the interim sediment allocation requires additional sediment monitoring of the effluent during discharge, but not more frequently than once per year, until the three-year average concentration for effluent sediment monitoring results is at or below the applicable sediment allocation.

This Order also includes final concentration-based sediment WLA (in mg/kg dry sediment) for chlordane (0.5) and dieldrin (0.02) based on the Harbor Toxics TMDL and associated sediment monitoring requirements for the effluent.

During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for chlordane or dieldrin as specified in **Table 4** of this Order, then the Discharger has not demonstrated compliance with the final concentration-based sediment WLAs (**Table 5** of this Order) specified by the Harbor Toxics TMDL, Resolution No. R11-008 (page 21 for chlordane and dieldrin). Therefore, the Discharger is required to implement the effluent sediment monitoring program for that priority pollutant. The Discharger shall begin the effluent sediment monitoring program during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the final concentration-based sediment allocations in **Table 5** of this Order, demonstrates compliance with the final concentration-based sediment WLAs and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that is above the final concentration-based sediment WLAs for chlordane or dieldrin constitutes an exceedance of the final concentration-based sediment WLAs. Annual effluent sediment monitoring is required for the pollutant(s) until the data demonstrates compliance.

In an effort to accurately characterize the sediment discharged from the Facility, the Discharger will be required to collect enough effluent to perform sediment monitoring at least once during the permit term. This monitoring is required only if the effluent monitoring does not trigger sediment monitoring during the five year permit term.

Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for Dominguez Channel, Torrance, and Dominguez Channel Estuary

As defined in the Harbor Toxics TMDL, the Discharger is a “responsible party” because it is an “Individual Industrial Permittee”. As such, either individually or with a collaborating group, the Discharger shall develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary. These plans shall follow the “TMDL Element - Monitoring Plan” provisions in Attachment A to Resolution No. R11-008. The TMDL requires that the Monitoring Plan and QAPP shall be submitted 20 months after the effective date (March 23, 2012) of the TMDL for public review and subsequent Executive Officer approval. Since the effective date of this Order exceeds the deadline for the Monitoring Plan and QAPP, the Discharger shall join a group already formed or develop a site specific monitoring plan. If the Discharger decides to join a group already formed, the Discharge shall notify the Regional Water Board within 90 days of the effective date of the Order. Documentation of Discharger’s participation and responsibilities shall be provided with the notification. If the Discharger

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

E. Other Plans, Polices and Regulations

1. **Storm Water.** CWA section 402(p), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. Pursuant to this requirement, in 1990, USEPA promulgated 40 CFR § 122.26 that established requirements for storm water discharges under an NPDES program. To facilitate compliance with federal regulations, in November 1991, the State Water Board issued a statewide general permit, NPDES No. CAS000001: *General Permit for Storm Water Discharges Associated with Industrial Activities*. This permit was amended in September 1992 and reissued on April 17, 1997 in State Water Board Order No. 97-03-DWQ, and superseded by Order No. 2014-0057-DWQ on April 01, 2014, to regulate storm water discharges associated with industrial activity.

This Order requires the Discharger to implement BMPs as required by section VI.C.3 of the WDR in order to support attainment of water quality standards and to conduct monitoring. The use of BMPs to control or abate the discharge of pollutants is authorized by 40 CFR § 122.44(k)(3) because numeric effluent limitations are currently 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 CFR § 122.44(k)(4).)

The facility may reenroll in General Industrial Storm 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.p of the WDR.

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

1. California Ocean Plan Discharge Prohibitions

This permit implements discharge prohibitions that are applicable under sections III.I.1.a, III.I.3.a, and III.I.4.a of the California Ocean Plan.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR part 133 and/or Best Professional Judgment (BPJ) in accordance with 40 CFR section 125.3.

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

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

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

2. Applicable Technology-Based Effluent Limitations (TBELs)

The technology-based effluent limitations in this Order are established in accordance with 40 CFR § 125.3 and based on Table 2 of the 2015 Ocean Plan. These technology-

based effluent limitations apply directly to the Discharger’s effluent and are summarized in Table F-7 below. 40 CFR § 125.3 requires this facility to have final effluent limitations expressed as both average monthly and maximum daily, unless infeasible. However, this Order includes three averaging periods, rather than just two: average monthly, average weekly, and instantaneous maximum final effluent limitations, consistent with the 2015 Ocean Plan. It is also impracticable to have a maximum daily effluent limitation for these pollutants because the 2015 Ocean Plan requires that maximum daily effluent limitations apply to 24-hour composite samples and it is more appropriate to collect grab samples for these parameters due to their short holding time and the ability of solids to adhere to sampling equipment. The instantaneous maximum effluent limitations are also more stringent than the maximum daily effluent limitations, therefore the instantaneous maximum effluent limitations satisfy the federal requirement.

Table F-7. Effluent Limitations Established by the 2015 Ocean Plan

Parameter	Units	Effluent Limitations		
		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
Removal Efficiency for TSS	%	75 ²	--	--
pH	6.0 to 9.0 pH units			

Since the influent is tertiary effluent from the E.C. Little Water Recycling Plant and the effluent from the Carson WRP is brine, requiring 75% TSS removal efficiency is not appropriate for the Carson WRP. As permitted in the 2015 Ocean Plan, since the monthly effluent limitation included in this Order for TSS is 60 mg/L, the Discharger is not required to remove 75% of suspended solids from the influent stream before discharging to the ocean. All other effluent limitations established in the 2015 Ocean Plan have been included in the Order.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

40 CFR § 122.44(d)(1)(i) requires that permits include water quality-based effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. USEPA has applied CWA section 403(c) and 40 CFR § 125. Subpart M, following 40 CFR § 122. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter

² Dischargers shall, as a 30-day average, remove 75% of TSS from the influent stream before discharging wastewater to the ocean, except that the effluent limitation to be met shall not be lower than 60 mg/L.

for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

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

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. R4-2013-0046 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 $UCB_{95/95}$ is then compared to the appropriate objective to determine the potential for an exceedance of that objective and the need for an effluent limitation. For constituents that have an insufficient number of monitoring data or a substantial number of non-detected data with a reporting limit higher than the respective water quality objective, the RPA result is likely to be inconclusive. The Ocean Plan requires that the existing effluent limitations for these constituents be retained in the new Order, otherwise the permit shall include a reopener clause to allow for subsequent modification of the permit to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above a water quality objective.

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 Discharger is required to monitor for these constituents to gather data for use in RPAs for future Order renewals and/or updates.

The Regional Water Board developed WQBELs for DDT and PCBs that have available waste load allocations (WLAs) under the *Santa Monica Bay Total Maximum Daily Loads for DDTs and PCBs* approved and adopted by the USEPA on March 26, 2012; and WQBELs for copper, lead, zinc, PAHs, chlordane, 4,4'-DDT, dieldrin, and total PCBs that have available WLAs under the *Dominguez Channel Toxics TMDL* approved by USEPA on March 23, 2012. The TMDL WLA-based effluent limitations for these pollutants were established regardless of whether or not there is reasonable potential for the pollutants to be present in the discharge at levels that would cause or contribute to a violation of water quality standards. The Regional Water Board developed WQBELs for these pollutants pursuant to 40 CFR section 122.44(d)(1)(vii), which does not require or contemplate a reasonable potential analysis.

As described in the reopener provisions in section VI.C.1. of this Order, additional WQBELs may be established in this Order if the discharge has the reasonable potential to cause, or contributes to an excursion above a California Ocean Plan (Ocean Plan) Table 1 water quality objective during the permit term.

5. WQBEL Calculations

Brine from the Facility undergoes two mixing events before it is discharged to the Pacific Ocean. The first mixing event occurs when the effluent from the Facility combines with effluent from JWPCP. The second mixing event occurs during the actual discharge to the Pacific Ocean through the diffuser on the ocean outfall. Because the effluent from the Facility undergoes two mixing events during its discharge, both mixing events must be considered when determining reasonable potential and developing an effluent limitation. See section I.F. of this fact sheet for additional information on the dilution ratios used in this Order. The process of calculating WQBELs is included below but no additional WQBELs were required to be calculated based on the reasonable potential analysis.

Second Mixing Event Calculation

From the water quality objectives in Table 1 of the 2015 Ocean Plan, effluent limitations are calculated according to the following equation for all pollutants, except for acute toxicity (if applicable) and radioactivity. The following equation is used to calculate the effluent concentrations permitted by the 166:1 dilution, provided by ocean waters after the combined effluent from the Facility and JWPCP is discharged from Discharge Point 001 and 002, which are the two discharge points used during normal operations.

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

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) in Table F-9

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

The value of D_m is described in detail in Section I.F. of this Fact Sheet. Based on Table 3 of the 2015 Ocean Plan, C_s is equal to zero for all pollutants except the following:

Table F-8. Pollutants with Background Seawater Concentrations

Constituent	Background Seawater Concentration (C _s)
Arsenic	3 µg/L
Copper	2 µg/L
Mercury	0.0005 µg/L
Silver	0.16 µg/L
Zinc	8 µg/L

First Mixing Event Calculation

Additional dilution takes place when the brine from the Facility and JWPCP effluent combine and mix inside the JWPCP discharge pipeline. Calculation of the dilution is dependent on the effluent concentrations and flow data for JWPCP and maximum design capacity for the Facility (see section I.F. of this Fact Sheet).

JWPCP’s lowest monthly flow average between 2012 and 2016 (249 MGD) and the Facility’s maximum discharge flow value (1.2 MGD) have been used to represent the worst case flow scenario during the first mixing event. The dilution factor is 249/1.2 or 208. The final effluent limitations for this Facility are calculated using the same equation as above but making C_o equal to the C_e calculated in the second mixing calculation, and a D_m of 208.

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 mortality. A chronic toxicity test is conducted over a short or a longer period of time and may measure a sublethal endpoint such as reproduction or growth in addition to mortality. A constituent present at low concentrations may exhibit a chronic effect; however, a higher concentration of the same constituent may be required to produce an acute effect. Because of the nature of industrial discharges into the Hyperion Treatment Plant sewer shed, toxic constituents (or a mixture of constituents exhibiting toxic effects) may be present in the Facility’s effluent.

A total of 27 chronic WET tests were conducted on the Facility’s final effluent between January 2013 and December 2017. No exceedances of the maximum daily final effluent limitation of 167 TUC was reported for chronic toxicity; therefore, the discharge did not exhibit reasonable potential to exceed the water quality objectives for chronic toxicity at Discharge Point 001 and 002, based on 2015 Ocean Plan procedures for calculating reasonable potential.

The Ocean Plan addresses the application of chronic and acute toxicity requirements based on minimum probable dilutions (D_m) for ocean discharges. Following the 2015 Ocean Plan, dischargers are required to conduct chronic toxicity monitoring for ocean discharges with D_m factors ranging from 99 to 349 and Regional Water Boards may require acute toxicity monitoring in addition to chronic toxicity monitoring. Dischargers with D_m factors below 99 are required to conduct only chronic toxicity testing. The D_m for Discharge Point 001 and 002 is 166, the D_m for Discharge Point 003 is 150, the D_m for Discharge Point 004 is 115. Since D_m is between 99 and 349 for all discharge points, chronic toxicity monitoring is required and no acute toxicity is required at Discharge Point 001 and 002, consistent with the Ocean Plan. No chronic or acute toxicity final effluent

limitations have been assigned to Discharge Point 001 or 002 because the discharge did not exhibit reasonable potential to exceed the water quality objectives during the previous permit cycle, consistent with 40 CFR § 122.44(d)(1)(v).

The Ocean Plan establishes a daily maximum chronic toxicity objective of $1.0 \text{ TUc} = 100/(\text{No Observed Effect Concentration (NOEC)})$, using a 5-concentration hypothesis test, and a daily maximum acute toxicity objective of $0.3 \text{ TUa} = 100/\text{LC50}$, using a point estimate model. This Order includes final effluent limitations using the Test of Significant Toxicity (TST) hypothesis testing approach. This statistical approach is consistent with the Ocean Plan in that it provides maximum protection to the environment since it more reliably identifies acute and chronic toxicity than the current NOEC hypothesis-testing approach (See 2015 California Ocean Plan, Section III.F and Appendix I).

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

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

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

State Water Board's Quality Assurance Officer and Environmental Laboratory Accreditations Program (40 CFR § 122.44(h)). The PMSD criteria only apply to compliance for NOEC and the sublethal endpoints of the NOEC, and therefore are not used to interpret TST results.

7. Santa Monica Bay TMDLs for DDT and PCBs

The *Santa Monica Bay TMDLs for DDT and PCBs* includes WLAs for the Carson WRP. The total loads for DDTs and PCBs from the Hyperion Treatment Plant, JWPCP, and West Basin's Water Recycling Plants (including the Edward C. Little Water Reclamation Plant and the Carson WRP) 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 Carson WRP be established as:

$$\text{Carson WRP WLA} = C_{\text{HTP}}Q_{(\text{HTP to Carson})} + C_{\text{JWPCP}}Q_{(\text{JWPCP to Carson})}$$

Where:

C_{HTP} = concentration WLA for the Hyperion effluent

C_{JWPCP} = concentration WLA for JWPCP effluent

$Q_{(\text{HTP to Carson})}$ = effluent flow diverted from Hyperion to the Facility

$Q_{(\text{JWPCP to Carson})}$ = effluent flow diverted from JWPCP to the Facility

For DDTs: Carson WLA = $C_{\text{HTP}}Q_{(\text{HTP to Carson})} + 0 = 10.1 * Q_{(\text{HTP to Carson})}$

For PCBs: Carson WLA = $C_{\text{HTP}}Q_{(\text{HTP to Carson})} + 0 = 0.271 * Q_{(\text{HTP to Carson})}$

The Santa Monica bay TMDLs for DDT 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/yr) for discharges of DDT and PCBs 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:

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

Where:

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

C_i = DDT or PCB concentration of each individual sample (ng/L)

Q_i = discharger flow rate on date of sample (MGD)

N = number of samples collected during the month

For intermittent dischargers (dischargers who do not discharge every day in a calendar month or have no discharge for a calendar month ($Q_i = 0$)), Q_i is calculated as follows:

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

Where:

Q_d = total flow for the day when discharge occurred in a month (MGD)

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

Consistent with the federal requirement and with the NDES Permit Writers Manual (EPA-833-K-10-001, September 2010), Annual Average mass-based effluent limitations have been included in this Order for DDT and PCBs. Consistent with the TMDL, concentration-based effluent limitations are not established.

8. Dominguez Channel Toxics TMDL

The *Dominguez Channel Toxics TMDL* includes WLAs that are applicable to storm water dischargers (Municipal Separate Storm Sewer System (MS4) permittees, California Department of Transportation (Caltrans), general construction and general industrial dischargers), and other NPDES dischargers, such as the Carson WRP. On March 23, 2012, USEPA approved the TMDL under section 303(d) of the Clean Water Act. The *Dominguez Channel Toxics TMDL*, prescribes the following salt water column concentration-based WLAs, for discharges into the saltwater Dominguez Channel Estuary: 3.73 $\mu\text{g/L}$ copper, 8.52 $\mu\text{g/L}$ lead, 85.6 $\mu\text{g/L}$ zinc, 0.049 $\mu\text{g/L}$ PAHs, 0.00059 $\mu\text{g/L}$ Chlordane, 0.00059 $\mu\text{g/L}$ 4,4'-DDT, 0.00014 $\mu\text{g/L}$ dieldrin, and 0.00017 $\mu\text{g/L}$ Total PCBs. The TMDL implementation plan consists of a phased approach where responsible parties can implement a variety of strategies to meet the required WLAs and LAs by March 23, 2032, such as non-structural best management practices (BMPs), diversion and treatment to reduce sediment transport, and sediment removal activities.

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 §122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. The effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order No. R4-2013-0046.

The final effluent limitation for temperature is more stringent in this Order than the final effluent limitation in the previous Order. The final effluent limitation was changed from a maximum daily to an instantaneous maximum to comply with the Thermal Plan, which requires elevated temperature wastes to comply with limitations necessary to assure protection of the beneficial uses and area of special biological significance. A maximum daily final effluent limitation is not appropriate for temperature because any fluctuation above the final effluent limitation could have detrimental impacts on the beneficial uses of the receiving water. The Regional Water Board finds that the instantaneous maximum final effluent limitation for temperature in this Order is appropriate to protect the beneficial uses of the receiving water because it does not permit any fluctuations above the limit.

This Order also includes individual WQBELs for DDTs and PCBs, but does not include the group WQBELs for DDTs and PCBs that were included in the previous Order. The

WQBELs included in this Order were developed based on the requirements and assumptions for the WLAs in the *Santa Monica Bay Total Maximum Daily Loads for DDTs and PCBs*. The group WQBEL was removed because as long as each discharger is in compliance with its individual WLA, they will also be in compliance with the group WLA. Removal of the group WQBELs also ensures that the Discharger will not be penalized for another discharger's failure to comply with their respective individual WLA.

2. Antidegradation Policies

This Order includes both narrative and numeric final effluent limitations and receiving water limitations 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 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.

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 are discussed in section IV.B. of the fact sheet and consist of restrictions on TSS, turbidity, settleable solids, oil and grease, and pH. This Order's technology-based pollutant restrictions implement the minimum requirements in Table 2 of the Ocean Plan.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the Ocean Plan, which was approved by the USEPA on February 14, 2006 and has since been further amended. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by the USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order were approved by USEPA and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

Table F-9. Summary of Final Effluent Limitations Discharge Points 001, 002, 003, and 004

Parameter	Units	Effluent Limitations ³					Basis
		Average Annually	Average Monthly ⁴	Average Weekly	Instantaneous Minimum	Instantaneous Maximum ⁵	
Discharge Points 001, 002, 003, and 004							
Total Suspended Solids	mg/L	--	60	--	--	--	Ocean Plan
	lbs/day ⁶	--	600	--	--	--	
pH	standard units	--	--	--	6.0	9.0	Ocean Plan
Temperature	°F	--	--	--	--	100	Ocean Plan
Oil and Grease	mg/L	--	25	40	--	75	Ocean Plan
	lbs/day ⁶	--	250	400	--	750	
Settleable Solids	ml/L	--	1.0	1.5	--	3.0	Ocean Plan
Turbidity	NTU	--	75	100	--	225	Ocean Plan

³ The minimum dilution ratio used to calculate effluent limitations for nonconventional and toxic pollutants for Discharge Point 001, 002, 003, and 004, is based on two mixing events, one as the effluent mixes with the Joint Water Pollution Control Plant's effluent in the discharge pipe and another where the combined effluent is discharged into the Ocean. The most conservative dilution ratio of one part effluent to 24,070 parts seawater was used to calculate the effluent limits and is described in more detail in section I.F. of the Fact Sheet.

⁴ 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.

⁵ The instantaneous maximum effluent limitations shall apply to grab samples.

⁶ The mass emission rates are based on the existing plant design flow rate of 1.2 MGD for the brine waste, and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

Parameter	Units	Effluent Limitations ³					Basis
		Average Annually	Average Monthly ⁴	Average Weekly	Instantaneous Minimum	Instantaneous Maximum ⁵	
Total DDT ^{7,8}	g/year	10.1*Q	--	--	--	--	TMDL
Total PCBs ^{7,8}	g/year	0.271*Q	--	--	--	--	TMDL

This Order also contains water quality-based effluent limitations for discharges of storm water into Dominguez Channel Estuary. However, if West Basin submits a Notice of Intent (NOI) for the Carson WRP and 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 (Storm water Industrial General Order), then the effluent limitations for Discharge Point SW-001 in WDR Tables 5, 6, and 7 will not apply, since the discharge into Dominguez Channel Estuary would be regulated under the Storm water Industrial General Order rather than this Order.

⁷ See Section VIII of the Order and Attachment A for definitions of terms.

⁸ The total mass load for DDTs and PCBs from the Joint Water Pollution Control Plant, Hyperion Treatment Plant, and West Basin’s Edward C. Little and Carson Regional Water Reclamation Plants shall not be more than 14,567 g/yr for DDTs and 351 g/yr for PCBs. The Discharger is deemed in compliance with these group WQBELs for DDTs and PCBs if it is in compliance with the individual mass-based WQBELs for DDTs and PCBs, which have been included in this Order as final effluent limitations. This is the Waste Load Allocation and final effluent limitation in accordance with the *Santa Monica Bay Total Maximum Daily Load for DDTs and PCBs* (Santa Monica TMDL for DDTs and PCBs) promulgated by USEPA on March 26, 2012.

$$WQBEL \text{ for the Facility} = C_{HTP}Q_{(HTP \text{ to Carson})} + C_{JWPCP}Q_{(JWPCP \text{ to Carson})}$$

C_{HTP} = concentration WLA for the Hyperion effluent

C_{JWPCP} = concentration WLA for JWPCP effluent

$Q_{(HTP \text{ to Carson})}$ = effluent flow diverted from Hyperion to the Facility

$Q_{(JWPCP \text{ to Carson})}$ = effluent flow diverted from JWPCP to the Facility

$$\text{For DDTs: Carson WRP WLA} = C_{HTP}Q_{(HTP \text{ to Carson})} + 0 = 10.1 * Q_{(HTP \text{ to Carson})}$$

$$\text{For PCBs: Carson WRP WLA} = C_{HTP}Q_{(HTP \text{ to Carson})} + 0 = 0.271 * Q_{(HTP \text{ to Carson})}$$

Table F-10. Summary of Final Effluent Limitations Discharge Points SW-001

Parameter	Units	Effluent Limitations ^{9,10,11}						Basis
		Average Annually	Average Monthly	Average Weekly	Instantaneous Minimum	Instantaneous Maximum	Maximum Daily	
Total Suspended Solids (TSS)	mg/L	--	--	--	--	--	75	BPJ
Total Copper (wet weather)	µg/L	--	--	--	--	--	3.73	TMDL
Total Lead (wet weather)	µg/L	--	--	--	--	--	8.52	TMDL
Total Zinc (wet weather)	µg/L	--	--	--	--	--	85.6	TMDL
PAHs	µg/L	--	--	--	--	--	0.049	TMDL
Chlordane	µg/L	--	--	--	--	--	0.00059	TMDL
4,4'-DDT	µg/L	--	--	--	--	--	0.00059	TMDL
Dieldrin	µg/L	--	--	--	--	--	0.00014	TMDL
Total PCBs	µg/L	--	--	--	--	--	0.00017	TMDL

⁹ These final effluent limitations are based on the waste load allocations prescribed for storm water discharges and other NPDES permits in the *Total Maximum Daily Load for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters (Dominguez Channel Toxics TMDL)*, Resolution No. R11-008, adopted by the Regional Water Board on May 5, 2011.

¹⁰ During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for copper, lead, zinc, 4,4'-DDT, total PCBs, or PAHs (i.e., benzo(a)anthracene, benzo(a)pyrene, chrysene, or pyrene) as specified in Table 5 of this Order, then the Discharger has not demonstrated compliance with the final sediment allocations (Monitoring Thresholds, Table 7, of this Order) specified by the Harbor Toxics TMDL, Resolution No. R11-008 (page 11, Item 3) and the Discharger is required to implement the effluent sediment monitoring program for that priority pollutant. The Discharger shall begin the effluent sediment monitoring program during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the interim sediment allocations (Monitoring Thresholds in Tables 7, of this Order), demonstrates compliance with the interim sediment allocation and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that exceeds the interim sediment allocation requires additional effluent sediment monitoring during discharge but not more frequently than once per year until the three-year average concentration for effluent sediment monitoring results is at or below the interim sediment allocation.

¹¹ During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for chlordane or dieldrin as specified in Table 5 of this Order, then the Discharger has not demonstrated compliance with the final concentration-based sediment WLAs (Table 6, of this Order) specified by the Harbor Toxics TMDL, Resolution No. R11-008 (page 21) and the Discharger is required to implement the effluent sediment monitoring program for that priority pollutant. The Discharger shall begin the effluent sediment monitoring program during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the final concentration-based sediment allocations in Tables 6, of this Order, demonstrates compliance with the final concentration-based sediment WLAs and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that is above the final concentration-based sediment WLAs for chlordane or dieldrin constitutes an exceedance of the final concentration-based sediment WLAs. Annual effluent sediment monitoring is required for the pollutant(s) until the data demonstrates compliance.

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

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Ocean Plan and Basin Plan contain numeric and narrative water quality standards applicable to surface waters within the Los Angeles Region. Water quality objectives include a policy to maintain the high quality waters pursuant to federal regulations (40 CFR § 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in the Order are included to ensure protection of beneficial uses of the receiving water.

B. Groundwater (Not Applicable)

C. Storm Water Requirements

The receiving water limitations applicable to the Carson WRP storm water discharge at Discharge Point SW-001 are based on the General NPDES Permit No. CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Facilities* (Order No. 2014-0057-DWQ) and on the Dominguez Channel Toxics TMDL. As the Facility is no longer covered by Order No. 2014-0057-DWQ, it has individual permit coverage under this Order.

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 permits in accordance with 40 CFR section 122.42, are provided in Attachment D to the Order.

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 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 Discharger 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 Discharger 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 Discharger to report specific time schedules for the plant's projects. This provision requires the Discharger 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 Discharger may adjust and test the treatment system(s). This provision requires the Discharger to submit an Operations Plan describing the actions the Discharger will take during the period of adjusting and testing to prevent violations.
- c. **Treatment Plant Capacity - (Not Applicable)**
- d. **Toxicity Reduction Evaluation (TRE) Requirements.** If the toxicity tests conducted in compliance with this Order consistently result in "Fail," the Discharger shall conduct a TRE as detailed in section V of the MRP (Attachment E). The TRE will help the Discharger identify the possible source(s) of toxicity. The Discharger shall take all reasonable steps to reduce toxicity to the required level.
- e. **Monitoring Thresholds Based on Sediment Interim and Final Concentration-based Allocations in the Harbor Toxics TMDL for Sediment Monitoring of Effluent.** This Order implements the Harbor Toxics TMDL's interim sediment allocations (Dominguez Channel Estuary) for copper, lead, zinc, DDT, PAHs, and PCBs as monitoring thresholds. Compliance with these thresholds shall be demonstrated in accordance with Footnote 4 to Table 4 of this Order which includes effluent limits for TSS and the targeted pollutants. If there is a discharge, the permittee is required to collect sufficient sample at least once during the permit term to analyze the sediment in the effluent directly. Regardless of these monitoring thresholds, the Discharger shall ensure that effluent concentrations and mass discharges do not exceed levels that can be attained by performance of the Facility's treatment technologies existing at the time of permit issuance, reissuance, or modification.

Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for Dominguez Channel, Torrance, and Dominguez Channel Estuary Compliance Monitoring Program. This provision implements the Compliance Monitoring Program as required in the Harbor Toxics TMDL. The Compliance Monitoring Program include water column monitoring, sediment monitoring and fish tissue monitoring at monitoring station in Dominguez Channel Estuary. The Discharger may join a collaboration group or develop a site specific plan to comply with this requirement.

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

a. **Spill Clean-up Contingency Plan (SCCP)**

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

b. **Pollutant Minimization Plan (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 Publicly-Owned Treatment Works– Not Applicable**

6. **Other Special Provisions – Not Applicable**

7. **Compliance Schedules – Not Applicable**

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

A. Influent Monitoring

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

B. Effluent Monitoring

The Discharger 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. In addition to containing definition of terms, it specifies general sampling/analytical protocols and the requirements of reporting spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board policies. The Monitoring and Reporting Program also contains a sampling program specific to the Discharger'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-10. Monitoring Frequency Comparisons

Parameter	Monitoring Frequency (2013 Permit, Order No. R4-2013-0046)	Monitoring Frequency (2018 Permit, Order No. R4-2018-XXXX)
Total brine waste flow	Continuously	Continuously
Oil and grease	Monthly	Monthly
pH	Monthly	Monthly
Temperature	Monthly	Monthly
Settleable solids	Monthly	Monthly
Suspended solids	Monthly	Monthly
Turbidity	Monthly	Monthly
Salinity	Monthly	Monthly
Total residual chlorine	Quarterly	Quarterly
Ammonia	Quarterly	Quarterly
Chronic Toxicity	Annually	Annually
Arsenic	Quarterly	Quarterly
Cadmium	Quarterly	Quarterly
Chromium VI	Quarterly	Quarterly
Copper	Quarterly	Quarterly
Lead	Quarterly	Quarterly
Mercury	Quarterly	Quarterly
Nickel	Quarterly	Quarterly
Selenium	Quarterly	Quarterly
Silver	Quarterly	Quarterly
Zinc	Quarterly	Quarterly
Cyanide	Quarterly	Quarterly
Phenolic compounds (chlorinated)	Quarterly	Semiannually
Phenolic Compounds (non-chlorinated)	Quarterly	Semiannually
Endosulfan	Semiannually	Semiannually
Endrin	Semiannually	Semiannually
Hexachlorocyclohexane (HCH)	Semiannually	Semiannually
Radioactivity	Semiannually	Semiannually
Acrolein	Semiannually	Semiannually
Antimony	Semiannually	Quarterly
Bis(2-chloroethoxy) methane	Semiannually	Semiannually
Bis(2-chloroisopropyl) ether	Semiannually	Semiannually
Chlorobenzene	Semiannually	Semiannually
Chromium III	Quarterly	Quarterly

Parameter	Monitoring Frequency (2013 Permit, Order No. R4-2013-0046)	Monitoring Frequency (2018 Permit, Order No. R4-2018-XXXX)
di-n-butyl phthalate	Semiannually	Quarterly
Dichlorobenzenes	Semiannually	Semiannually
Diethyl phthalate	Quarterly	Semiannually
Dimethyl phthalate	Quarterly	Quarterly
4,6-dinitro-2-methylphenol	Quarterly	Semiannually
2,4-dinitrophenol	Quarterly	Semiannually
Ethylbenzene	Semiannually	Semiannually
Fluoranthene	Semiannually	Semiannually
Hexachlorocyclopentadiene	Semiannually	Semiannually
Nitrobenzene	Quarterly	Semiannually
Thallium	Semiannually	Quarterly
Toluene	Quarterly	Quarterly
Tributyltin	Semiannually	Quarterly
1,1,1-trichloroethane	Semiannually	Semiannually
Acrylonitrile	Semiannually	Semiannually
Aldrin	Semiannually	Semiannually
Benzene	Semiannually	Semiannually
Benzidine	Semiannually	Semiannually
Beryllium	Semiannually	Quarterly
Bis(2-chloroethyl) ether	Semiannually	Semiannually
Bis(2-ethylhexyl)phthalate	Quarterly	Quarterly
Carbon tetrachloride	Semiannually	Quarterly
Chlordane	Semiannually	Semiannually
Chlorodibromomethane	Quarterly	Quarterly
Chloroform	Quarterly	Quarterly
DDT	Semiannually	Semiannually/Annually
1,4-dichlorobenzene	Quarterly	Semiannually
3,3'-dichlorobenzidine	Semiannually	Semiannually
1,2-dichloroethane	Semiannually	Semiannually
1,1-dichloroethylene	Semiannually	Semiannually
Dichlorobromomethane	Quarterly	Quarterly
Dichloromethane	Quarterly	Quarterly
1,3-dichloropropene	Semiannually	Semiannually
Dieldrin	Semiannually	Semiannually
2,4-dinitrotoluene	Semiannually	Semiannually
1,2-diphenylhydrazine	Semiannually	Semiannually
Halomethanes	Quarterly	Quarterly
Heptachlor	Semiannually	Semiannually
Heptachlor epoxide	Semiannually	Semiannually
Hexachlorobenzene	Semiannually	Semiannually
Hexachlorobutadiene	Semiannually	Semiannually
Hexachloroethane	Semiannually	Semiannually
Isophorone	Quarterly	Semiannually
N-nitrosodimethylamine	Quarterly	Quarterly

Parameter	Monitoring Frequency (2013 Permit, Order No. R4-2013-0046)	Monitoring Frequency (2018 Permit, Order No. R4-2018-XXXX)
N-nitrosodi-N-propylamine	Quarterly	Semiannually
N-nitrosodiphenylamine	Semiannually	Semiannually
PAHs	Semiannually	Semiannually
PCBs as arochlors	Semiannually	Semiannually
PCBs (as individual congeners)	Semiannually	Semiannually
TCDD Equivalents	Quarterly	Semiannually
1,1,2,2-tetrachloroethane	Semiannually	Semiannually
Tetrachloroethylene	Quarterly	Quarterly
Toxaphene	Semiannually	Semiannually
Trichloroethylene	Semiannually	Semiannually
1,1,2-trichloroethane	Semiannually	Semiannually
2,4,6-trichlorophenol	Semiannually	Quarterly
Vinyl chloride	Semiannually	Semiannually

C. Effluent Sediment Monitoring

The Harbor Toxics TMDL requires compliance with the TMDL’s interim sediment allocations. This Order implements this requirement in a framework of effluent limits, sediment monitoring thresholds, and effluent monitoring requirements. Compliance with the interim sediment allocations shall be demonstrated, as specified in Footnote 4 to Table 4, of this Order. These requirements will ensure that discharges from the Facility do not contribute significantly to contaminant sediment concentrations in the Dominguez Channel Estuary. The effluent sediment monitoring is also required to demonstrate compliance with sediment limitations (final concentration-based sediment WLAs) as specified in Table 5 of this Order.

D. Whole Effluent Toxicity Testing Requirements

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

E. Receiving Water Monitoring

1. Surface Water

Receiving water monitoring is currently being conducted by the Los Angeles County Sanitation Districts to ensure the combined discharge from JWPCP (CI-1758) and the Facility are in compliance with the receiving water limitations and to characterize the quality of the receiving water. Receiving water monitoring requirements are based on the Ocean Plan and the Basin Plan.

Ocean-specific Regional Monitoring requirements may be required by the Discharger if determined by the Executive Officer.

2. Bed Sediment Monitoring

The final concentration-based sediment waste load allocations (WLAs) for chlordane and dieldrin were included in the Harbor Toxics TMDL for Dominguez Channel Estuary. The effluent or bed sediment monitoring will provide data for the direct determination of compliance with these WLAs. The Discharger may also demonstrate compliance with these WLAs by compliance with TSS and the respective effluent limits or performance goal for these constituents.

3. Groundwater (Not Applicable)

F. Other Monitoring Requirements

1. Rainfall Monitoring and Visual Observation

Daily rainfall information will provide the weather condition in the vicinity of the Facility. Because the discharge is comprised of storm water runoff, the Discharger is required to conduct observations of storm water discharge in the vicinity of the discharge to detect the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor.

2. Regional Monitoring

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

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

Under the authority of section 308 of the CWA (33 U.S.C. § 1318), USEPA requires major 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 USEPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to USEPA's DMR-QA Coordinator and Quality Assurance Manager.

VIII. PUBLIC PARTICIPATION

The Regional Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the Juanita Millender-McDonald Carson Regional Water Recycling Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through posting at the Carson WRP and the 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 tentative WDRs as provided through the notification process. Comments were due either in person or by mail to

the Executive Office at the Regional Water Board at the address on the cover page of this Order, or by email submitted to losangeles@waterboards.ca.gov.

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 5:00 p.m. on May 24, 2018

C. Public Hearing

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

Date: June 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 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.

The Regional Water Board's web address is www.swrcb.ca.gov/rwgcb4 where interested persons can access the current agenda for changes in Board meeting dates, times, and venues.

D. Reconsideration of Waste Discharge Requirements

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

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

Or by email at waterqualitypetitions@waterboards.ca.gov

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

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

G. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at 320 West 4th Street, Suite 200, Los Angeles, California, at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (213) 576-6600.

H. 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.

I. 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.

TENTATIVE

ATTACHMENT G –TOXICITY REDUCTION EVALUATION (TRE) WORKPLAN OUTLINE

Any sludge requirements in this Attachment G are not applied for the Juanita Millender-McDonald Carson Regional Water Recycling Plant.

1. Information and Data Acquisition

a. Operations and performance review

- i. NPDES permit requirements
 - (1) Effluent limitations
 - (2) Special conditions
 - (3) Monitoring data and compliance history
- ii. Design criteria
 - (1) Hydraulic loading capacities
 - (2) Pollutant loading capacities
 - (3) Biodegradation kinetics calculations/assumptions
- iii. 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
- iv. 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
- v. Operations information
 - (1) Operating logs
 - (2) Standard operating procedures
 - (3) Operations and maintenance practices
- vi. Process sidestream characterization data
 - (1) Sludge processing sidestreams
 - (2) Tertiary filter backwash
 - (3) Cooling water
- vii. Combined sewer overflow (CSO) bypass data
 - (1) Frequency
 - (2) Volume
- viii. Chemical coagulant usage for wastewater treatment and sludge processing
 - (1) Polymer
 - (2) Ferric chloride
 - (3) Alum

- b. Influent and effluent characterization data**
 - i. Toxicity
 - ii. Priority pollutants
 - iii. Hazardous pollutants
 - iv. SARA 313 pollutants,
 - v. Other chemical-specific monitoring results
- c. Sewage residuals (raw, digested, thickened and dewatered sludge and incinerator ash) characterization data**
 - i. EP toxicity
 - ii. Toxicity Characteristic Leaching Procedure (TCLP)
 - iii. Chemical analysis
- d. Industrial waste survey (IWS)**
 - i. Information on IUs with categorical standards or local limits and other significant non-categorical IUs
 - ii. Number of IUs
 - iii. Discharge flow
 - iv. Standard Industrial Classification (SIC) code
 - v. Wastewater flow
 - (1) Types and concentrations of pollutants in the discharge
 - (2) Products manufactured
 - vi. Description of pretreatment facilities and operating practices
 - vii. Annual pretreatment report
 - viii. Schematic of sewer collection system
 - ix. Monitoring data
 - (1) Discharge characterization data
 - (2) Spill prevention and control procedures
 - (3) Hazardous waste generation
 - x. IU self-monitoring data
 - (1) Description of operations
 - (2) Flow measurements
 - (3) Discharge characterization data
 - (4) Notice of sludge loading
 - (5) Compliance schedule (if out of compliance)
 - xi. Technically based local limits compliance reports
 - xii. Waste hauler monitoring data manifests
 - xiii. Evidence of treatment interferences (i.e., biological process inhibition)

ATTACHMENT H – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

I. IMPLEMENTATION SCHEDULE

A storm water pollution prevention plan (SWPPP) shall be developed and submitted to the Regional Water Board within 90 days following the adoption of this Order. The SWPPP shall be implemented for each facility covered by this Permit within 10 days of approval from the Regional Water Board, or 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**

<p>PLANNING AND ORGANIZATION</p> <ul style="list-style-type: none">Form Pollution Prevention TeamReview other plans
<p>ASSESSMENT PHASE</p> <ul style="list-style-type: none">Develop a site mapIdentify potential pollutant sourcesInventory of materials and chemicalsList significant spills and leaksIdentify non-storm water dischargesAssess pollutant risks
<p>BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE</p> <ul style="list-style-type: none">Non-structural BMPsStructural BMPsSelect activity and site-specific BMPs
<p>IMPLEMENTATION PHASE</p> <ul style="list-style-type: none">Train employeesImplement BMPsConduct recordkeeping and reporting
<p>EVALUATION / MONITORING</p> <ul style="list-style-type: none">Conduct annual site evaluationReview monitoring informationEvaluate BMPsReview 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 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

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.

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.