CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

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ORDER NO. R9-2018-0004
NPDES NO. CA0107336

WASTE DISCHARGE REQUIREMENTS FOR SEAWORLD LLC DBA SEAWORLD SAN DIEGO SEAWORLD SAN DIEGO DISCHARGE TO MISSION BAY, SAN DIEGO COUNTY

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

Table 1. Discharger Information

Discharger	SeaWorld LLC dba SeaWorld San Diego
Name of Facility	SeaWorld, San Diego
Facility Address	500 SeaWorld Drive
	San Diego, CA 92109
	San Diego County

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001 (East Outfall)	Stormwater and wastewater from east treatment system	32° 46' 03"	117° 13' 33"	Mission Bay
002 (West Outfall)	Stormwater and wastewater from west treatment system	32° 46' 04"	117° 13' 40"	Mission Bay

Table 3. Administrative Information

This Order was adopted on:	June 20, 2018
This Order shall become effective on:	August 1, 2018
This Order shall expire on:	June 30, 2023
The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations (CCR), and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	**180 days prior to the Order expiration date**
The U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, San Diego Region have classified this discharge as follows:	**Major**

I, David W. Gibson, 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, San Diego Region, on the date indicated above.

David W. Gibson, Executive Officer

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I. FACILITY INFORMATION

SeaWorld, San Diego (Facility) is an amusement park known primarily for its aquatic animal exhibits. The Facility discharges storm water; wastewater from marine mammal and aquarium exhibits; landscape irrigation runoff; and overspray from Facility cleaning to Mission Bay. The discharge may contain a variety of pollutants including waste from confined aquatic animals; uneaten feed; aquaculture drugs and chemicals; and chemicals used for cleaning, maintaining landscapes, or enhancing water quality conditions.

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

II. FINDINGS

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), finds:

A. Legal Authorities. This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (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). This Order shall serve as an NPDES permit authorizing the Discharger to discharge into waters of the U.S. at the discharge location described in Table 2 subject to the WDRs in this Order.

B. Background and Rationale for Requirements. The San Diego 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, G, and H are also incorporated into this Order.

C. Provisions and Requirements Implementing State Law. The provision/requirement in subsection VI.A.2.a. is included to implement State law only. This provision/requirement is not required or authorized under the federal CWA; consequently, violations of this provision/requirement are not subject to the enforcement remedies that are available for NPDES violations.

D. Executive Officer Delegation of Authority. The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to Water Code section 13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under Water Code section 13223 or this Order explicitly states otherwise.

E. Notification of Interested Parties. The San Diego Water Board has notified SeaWorld Parks & Entertainment, Inc. a Delaware Corporation, SeaWorld LLC d/b/a SeaWorld San Diego (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. The San Diego Water Board has also provided an opportunity for the Discharger and interested agencies and persons to submit oral comments and recommendations at a public hearing. Details of the notification are provided in the Fact Sheet (Attachment F).

F. Consideration of Public Comment. The San Diego 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 (Attachment F).

THEREFORE, IT IS HEREBY ORDERED that this Order supersedes Order No. R9-2011-0032, as amended by Order No. R9-2013-0034, 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. The Discharger is hereby authorized to discharge subject to WDRs in this Order at the discharge location described in Table 2 to Mission Bay. If any part of this Order is subject to a temporary stay of enforcement, unless otherwise specified in the order granting stay, the Discharger shall comply with the analogous portions of Order No. R9-2011-0032, as amended by Order No. R9-2013-0034. This action in no way prevents the San Diego Water Board from taking enforcement action for past violations of Order No. R9-2011-0032, as amended by Order No. R9-2013-0034.

Any discharges not expressly authorized in this Order cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to USEPA, State, or local authorities after issuance of this Order via any means, including during an inspection.

III. DISCHARGE PROHIBITIONS

A. The Discharger must comply with Discharge Prohibitions contained in the San Diego Water Board's *Water Quality Control Plan for the San Diego Basin* (Basin Plan) and other applicable statewide water quality control plans and policies described in Attachment F of this Order. All such prohibitions are hereby incorporated in this Order by reference as if fully set forth herein. Basin Plan Discharge Prohibitions are summarized in Attachment G.

B. Discharges of wastes in a manner or to a location which have not been specifically authorized by this Order and for which valid WDRs are not in force are prohibited.

C. Aquaria and pool draining operations are prohibited during storm water bypass discharge event.

D. The discharge of wastewater and/or storm water in excess of the effluent limitations in section IV.A.1 of this Order are prohibited unless the Discharger obtains revised WDRs authorizing an increased discharge.

E. The discharge shall not cause pollution, contamination, or nuisance, as those terms are defined in Water Code section 13050, as a result of the treatment or discharge.

F. Practices that allow accumulated sludge, grit, or solid residues to be discharged to surface waters are prohibited.

G. Odors, vectors, and other nuisances of waste origin beyond the limits of the property controlled by the Discharger are prohibited.

H. The discharge of wastes that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses) is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

1. Final Effluent Limitations – Discharge Point Nos. 001 and 002

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point Nos. 001 and 002, with compliance measured at Monitoring Locations EFF-001 and EFF-002, respectively, as described in the Monitoring and Reporting

Program (MRP) (Attachment E). The effluent limitations were calculated using a dilution ratio of 21:1.

Table 4. Effluent Limitations at East Outfall, Discharge Point No. 001 and West Outfall, Discharge Point No. 002 (Monitoring Locations EFF-001 and EFF-002)[1]

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous	
				Minimum	Maximum
Flow Rate	million gallons per day (MGD)[3]	--	3.24	--	--
	MGD[4]	--	6.12	--	--
pH	standard units (s.u)	--	--	7.0	9.0
Total Suspended Solids (TSS)	milligrams per liter (mg/L)	[2]			
Settleable Solids	mg/L	1.0	--	--	3.0
Turbidity	NTU	75	--	--	225
Oil and Grease	mg/L	25	--	--	75
	pounds per day (lbs/day)[3]	676	--	--	2,026
	lbs/day[4]	1,276	--	--	3,828
Ammonia, Unionized as N[5]	mg/L	--	--	--	0.55
	lbs/day[3]	--	--	--	15
	lbs/day[4]	--	--	--	28.1
Total Chlorine Residual[6,7]	mg/L	0.21	--	--	0.42
	lbs/day[3]	5.7	--	--	11.35
	lbs/day[4]	10.7	--	--	21.44
Copper, Total Recoverable[6,8]	µg/L	38.1	76.5	--	--
	lbs/day[3]	1.0	2.07	--	--
	lbs/day[4]	1.9	3.90	--	--
Silver[6,8]	µg/L	20.99	36	--	--
	lbs/day[3]	0.6	1.0	--	--
	lbs/day[4]	1.1	1.84	--	--
Chronic Toxicity (Test of Significant Toxicity)[9]	Pass/Fail and % effect	--	Pass and less than 50% effect[10]	--	--

1 See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

2 The concentration of suspended solids shall not be increased in excess of 10 mg/L as a monthly average or 15 mg/L as a daily maximum when compared to the suspended solids concentration in the intake.

3 The permitted flow for Discharge Point No. 001 is 3.24 MGD. The Mass Emission Rate (MER) limitations, in lbs/day for Discharge Point No. 001 were calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the permitted flow (MGD) of 3.24 MGD for Discharge Point No. 001 and C is the concentration (mg/L).

4 The permitted flow for Discharge Point No. 002 is 6.12 MGD. The MER limitations, in lbs/day, for Discharge Point No. 002 were calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the permitted flow (MGD) of 6.12 MGD for Discharge Point No. 002, and C is the concentration (mg/L).

5 The effluent limitation for ammonia is based on Basin Plan unionized ammonia objectives of 0.025 mg/L (as N) and was calculated using a dilution ratio of 21:1 expressed as parts seawater per part wastewater. See section IV of Attachment F to this Order (Attachment F, Fact Sheet) for a discussion of the dilution ratio.

[6] The effluent limitation was calculated using a dilution ratio of 21:1 expressed as parts seawater per part wastewater. See section IV of Attachment F for a discussion of the dilution ratio.

[7] The Basin Plan contains narrative objectives for total residual chlorine prohibiting discharges that cause toxicity to aquatic organisms.

[8] Average monthly and maximum daily effluent limitations for copper and the maximum daily effluent limitation for silver are carried forward from previous permit Order No. R9-2011-0032 to fulfill anti-backsliding requirements.

[9] The Chronic Toxicity final effluent limitation is protective of the narrative Basin Plan water quality objective for toxicity. The final effluent limitation will be implemented using 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), current USEPA guidance in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010) (https://www3.epa.gov/npdes/pubs/wet_final_tst_implementation2010.pdf) and USEPA Regions 8, 9, and 10 Toxicity Training Tool (January 2010).

[10] As specified in section VII.J of this Order and section III.C of the MRP (Attachment E). Discharges shall maintain compliance with the Maximum Daily Effluent Limitation (MDEL) policy for chronic toxicity. The MDEL is based on the outcome of the Test of Significant Toxicity (TST) approach and the resulting percent effect at the Instream Waste Concentration (IWC). The MDEL is exceeded when a toxicity test results in a "fail," and the percent effect is greater than or equal to 50 percent for chronic toxicity tests in accordance with section VII.J of this Order.

2. Effluent Limitations for Bacteria

The Discharger shall maintain compliance with the following bacteria effluent limitations at Discharge Point Nos. 001 and 002, with compliance measured at Monitoring Locations EFF-001 and EFF-002, respectively, as described in the Monitoring and Reporting Program (MRP) (Attachment E).

a. Total Coliform Organisms: The median total coliform concentration for the calendar month shall not exceed:

i. 70/100 mL and

ii. 230/100 mL for a five-tube decimal dilution test in more than 10 percent of samples collected; or

iii. 330/100 mL for a three-tube dilution test in more than 10 percent of samples collected.

b. Fecal Coliform Organisms: The fecal coliform concentration for the effluent for the calendar month based on a minimum of five samples shall not exceed:

i. A geometric mean[1] of 200/100mL; and

ii. 400/100 mL in more than 10 percent of samples collected.

c. Enterococcus: The average monthly concentration of enterococci in the effluent shall not exceed 35/100 mL, and the concentration of enterococci in the effluent shall not exceed 104/100 mL at any time.

3. Performance Goals – Discharge Point Nos. 001 and 002

Constituents that do not have reasonable potential to cause or contribute to an exceedance of water quality objectives, or for which reasonable potential to cause or contribute to an exceedance of water quality objectives cannot be determined, are referred to as performance goal constituents and are assigned the performance goals listed in the following table. Performance goal constituents shall be monitored at Monitoring Locations EFF-001 (for Discharge Point No. 001) and EFF-002 (for Discharge

[1] This effluent limitation is based on the Basin Plan fecal coliform water quality objective for contact recreation which specifies that the fecal coliform in waters designated for contact recreation (REC-1) based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200/100 mL.

Point No. 002), but the results will not be used for compliance determination. Performance goals were calculated using the dilution ratio 21:1 for Discharge Points Nos. 001 and 002.

Table 5. Performance Goals East Outfall, Discharge Point No. 001 and West Outfall, Discharge Point No. 002 (Monitoring Locations EFF-001 and EFF-002)[1]

Parameter	Units	Performance Goals[1,2,3]	
		Maximum Daily	Average Monthly
Antimony	µg/L	9.46E+04	1.90E+05
	lbs/day[4]	2.56E+03	5.14E+03
	lbs/day[5]	4.83E+03	9.71E+03
Arsenic	µg/L	6.47E+02	1.30E+03
	lbs/day[4]	1.75E+01	3.51E+01
	lbs/day[5]	3.30E+01	6.63E+01
Cadmium	µg/L	1.68E+02	3.37E+02
	lbs/day[4]	4.54E+00	9.12E+00
	lbs/day[5]	8.58E+00	1.72E+01
Chromium (VI)[6]	µg/L	9.05E+02	1.82E+03
	lbs/day[4]	2.45E+01	4.91E+01
	lbs/day[5]	4.62E+01	9.27E+01
Lead	µg/L	1.53E+02	3.07E+02
	lbs/day[4]	4.14E+00	8.30E+00
	lbs/day[5]	7.81E+00	1.57E+01
Mercury	µg/L	1.12E+00	2.26E+00
	lbs/day[4]	3.03E-02	6.09E-02
	lbs/day[5]	5.73E-02	1.15E-01
Nickel	µg/L	1.49E+02	2.99E+02
	lbs/day[4]	4.02E+00	8.07E+00
	lbs/day[5]	7.60E+00	1.52E+01
Selenium	µg/L	1.28E+03	2.57E+03
	lbs/day[4]	3.45E+01	6.93E+01
	lbs/day[5]	6.53E+01	1.31E+02
Thallium	µg/L	1.39E+02	2.79E+02
	lbs/day[4]	3.75E+00	7.53E+00
	lbs/day[5]	7.07E+00	1.42E+01
Zinc	µg/L	1.04E+03	2.09E+03
	lbs/day[4]	2.81E+01	5.65E+01
	lbs/day[5]	5.32E+01	1.07E+02
Cyanide[7]	µg/L	1.09E+01	2.20E+01
	lbs/day[4]	2.96E-01	5.93E-01
	lbs/day[5]	5.59E-01	1.12E+00
2,3,7,8-TCDD (Dioxin)	µg/L	3.08E-07	6.19E-07
	lbs/day[4]	8.32E-09	1.67E-08
	lbs/day[5]	1.57E-08	3.16E-08
Acrolein	µg/L	1.72E+04	3.45E+04
	lbs/day[4]	4.64E+02	9.32E+02
	lbs/day[5]	8.76E+02	1.76E+03
Acrylonitrile	µg/L	1.45E+01	2.92E+01
	lbs/day[4]	3.92E-01	7.89E-01
	lbs/day[5]	7.41E-01	1.49E+00

Parameter	Units	Performance Goals[1,2,3]	
		Maximum Daily	Average Monthly
Benzene	µg/L	1.56E+03	3.14E+03
	lbs/day[4]	4.22E+01	8.48E+01
	lbs/day[5]	7.97E+01	1.60E+02
Bromoform	µg/L	7.92E+03	1.59E+04
	lbs/day[4]	2.14E+02	4.30E+02
	lbs/day[5]	4.04E+02	8.13E+02
Carbon Tetrachloride	µg/L	9.68E+01	1.95E+02
	lbs/day[4]	2.62E+00	5.26E+00
	lbs/day[5]	4.94E+00	9.93E+00
Chlorobenzene	µg/L	4.62E+05	9.29E+05
	lbs/day[4]	1.25E+04	2.51E+04
	lbs/day[5]	2.36E+04	4.74E+04
Chlordibromomethane	µg/L	7.48E+02	1.50E+03
	lbs/day[4]	2.02E+01	4.06E+01
	lbs/day[5]	3.82E+01	7.67E+01
Dichlorobromomethane	µg/L	1.01E+03	2.03E+03
	lbs/day[4]	2.73E+01	5.50E+01
	lbs/day[5]	5.17E+01	1.04E+02
1,2-Dichloroethane	µg/L	2.18E+03	4.38E+03
	lbs/day[4]	5.89E+01	1.18E+02
	lbs/day[5]	1.11E+02	2.23E+02
1,1-Dichloroethylene	µg/L	7.04E+01	1.42E+02
	lbs/day[4]	1.90E+00	3.82E+00
	lbs/day[5]	3.59E+00	7.22E+00
1,2-Dichloropropane	µg/L	8.58E+02	1.72E+03
	lbs/day[4]	2.32E+01	4.66E+01
	lbs/day[5]	4.38E+01	8.80E+01
1,3-Dichloropropylene	µg/L	3.74E+04	7.52E+04
	lbs/day[4]	1.01E+03	2.03E+03
	lbs/day[5]	1.91E+03	3.84E+03
Ethylbenzene	µg/L	6.38E+05	1.28E+06
	lbs/day[4]	1.72E+04	3.47E+04
	lbs/day[5]	3.26E+04	6.55E+04
Methyl Bromide	µg/L	8.80E+04	1.77E+05
	lbs/day[4]	2.38E+03	4.78E+03
	lbs/day[5]	4.49E+03	9.03E+03
Methylene Chloride	µg/L	3.52E+04	7.08E+04
	lbs/day[4]	9.51E+02	1.91E+03
	lbs/day[5]	1.80E+03	3.61E+03
1,1,2,2-Tetrachloroethane	µg/L	2.42E+02	4.86E+02
	lbs/day[4]	6.54E+00	1.31E+01
	lbs/day[5]	1.24E+01	2.48E+01
Tetrachloroethylene	µg/L	1.95E+02	3.91E+02
	lbs/day[4]	5.26E+00	1.06E+01
	lbs/day[5]	9.94E+00	2.00E+01
Toluene	µg/L	4.40E+06	8.84E+06
	lbs/day[4]	1.19E+05	2.39E+05

Parameter	Units	Performance Goals[1,2,3]	
		Maximum Daily	Average Monthly
	lbs/day[5]	2.25E+05	4.51E+05
1,2-Trans-Dichloroethylene	µg/L	3.08E+06	6.19E+06
	lbs/day[4]	8.32E+04	1.67E+05
	lbs/day[5]	1.57E+05	3.16E+05
1,1,2-Trichloroethane	µg/L	9.24E+02	1.86E+03
	lbs/day[4]	2.50E+01	5.02E+01
	lbs/day[5]	4.72E+01	9.48E+01
Trichloroethylene	µg/L	1.78E+03	3.58E+03
	lbs/day[4]	4.82E+01	9.68E+01
	lbs/day[5]	9.10E+01	1.83E+02
Vinyl Chloride	µg/L	1.16E+04	2.32E+04
	lbs/day[4]	3.12E+02	6.27E+02
	lbs/day[5]	5.90E+02	1.18E+03
Chlorophenol	µg/L	8.80E+03	1.77E+04
	lbs/day[4]	2.38E+02	4.78E+02
	lbs/day[5]	4.49E+02	9.03E+02
2,4-Dichlorophenol	µg/L	1.74E+04	3.49E+04
	lbs/day[4]	4.70E+02	9.44E+02
	lbs/day[5]	8.87E+02	1.78E+03
2,4-Dimethylphenol	µg/L	5.06E+04	1.02E+05
	lbs/day[4]	1.37E+03	2.75E+03
	lbs/day[5]	2.58E+03	5.19E+03
2-Methyl-4,6-Dinitrophenol	µg/L	1.68E+04	3.38E+04
	lbs/day[4]	4.55E+02	9.14E+02
	lbs/day[5]	8.59E+02	1.73E+03
2,4-Dinitrophenol	µg/L	3.08E+05	6.19E+05
	lbs/day[4]	8.32E+03	1.67E+04
	lbs/day[5]	1.57E+04	3.16E+04
Pentachlorophenol	µg/L	1.42E+02	2.85E+02
	lbs/day[4]	3.84E+00	7.70E+00
	lbs/day[5]	7.25E+00	1.45E+01
Phenol	µg/L	1.01E+08	2.03E+08
	lbs/day[4]	2.73E+06	5.50E+06
	lbs/day[5]	5.17E+06	1.04E+07
2,4,6-Trichlorophenol	µg/L	1.43E+02	2.87E+02
	lbs/day[4]	3.86E+00	7.77E+00
	lbs/day[5]	7.30E+00	1.47E+01
Acenaphthene	µg/L	5.94E+04	1.19E+05
	lbs/day[4]	1.61E+03	3.23E+03
	lbs/day[5]	3.03E+03	6.09E+03
Anthracene	µg/L	2.42E+06	4.86E+06
	lbs/day[4]	6.54E+04	1.31E+05
	lbs/day[5]	1.24E+05	2.48E+05
Benzidine	µg/L	1.19E-02	2.39E-02
	lbs/day[4]	3.21E-04	6.45E-04
	lbs/day[5]	6.06E-04	1.22E-03
Benzo(a)Anthracene	µg/L	1.08E+00	2.17E+00

Parameter	Units	Performance Goals[1,2,3]	
		Maximum Daily	Average Monthly
	lbs/day[4]	2.91E-02	5.85E-02
	lbs/day[5]	5.50E-02	1.11E-01
Benzo(a)Pyrene	µg/L	1.03E+00	2.07E+00
	lbs/day[4]	2.78E-02	5.59E-02
	lbs/day[5]	5.25E-02	1.06E-01
Benzo(b)Fluoranthene	µg/L	1.08E+00	2.17E+00
	lbs/day[4]	2.91E-02	5.85E-02
	lbs/day[5]	5.50E-02	1.11E-01
Benzo(k)Fluoranthene	µg/L	1.08E+00	2.17E+00
	lbs/day[4]	2.91E-02	5.85E-02
	lbs/day[5]	5.50E-02	1.11E-01
Bis(2-Chloroethyl)Ether	µg/L	3.08E+01	6.19E+01
	lbs/day[4]	8.32E-01	1.67E+00
	lbs/day[5]	1.57E+00	3.16E+00
Bis(2-Chloroisopropyl)Ether	µg/L	3.74E+06	7.52E+06
	lbs/day[4]	1.01E+05	2.03E+05
	lbs/day[5]	1.91E+05	3.84E+05
Bis(2-Ethylhexyl)Phthalate	µg/L	1.30E+02	2.61E+02
	lbs/day[4]	3.51E+00	7.05E+00
	lbs/day[5]	6.63E+00	1.33E+01
Butylbenzyl Phthalate	µg/L	1.14E+05	2.30E+05
	lbs/day[4]	3.09E+03	6.21E+03
	lbs/day[5]	5.84E+03	1.17E+04
2-Chloronaphthalene	µg/L	9.46E+04	1.90E+05
	lbs/day[4]	2.56E+03	5.14E+03
	lbs/day[5]	4.83E+03	9.71E+03
Chrysene	µg/L	1.08E+00	2.17E+00
	lbs/day[4]	2.91E-02	5.85E-02
	lbs/day[5]	5.50E-02	1.11E-01
Dibenzo(a,h)Anthracene	µg/L	1.08E+00	2.17E+00
	lbs/day[4]	2.91E-02	5.85E-02
	lbs/day[5]	5.50E-02	1.11E-01
1,2-Dichlorobenzene	µg/L	3.74E+05	7.52E+05
	lbs/day[4]	1.01E+04	2.03E+04
	lbs/day[5]	1.91E+04	3.84E+04
1,3-Dichlorobenzene	µg/L	5.72E+04	1.15E+05
	lbs/day[4]	1.55E+03	3.11E+03
	lbs/day[5]	2.92E+03	5.87E+03
1,4-Dichlorobenzene	µg/L	5.72E+04	1.15E+05
	lbs/day[4]	1.55E+03	3.11E+03
	lbs/day[5]	2.92E+03	5.87E+03
3,3'-Dichlorobenzidine	µg/L	1.69E+00	3.40E+00
	lbs/day[4]	4.58E-02	9.20E-02
	lbs/day[5]	8.65E-02	1.74E-01
Diethyl Phthalate	µg/L	2.64E+06	5.31E+06
	lbs/day[4]	7.13E+04	1.43E+05
	lbs/day[5]	1.35E+05	2.71E+05

Parameter	Units	Performance Goals[1,2,3]	
		Maximum Daily	Average Monthly
Dimethyl Phthalate	µg/L	6.38E+07	1.28E+08
	lbs/day[4]	1.72E+06	3.47E+06
	lbs/day[5]	3.26E+06	6.55E+06
Di-n-Butyl Phthalate	µg/L	2.64E+05	5.31E+05
	lbs/day[4]	7.13E+03	1.43E+04
	lbs/day[5]	1.35E+04	2.71E+04
2,4-Dinitrotoluene	µg/L	2.00E+02	4.02E+02
	lbs/day[4]	5.41E+00	1.09E+01
	lbs/day[5]	1.02E+01	2.05E+01
1,2-Diphenylhydrazine	µg/L	1.19E+01	2.39E+01
	lbs/day[4]	3.21E-01	6.45E-01
	lbs/day[5]	6.06E-01	1.22E+00
Fluoranthene	µg/L	8.14E+03	1.64E+04
	lbs/day[4]	2.20E+02	4.42E+02
	lbs/day[5]	4.15E+02	8.35E+02
Fluorene	µg/L	3.08E+05	6.19E+05
	lbs/day[4]	8.32E+03	1.67E+04
	lbs/day[5]	1.57E+04	3.16E+04
Hexachlorobenzene	µg/L	1.69E-02	3.40E-02
	lbs/day[4]	4.58E-04	9.20E-04
	lbs/day[5]	8.65E-04	1.74E-03
Hexachlorobutadiene	µg/L	1.10E+03	2.21E+03
	lbs/day[4]	2.97E+01	5.97E+01
	lbs/day[5]	5.61E+01	1.13E+02
Hexachlorocyclopentadiene	µg/L	3.74E+05	7.52E+05
	lbs/day[4]	1.01E+04	2.03E+04
	lbs/day[5]	1.91E+04	3.84E+04
Hexachloroethane	µg/L	1.96E+02	3.94E+02
	lbs/day[4]	5.29E+00	1.06E+01
	lbs/day[5]	9.99E+00	2.01E+01
Indeno(1,2,3-cd) Pyrene	µg/L	1.08E+00	2.17E+00
	lbs/day[4]	2.91E-02	5.85E-02
	lbs/day[5]	5.50E-02	1.11E-01
Isophorone	µg/L	1.32E+04	2.65E+04
	lbs/day[4]	3.57E+02	7.17E+02
	lbs/day[5]	6.74E+02	1.35E+03
Nitrobenzene	µg/L	4.18E+04	8.40E+04
	lbs/day[4]	1.13E+03	2.27E+03
	lbs/day[5]	2.13E+03	4.29E+03
N-Nitrosodimethylamine	µg/L	1.78E+02	3.58E+02
	lbs/day[4]	4.82E+00	9.68E+00
	lbs/day[5]	9.10E+00	1.83E+01
N-Nitrosodi-n-Propylamine	µg/L	3.08E+01	6.19E+01
	lbs/day[4]	8.32E-01	1.67E+00
	lbs/day[5]	1.57E+00	3.16E+00
N-Nitrosodiphenylamine	µg/L	3.52E+02	7.08E+02
	lbs/day[4]	9.51E+00	1.91E+01

Parameter	Units	Performance Goals[1,2,3]	
		Maximum Daily	Average Monthly
	lbs/day[5]	1.80E+01	3.61E+01
Pyrene	µg/L	2.42E+05	4.86E+05
	lbs/day[4]	6.54E+03	1.31E+04
	lbs/day[5]	1.24E+04	2.48E+04
Aldrin	µg/L	3.08E-03	6.19E-03
	lbs/day[4]	8.32E-05	1.67E-04
	lbs/day[5]	1.57E-04	3.16E-04
alpha-BHC	µg/L	2.86E-01	5.75E-01
	lbs/day[4]	7.73E-03	1.55E-02
	lbs/day[5]	1.46E-02	2.93E-02
beta-BHC	µg/L	1.01E+00	2.03E+00
	lbs/day[4]	2.73E-02	5.50E-02
	lbs/day[5]	5.17E-02	1.04E-01
gamma-BHC	µg/L	1.39E+00	2.79E+00
	lbs/day[4]	3.75E-02	7.53E-02
	lbs/day[5]	7.07E-02	1.42E-01
Chlordane	µg/L	1.30E-02	2.61E-02
	lbs/day[4]	3.51E-04	7.05E-04
	lbs/day[5]	6.63E-04	1.33E-03
4,4-DDT	µg/L	1.30E-02	2.61E-02
	lbs/day[4]	3.51E-04	7.05E-04
	lbs/day[5]	6.63E-04	1.33E-03
4,4-DDE	µg/L	1.30E-02	2.61E-02
	lbs/day[4]	3.51E-04	7.05E-04
	lbs/day[5]	6.63E-04	1.33E-03
4,4-DDD	µg/L	1.85E-02	3.71E-02
	lbs/day[4]	4.99E-04	1.00E-03
	lbs/day[5]	9.43E-04	1.90E-03
Dieldrin	µg/L	3.08E-03	6.19E-03
	lbs/day[4]	8.32E-05	1.67E-04
	lbs/day[5]	1.57E-04	3.16E-04
alpha-Endosulfan	µg/L	1.56E-01	3.14E-01
	lbs/day[4]	4.22E-03	8.48E-03
	lbs/day[5]	7.98E-03	1.60E-02
Endosulfan-beta	µg/L	1.56E-01	3.14E-01
	lbs/day[4]	4.22E-03	8.48E-03
	lbs/day[5]	7.98E-03	1.60E-02
Endosulfan Sulfate	µg/L	5.28E+03	1.06E+04
	lbs/day[4]	1.43E+02	2.87E+02
	lbs/day[5]	2.69E+02	5.42E+02
Endrin	µg/L	4.13E-02	8.29E-02
	lbs/day[4]	1.12E-03	2.24E-03
	lbs/day[5]	2.11E-03	4.23E-03
Endrin Aldehyde	µg/L	1.78E+01	3.58E+01
	lbs/day[4]	4.82E-01	9.68E-01
	lbs/day[5]	9.10E-01	1.83E+00
Heptachlor	µg/L	4.62E-03	9.29E-03

Parameter	Units	Performance Goals[1,2,3]	
		Maximum Daily	Average Monthly
	lbs/day[4]	1.25E-04	2.51E-04
	lbs/day[5]	2.36E-04	4.74E-04
Heptachlor Epoxide	µg/L	2.42E-03	4.86E-03
	lbs/day[4]	6.54E-05	1.31E-04
	lbs/day[5]	1.24E-04	2.48E-04
PCBs sum (2)	µg/L	3.74E-03	7.52E-03
	lbs/day[4]	1.01E-04	2.03E-04
	lbs/day[5]	1.91E-04	3.84E-04
Toxaphene	µg/L	3.59E-03	7.21E-03
	lbs/day[4]	9.71E-05	1.95E-04
	lbs/day[5]	1.83E-04	3.68E-04

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] The MER performance goal, in lbs/day, was calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the permitted flow (MGD) and C is the concentration (mg/L).

[3] Scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates that position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation, a value of 6.1E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^{2} or 610, and 6.1E+00 represents 6.1×10^{0} or 6.1.

[4] Based on a flow of 3.24 MGD at Discharge Point No. 001.

[5] Based on a flow of 6.12 MGD at Discharge Point No. 002.

[6] Dischargers may, at their option, apply this performance goal as a total chromium performance goal.

[7] If the Discharger can demonstrate to the satisfaction of USEPA and the State Water Resources Control Board (State Water Board) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, the performance goals may be evaluated with the combined measurement of free cyanide, simple alkali metals cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in Code of Federal Regulations, title 40 (40 CFR) part 136.

B. DISCHARGE SPECIFICATIONS

1. Collected screenings, sludges, and other solids removed from intake water or liquid wastes, shall be disposed of in compliance with appropriate local, regional, and State regulations or statues

2. Persistent or cumulative toxic substances shall be removed from the waste to the maximum extent practicable through source control or adequate treatment prior to discharge.

3. Bay or estuarine outfall and diffuser systems shall be designed to achieve the most rapid initial dilution practicable to minimize concentrations of substances not removed by source control or treatment.

4. Wastes shall not be discharged into or adjacent to areas where the protection of beneficial uses requires spatial separation from waste fields

5. Waste discharges shall not cause a blockage of zones of passage required for the migration of anadromous fish.

6. The discharge shall not result in the release of exotic species or species not native to Mission Bay, including exotic or non-native pathogens.

7. The discharge of substances for which effluent limitations are not established in this Order shall be prevented, or, if the discharge cannot be prevented, minimized

8. All waste treatment, containment, and disposal facilities shall be protected against 100-year peak stream flows as defined by the San Diego County Flood Control District (FCD).

9. All waste treatment, containment and disposal facilities shall be protected against erosion, overland runoff and other impacts resulting from a 100-year frequency 24-hour storm event as defined by the San Diego FCD.

10. All waste treatment, containment and disposal facilities shall be protected against regional impacts due to climate change including but not limited to sea level rise coastal storm surges, changes to Mission Bay and ocean water chemistry and the gradual warming of Mission Bay and ocean water temperatures.

11. The discharge of substances for which effluent limitations are not established in this Order shall be prevented, or, if the discharge cannot be prevented, minimized.

C. Land Discharge Specifications – NOT APPLICABLE

D. Recycling Specifications – NOT APPLICABLE

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

The receiving water limitations set forth below for Mission Bay are based on applicable water quality standards contained in water quality control plans and policies and federal regulations and are a required part of this Order. The discharge of waste shall not cause or contribute to violations of these receiving water limitations in Mission Bay.

1. Bacterial Characteristics [Basin Plan]

a. Total Coliform Organisms: The median total coliform concentration throughout the water column for any calendar month shall not exceed:

i. 70/100 mL and

ii. 230/100 mL for a five-tube decimal dilution test in more than 10 percent of samples collected; or

iii. 330/100 mL for a three-tube dilution test in more than 10 percent of samples collected.

b. Fecal Coliform Organisms: The fecal coliform concentration for the effluent for the calendar month based on a minimum of five sample shall not exceed:

i. A log mean[2] of 200/100mL and

ii. 400/100 mL in more than 10 percent of samples collected.

c. Enterococcus: The concentration of enterococci shall not exceed 35/100 mL in all areas and 104/100 mL in designated beach areas.

2. Physical Characteristics

a. Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses. The natural color of fish, shellfish, or other resources shall not be impaired. [Basin Plan]

[2] Log mean refers to geometric mean as defined in Section VII.J of the Order

b. Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses. [Basin Plan]

c. Waters shall not contain oils, greases, waxes, or other materials in concentrations which result in a visible film or coating on the surface of the water or on objects in the water, or which cause nuisance or otherwise adversely affect beneficial uses. [Basin Plan]

d. The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses. Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities in Mission Bay or human health. [Basin Plan]

e. Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses. [Basin Plan]

f. Waters shall not contain taste or odor producing substances at concentrations which cause a nuisance or adversely affect beneficial uses. [Basin Plan]

g. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. The transparency of waters in lagoons and estuaries shall not be less than 50% of the depth at locations where measurement is made by means of a standard Secchi disk, except where lesser transparency is caused by rainfall runoff from undisturbed natural areas and dredging projects conducted in conformance with WDRs of the San Diego Water Board. With these two exceptions, increases in turbidity attributable to controllable water quality factors shall not exceed 20 % over natural turbidity levels at locations with a natural turbidity of 0 to 50 NTU; 10 NTU at locations with a natural turbidity of 50 to 100 NTU; and 10% over the natural turbidity level in locations with a natural turbidity of greater than 100 NTU. [Basin Plan]

The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the San Diego Water Board that such alteration in temperature does not adversely affect beneficial uses. The maximum temperature of waste shall not exceed the natural temperature of the receiving waters by more than 20 ºF. [Basin Plan] [Thermal Plan]

3. Chemical Characteristics

a. The dissolved oxygen (DO) concentration shall not at any time be less than 5 mg/L. The annual mean DO concentration shall not be less than 7 mg/L more than 10% of the time. [Basin Plan]

b. Within Mission Bay, changes in normal ambient pH levels shall not exceed 0.2 units. The pH shall not be depressed below 7.0 nor raised above 9.0. [Basin Plan]

c. Waters of Mission Bay shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses. [Basin Plan]

d. Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth. [Basin Plan]

e. No individual pesticide or combination of pesticides shall be present in the water column, sediments, or biota at concentration(s) that adversely affect beneficial uses. Pesticides shall not be present at levels which will bioaccumulate in aquatic

organisms to levels which are harmful to human health, wildlife or aquatic organisms. [Basin Plan]

f. The discharge of wastes shall not cause concentrations of unionized ammonia (NH_3) to exceed 0.025 mg/L as N. [Basin Plan]

g. All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance will be determined by use of indicator organisms, analysis of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods, as specified by the San Diego Water Board. [Basin Plan]

4. Radioactivity

Radionuclides shall not be present in concentrations that are harmful/deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life. [Basin Plan]

5. Biological Characteristics

a. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded. [Ocean Plan-BPJ]

b. The natural taste, odor, color of fish, shellfish, or other marine resources used for human consumption shall not be altered. [Ocean Plan-BPJ]

c. The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health. [Ocean Plan-BPJ]

B. Groundwater Limitations – NOT APPLICABLE

VI. PROVISIONS

A. Standard Provisions

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

2. San Diego 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. All proposed new treatment facilities and expansions of existing treatment facilities shall be completely constructed and operable prior to initiation of the discharge from the new or expanded facilities. The Discharger shall submit a certification report for each new treatment facility, expansion of an existing treatment facility, and design capacity re-ratings, prepared by the design engineer. For design capacity re-ratings, the certification report shall be prepared by the engineer who evaluated the treatment facility design capacity. The signature and engineering license number of the engineer preparing the certification report shall be affixed to the report. If reasonable, the certification report shall be submitted prior to beginning construction of new treatment facilities or expansions of existing treatment facilities.

i. The certification report shall:

(a) Identify the design capacity of the treatment facility, including the daily and 30-day design capacity;

(b) Certify the adequacy of each component of the treatment facility; and

(c) Contain a requirement-by-requirement analysis, based on acceptable engineering practices, of the process and physical design of the facility to ensure compliance with this Order.

ii. The Discharger shall not initiate a discharge from an existing treatment facility at a daily flow rate in excess of its previously approved design capacity until:

(a) The certification report is received by the San Diego Water Board,

(b) The San Diego Water Board has received written notification of completion of construction (new or expanded treatment facilities only),

(c) An inspection of the facility has been made by the San Diego Water Board or its designated representatives (new or expanded treatment facilities only), and

(d) The San Diego Water Board has provided the Discharger with written authorization to initiate discharge from a new or expanded treatment facility or at a daily flow rate in excess of its previously approved design capacity.

b. The expiration date of this Order is contained in Table 3 of this Order. After the expiration date, the terms and conditions of this Order are automatically continued pending issuance of a new permit, provided that all requirements of USEPA's NPDES regulations at 40 CFR section 122.6 and the State's regulations at title 23, division 3, chapter 9, article 3, section 2235.4 of the CCR regarding the continuation of expired permits and WDRs are met.

c. A copy of this Order shall be posted at a prominent location and shall be available to site personnel, San Diego Water Board, State Water Board, and USEPA or their authorized representative at all times.

B. Monitoring and Reporting Program (MRP) Requirements

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

2. Notifications required to be provided under this Order to the San Diego Water Board shall be made to:

E-mail – SanDiego@waterboards.ca.gov
Telephone – (619) 516-1990
Facsimile – (619) 516-1994

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 performance goal(s) set forth in section IV.A.2, Table 5, of this Order or above any applicable water quality standard. (40 CFR section 122.44(d)(1))

b. This Order may be reopened for modification of the monitoring and reporting requirements and/or special studies requirements, at the discretion of the San Diego Water Board. Such modification(s) may include, but is (are) not limited to, revision(s) (i) to implement recommendations from Southern California Coastal Water Research Project (SCCWRP), (ii) to develop, refine, implement, and/or coordinate a regional monitoring program, (iii) to develop and implement improved monitoring and

assessment programs in keeping with San Diego Water Board Resolution No. R9-2012-0069, Resolution in Support of a Regional Monitoring Framework, and/or (iv) to add provisions to require the Discharger to evaluate and provide information on cost and values of the MRP (Attachment E).

c. This Order may be modified, revoked and reissued, or terminated for cause in accordance with the provisions of 40 CFR parts 122, 124, and 125 at any time prior to its expiration under any of the following circumstances:

i. Violation of any terms or conditions of this Order (Water Code section 13381(a));

ii. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts (Water Code section 13381(b)); and

iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge (Water Code section 13381(c)).

d. The filing of a request by the Discharger for modifications, revocation and reissuance, or termination of this Order does not stay any condition of this Order. Notification by the Discharger of planned operational or facility changes or anticipated noncompliance with this Order does not stay any condition of this Order. (40 CFR section 122.41(f))

e. If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA section 307(a) for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the San Diego Water Board may institute proceedings under these regulations to modify or revoke and reissue this Order to conform to the toxic effluent standard or prohibition. (40 CFR section 122.44(b)(1))

f. This Order may be reopened and modified, in accordance with the provisions set forth in 40 CFR parts 122 and 124.

g. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments, or the adoption of a total maximum daily load (TMDL) for the receiving water. (40 CFR section 122.62(a)(2))

h. This Order may be reopened upon submission by the Discharger of adequate information, as determined by the San Diego Water Board, to provide for dilution credits or a mixing zone, as may be appropriate. (40 CFR section 122.62(a)(2))

i. This Order may also be reopened and modified, revoked and reissued, or terminated in accordance with the provisions of 40 CFR sections 122.44, 122.62 to 122.64, and 125.62. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order, and endangerment to human health or the environment resulting from the permitted activity.

j. The mass emission performance goals, contained in section IV.A.2 of this Order, may be re-evaluated and modified during this Order term, or this Order may be modified to incorporate WQBELs, in accordance with the requirements set forth at 40 CFR sections 122.62 and 124.5.

k. This Order may be reopened or modified to incorporate any amendments to the Ocean Plan pertaining to adoption of statewide bacteria water quality objectives and implementation options to protect recreational users from the effects of pathogens in water bodies.

I. In accordance with 40 CFR Parts 122 and 124, this Order may be modified to include or revise effluent limitations or permit conditions to address toxicity in the effluent or receiving water body, as a result of the discharge; or to implement new, revised, or newly interpreted water quality standards applicable to acute or chronic toxicity.

2. Special Studies, Technical Reports, and Additional Monitoring Requirements

Climate Change Action Plan

The Discharger shall prepare and submit a climate change action plan (CAPP) within three years of the effective date of this Order, consistent with the MRP (Attachment E) section VI.

3. Best Management Practices (BMPs) and Pollution Prevention

a. Storm Water Pollution Prevention Plan (SWPPP)

The Discharger shall review its SWPPP, and develop an updated SWPPP as described in Attachment I to this Order (Attachment I) by January 28, 2019. The Discharger shall also develop a Storm Water BMP Plan, and submit an Annual Comprehensive Site Compliance Evaluation as described in Attachment I. The Storm Water BMP Plan shall be incorporated into the updated SWPPP.

b. Confined Aquatic Animals BMP Plan

The Discharger shall establish and document specific BMPs and operating procedures following the general guidance contained in the *Compliance Guide for the Concentrated Aquatic Animal Production Point Source Category*[3]. The Confined Aquatic Animal BMP Plan shall, at a minimum, include the following practices:

i. Feed must be managed such that the discharge of unconsumed food to Mission Bay is minimized.

ii. Aquatic animal exhibits, aquariums, and other exhibit pools must be cleaned and maintained such that the discharge of accumulated solids to Mission Bay is minimized.

iii. Aquatic animal mortalities must be removed and disposed of properly on a regular basis and aquatic animal mortalities may not be discharged to Mission Bay.

iv. Records of all drugs, pesticides, or other chemicals administered at the Facility must be maintained.

v. All aquaculture drugs and chemicals must be used in accordance with applicable label directions, except extra label drug use, as prescribed by a veterinarian.

vi. Storage of aquaculture drugs, chemicals, and feed must be in a manner designed to prevent spills that may result in the discharge of drugs, pesticides, or feed to Mission Bay.

vii. Procedures for properly containing, cleaning, and disposing of any spilled material must be implemented.

[3] The referenced document is available online at: https://www.epa.gov/sites/production/files/2015-11/documents/caap-aquaculture_compliance-guide_2006.pdf

c. Pollutant Minimization Program (PMP)

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

i. The Discharger shall develop and conduct a 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 (WET), 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:

(a) The concentration of the pollutant is reported as DNQ and the effluent limitation is less than the reported ML; or

(b) The concentration of the pollutant is reported as ND and the effluent limitation is less than the MDL.

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 San Diego 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 Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

ii. The PMP shall include, but not be limited to, the following actions and submittals acceptable to the San Diego Water Board:

(a) 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;

(b) Quarterly monitoring for the reportable pollutant(s) in the influent to the wastewater treatment system;

(c) 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;

(d) Implementation of appropriate cost-effective control measures for the reportable pollutant(s), consistent with the control strategy; and

(e) An annual status report that shall be sent to the San Diego Water Board including:

(1) All PMP monitoring results for the previous year;

(2) A list of potential sources of the reportable pollutant(s);

(3) A summary of all actions undertaken pursuant to the control strategy; and

(4) A description of actions to be taken in the following year.

4. Construction, Operation and Maintenance Specifications – Not Applicable

5. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

6. Other Special Provisions

a. Notice Requirements

i. The Discharger shall notify the San Diego Water Board of the use of any investigational new animal drug (INAD) or any extra label drug use where such a use may lead to a discharge of the drug to Mission Bay. Reporting is not required for an INAD or extra label drug use that has been previously approved by U.S. Food and Drug Administration (FDA) for a different species or disease if the INAD or extra label use is at or below the approved dosage and involves similar conditions of use. The notification must identify the drug used, reason for treatment, dates, times, and duration of treatment; method of application; and the amount added.

ii. The Discharger shall notify the San Diego Water Board regarding spills of drugs, pesticides, or feed that result in a discharge to Mission Bay. In the event of such a spill, Dischargers shall provide an oral report within 24 hours of its occurrence and a written report within five days. The report shall include the identity and quantity of material spilled.

7. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

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

A. Compliance with Average Monthly Effluent Limitation (AMEL)

If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of noncompliance in a 31-day month). The average of daily discharges over the calendar month that exceeds the AMEL for a parameter will be considered out of compliance for the month only. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

B. Compliance with Maximum Daily Effluent Limitation (MDEL)

The MDEL shall apply to flow weighted 24-hour composite sample, or grab sample determinations, as specified in the MRP (Attachment E). If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that parameter for that one day only within the reporting period. For any one day during which no sample is taken, no compliance determination can be made for that day.

C. Compliance with Instantaneous Minimum Effluent Limitation

The instantaneous minimum effluent concentration limitation shall apply to grab sample determinations. If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of noncompliance with the instantaneous minimum effluent limitation).

D. Compliance with Instantaneous Maximum Effluent Limitation

The instantaneous maximum effluent concentration limitation shall apply to grab sample determinations. If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of noncompliance with the instantaneous maximum effluent limitation).

E. Compliance with Monthly Median Effluent Limitation

If the median concentration of daily discharges over a calendar month exceeds the monthly median effluent limitation for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of noncompliance in a 31-day month). The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the monthly median effluent limitation, the Discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample is taken, no compliance determination can be made for that calendar month.

F. 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 MER determined from that sample concentration shall also be reported as “ND” or “DNQ.”

G. Compliance with Effluent Limitations

Sufficient sampling and analysis shall be required to determine compliance with the effluent limitations.

1. Compliance with Single-constituent Effluent Limitations

The Discharger shall be deemed out of compliance with an effluent limitation or discharge specification if the concentration of the constituent in the monitoring sample is greater than the effluent limitation or discharge specification and greater than or equal to the ML.

2. Compliance with Effluent Limitations Expressed as a Sum of Several Constituents

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

3. Multiple Sample Data Reduction

The concentration of the pollutant in the effluent may be estimated from the result of a single sample analysis or by a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses when all sample results are quantifiable (i.e., greater than or equal to the reported ML). When one or more sample results are reported as ND or DNQ, the central tendency concentration of the pollutant shall be the median (middle) value of the multiple samples. If, in an even number of samples, one or both of the middle values is ND or DNQ, the median will be the lower of the two middle values.

4. Mass Emission Rate (MER)

The MER, in pounds per day, shall be obtained from the following calculation for any calendar day:

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

In which Q and C are the flow rate in million gallons per day and the constituent concentration in mg/L, respectively, and 8.34 is a conversion factor (lbs/gallon of water). If a composite sample is taken, then C is the concentration measured in the composite sample and Q is the average flow rate occurring during the period over which the samples are composited.

H. Single Operational Upset (SOU)

A Single Operational Upset (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 section I.H of Attachment D.

3. For purposes outside of Water Code 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 the USEPA Memorandum, *Issuance of Guidance Interpreting Single Operational Upset* (September 27, 1989).

4. For purposes of Water Code 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 Water Code section 13385(f)(2).

I. Effluent Limitation for Fecal Coliform

1. The geometric mean used for determining compliance with the effluent limitation for fecal coliform is calculated with the following equation:

Geometric Mean = (C1 x C2 x … x Cn)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) found on each day of sampling.

2. For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000 MPN/100 mL. The detection methods used for each analysis

shall be reported with the results of the analysis. Detection methods used for coliforms (total and fecal) shall be those listed in 40 CFR part 136 or any improved method determined by the San Diego Water Board (and approved by USEPA) to be appropriate. Detection methods used for enterococcus shall be those presented in USEPA publication USEPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure*, listed under 40 CFR part 136, and any other method approved by the San Diego Water Board.

J. Chronic Toxicity

The discharge is subject to determination of "Pass" or "Fail" from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is:

Mean discharge "in-stream" waste concentration (IWC) response ≤ 0.75 × Mean control response.

A test result that rejects this null hypothesis is reported as "Pass." A test result that does not reject this null hypothesis is reported as "Fail." This is a t-test (formally Student's t-test), a statistical analysis comparing two sets of replicate observations—in the case of 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.

The MDEL for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST statistical approach, results in "Fail."

The MDEL for chronic toxicity is set at the IWC for the discharge (100 percent effluent) and expressed in units of the TST statistical approach ("Pass" or "Fail"). The Maximum Daily Effluent Limitation (MDEL) for chronic toxicity is exceeded and a violation will be flagged when a toxicity test results in a "fail" in accordance with the TST approach and the percent effect is greater than or equal to 50 percent. Toxicity results shall be reported to the San Diego Water Board as either a "pass" or a "fail" at the IWC of 100 percent effluent. All monitoring for the MDEL for chronic toxicity shall be reported using the IWC effluent concentration and negative control, expressed in units of the TST. The TST hypothesis (Ho) (see above) is statistically analyzed using the IWC and a negative control. Effluent toxicity tests shall be run using *Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine Estuarine Organisms* (EPA/600/R-95/136, 1995). The San Diego Water Board's review of reported toxicity test results will include review of concentration-response patterns as appropriate (see section IV.C.5 of the Fact Sheet (Attachment F)). As described in the laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Board dated August 07, 2014, and from USEPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the no-observed-effect-concentration (NOEC) and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. SOPs used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach, including those that incorporate a consideration of concentration-response patterns, must be submitted to the San Diego Water Board (40 CFR section 122.41(h)). The San Diego Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Discharger,

USEPA, Region IX, the State Water Board's Quality Assurance (QA) Officer, or the State Water Board, Division of Drinking Water (DDW) Environmental Laboratory Accreditation Program (ELAP) as needed.

ATTACHMENT A – ABBREVIATIONS AND GLOSSARY

Part 1. – Abbreviations

Abbreviation	Definition
40 CFR	Code of Federal Regulations, title 40
AMEL	Average Monthly Effluent Limitation
ASBS	Areas of Special Biological Significance
AWEL	Average Weekly Effluent Limitation
Basin Plan	Water Quality Control Plan for the San Diego Basin
BAT	Best Available Technology
Bays and Estuaries Policy	*Water Quality Control Policy for Enclosed Bays and Estuaries of California*
BMPs	Best Management Practices
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CFU	Colony Forming Units
CIWQS	California Integrated Water Quality System
CTR	California Toxics Rule
CV	Coefficient of Variation
CVM	Center for Veterinary Medicine
CWA	Clean Water Act
DDT	Dichlorodiphenyltrichloroethane
DDW	State Water Board, Division of Drinking Water
Discharger	SeaWorld LLC d/b/a/ SeaWorld San Diego
DMR	Discharge Monitoring Report
DNQ	Detected, but Not Quantified
DO	Dissolved Oxygen
ECA	Effluent Concentration Allowance
ELAP	Environmental Laboratory Accreditation Program
°F	Degrees Fahrenheit
Facility	SeaWorld, San Diego
FDA	U.S. Food & Drug Administration
GPS	Global Positioning System
Ho	Null Hypothesis
INAD	Investigational New Animal Drug
IWC	In-Stream Waste Concentration
lbs/day	Pounds per Day
LRP	Low Regulatory Priority
LTA	Long-Term Average
MDEL	Maximum Daily Effluent Limitation
MDL	Method Detection Limit
MEC	Maximum Effluent Concentration
MER	Mass Emission Rate
MGD	Million Gallons per Day
mg/L	Milligrams per Liter
ML	Minimum Level

Abbreviation	Definition
MPN	Most Probable Number
MRP	Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer System
ND	Not Detected
NH_3	Unionized ammonia
NOEC	No-Observed-Effect-Concentration
NPDES	National Pollutant Discharge Elimination System
NTR	National Toxics Rule
NTU	Nephelometric Turbidity Unit
Ocean Plan	*California Ocean Plan, Water Quality Control Plan Ocean Waters of California*
PCB	Polychlorinated Biphenyls
pCi/L	Picocuries per Liter
PMP	Pollutant Minimization Program
PMSD	Percent Minimum Significant Difference
ppt	Parts Per Thousand
POTWs	Publicly-Owned Treatment Works
QA	Quality Assurance
QC	Quality Control
RL	Reporting Level
ROWD	Report of Waste Discharge
RPA	Reasonable Potential Analysis
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SIP	State Implementation Policy, *Policy for Implementation of Toxics Standards for Inland Surface Waters, and Enclosed Bays, and Estuaries of California*
SM	Standard Methods
SMR	Self-monitoring Report
SOPs	Standard Operating Procedures
SOU	Single Operational Upset
State Implementation Plan	*Policy for Implementation of Toxics Standards for Inland Surface Waters, and Enclosed Bays, and Estuaries of California*
State Water Board	State Water Resources Control Board
SWAMP	Surface Water Ambient Monitoring Program
SWPPP	Storm Water Pollution Prevention Plan
SWQPAs	State Water Quality Protection Areas
TBELs	Technology-Based Effluent Limitations
Thermal Plan	*Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California*
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TRE	Toxicity Reduction Evaluation
TSS	Total Suspended Solids
TST	Test of Significant Toxicity
TUc	Chronic Toxicity Unit
µg/L	Micrograms per Liter
USEPA	U.S. Environmental Protection Agency
Water Code	California Water Code

Abbreviation	Definition
WDRs	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WLA	Waste Load Allocation
WQBELs	Water Quality-Based Effluent Limitations

Part 2. – Glossary of Common Terms

Areas of Special Biological Significance (ASBS)

Those areas designated by the 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.

Acute Toxicity

The ability of a substance to cause severe biological harm or death soon after a single exposure or dose. The term acute toxicity also encompasses any poisonous effect resulting from a single short-term exposure to a toxic substance.

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.

Beneficial Uses

The uses of water necessary for the survival or well-being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals. "Beneficial Uses" of the waters of the State that may be protected against include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. In the *Water Quality Control Plan for the San Diego Basin* (Basin Plan), existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. “Beneficial Uses” are equivalent to "Designated Uses" under federal law. [California Water Code section 13050(f)].

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.

Bypass

The intentional diversion of waste streams from any portion of a treatment facility. (40 CFR section 122.41(m)(1)(i).)

Carcinogenic

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

Chlordane

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

Chronic Toxicity

The capacity of a substance to cause long-term poisonous health effects in humans, animals, fish, and other organisms. This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response. Chronic toxicity shall be determined as Pass or Fail:

“Pass” or “Fail” and “Percent Effect” (effluent limitations for this Order)

The discharge is subject to determination of “Pass” or “Fail” and “Percent Effect” from a chronic toxicity test using the TST statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-004, 2010), Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is:

Mean discharge IWC response ≤0.75 × Mean control response.

Chlorinated Phenolics

The sum of 4-chloro-3-methylphenol, 2-chlorophenol, pentachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol.

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

A composite sample is defined as a combination of at least eight sample aliquots of at least 100 ml, collected at periodic intervals during the operating hours of a. facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. The 100 ml minimum volume of an aliquot does not apply to automatic self-purging samplers. If one 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.

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.

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)

DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dichlorobenzenes

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

Dichlorodiphenyltrichloroethane (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.

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.

Discharge Monitoring Reports (DMRs)

The DMRs means the Environmental Protection Agency (EPA) uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by ''approved States'' as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Dredged Material

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

Effluent Concentration Allowance (ECA)

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

Enclosed Bays

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

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

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

Halomethanes

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

HCH

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

Initial Dilution

The process that results in the rapid and irreversible turbulent mixing of wastewater with bay water around the point of discharge. Where turbulent mixing results primarily from the momentum of discharge, initial dilution 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 Board, whichever results in the lower estimate for initial dilution.

Inland Surface Waters

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

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).

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).

Six-Month Median Effluent Limitation

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

Method Detection Limit (MDL)

MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in in 40 CFR part 136, Appendix B.

Minimum Level (ML)

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

Mixing Zone

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

Not Detected (ND)

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

Ocean Waters

The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's *California Ocean Plan*.

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)

PCBs (polychlorinated biphenyls) represent the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Arcolor-1260

Percent Removal

A percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the average values of the raw wastewater influent pollutant concentrations to the facility and the average values of the effluent pollutant concentrations for a given time period.

Persistent Pollutants

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

Phenolic Compounds (non-chlorinated)

The sum of 2,4-dimethylphenol, 4,6-Dinitro-2-methylphenol, 2, 4-dinitrophenol, 2-methylphenol, 4-methylphenol, 2-nitropheneol, 4-nitrophenol, 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 a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The San Diego Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention

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

Reporting Level (RL)

The RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approve analytical methods for reporting a sample result that are selected by the San Diego Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

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 Public Health as shellfish for public health purposes (i.e., mussels, clams and oysters).

Significant Difference

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

Six-Month Median Effluent Limitation

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

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 Resolution No.'s 74-28, 74-32, and 75-61 are now also classified as a subset of State Water Quality Protection Areas and require special protections afforded by the Ocean Plan.

TCDD equivalents
TCDD equivalents represent the sum of 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 by the table below. USEPA Method 8280 may be used to analyze TCDD equivalents.

Isomer Group	Toxicity Equivalence Factor
2,3,7,8 – tetra CDD	1.0
2,3,7,8 – penta CDD	0.5
2,3,7,8 – hexa CDD	0.1
2,3,7,8 – hepta CDD	0.01
octa CDD	0.001
2,3,7,8 – tetra CDF	0.1
1,2,3,7,8 – penta CDF	0.05
2,3,4,7,8 – penta CDF	0.5
2,3,7,8 – hexa CDFs	0.1
2,3,7,8 – hepta CDFs	0.01
Octa CDF	0.001

Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and

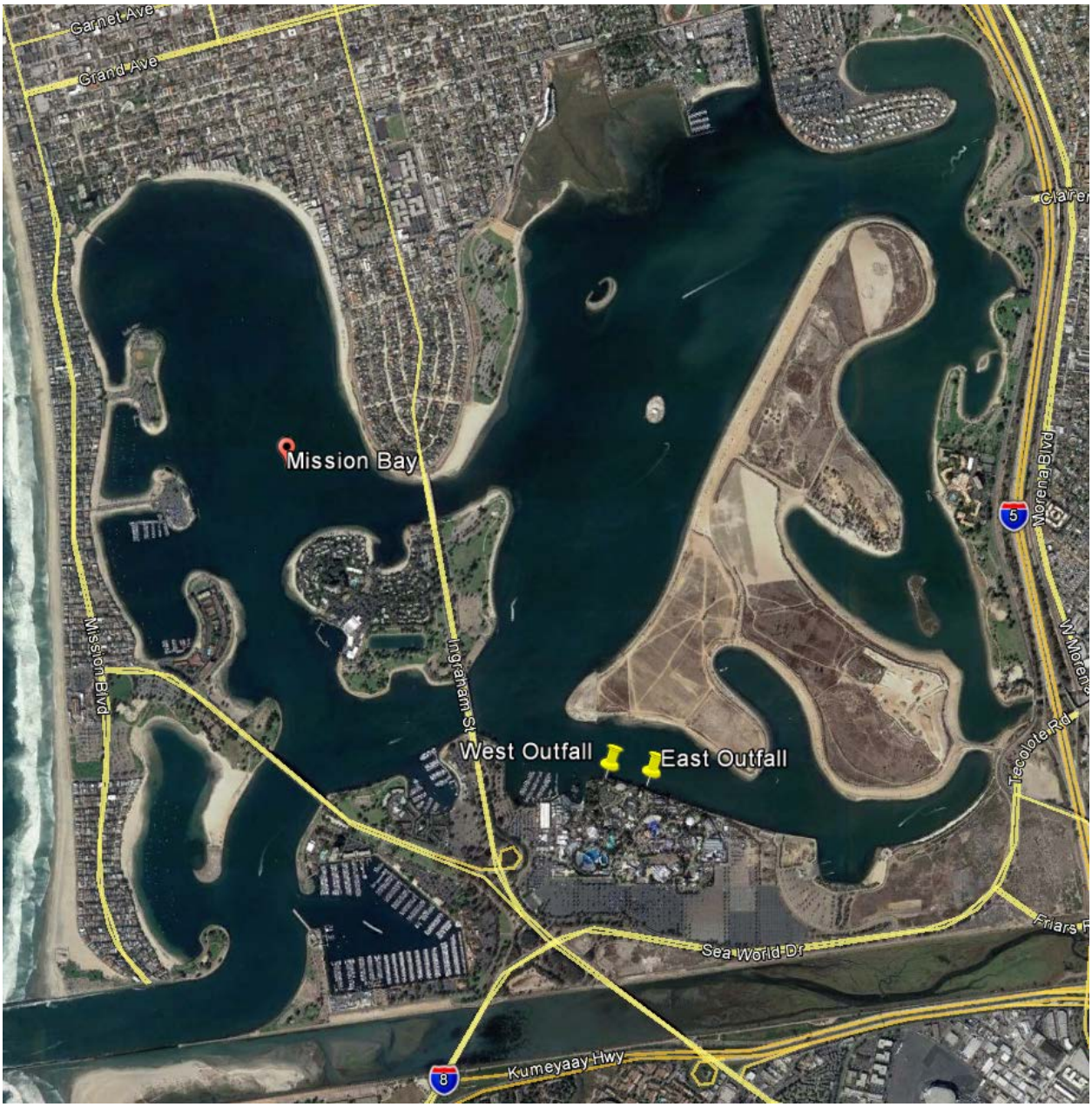
maintenance practices, and BMPs. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

Water Quality Objectives
Numerical or narrative limits on constituents or characteristics of water designed to protect designated beneficial uses of the water. [California Water Code section 13050(h)]. California's water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans.

Water Quality Standards
Provisions of State or federal law which consist of a designated use or uses for waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Act [40 CFR section 131.3(i)]. A water quality standard under the federal Clean Water Act is equivalent to a beneficial use designation plus a water quality objective. In California, water quality standards are promulgated by the State and Regional Water Boards in Water Quality Control Plans. Water quality standards are enforceable limits for the bodies of surface or ground waters for which they are established.

ATTACHMENT B – MAP

Figure B-1. Location Map Showing Discharge Locations



ATTACHMENT C – FLOW SCHEMATICS

Figure C-1 – Flow Schematic for East Intake, Treatment System, and Outfall (Discharge Point No. 001)

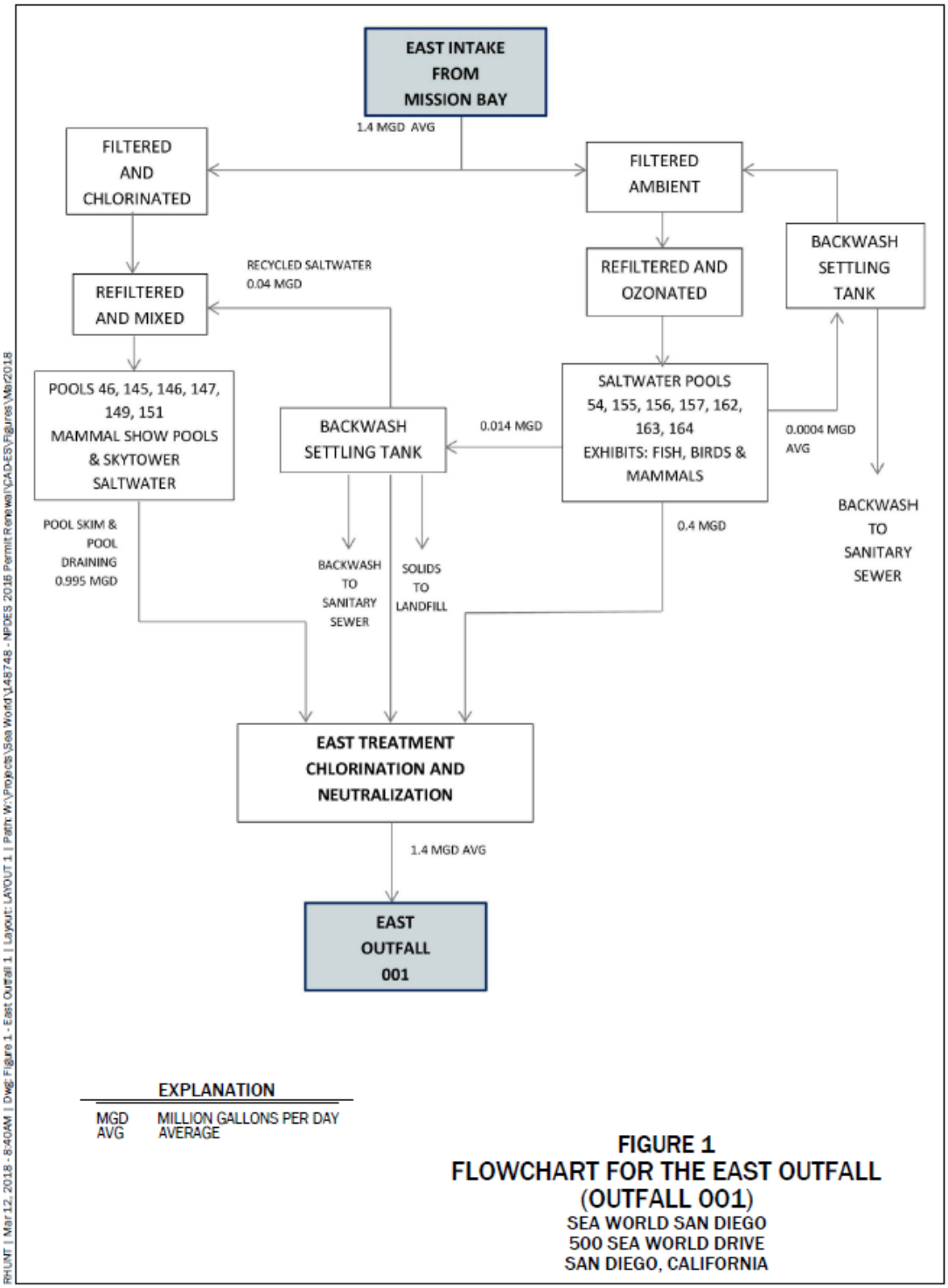
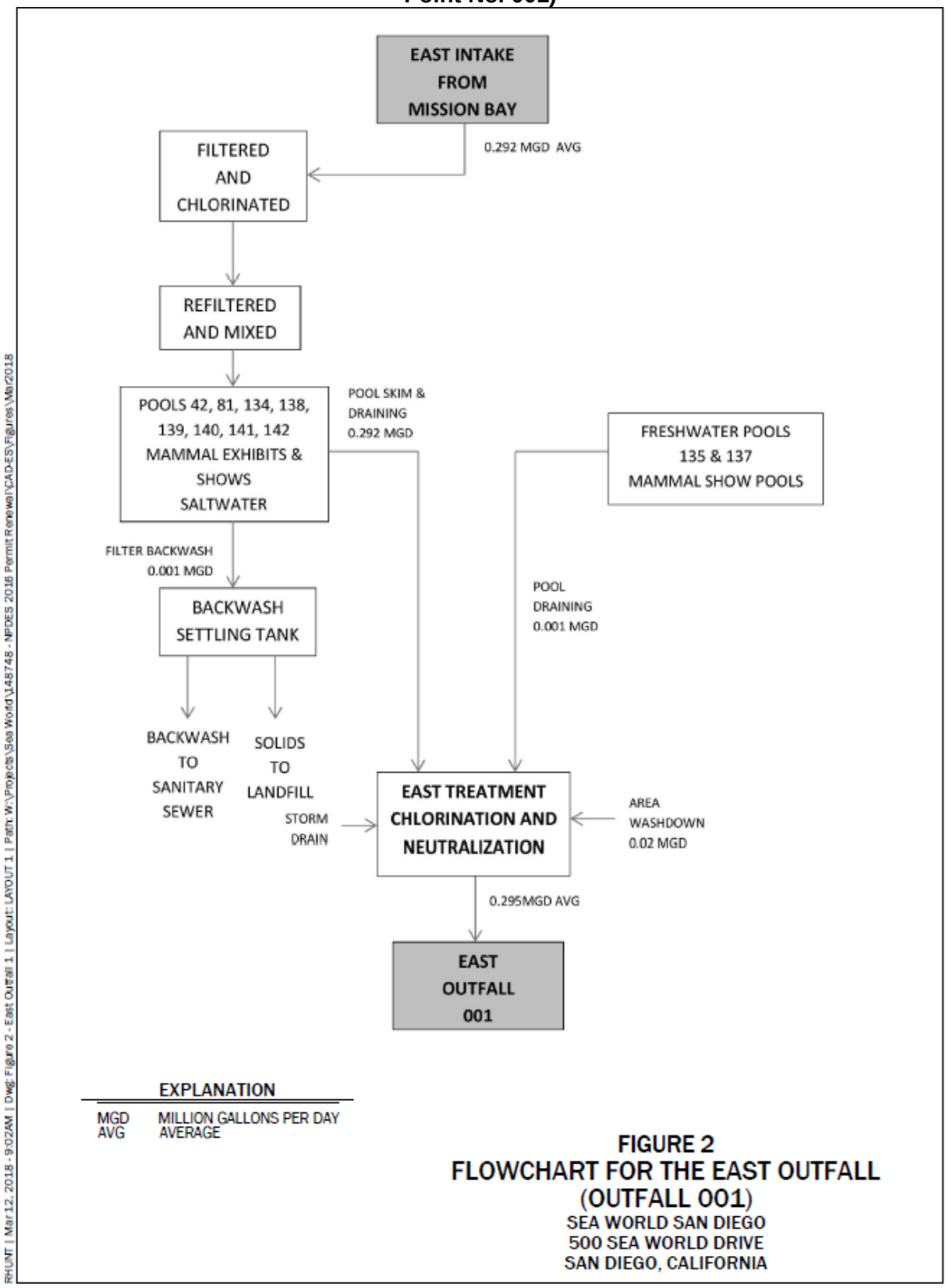
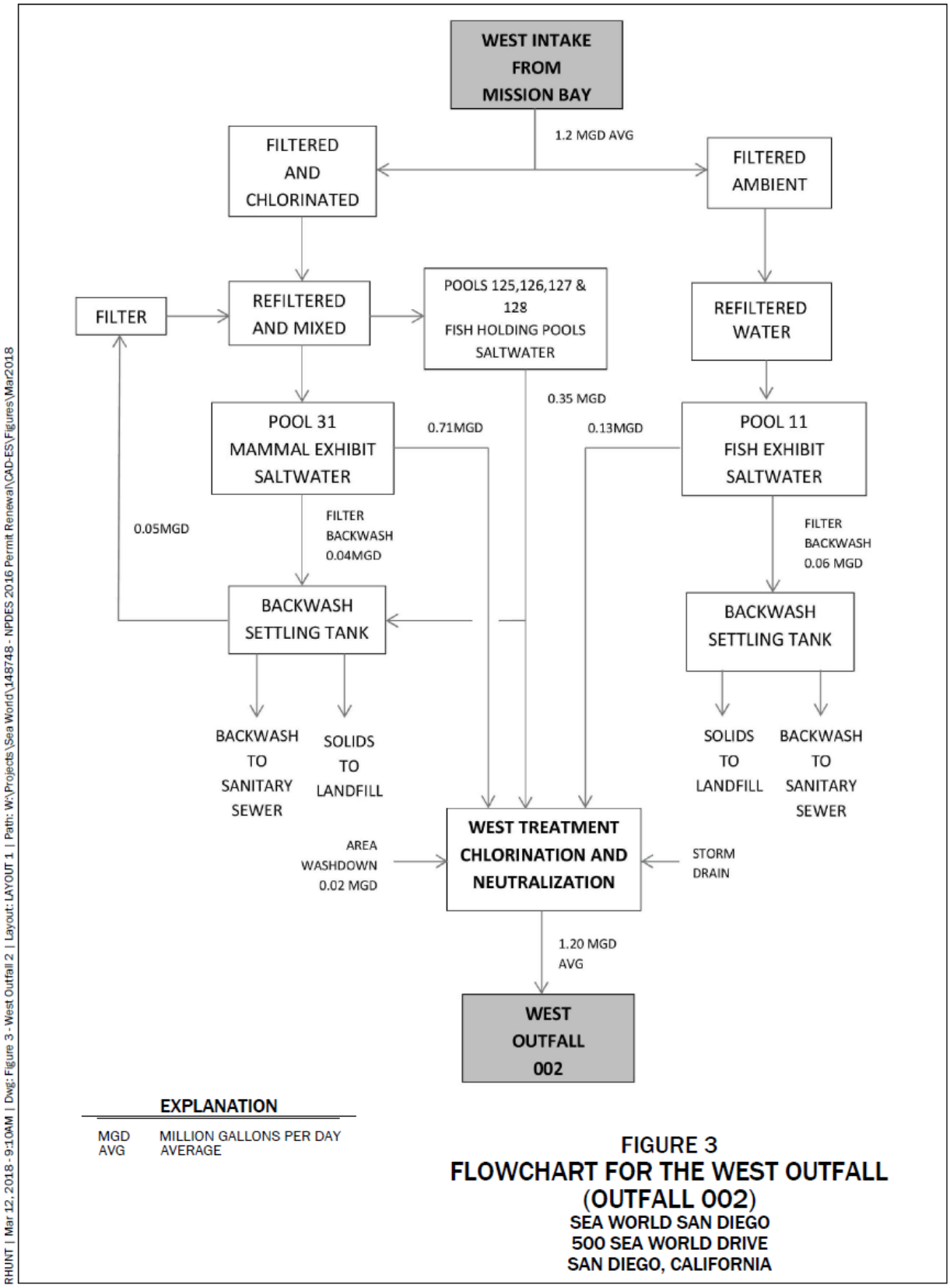


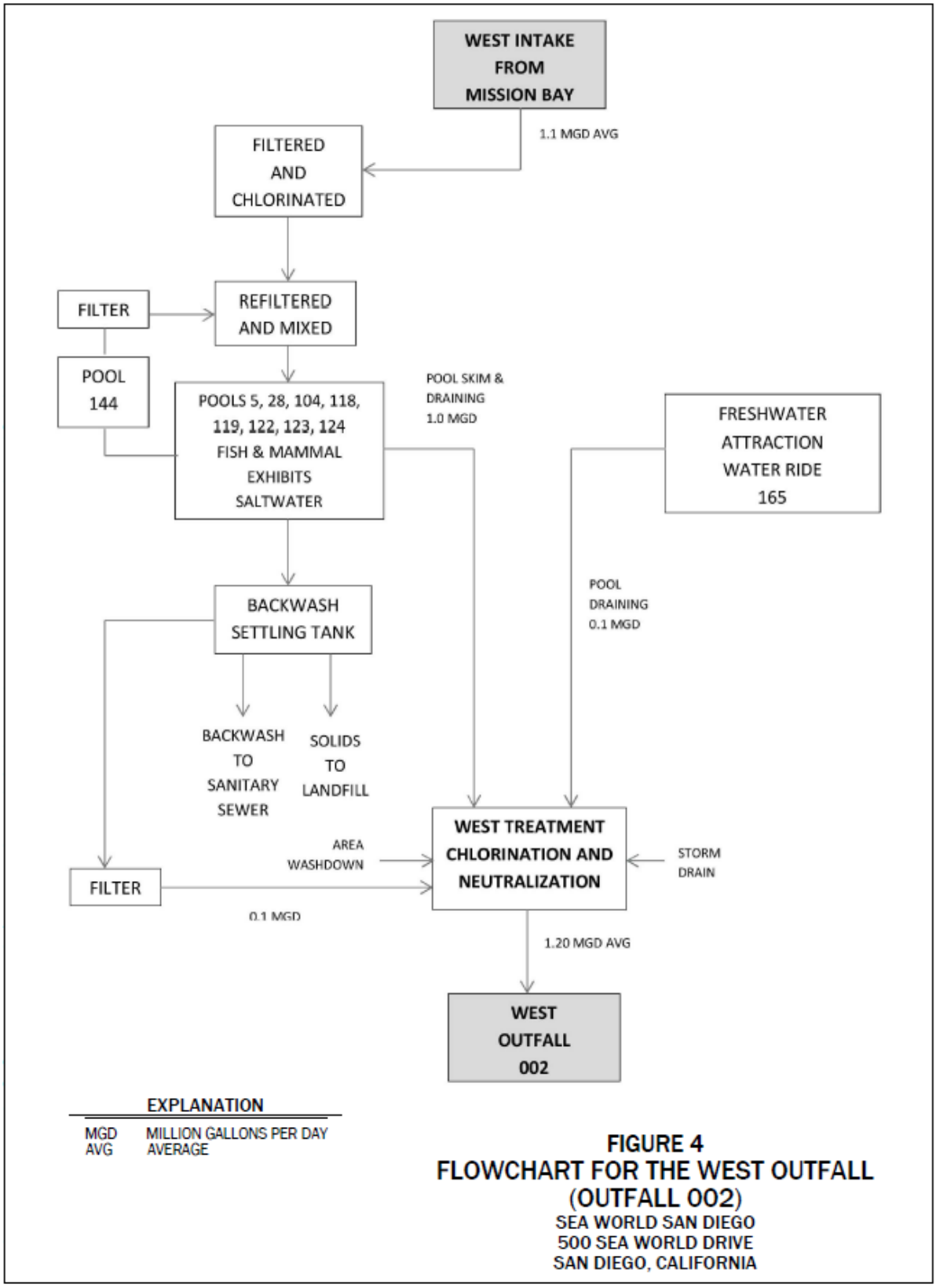
Figure C-2 – Flow Schematic for East Intake and Treatment System, and East Outfall (Discharge Point No. 001)



Attachment C-3 – Flow Schematic for West Intake, Treatment System, and Outfall (Discharge Point No. 002)



Attachment C-4 – Flow Schematic for West Intake, Treatment System, and Outfall (Discharge Point No. 002)



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (Water Code) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (Title 40, Code of Federal Regulations (40 CFR) section 122.41(a).)

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

C. Duty to Mitigate

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

E. Property Rights

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

F. Inspection and Entry

The Discharger shall allow the San Diego Water Board, State Water Board, USEPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. section 1318(a)(4)(b); 40 CFR section 122.41(i); Water Code, section 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.

section 1318(a)(4)(b)(i); 40 CFR section 122.41(i)(1); Water Code, sections 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. section 1318(a)(4)(b)(ii); 40 CFR section 122.41(i)(2); Water Code, sections 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. section 1318(a)(4)(b)(ii); 40 CFR section 122.41(i)(3); Water Code, sections 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. section 1318(a)(4)(b); 40 CFR section 122.41(i)(4); Water Code, sections 13267, 13383.)

G. Bypass

1. Definitions

a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR section 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 section 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 section 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the San Diego Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR section 122.41(m)(4)(i)):

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR section 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 section 122.41(m)(4)(i)(B)); and

c. The Discharger submitted notice to the San Diego Water Boards required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR section 122.41(m)(4)(i)(C).)

4. The San Diego Water Board may approve an anticipated bypass, after considering its adverse effects, if the San Diego Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 CFR section 122.41(m)(4)(ii).)

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. The notice shall be sent to the San Diego Water Board. (40 CFR section 122.41(m)(3)(i).)

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the San Diego Water Board. (40 CFR section 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 section 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 section 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 section 122.41(n)(3)):

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

b. The permitted facility was, at the time, being properly operated (40 CFR section 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 section 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 section 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 section 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 section 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 section 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the San Diego Water Board. The San Diego 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 section 122.41(l)(3); section 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 section 122.41(j)(1).)

B. Monitoring results must be conducted according to test procedures under 40 CFR part 136 or, in the case of sludge use or disposal, approved under 40 CFR part 136 unless otherwise specified in 40 CFR part 503 unless other test procedures have been specified in this Order. (40 CFR section 122.41(j)(4); section 122.44(i)(1)(iv).)

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 or O for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR part 136 or otherwise required under 40 CFR chapter 1, subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 CFR sections 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 San Diego Water Board Executive Officer at any time. (40 CFR section 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR section 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 CFR section 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 CFR section 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 CFR section 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 CFR section 122.41(j)(3)(v)); and

6. The results of such analyses. (40 CFR section 122.41(j)(3)(vi).)

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

1. The name and address of any permit applicant or Discharger (40 CFR section 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 CFR section 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the San Diego Water Board, State Water Board, or USEPA within a reasonable time, any information which the San Diego 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 San Diego Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR section 122.41(h); Water Code, section 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the San Diego Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR section 122.41(k).)

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

3. All reports required by this Order and other information requested by the San Diego 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 section 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 section 122.22(b)(2)); and

c. The written authorization is submitted to the San Diego Water Board and State Water Board. (40 CFR section 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 San Diego Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR section 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 section 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR section 122.41(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the San Diego Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR section 122.41(l)(4)(i).). 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 subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the San Diego Water Board. (40 CFR section 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 section 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 section 122.41(l)(5).)

E. Twenty-Four Hour Reporting

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

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR section 122.41(l)(6)(ii)):

a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR section 122.41(l)(6)(ii)(A).)

b. Any upset that exceeds any effluent limitation in this Order. (40 CFR section 122.41(l)(6)(ii)(B).)

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

F. Planned Changes

The Discharger shall give notice to the San Diego 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 section 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 section 122.41(l)(1)(i)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR section 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR section 122.41(l)(1)(iii).

G. Anticipated Noncompliance

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

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 CFR section 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 San Diego Water Board**,** State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR section 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the San Diego Water Board as soon as they know or have reason to believe (40 CFR section 122.42(a)):

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

a. 100 micrograms per liter (µg/L) (40 CFR section 122.42(a)(1)(i));

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

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (ROWD) (40 CFR section 122.42(a)(1)(iii)); or

d. The level established by the San Diego Water Board in accordance with section 122.44(f). (40 CFR section 122.42(a)(1)(iv).)

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

a. 500 micrograms per liter (µg/L) (40 CFR section 122.42(a)(2)(i));

b. 1 milligram per liter (mg/L) for antimony (40 CFR section 122.42(a)(2)(ii));

c. Ten (10) times the maximum concentration value reported for that pollutant in the ROWD (40 CFR section 122.42(a)(2)(iii)); or

d. The level established by the San Diego Water Board in accordance with section 122.44(f). (40 CFR section 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Section 308 of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of the Code of Federal Regulations, title 40 (40 CFR) require that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. California Water Code (Water Code) sections 13267 and 13383 also authorize the San Diego Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. Pursuant to this authority, this MRP establishes conditions for the Discharger to conduct routine or episodic self-monitoring of the discharges regulated under this Order at specified influent, internal operations, effluent, and receiving water monitoring locations. The MRP requires the Discharger to report the results to the San Diego Water Board with information necessary to evaluate discharge characteristics and compliance status.

The purpose of this MRP is to determine and ensure compliance with effluent limitations and other requirements established in this Order, assess treatment efficiency, characterize effluents, and characterize the receiving water and the effects of the discharge on the receiving water. This MRP also specifies requirements concerning the proper use, maintenance, and installation of monitoring equipment and methods, and the monitoring type intervals and frequency necessary to yield data that are representative of the activities and discharges regulated under this Order.

Each monitoring section contains an introductory paragraph summarizing why the monitoring is needed and the key management questions the monitoring is designed to answer. In developing the list of key management questions, the San Diego Water Board considered four basic types of information for each question:

(1) Management Information Need – Why does the San Diego Water Board need to know the answer?

(2) Monitoring Criteria – What monitoring will be conducted for deriving an answer to the question?

(3) Expected Product – How should the answer be expressed and reported?

(4) Possible Management Actions – What actions will be potentially influenced by the answer?

The framework for this monitoring program has three components that comprise a range of spatial and temporal scales: 1. core monitoring, 2. regional monitoring, and 3. special studies.

1. Core monitoring consists of the basic site-specific monitoring necessary to measure compliance with individual effluent limits and/or impacts to receiving water quality. Core monitoring is typically conducted in the immediate vicinity of the discharge by examining local scale spatial effects.

2. Regional monitoring provides information necessary to make assessments over large areas and serves to evaluate cumulative effects of all anthropogenic inputs. Regional monitoring data also assists in the interpretation of core monitoring studies. In the event that a regional monitoring effort takes place during the permit cycle in which this MRP does not specifically address regional monitoring, the San Diego Water Board may allow relief from aspects of core monitoring components in order to encourage participation pursuant to section V of this MRP.

3. Special studies are directed monitoring efforts designed in response to specific management or research questions identified through either core or regional monitoring programs. Often they are used to help understand core or regional monitoring results, where a specific environmental process is not well understood, or to address unique issues of local importance.

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in section II, Table E-1 below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the San Diego Water Board.

B. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurement is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ±5 percent from true discharge rates throughout the range of expected discharge volumes.

C. Monitoring must be conducted according to U.S. Environmental Protection Agency (USEPA) test procedures approved at 40 CFR part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act*, as amended, or unless other test procedures are specified in this Order and/or by the San Diego Water Board.

D. All analyses shall be performed in a laboratory certified to perform such analyses by the State Water Board's Division of Drinking Water (DDW) or by a laboratory approved by the San Diego Water Board. The laboratory must be accredited under the DDW Environmental Laboratory Accreditation Program (ELAP) to ensure the quality of analytical data used for regulatory purposes to meet the requirements of this Order. Additional information on ELAP can be accessed at http://www.waterboards.ca.gov/drinking_water/certlic/labs/index.shtml.

E. Records of monitoring information shall include information required under Standard Provision, Attachment D, section IV.

F. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices.

G. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Duplicate chemical analyses must be conducted on a minimum of 10 percent of the samples or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples. The Discharger should have a success rate equal or greater than 80 percent.

H. When requested by USEPA or the San Diego Water Board, the Discharger will participate in the NPDES Discharge Monitoring Report QA (DMR-QA) performance study. If the DMR-QA is not requested, the Discharger shall submit the most recent Water Pollution Performance Evaluation Study. The Discharger shall ensure that the results of the DMR-QA Study or the most recent Water Pollution Performance Evaluation Study are submitted annually by December 31 to the State Water Resources Control Board at the following address:

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

I. Analysis for toxic pollutants, including chronic toxicity, with effluent limitations or performance goals based on water quality objectives and criteria of the Basin Plan and the *Policy for*

Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) shall be conducted in accordance with procedures described in the Basin Plan and restated in this MRP.

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description	Coordinates[1]
--	E-INF	Representative sample location of the intake water, prior to any treatment, chemical addition, or use within the aquarium, for East intake system	32º 46’ 02” N; 117º 13’ 29” W
--	W-INF	Representative sample location of the intake water, prior to any treatment, chemical addition, or use within the aquarium, for West intake system	32º 46’ 05” N; 117º 13’ 48” W
001	EFF-001	Representative sample location of the final effluent for the East treatment system	32º 46’ 03” N; 117º 13’ 33” W
002	EFF-002	Representative sample location of the final effluent for the West treatment system	32º 46’ 04” N; 117º 13’ 40” W

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

III. CORE MONITORING REQUIREMENTS

A. Influent Monitoring Requirements

Influent monitoring is the collection and analysis of samples or measurements of wastewater prior to the treatment processes. Influent monitoring of a wastewater stream prior to entering the treatment plant is necessary to address the following question:

(1) Is the Facility complying with permit conditions including, but not limited to, the effluent limitation for total suspended solids expressed as maximum increment over the influent total suspended solids concentration?

The Discharger shall monitor the influent at Monitoring Locations E-INF and W-INF.

Table E-2. Influent Monitoring at Monitoring Location E-INF and W-INF[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Suspended Solids (TSS)	mg/L	24-hour composite	1/Month	[2]

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. Consistent with the requirements of 40 CFR part 136, the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP), or where no methods are specified for a given pollutant, by methods approved by USEPA and the State Water Board.

B. Effluent Monitoring Requirements

Effluent monitoring is the collection and analysis of samples or measurements of effluents, after all treatment processes, to determine and quantify contaminants and to demonstrate

compliance with applicable effluent limitations, standards, and other requirements of this Order.

Effluent monitoring is necessary to address the following questions:

(1) Does the effluent comply with permit effluent limitations, performance goals, and other requirements of this Order, thereby ensuring that water quality standards are achieved in the receiving water?

(2) What is the mass of constituents that are discharged daily, monthly, and annually?

(3) Is the effluent concentration or mass changing over time?

(4) Is the Facility being properly operated and maintained to ensure compliance with the conditions of the Order?

The Discharger shall monitor the east effluent discharge (Discharge Point No. 001) at EFF-001 and the west effluent discharge (Discharge Point No. 002) as follows:

Table E-3. Effluent Monitoring at Monitoring Location EFF-001 and EFF-002[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Recorder/Totalized	Continuous	-
pH	Standard Units	Grab	1/Week	[2]
Fecal Coliform	MPN/100 mL	Grab	1/Week	[2]
Total Coliform	MPN /100 mL	Grab	1/Week	[2]
Enterococcus	MPN 100 mL	Grab	1/Week	[2]
Chlorine, Total Residual	µg/L	Grab	1/Week[3]	[2]
Temperature	˚C	Grab	1/Month	[2]
Total Suspended Solids (TSS)	mg/L	24-hr Composite	1/Month	[2]
Settleable Solids	ml/L	24-hr Composite	1/Month	[2]
Turbidity	NTU	24-hr Composite	1/Month	[2]
Oil and Grease	mg/L	24-hr Composite	1/Month[3]	[2]
Ammonia, Unionized as N	mg/L	24-hr Composite	1/Month[3]	[2]
Copper, Total Recoverable	µg/L	24-hr Composite	1/Month[3]	[2,5]
Silver, Total Recoverable	µg/L	24-hr Composite	1/Month[3]	[2,5]
Chronic Toxicity	"Pass"/"Fail" (Test of Significant Toxicity)[6]	24-hr Composite	1/Quarter	[7]
PARAMETERS FOR PROTECTION OF MARINE AQUATIC LIFE				
Arsenic, Total Recoverable	µg/L	24-hr Composite	1/Year[3,4]	[2]
Cadmium, Total Recoverable	µg/L	24-hr Composite	1/Year[3,4]	[2]
Chromium (VI), Total Recoverable	µg/L	24-hr Composite	1/Year[3,4]	[2]
Lead, Total Recoverable	µg/L	24-hr Composite	1/Year[3,4]	[2]
Mercury, Total Recoverable	µg/L	24-hr Composite	1/Year[3,4]	[2]
Nickel, Total Recoverable	µg/L	24-hr Composite	1/Year[3,4]	[2]
Selenium, Total Recoverable	µg/L	24-hr Composite	1/Year[3,4]	[2]
Zinc, Total Recoverable	µg/L	24-hr Composite	1/Year[3,4]	[2]
Cyanide, Total Recoverable	µg/L	24-hr Composite	1/Year[3,4]	[2]
Phenolic Compounds	µg/L	24-hr Composite	1/Year[3,4]	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
(nonchlorinated)[1]				
Chlorinated Phenolics[1]	µg/L	24-hr Composite	1/Year[3,4]	[2]
Endosulfan[1]	µg/L	24-hr Composite	1/Year[3,4]	[2]
Endrin	µg/L	24-hr Composite	1/Year[3,4]	[2]
HCH (BHC)[1]	µg/L	24-hr Composite	1/Year[3,4]	[2]
PARAMETERS FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS				
Acrolein	µg/L	Grab	1/Year[3,4]	[2]
Antimony, Total	µg/L	24-hr Composite	1/Year[3,4]	[2]
Bis (2-chloroethoxy) Methane	µg/L	24-hr Composite	1/Year[3,4]	[2]
Bis (2-chloroisopropyl) Ether	µg/L	24-hr Composite	1/Year[3,4]	[2]
Chlorobenzene	µg/L	Grab	1/Year[3,4]	[2]
Chromium (III), Total Recoverable	µg/L	24-hr Composite	1/Year[3,4]	[2]
Di-n-butyl Phthalate	µg/L	24-hr Composite	1/Year[3,4]	[2]
Dichlorobenzenes[1]	µg/L	Grab	1/Year[3,4]	[2]
Diethyl Phthalate	µg/L	24-hr Composite	1/Year[3,4]	[2]
Dimethyl Phthalate	µg/L	24-hr Composite	1/Year[3,4]	[2]
4,6-dinitro-2-methylphenol	µg/L	24-hr Composite	1/Year[3,4]	[2]
2,4-dinitrophenol	µg/L	24-hr Composite	1/Year[3,4]	[2]
Ethylbenzene	µg/L	Grab	1/Year[3,4]	[2]
Fluoranthene	µg/L	24-hr Composite	1/Year[3,4]	[2]
Hexachlorocyclopentadiene	µg/L	24-hr Composite	1/Year[3,4]	[2]
Nitrobenzene	µg/L	24-hr Composite	1/Year[3,4]	[2]
Thallium, Total Recoverable	µg/L	24-hr Composite	1/Year[3,4]	[2]
Toluene	µg/L	Grab	1/Year[3,4]	[2]
Tributyltin	µg/L	24-hr Composite	1/Year[3,4]	[2]
1,1,1-trichloroethane	µg/L	Grab	1/Year[3,4]	[2]
PARAMETERS FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS				
Acrylonitrile	µg/L	Grab	1/Year[3,4]	[2]
Aldrin	µg/L	24-hr Composite	1/Year[3,4]	[2]
Benzene	µg/L	Grab	1/Year[3,4]	[2]
Benzidine	µg/L	24-hr Composite	1/Year[3,4]	[2]
Beryllium	µg/L	24-hr Composite	1/Year[3,4]	[2]
Bis (2-chloroethyl) Ether	µg/L	24-hr Composite	1/Year[3,4]	[2]
Bis (2-ethlyhexyl) Phthalate	µg/L	24-hr Composite	1/Year[3,4]	[2]
Carbon Tetrachloride	µg/L	Grab	1/Year[3,4]	[2]
Chlordane[1]	µg/L	24-hr Composite	1/Year[3,4]	[2]
Chlorodibromomethane	µg/L	Grab	1/Year[3,4]	[2]
Chloroform	µg/L	Grab	1/Year[3,4]	[2]
DDT[1]	µg/L	24-hr Composite	1/Year[3,4]	[2]
1,4-dichlorobenzene	µg/L	Grab	1/Year[3,4]	[2]
3,3'-dichlorobenzidine	µg/L	24-hr Composite	1/Year[3,4]	[2]
1,2-dichloroethane	µg/L	Grab	1/Year[3,4]	[2]
1,1-dichloroethylene	µg/L	Grab	1/Year[3,4]	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dichlorobromomethane	µg/L	Grab	1/Year[3,4]	[2]
Dichloromethane	µg/L	Grab	1/Year[3,4]	[2]
1,3-dichloropropene	µg/L	Grab	1/Year[3,4]	[2]
Dieldrin	µg/L	24-hr Composite	1/Year[3,4]	[2]
2,4-dinitrotoluene	µg/L	24-hr Composite	1/Year[3,4]	[2]
1,2-diphenylhydrazine	µg/L	24-hr Composite	1/Year[3,4]	[2]
Halomethanes[1]	µg/L	Grab	1/Year[3,4]	[2]
Heptachlor	µg/L	24-hr Composite	1/Year[3,4]	[2]
Heptachlor Epoxide	µg/L	24-hr Composite	1/Year[3,4]	[2]
Hexachlorobenzene	µg/L	24-hr Composite	1/Year[3,4]	[2]
Hexachlorobutadiene	µg/L	24-hr Composite	1/Year[3,4]	[2]
Hexachloroethane	µg/L	24-hr Composite	1/Year[3,4]	[2]
Isophorone	µg/L	24-hr Composite	1/Year[3,4]	[2]
N-nitrosodimethylamine	µg/L	24-hr Composite	1/Year[3,4]	[2]
N-nitrosodi-N-propylamine	µg/L	24-hr Composite	1/Year[3,4]	[2]
N-nitrosodiphenylamine	µg/L	24-hr Composite	1/Year[3,4]	[2]
Polynuclear Aromatic Hydrocarbons (PAHs)[1]	µg/L	24-hr Composite	1/Year[3,4]	[2]
Polychlorinated Biphenyls (PCBs)[1]	µg/L	24-hr Composite	1/Year[3,4]	[2]
TCDD equivalents[1]	µg/L	24-hr Composite	1/Year[3,4]	[2]
1,1,2,2-tetrachloroethane	µg/L	Grab	1/Year[3,4]	[2]
Tetrachloroethylene	µg/L	Grab	1/Year[3,4]	[2]
Toxaphene	µg/L	24-hr Composite	1/Year[3,4]	[2]
Trichloroethylene	µg/L	Grab	1/Year[3,4]	[2]
1,1,2-trichloroethane	µg/L	Grab	1/Year[3,4]	[2]
2,4,6-trichlorophenol	µg/L	24-hr Composite	1/Year[3,4]	[2]
Vinyl Chloride	µg/L	Grab	1/Year[3,4]	[2]

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. Consistent with the requirements of 40 CFR part 136, the methods must meet the lowest MLs specified in Attachment 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP), or where no methods are specified for a given pollutant by methods approved by USEPA and the State Water Board.
3. The Discharger shall calculate and report the mass emission rate (MER) of the constituent for each sample taken. The MER shall be calculated in accordance with section VII.I.4 of this Order.
4. The minimum frequency of monitoring for this constituent is automatically increased to twice the minimum frequency specified, if any analysis for this constituent yields a result higher than the applicable effluent limitation or performance goal specified in this Order. The increased minimum frequency of monitoring shall remain in effect until the results of a minimum of four consecutive analyses for this constituent are below all applicable effluent limitations or performance goals specified in this Order.
5. EPA Method 1640 (reductive precipitation sample pre-concentration)/EPA Method 200.8 (ICP-MS) may be used to determine copper and silver.
6. For compliance determination, chronic toxicity results shall be reported as “Pass” or “Fail” and “Percent Effect.”
7. As specified in section VII.K of this Order and section III.C of this MRP (Attachment E).

C. Whole Effluent Toxicity (WET) Testing Requirements

The WET refers to the overall aggregate toxic effect of an effluent measured directly by an aquatic toxicity test(s). The control of wet is one approach this order uses to control the discharge of toxic pollutants. WET tests evaluate the aggregate toxic effects of all chemicals in the effluent including additive, synergistic, or antagonistic toxicity effects; the toxicity effects of unmeasured chemicals in the effluent; and the variability in bioavailability of the chemicals in the effluent. Monitoring to assess the overall toxicity of the effluent is required to answer the following questions:

(1) Does the effluent meet effluent limitations for toxicity thereby ensuring that water quality standards are achieved in the receiving water?

(2) If the effluent does not meet effluent limitations for toxicity, are unmeasured pollutants causing risk to aquatic life or human health?

(3) If the effluent does not meet effluent limitations for toxicity, are pollutants in combinations causing risk to aquatic life or human health?

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

The chronic IWC for the discharge is 100 percent effluent.

2. Sample Volume and Holding Time

The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. For the receiving water, sufficient sample volume shall also be collected during accelerated monitoring for subsequent Toxicity Identification Evaluation (TIE) studies, if necessary, at each sampling event. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.

3. Chronic Marine Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity greater than one parts per thousand (ppt), the Discharger shall conduct the following chronic toxicity tests on effluent samples, at the in-stream waste concentration for the discharge, in accordance with species and test methods in *Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine Estuarine Organisms* (EPA/600/R-95/136, 1995). Artificial sea salts or hypersaline brine shall be used to increase sample salinity if needed. In no case shall these species be substituted with another test species unless written authorization from the San Diego Water Board is received.

a. A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01). If laboratory-held cultures of the topsmelt, *Atherinops affinis*, are not available for testing, then the Discharger shall conduct a static renewal toxicity test with the inland silverside, *Menidia beryllina* (Larval Survival and Growth Test Method 1006.01), found in the third edition of Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms (EPA-821-R-02-014, 2002; Table IA, 40 CFR part 136). Additional species may be used by the Discharger if approved by the San Diego Water Board.

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

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

4. Species Sensitivity Screening

Species sensitivity screening shall be conducted during this Order's first required sample collection or within 24 months of most recent screening, whichever is later. The Discharger shall collect a single effluent sample to initiate and concurrently conduct three toxicity tests using the fish, an invertebrate, and the alga species previously referenced. This 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 shall be collected 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 this Order cycle. If only one species fails, then that species shall be used for routine monitoring during this Order 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 this Order cycle, until such time as a rescreening is required.

Species sensitivity rescreening is required every 24 months. The Discharger shall rescreen with the marine vertebrate species, a marine invertebrate species, and 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.

The species used to conduct the receiving water monitoring shall be the most sensitive species from the most recent species sensitivity screening.

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

5. Quality Assurance (QA) and Additional Requirements

Quality assurance (QA) 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 (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833- R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is: Mean discharge IWC response ≤0.75 × Mean control response. A test result that rejects this null hypothesis is reported as "Pass." A test result that does not reject this null hypothesis is reported as "Fail." This is a t-test (formally Student's t-test), a statistical analysis comparing two sets of replicate observations—in the case of WET, only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is "Pass" or "Fail"). The Welch's t-test

employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances. The relative "Percent Effect" at the discharge IWC is defined and reported as: ((Mean control response - Mean discharge IWC response) ÷ Mean control response) × 100.

b. 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), the test should be declared invalid, then the Discharger must resample and re-test within 14 days of test termination.

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 effects concentration at 25 percent (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 this MRP 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 shall prepare and submit a copy of the Discharger's Initial Investigation TRE Work Plan to the San Diego Water Board for approval within 90 days of the effective date of this Order. If the San Diego Water Board 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), or most current version, as guidance. At a minimum, the work plan must contain the provisions in Attachment I, *Generic Toxicity Reduction Evaluation (TRE) Work Plan*. The TRE Work Plan shall describe the steps that the Discharger intends to follow if toxicity is detected, and shall include, at a minimum:

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. Accelerated Monitoring Schedule "Fail and Greater Than or Equal to 50% Effect"

The Maximum Daily single result shall be used to determine if accelerated testing needs to be conducted. Once the Discharger becomes aware of this result, the Discharger shall notify the San Diego Water Board and implement an accelerated

monitoring schedule within five calendar days of the receipt of the result. However, if the sample is contracted out to a commercial laboratory, the Discharger shall ensure that the San Diego Water Board is notified and the first of four accelerated monitoring tests is initiated within seven calendar days of the Discharger becoming aware of the result. The accelerated monitoring schedule shall consist of four toxicity tests (including the discharge IWC), conducted at approximately two-week intervals, over an eight-week period; in preparation for the TRE process and associated reporting, these results shall also be reported using the EC25. If each of the accelerated toxicity tests results in "Pass and less than 50% effect," the Discharger shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results in "Fail and greater than or equal to 50% effect," the Discharger shall immediately implement the TRE Process conditions set forth below. During accelerated monitoring schedules, only TST results ("Pass" or "Fail") for chronic toxicity tests shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL.

8. TRE Process

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

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 of receiving validated results, submit to the San Diego Water Board a Detailed TRE Work Plan, which shall follow the 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 San Diego Water Board:

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; and

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

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

c. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances

from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.

d. The Discharger shall continue to conduct the minimum effluent monitoring while the TRE and/or TIE process is taking place. Additional accelerated monitoring and TRE Work Plans are not required once a TRE is begun.

e. The San Diego 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 routine monitoring finds there is no longer toxicity.

f. The San Diego Water Board may consider the results of any TRE/TIE studies in an enforcement action.

9. 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) conducted during the monitoring period shall be reported on the SMR due date specified in Table E-5.

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 San Diego Water Board shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. Prior to the completion of the final TRE/TIE report, the Discharger shall provide status updates in the monthly monitoring reports, indicating which TRE/TIE 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 for the reference toxicant for the previous 20 tests and the laboratory’s performance for the control mean, control standard deviation, and control coefficient of variation for the previous 12-month period.

g. Any additional quality assurance/quality control (QA/QC) documentation or any additional chronic toxicity-related information, upon written request from the San Diego Water Board.

D. Land Discharge Monitoring Requirements – NOT APPLICABLE

E. Recycling Monitoring Requirements – NOT APPLICABLE

IV. RECEIVING WATER MONITORING REQUIREMENTS

The receiving water monitoring requirements set forth below are designed to measure the effects of the Facility discharge on the receiving waters.

Station location, sampling, sample preservation and analyses, when not specified, shall be by methods approved by the San Diego Water Board. The monitoring program may be modified by the San Diego Water Board at any time. The Discharger may also submit a list of and rationale for any reductions in or other changes to these monitoring requirements that it considers to be appropriate to the San Diego Water Board for approval.

In the event that the Discharger is unable to obtain a sample from a monitoring station(s) due to safety, legal, or other reasons, collection of samples at such station(s) can be omitted. In the event that a monitoring location is omitted, the Discharger shall submit a statement to the San Diego Water Board containing, at a minimum, the following information:

1. The monitoring station(s) that was omitted;
2. The date the monitoring station was omitted; and
3. A description of the circumstances for omitting the collection of data at the monitoring station.

A. Visual Observations Near Discharge Points

The Discharger shall conduct visual observations of the outfall lines and in the vicinity of Discharge Point No. 001 and Discharge Point No. 002 on a monthly basis and document the presence of any bubbling, floating and suspended material, visible sheens, discoloration, or odors. Notes on receiving water conditions shall be summarized annually in the receiving water monitoring reports.

B. Receiving Water Monitoring Program

A receiving water monitoring program is an ongoing program designed to measure the effects of SeaWorld's discharge on the receiving water, including the effects on water quality, marine life, and human health. A receiving water monitoring program is intended to answer the following questions:

(1) Does the receiving water meet water quality standards?

(2) Are the receiving water conditions getting better or worse over time?

(3) Are densities of bacteria in water contact recreation areas below levels protective of public health?

(4) What are the effects of the discharge on the receiving waters?

(5) What is the fate of the wastewater plume in Mission Bay?

1. **Conceptual Site Model.** The Discharger shall construct a Conceptual Site Model (CSM) based on available site-specific data such as the effluent quality, occurrence of waste constituents in the receiving water and sediment, direction and magnitude of surface and subsurface currents, and tidal flushing of Mission Bay. The CSM shall include three-dimensional spatial extent and temporal variability of the waste constituents in the receiving water; and the location and exposure points of actual and potential receptors (humans, animals, and plants).

   The CSM shall be refined and updated as data becomes available. The initial CSM shall include a discussion of the level of uncertainty of conclusions, outline data gaps in the initial CSM, and describe the additional work needed to complete the CSM. Updates to the CSM shall be included in all future technical and monitoring reports submitted. The initial CSM shall be submitted to the San Diego Water Board with the work plan described in section IV.B.2.

2. Receiving Water Monitoring Program Work Plan

a. Receiving Water Monitoring Program Work Plan. The Discharger shall submit to the San Diego Water Board for approval within 180 days after the effective date of this Order, a Receiving Water Monitoring Program Work Plan to implement an ongoing receiving water monitoring program. The San Diego Water Board may extend the due date of the Work Plan if the Discharger demonstrates the need for additional time. The Work Plan shall include the following elements:

i. The Conceptual Site Model;

ii. Specific questions that will be addressed with the receiving monitoring program;

iii. Proposed sample locations, monitoring frequency, and constituents that will be monitored;

iv. Protocols for sample collection and processing;

v. Methods for analyzing monitoring data; *and*

vi. An ELAP approved Quality Assurance Project Plan (QAPP) describing the project objectives and organization, functional activities, and quality assurance/quality control protocols;

b. Receiving Water Monitoring Program Work Plan Implementation. The Discharger shall implement the Work Plan 60 days after submission of the Work Plan, unless otherwise directed in writing by the San Diego Water Board. The Discharger shall notify the San Diego Water Board of the intent to initiate the proposed actions included in the Work Plan; and comply with any conditions set by the San Diego Water Board.

c. Results of the Receiving Water Monitoring Program. The results of the receiving water monitoring program shall be submitted annually with the receiving water monitoring report required in section IV.C of this MRP. This report shall include in-depth discussion, evaluation, interpretation, and tabulation of the project data.

C. Receiving Water Monitoring Reports

1. The Discharger shall submit a receiving water monitoring report annually on March 1. The receiving water monitoring report shall cover the following requirements:

a. Visual observations of discharge points (section IV.A of this MRP)

b. Receiving Water Monitoring Program (section IV.B of this MRP)

2. The annual receiving water monitoring report shall include, at a minimum, the following information:

a. A description of climatic and receiving water characteristics at the time of sampling [e.g. observations of wind (direction and speed); weather (e.g. cloudy, sunny, rainy, etc.; observations of water color or discoloration (percent algal cover at surface and bottom); presence of oil and grease, turbidity, and odor in the water or on the shore; time of sampling; air temperature (°F); water temperature (°F); etc.].

b. A description of sampling stations including a description of characteristics unique to each station [e.g. Global Positioning System (GPS) coordinates for station location; photo documentation; sediment characteristics; etc.];

c. A description of the sample collection and preservation procedures used in the survey;

d. A description of the specific method used for laboratory analysis; *and*

e. Tabulation of the data and an in-depth discussion of the receiving water monitoring results. The discussion shall compare data for the reference station(s) with data from the stations located in the area of the discharge. All tabulations and computations shall be explained. The in-depth discussion of the tabulated data shall address the water quality management questions posed in sections IV and IV.B of this MRP. The in-depth discussion shall include interpretations and conclusions as to whether applicable bacterial characteristics described in Receiving Water Limitation V.A.1 of this Order have been attained at each station.

V. REGIONAL WATERSHED MONITORING

Regional water monitoring provides information about the sources, fates, and effects of anthropogenic contaminants necessary to make assessments over large areas. The large-scale assessments provided by regional monitoring describe and evaluate cumulative effects of all anthropogenic inputs and enable better decision making regarding protection of beneficial uses of Mission Bay. Regional monitoring data assists in the interpretation of core monitoring studies by providing a more accurate and complete characterization of reference conditions and natural variability. Regional monitoring also leads to methods standardization and improved quality control through inter-calibration exercise. The coalitions implementing regional monitoring enable sharing of technical resources, trained personnel, and associated costs. Focusing these resources on regional issues and developing a broader understanding of pollutants effects in ocean waters enables the development of more rapid and effective response strategies. Based on all of these considerations the San Diego Water Board supports regional approaches to monitoring Mission Bay.

The Discharger shall, as directed by the San Diego Water Board, participate with other regulated entities, other interested parties, and the San Diego Water Board in development and implementation of new and improved monitoring and assessment programs for Mission Bay and discharges to those waters. These programs shall be developed and implemented so as to answer the following questions:

(1) What are the status and trends of conditions in Mission Bay with regard to beneficial uses?

(2) What are the primary stressors causing or contributing to conditions of concern?

(3) What are the major sources of the stressors causing or contributing to conditions of concern?

(4) Are the actions taken to address such stressors and sources effective (i.e., environmental outcomes)?

Development and implementation of new and improved monitoring and assessment programs for ocean waters will be guided by the following:

1. *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*.
2. San Diego Water Board Resolution No. R9-2012-0069, *Resolution in Support of a Regional Monitoring Framework*.
3. San Diego Water Board staff report entitled *A Framework for Monitoring and Assessment in the San Diego Region*.
4. Other guidance materials, as appropriate.

VI. SPECIAL STUDIES REQUIREMENTS

Climate Change Action Plan

The Discharger shall prepare and submit a climate change action plan (CAPP) within three years of the effective date of this Order. The CAPP shall identify projected regional impacts on the Discharger's Facility and operations due to climate change if current trends continue. The CCAP shall also identify steps being taken or planned to address greenhouse gas emissions attributable to wastewater treatment, solids handling, and effluent discharge; flooding and sea level rise risks; the potential need to adjust NPDES permit conditions and the Discharger's pollution control program; the financing needed to pay for planned actions; schedules to update the CCAP as more information on climate change and its effect become available; and any other factors as appropriate.

VII. OTHER MONITORING REQUIREMENTS

A. Aquaculture Chemicals and Drugs

The Discharger shall submit annually on March 1, a report describing drugs, disinfectants, pesticides, and other chemicals that are used in the aquariums and may be present in the discharges to Mission Bay. The report shall include the names, active ingredients, and the amounts of each of the aquaculture chemicals and drugs used during the year.

B. Outfall Inspections

The east and west outfall structures shall be thoroughly inspected a minimum of once per year. Inspections shall include general observations and photographic/video graphic records of the outfall pipes. A summary report of the inspection findings shall be provided annually by March 1. This written report shall provide a description of the observed condition of the outfall structures from shallow water to their respective termini. Photographic/video graphic records shall be retained by the Discharger and submitted to the San Diego Water Board upon request.

VIII. 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. The Discharger shall report all instances of noncompliance not reported under sections V.E, V.G, and V.H of the Standard Provisions (Attachment D) at the time monitoring reports are submitted. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website at http://www.waterboards.ca.gov/water_issues/programs/ciwqs/. The CIWQS website will provide additional information for SMR submittal in the event there will be a planned or unplanned service interruption for electronic submittal. SMRs must be signed and certified as required by section V of the Standards Provisions (Attachment D). The Discharger shall maintain sufficient staffing and resources to ensure it submits SMRs that are complete and timely. This includes provision for training and supervision of individuals on how to prepare and submit SMRs.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IV. The Discharger shall submit monthly and semiannual 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:

Table E-4. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with monthly SMR
1/Week	Permit effective date	Sunday through Saturday	Submit with monthly SMR
1/Month	Permit effective date	1st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling.
1/Quarter	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	June 1 September 1 December 1 March 1
1/Year	Closest of January 1 following (or on) permit effective date	January 1 through December 31	March 1

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

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

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

b. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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

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

5. Compliance Determination. Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined above and in Attachment A of this Order. For purposes of reporting and administrative enforcement by the San Diego Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the reportable pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported 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 dataset 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 dataset 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 dataset shall be determined. If the dataset has an odd number of data points, then the median is the middle value. If the dataset has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

7. The Discharger shall submit SMRs in accordance with the following requirements:

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

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

C. Discharge Monitoring Reports (DMRs)

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

D. Other Reports

The following reports are required under sections I, III, IV, VI, and VII of this MRP, and the California Code of Regulations (CCR). The reports shall be submitted to the San Diego Water Board using the State Water Board's CIWQS program website or as noted below. The reports must be signed and certified as required by section V of the Standards Provisions (Attachment D). The CIWQS website will provide additional information for SMR submittal in the event of a planned or unplanned service interruption for electronic submittal.

Table E-5. Other Reports

Report	Location of requirement	Due Date
DMR-QA Study	Section I.H of this MRP	Annually on December 31[1]
Initial Investigation TRE Work Plan	Section III.C.6 of this MRP	Within 90 days of the effective date of this Order
Receiving Water Monitoring Program Work Plan	Section IV.B.2 of this MRP	Within 180 days of the effective date of this Order
Receiving Water Monitoring Report	Section IV.C of this MRP	Annually on March 1
CCAP	Section VI.A of this MRP	Within three years of the effective date of this Order
Aquaculture Chemicals and Drugs Report	Section VII.A of this MRP	Annually on March 1
Outfall Inspection Report	Section VII.B of this MRP	Annually on March 1
ROWD (for reissuance)	Title 23, CCR	No later than 180 days before the Order expiration date[2]

1. See section I.H. of this MRP for instructions on how to submit the study.
2. Submit in person or by mail to the San Diego Water Board office (2375 Northside Drive. Suite 100, San Diego, CA 92108) or by email at SanDiego@waterboards.ca.gov.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section II.B of this Order, the San Diego Water Board incorporates this Fact Sheet as findings of the San Diego 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	9 000000083
Discharger	SeaWorld LLC d/b/a SeaWorld San Diego
Name of Facility	SeaWorld, San Diego
Facility Address	500 SeaWorld Drive
	San Diego, CA 92109
	San Diego County
Facility Contact, Title and Phone	Shari Sehlhorst, Environmental Manager, (619) 226-3637
Authorized Person to Sign and Submit Reports	Marilyn Hannes, President, (619) 226-3802
Mailing Address	500 SeaWorld Drive, San Diego, CA 92109
Billing Address	500 SeaWorld Drive, San Diego, CA 92109
Type of Facility	Amusement Park, SIC code 7995
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A
Pretreatment Program	NA
Recycling Requirements	NA
Facility Permitted Flow	9.36 million gallons per day (MGD)
Facility Design Flow	9.36 MGD
Watershed	Mission Bay
Receiving Water	Mission Bay
Receiving Water Type	Enclosed Bay

A. SeaWorld LLC d/b/a SeaWorld San Diego (Discharger) is the owner and operator of SeaWorld, San Diego (Facility), an amusement park.

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 storm water and wastewater to Mission Bay, a water of the U.S. The Discharger was previously regulated by Order No. R9-2011-0032, adopted on June 8, 2011, amended on April 10, 2013 by Order No. R9-2013-0034, and expired on July 27, 2016.

Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. The Discharger filed a report of waste discharge (ROWD) and submitted an application for reissuance of its waste discharge requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on January 25, 2016. The application was deemed complete on February 22, 2016. A site visit was conducted on December 20, 2017 to observe operations and collect additional information to develop this Order.

D. 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 (CCR), 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.

II. FACILITY DESCRIPTION

A. Description of Wastewater

The Facility is an amusement park known primarily for its aquatic animal exhibits. The Facility discharges storm water; wastewater from marine mammal and aquatic animal exhibits, aquariums, and other exhibit pools; landscape irrigation runoff; and overspray from Facility cleaning to Mission Bay. The discharge may contain a variety of pollutants including waste from confined aquatic animals; uneaten feed; aquaculture drugs and chemicals (e.g., Cipro); and chemicals used for cleaning, maintaining landscapes, or enhancing water quality conditions.

The Discharger pumps seawater from Mission Bay for use in the aquatic animal exhibits, aquariums, and other exhibit pools. The East intake consists of four pumps that intake up to 3.24 MGD of seawater. The West intake consists of two pumps that intake up to 6.12 MGD of seawater. Both intake streams are separate and each contains its own treatment system and outfall.

Seawater pumped from Mission Bay is filtered and disinfected with chlorine to produce a suitable environment for the exhibit mammals tolerant to chlorine. Seawater used in the fish exhibits is filtered and disinfected using ozone and ultraviolet (UV) light at specific exhibit locations. Backwash from the intake filters is directed to a settling basin. Solids from the basin are sent to a landfill, and water from the basin is discharged into the City of San Diego's sanitary sewer system.

Water from the exhibits, aquariums, and other exhibit pools is continuously recirculated through filtration systems to remove animal waste products consisting of excrement and uneaten food. Backflows and bypasses from the filtration system and water from intermittent pool drainage and cleaning operations are directed to one of two effluent treatment systems, as shown in Attachment C. The wastewater is filtered through 1-inch stainless steel screens, chlorinated with sodium hypochlorite, and dechlorinated with sodium sulfite.

The effluent treatment systems are designed to accommodate a total combined maximum effluent flow of 9.36 MGD. The East effluent treatment system and outfall (Discharge Point No. 001) has a maximum design capacity of 3.24 MGD. The West effluent treatment system and outfall (Discharge Point No. 002) has a maximum design capacity of 6.12 MGD. The ROWD submitted by the Discharger reports an average daily flow of 1.462 MGD for Discharge Point No. 001 and 2.328 MGD for Discharge Point No. 002.

Two storm water bypass discharge points are located in the West side collection system, and four storm water bypass discharge points are located in the East side collection system. This Order prohibits aquatic animal exhibits, aquariums, and other exhibit pool draining during a

storm water bypass event and the implementation of a Storm Water Pollution Prevention Plan (SWPPP) to reduce pollution to Mission Bay. During large storm events, storm water is bypassed directly into Mission Bay.

Domestic wastewater, intake filter backwash, and wastewater from the sea turtle exhibit are discharged to the City of San Diego's sanitary sewer system. Other freshwater pools may be drained either to the East treatment system or to the sanitary sewer.

Flow diagrams for the East and West intake and effluent treatment systems are provided in Attachment C.

Fireworks events at the Facility are regulated separately under Order No. R9-2011-0022, NPDES Permit No.CA999002.

B. Discharge Points and Receiving Waters

Discharge Point No. 001 (East Outfall) has a maximum discharge rate of 3.24 MGD and is located at 32º 46' 03" North latitude and 117º 13' 33" West longitude. Discharge Point No. 002 (West Outfall) has a maximum discharge rate of 6.12 MGD and is located at 32º 46' 04" North latitude and 117º 13' 40" West longitude. The outfall locations are shown in Attachment B. The two submerged outfall pipes have pipe reducers, and the initial zone of dilution for each discharge has been calculated as 21 parts seawater to 1 part effluent (21:1). The dilution factor of 21:1 is carried over from Order No. R9-2011-0032, and applied in calculating effluent limitations for ammonia, total residual chlorine, copper, and silver.

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

1. Effluent limitations contained in Order No. R9-2011-0032, as amended by Order No. R9-2013-0034, for discharges from Discharge Point Nos. 001 and 002 (Monitoring Locations EFF-001 and EFF-002) and representative monitoring data from the term of Order No. R9-2011-0032, as amended by Order No. R9-2013-0034 are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data for Discharge Point Nos. 001 and 002

Parameter	Units	Effluent Limitations			Monitoring Data (September 2011 through December 2017)	
		6 Month Median	Average Monthly	Maximum Daily	Highest Average Monthly	Highest Maximum Daily
Discharge Point No. 001						
Flow	MGD	--	--	3.24	--	2.59
Oil and Grease	mg/L	--	25	75[1]	4.7	4.7
	lbs/day[2]	--	676	2,026	57.5	57.5
TSS	mg/L	Narrative[3]			2.6	2.6
Settleable Solids	mg/L	--	1.0	3.0[1]	<0.1	<0.1
Turbidity	NTU	--	75	225[1]	1.7	1.7
pH	s.u.	--	7.0-9.0[4]		7.0-8.04[4]	
Ammonia	mg/L	--	--	0.55[1]	--	0.22
	lbs/day[2]	--	--	15[1]	--	1.71
Chlorine Residual	mg/L	--	0.21	0.42[1]	0.07	0.34
	lbs/day[2]	--	5.7	11.3[1]	0.39	0.49

Parameter	Units	Effluent Limitations			Monitoring Data (September 2011 through December 2017)	
		6 Month Median	Average Monthly	Maximum Daily	Highest Average Monthly	Highest Maximum Daily
Copper, Total Recoverable	µg/L	24	38.13	76.5	17.6	17.6
	lbs/day[2]	0.65	1.0	2.1	0.7	0.4
Silver, Total Recoverable	µg/L	6.5	23.16	36	4.03	4.03
	lbs/day[2]	0.2	0.6	1.0	0.06	0.06
Enterococcus	CFU/100mL	--	35	104[1]	19.6	90
Fecal Coliform	MPN/100 mL	Narrative[5]			8.81[6]	5,000
Total Coliform	MPN/100 mL	Narrative[7]			10.5[8]	16,000
Chronic Toxicity	TU_c	Narrative[9]			--	1.0
Discharge Point No. 002						
Flow Rate	MGD	--	--	6.12	--	3.19
Oil and Grease	mg/L	--	25	75[1]	4.3	4.3
	lbs/day[2]	--	1,276	3,828	88.4	88.4
TSS	mg/L	Narrative[3]			11.5	16.5
Settleable Solids	mg/L	--	1.0	3.0[1]	ND	ND
Turbidity	NTU	--	75	225[1]	1.3	1.3
pH	s.u.	--	7.0-9.0[4]		7.52-8.06[4]	
Ammonia	mg/L	--	--	0.55[1]	--	0.14
	lbs/day[2]	--	--	28.1[1]	--	2.88
Chlorine Residual	mg/L	--	0.21	0.42[1]	0.06	0.14
	lbs/day[2]	--	10.7	21.4[1]	0.44	0.49
Copper, Total Recoverable	µg/L	24	38.13	76.5	37.5	37.5
	lbs/day[2]	1.2	1.9	3.9	0.7	0.7
Silver, Total Recoverable	µg/L	6.5	23.16	36	2.17	2.17
	lbs/day[2]	0.33	1.2	1.8	0.04	0.04
Enterococcus	CFU/100 mL	--	35	104[1]	2.9	8
Fecal Coliform	MPN/100 mL	Narrative[5]			7.29[6]	2,400
Total Coliform	MPN/100 mL	Narrative[7]			25[8]	16,000
Chronic Toxicity	TU_c	Narrative[9]			1	1

NA = Criteria for this parameter is not applicable.
ND = Non-detectable.

1 Instantaneous maximum effluent limitation
2 Mass-based effluent limitations calculated based on a maximum flow rate of 3.24 MGD for Discharge Point No. 001 and 6.12 MGD for Discharge Point No. 002.
3 The concentration of suspended solids in the discharge of aquaria wastewater through Outfall No. 001 shall not be increased in excess of 10 mg/L as a monthly average or 15 mg/L as a daily maximum when compared to the suspended solids concentration in the intake water.
4 Instantaneous minimum and maximum values
5 The fecal coliform concentration based on a minimum of not less than five samples over a calendar month shall not exceed a log mean of 200/100mL, nor shall more than 10 percent of total samples during any calendar month exceed 400/100mL.
6 Measurement was expressed as log mean of minimum five samples in five days.
7 The median total coliform concentration throughout the water column for any calendar month shall not exceed 70/100mL nor shall more than 10 percent of the samples collected during any calendar month exceed 230/100 mL for a five-tube decimal dilution test or 330/100 mL when a three-tube dilution test is used.
8 Measurement was expressed as 30-day median value.

[9] There shall be no chronic toxicity in the effluent discharge.

2. Order No. R9-2011-0032, as amended by Order No. R9-2013-0034, required the Discharger to monitor two storm water bypass events at a representative storm water bypass discharge location. The Discharger sampled 4 storm water bypass events at Monitoring Location SW-01 between December 13, 2012 and March 7, 2016. The Discharger sampled one storm water bypass event at Monitoring Location SW-02 (on February 28, 2014). The maximum results of grab samples are shown in Table F-4 as follows:

Table F-3. Historic Storm Water Bypass Monitoring Data

Pollutant	Unit	Monitoring Location SW-01	Monitoring Location SW-02
pH	S.U	7.76	7.75
Total Coliform	MPN/100 mL	16,000	5,000
Fecal Coliform	MPN/100 mL	5,000	3,000
Enterococcus	CFU/100 mL	16,000	56
Ammonia	mg/L	0.18	0.25
Oil and Grease	mg/L	ND	ND
Total Suspended Solids (TSS)	mg/L	209	38
Settleable Solids	ml/L	0.70	0.2
Turbidity	NTU	64	31.6
Residual Chlorine	µg/L	NA	NA
Copper	µg/L	76	ND
Silver	µg/L	ND	ND
Cyanide	µg/L	3.7	--
Zinc	µg/L	110	--

NA = Criteria for this parameter is not applicable.
ND = Non-detectable
"-- "= Data not available

D. Compliance Summary

Table F-4 lists violations of Order No. R9-2011-0032, as amended by Order No. R9-2013-0034, from the beginning of the permit term through December 2017. The San Diego Water Board issued 3 staff enforcement letters for the violations noted in Table F-4. Measures taken by the Discharger to address the coliform exceedances listed in Table F-4 include inspection of conveyance systems, injection points, and collection basins for the treatment systems; adjustments to chlorination procedures; pressure washing of sidewalls of the treatment systems; and additional monitoring to identify potential sources of bacteria. In addition, the Discharger conducted additional toxicity tests after the chronic toxicity exceedance that occurred on August 25, 2015, and discontinued use of copper sulfate as a disinfectant in its aquariums.

Table F-4. Summary of Compliance History

Date	Violation Type	Description
12/12/2011	Deficient Monitoring	A bypass at the east treatment plant was witnessed and the sample could not be collected during the bypass event.
02/21/2012	Limit exceedance	The Total Coliform Effluent Limitation not be exceeded by more than 10% of samples collected during the month is 230 MPN/100 mL, and the reported value was 9,000 MPN/100 mL.
02/27/2012	Limit exceedance	The Total Coliform Effluent Limitation not be exceeded by more than 10% of samples collected during the month is 230 MPN/100 mL, and the reported value was 300 MPN/100 mL.

Date	Violation Type	Description
09/24/2012	Limit exceedance	The Total Coliform Effluent Limitation not be exceeded by more than 10% of samples collected during the month is 230 MPN/100 mL, and the reported value was 16,000 MPN/100 mL.
10/01/2012	Limit exceedance	The Total Coliform Effluent Limitation not be exceeded by more than 10% of samples collected during the month is 230 MPN/100 mL, and the reported value was 16,000 MPN/100 mL.
10/26/2012	Limit exceedance	The Total Coliform Effluent Limitation not be exceeded by more than 10% of samples collected during the month is 230 MPN/100 mL, and the reported value was 1,600 MPN/100 mL.
3/13/2014	Limit exceedance	The Total Coliform Effluent Limitation not be exceeded by more than 10% of samples collected during the month is 230 MPN/100 mL, and the reported value was 900 ml/L at EFF-002.
8/25/2015	Limit exceedance	Narrative Effluent Limitation in Table 7 of Order No. R9-2011-0032 specifies that there shall be no Chronic Toxicity in the discharge. The Effluent Chronic Toxicity was reported as 1 TUc at EFF-002.
4/2/2017	Late Reporting	The self-monitoring report for February 2017 was submitted on April 2, 2017. The report was due on April 1, 2017
5/12/2017	Limit Exceedance	The Total Coliform Effluent Limitation not be exceeded by more than 10% of samples collected during the month is 230 MPN/100 mL, and the reported value was 1,700 MPN/100mL.
5/17/2017	Limit Exceedance	The Total Coliform Effluent Limitation not be exceeded by more than 10% of samples collected during the month is 230 MPN/100 mL, and the reported value was 280 MPN/100mL.
5/22/2017	Limit Exceedance	The Total Coliform Effluent Limitation not be exceeded by more than 10% of samples collected during the month is 230 MPN/100 mL, and the reported value was 3,000 MPN/100mL.
8/2/2017	Limit Exceedance	The Total Coliform Effluent Limitation not be exceeded by more than 10% of samples collected during the month is 230 MPN/100 mL, and reported value was 3,000 MPN/100mL.
8/28/2017	Limit Exceedance	The Total Coliform Effluent Limitation not be exceeded by more than 10% of samples collected during the month is 230 MPN/100 mL, and the reported value was 3,500 MPN/100mL.
8/30/2017	Limit Exceedance	The Total Coliform Effluent Limitation not be exceeded by more than 10% of samples collected during the month is 230 MPN/100 mL, and the reported value was 9,000 MPN/100mL.

E. Planned Changes – Not Applicable

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 (Water Code) (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from the Facility to surface waters.

B. California Environmental Quality Act (CEQA)

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

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

1. **Water Quality Control Plan.** The San Diego Water Board adopted a *Water Quality Control Plan for the San Diego Region* (Basin Plan) on September 8, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Pacific Ocean and other receiving waters addressed through the plan. Subsequent revisions to the Basin Plan have also been adopted by the San Diego Water Board and approved by the State Water Resources Control Board (State Water Board). Beneficial uses applicable to the Mission Bay are as follows:

Table F-5. Basin Plan Beneficial Uses

Discharge Point Nos.	Receiving Water Name	Beneficial Use(s)
001 and 002	Mission Bay	Industrial service supply (IND); contact water recreation (REC-1); non-contact water recreation(REC-2); commercial and sport fishing (COMM); estuarine habitat (EST); wildlife habitat (WILD); preservation of rare, threatened or endangered species (RARE); marine habitat (MAR); migration of aquatic organisms (MIGR); spawning, reproduction, and/or early development (SPWN), and shellfish harvesting (SHELL)

2. **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 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. Although the Ocean Plan is not directly applicable to enclosed bays, such as Mission Bay, the salinity and beneficial uses of Mission Bay are similar to those of the Ocean. Therefore, in order to protect the beneficial uses of Mission Bay, this Order used the Ocean Plan as a reference to develop discharge specifications and to supplement the provisions contained in the Basin Plan and other applicable plans and policies. As a result, the requirements of this Order implement the Ocean Plan.

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

4. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was

amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.

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

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

7. **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.

8. **Regulations for Use of Aquaculture Drugs and Chemicals.** Drugs and chemicals used in aquaculture are strictly regulated by the U.S. Food and Drug Administration (FDA) through the Federal Food, Drug, and Cosmetic Act (FFDCA; 21 USC 301-392). FDA's Center for Veterinary Medicine (CVM) regulates the manufacture, distribution, and use of animal drugs. CVM approves the use of new animal drugs based on data provided by a sponsor (usually a drug company). To be approved by CVM, an animal drug must be effective for the claim on the label and safe when used as directed for (1) treated animals; (2) persons administering the treatment; (3) the environment, including non-target organisms; and (4) consumers. Some drugs and chemicals are classed as Low Regulatory Priority (LRP) where FDA regulatory action is unlikely to be taken as long as an appropriate grade of the chemical is used, good management practices are followed, and local environmental requirements are met (such as NPDES permit requirements contained in this Order). The Discharger is responsible for complying with all regulations for use of drugs and chemicals. A licensed veterinarian may also prescribe extra label drugs under the FDA CVM's extra label drug use policy. The veterinarian assumes the responsibility for drug safety and efficacy, and for potential residues.

9. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species

Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare, threatened, or endangered species. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

10. **Previous Order.** In some cases, existing waste water discharge requirements and permit conditions (effluent limitations and other special conditions) contained in Order No. R9-2011-0032, as amended by Order No. R9-2013-0034, have been continued in this Order.

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

Under section 303(d) of the 1972 CWA, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology.

In July 2015, the USEPA approved a revised *303(d) List of Water Quality Limited Segments in California* (303(d) List). The 303(d) list includes the following listings for Mission Bay: Indicator Bacteria, Lead, Copper, and Eutrophication. Total maximum daily loads (TMDLs) for the 303(d) listed parameters have not been developed.

The Discharger chlorinates and dechlorinates the effluent prior to discharge to Mission Bay. The purpose of chlorination is to destroy any pathogens and bacteria that may be present in the effluent. Despite chlorination, the Discharger had period exceedances of the total coliform effluent limitation during the previous permit term. Steps taken by the Discharger to address the coliform exceedances are described in Table F-4. The Discharger conducted a eutrophication study during 2000-2001 and concluded that the effluent from the Facility is not causing or contributing to eutrophication in Mission Bay. Available effluent data to date does not indicate the Discharger will contribute to the impairment of the receiving water for lead.

E. Other Plans, Polices and Regulations

1. **Bays and Estuaries Policy***.* The State Water Board adopted the *Water Quality Control Policy for Enclosed Bays and Estuaries of California* (Bays and Estuaries Policy) on May 16, 1974. The Bays and Estuaries Policy establishes principles for management of water quality, water quality requirements for waste discharges, discharge prohibitions, and general provisions to prevent water quality degradation and to protect the beneficial uses of waters of enclosed bays and estuaries. These principles, requirements, prohibitions, and provisions have been incorporated into this Order.

   The Bays and Estuaries Policy contains the following principles for management of water quality in enclosed bays and estuaries, which includes Mission Bay:

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

   For the purpose of the Bays and Estuaries policy, treated ballast waters and innocuous non-municipal wastewater such as clear brines, washwater, and pool drains are not necessarily considered industrial process wastes, and may be allowed by San Diego Water Boards under discharge requirements that provide protection to the beneficial uses of the receiving water.

The following Principles for the Management of Water Quality in Enclosed Bays and Estuaries, as stated in the Bays and Estuaries Policy apply to all of California's enclosed bays and estuaries:

a. Persistent or cumulative toxic substances shall be removed from the waste to the maximum extent practicable through source control or adequate treatment prior to discharge.

b. Bay or estuarine outfall and diffuser systems shall be designed to achieve the most rapid initial dilution practicable to minimize concentrations of substances not removed by source control or treatment.

c. Wastes shall not be discharged into or adjacent to areas where the protection of beneficial uses requires spatial separation from waste fields.

d. Waste discharges shall not cause a blockage of zones of passage required for the migration of anadromous fish.

e. Nonpoint sources of pollutants shall be controlled to the maximum practicable extent.

As of the date of adoption of this Order, no segment of Mission Bay has been designated as an area where the protection of beneficial uses requires spatial separation from waste fields. The San Diego Water Board has considered the Principles for the Management of Water Quality in Enclosed Bays and Estuaries, in adopting this Order. The terms and conditions of this Order are consistent with the Principles for the Management of Water Quality in the Bays and Estuaries Policy.

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 U.S. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations described in 40 CFR 122: section 122.44(a) requires that permits include applicable technology-based effluent limitations (TBELs) and standards; and section 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

This Order carries forward a dilution ratio of 21:1 that was first included in Order No. 95-36 and has been carried forward since that time. The dilution factor of 21:1 was determined by the State Water Board using the UPLUME computer model. Performance goals in this Order for Discharge Points No.001 and 002 were calculated based on applicable CTR and NTR criteria, and using the methodology outlined in section 1.4 of the SIP.

A. Discharge Prohibitions

Effluent and receiving water limitations in this Order are based on the Federal Clean Water Act, Basin Plan, State Water Board plans and policies, USEPA guidance and regulations, and best practicable waste treatment technology. This Order authorizes the discharge of storm water and treated wastewater from Discharge Point Nos. 001 and 002. It does not authorize any other types of discharges.

1. Prohibition III.A incorporates by reference Basin Plan Waste Discharge Prohibitions.

2. Prohibitions III.B ensures that the operating and discharge conditions under which this Order addresses are not modified in such a way as to result in exceedances of Basin Plan Objectives and/or impairment of beneficial uses.

3. Prohibition III.C ensures that wastewater treatment operations are not impacted by excessive storm water.
4. Prohibitions III.D, III.E, III.F, III.G, and III.H ensure that there are no exceedances with Basin Plan Objectives and/or impairment of beneficial uses.
5. Prohibition III. K ensures proper disposal of any solids wastes.
6. Prohibition III. L ensures that the discharge will not introduce invasive species which could impair beneficial uses that support aquatic life, ecosystems, or habitat.
7. Prohibition III.M ensures that constituents for which effluent limitations have not been established will not be discharged at levels that adversely affect the quality of receiving waters.
8. These prohibitions are based on 40 CFR section 122.21(a) and Water Code section 13260, which require filing an application and ROWD before a discharge can occur. Discharges not described in the application and ROWD, and subsequently in this Order, are prohibited.

B. Discharge Specifications

Rationale for discharge specifications included in section IV B of the Order are provided below:

1. Discharge Specification B.1 ensures proper disposal of any solids wastes.
2. Discharge Specification B.2 is incorporated from the Bays and Estuaries Policy and requires the Discharger to implement source control measures or utilize treatment to prevent substances from being discharged with the effluent that could be toxic to aquatic life in Mission Bay.
3. A dilution ratio of 21:1 was utilized in calculating some of the effluent limitations specified in this Order. Discharge Specification B.3 is incorporated from the Bays and Estuaries Policy and ensures that outfall structures are designed to achieve appropriate dilution and prevent discharge of chemical constituents that can adversely affect water quality and beneficial uses of Mission Bay.
4. Discharge Specification B.4 is incorporated from the Bays and Estuaries Policy and ensures that wastes will not be discharged in areas where it is necessary to maintain a separation distance or zone to prevent the discharge from impairing beneficial uses of Mission Bay.
5. Discharge Specification B.5 is incorporated from the Bays and Estuaries Policy ensures the discharge of waste from the Facility will not prevent migration of anadromous fish.
6. Discharge Specification B.6 is incorporated from the Bays and Estuaries Policy and ensures that the discharge will not introduce invasive species which could impair beneficial uses that support aquatic life, ecosystems, or habitat.
7. Discharge Specification B.7 ensures that constituents for which effluent limitations have not been established will not be discharged at levels that adversely affect the quality of receiving waters.
8. Discharge Specifications B.8 and B.9 ensure that the Facility is designed and managed to avoid flooding during storm events.
9. Discharge Specification B.10 ensures that the Discharger implements measures to protect the Facility from adverse impacts of climate change.

C. Technology-Based Effluent Limitations (TBELs)

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 Best Professional Judgment (BPJ) in accordance with 40 CFR part 125, 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 performance by plants 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 the “cost reasonableness” of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

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

2. Applicable Technology-Based Effluent Limitations (TBELS)

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 BPJ to derive TBELs 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 permit writer must consider specific factors outlined in 40 CFR section 125.3.

On August 23, 2004, USEPA published *Effluent Limitations Guidelines for the Concentrated Aquatic Animal Production Point Source Category* (40 CFR part 451). The ELGs became effective on September 22, 2004. The ELGs establish national technology-based effluent discharge requirements for flow-through and recirculation systems and for net pens based on BPT, BCT, BAT, and NSPS. In the process of developing the ELGs, USEPA identified an extensive list of pollutants of concern in discharges from the aquaculture industry, including several metals, nutrients, solids, Biochemical Oxygen Demand (BOD), bacteria, drugs, and residuals of federally registered pesticides. USEPA did not include specific numerical limitations in the ELGs for any pollutants on this list, believing that Best Management Practices (BMPs) would provide acceptable control of these pollutants. USEPA also allowed permitting authorities to apply TBELs for other pollutants and WQBELs for pollutants considered in the ELGs in order to comply with applicable water quality standards.

The San Diego Water Board has concluded that proper management, operation, and maintenance practices in accordance with BMPs for confined aquatic animals, would provide acceptable control for drugs, chemicals, and other constituents where effluent limitations were not included in this Order. BMPs must include measures listed in section VI.C.4.b of this Order.

Consistent with anti-backsliding requirements, numeric limitations for TSS, settleable solids, oil and grease, turbidity, and pH have been carried over from the previous Order, Order No. R9-2011-0032. In addition, the beneficial uses of Mission Bay are similar to those of the ocean waters of the State. In order to protect the beneficial uses of Mission Bay, this Order includes TBELs based on Table 2 of the Ocean Plan. Ocean Plan Table 2 effluent limitations apply to a Discharger's total effluent of whatever origin. Although Table 2 of the Ocean Plan establishes effluent limitations for pH, the effluent limitations contained in the previous Order and this Order are based on the more stringent water quality objectives for pH for bays and estuaries contained in the Basin Plan.

Technology-based regulations are summarized in the following table:

Table F-6. Summary of TBELs

Parameter	Unit[1]	Effluent Limitations			
		Monthly Average	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Oil and Grease	mg/L	25	--	--	75
Total Suspended Solids (TSS)	mg/L	Narrative[1]			
Settleable Solids	mg/L	1.0	--	--	3.0
Turbidity	NTU	75	--	--	225

[1] The concentration of suspended solids in the discharge of aquaria wastewater through Discharge Point Nos. 001 and 002 shall not be increased in excess of 10 mg/L as a monthly average or 15 mg/L as a daily maximum when compared to the suspended solids concentration in the intake.

D. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

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

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The beneficial uses applicable to Mission Bay is summarized in Table F-5 of this Fact Sheet. The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving waters.

Beneficial uses of Mission Bay are similar to those of the ocean. The Ocean Plan establishes water quality objectives for bacterial, physical, chemical, and biological characteristics, and for radioactivity. In order to protect the beneficial uses of Mission Bay, effluent limitations for some parameters in this Order were derived from the Ocean Plan Table 1 water quality objectives.

a. Basin Plan. The Basin Plan at page 2-12 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Mission Bay is not designated for municipal supply. The Basin Plan numeric water quality objectives applicable to the receiving waters are listed below.

i. The Basin Plan establishes a numeric water quality objective for unionized ammonia. The Basin Plan states that the discharge of wastes shall not cause concentrations of unionized ammonia (NH_3) to exceed 0.025 mg/L (as N) in inland surface waters, enclosed bays and estuaries and coastal lagoons.

ii. The Basin Plan establishes numeric water quality objectives for fecal coliform in waters designated for contact recreation. In waters designated for contact recreation (REC-1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200/100 mL, nor shall more than 10 percent of total samples during any 30-day period exceed 400/100 mL.

iii. The Basin Plan establishes numeric water quality objectives for total coliform in waters where shellfish harvesting for human consumption, commercial, or sport purposes is designated. The Basin Plan states that in waters designated for shellfish harvesting (SHELL), the median total coliform concentration throughout the water column for any 30-day period shall not exceed 70/100 mL nor shall more than 10 percent of the samples collected during any 30-day period exceed 230/100 mL for a five-tube decimal dilution test or 330/100 mL when a three-tube decimal dilution test is used.

iv. The Basin Plan establishes numeric water quality objectives for enterococcus based on the *USEPA Bacteriological Criteria for Water Contact Recreation*. The Basin Plan states that in waters designated for contact recreation (REC-1), the enterococci concentration shall not exceed 35/100 mL in all areas, 104/100 mL in designated beach areas, 276/100 mL in moderately or lightly used areas, and 500/100 mL in infrequently used areas.

v. The Basin Plan establishes a narrative water quality objective for toxicity that all waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological response to human, plant, animal, or aquatic life.

Table F-7. Summary of Basin Plan Criteria – Mission Bay

Parameter	Units	Criteria	Basis
pH	s.u.	7.0-9.0[1]	Basin Plan
Ammonia, Unionized as N	mg/L	0.025	Basin Plan
Fecal Coliform	Organisms/100 mL	200[2]	Basin Plan
Total Coliform	Organisms/100 mL	[3]	Basin Plan
Enterococcus	Organisms/100 mL	[4]	Basin Plan
Turbidity	NTU	[5]	Basin Plan
Total Residual Chlorine	mg/L	Narrative[6]	Previous Order

1 The pH in bays and estuaries shall not be depressed below 7.0 and raised above 9.0. Changes in normal ambient pH shall not exceed 0.2 units in waters designated marine (MAR) or estuarine (EST).

2 The fecal coliform concentration based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200/100 mL, nor shall more than 10 percent of total samples during any 30-day period exceed 400/100mL.

3 The Basin Plan states that in waters designated for shellfish harvesting (SHELL), the median total coliform concentration throughout the water column for any 30-day period shall not exceed 70/100 mL nor shall more than 10 percent of the samples collected during any 30-day period exceed 230/100 mL for a five-tube decimal dilution test or 330/100 mL when a three-tube decimal dilution test is used.

4 The Basin Plan states that in waters designated for contact recreation (REC-1), the enterococci concentration shall not exceed 35/100 mL in all areas, 104/100 mL in designated beach areas, 276/100 mL in moderately or lightly used areas, and 500/100 mL in infrequently used areas.

5 Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. The transparency of waters in lagoons and estuaries shall not be less than 50% of the depth at locations where measurement is made by means of a standard Secchi disk, except where lesser transparency is caused by rainfall runoff from undisturbed natural areas and dredging projects conducted in conformance with WDRs of the San Diego Water Board. With these two exceptions, increases in turbidity attributable to controllable water quality factors shall not exceed 20 % over natural turbidity levels at locations with a natural turbidity of 0 to 50 NTU; 10 NTU at locations with a natural turbidity of 50 to 100 NTU; and 10% over the natural turbidity level in locations with a natural turbidity of greater than 100 NTU.

6 The Basin Plan does not contain water quality objectives for total residual chlorine, however it does contain narrative objectives prohibiting discharges that cause toxicity to aquatic organisms.

vi. The Basin Plan does not contain water quality objectives for total residual chlorine; however, it does contain a narrative limit prohibiting discharges that cause toxicity to aquatic organisms. The San Diego Water Board has determined that residual chlorine can be toxic to aquatic life. Table 1 of the Ocean Plan contains numeric water quality objectives for total residual chlorine of 8 µg/L as a daily maximum and 60 µg/L as an instantaneous maximum. Based on this water quality objective and a dilution factor of 21:1, the maximum daily effluent limitation for total chlorine residual would be 176 µg/L, and the instantaneous maximum effluent limitation for total chorine residual would be 1,320 µg/L. Consistent with anti-backsliding regulations, this Order carries forward the more stringent effluent limitations from the previous Order.

b. CTR/NTR Criteria. The CTR and NTR specify numeric aquatic life and human health criteria for numerous priority pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries. Some human health criteria are for consumption of “water and organisms” and others are for consumption of “organisms only.”

Priority pollutant water quality criteria in the CTR are applicable to Mission Bay. The CTR contains both saltwater and freshwater criteria. As specified in the CTR, 1) freshwater criteria apply at salinities of 1 ppt and below at locations where this occurs

95% or more of the time; 2) saltwater criteria apply at salinities of 10 parts per thousand and above at locations where this occurs 95 percent or more of the time; and 3) at salinities between 1 and 10 ppt the more stringent of the two apply unless USEPA approves the application of the freshwater or saltwater criteria based on an appropriate biological assessment.

The salinity of Mission Bay is comparable to that of the ocean. Therefore, saltwater criteria apply to the discharge from SeaWorld.

c. Applicable criteria for Discharge Point Nos. 001 and 002 are summarized below for the parameters detected in the effluent.

Table F-8. Summary of CTR/NTR Criteria at Discharge Point Nos. 001 and 002

Parameter	Selected Criteria (µg/L)	CTR/NTR Water Quality Criteria (µg/L)		
		Saltwater		Human Health For Consumption of Organisms only (µg/L)
		Acute	Chronic	
Antimony, Total Recoverable	4,300	--	--	4,300
Arsenic, Total Recoverable	36	69	36	NA
Cadmium, Total Recoverable	9.36	42.25	9.36	NA
Chromium VI, Total Recoverable	50.35	1,107.75	50.35	NA
Cyanide, Total	1.00	1.00	1.00	220,000
Copper, Total Recoverable	3.73	5.78	3.73	NA
Lead, Total Recoverable	8.52	220.82	8.52	NA
Mercury, Total Recoverable	0.051	Reserved	Reserved	0.051
Nickel, Total Recoverable	8.28	74.75	8.28	4,600
Selenium, Total Recoverable	71.14	290.58	71.14	NA
Silver, Total Recoverable	2.24	2.24	--	NA
Thallium, Total Recoverable	6.3	--	--	6.3
Zinc, Total Recoverable	85.62	95.14	85.62	NA
TCDD Equivalents	1.4E-08	--	--	1.4E-08
2,4-Dichlorophenol	790	--	--	790
3-Methyl-4-Chlorophenol	--	--	--	34
Pentachlorophenol	7.9	13	7.9	8.2
Benzo(a)Anthracene	0.049	--	--	0.049
Benzo(a)Pyrene	0.049	--	--	0.049
Benzo(b)Fluoranthene	0.049	--	--	0.049
Benzo(g,h,i)Perylene	--	--	--	--
Benzo(k)Fluoranthene	0.049	--	--	0.049
Bis(2-Ethylhexyl)Phthalate	5.9	--	--	5.9
Butylbenzyl Phthalate	5,200	--	--	5,200

Parameter	Selected Criteria (µg/L)	CTR/NTR Water Quality Criteria (µg/L)		
		Saltwater		Human Health For Consumption of Organisms only (µg/L)
		Acute	Chronic	
Chrysene	0.049	--	--	0.049
Dibenzo(a,h)Anthracene	0.049	--	--	0.049
Diethyl Phthalate	120,000	--	--	120,000
Dimethyl Phthalate	2,900,000	--	--	2,900,000
Di-n-Butyl Phthalate	12,000	--	--	12,000
Fluoranthene	370	--	--	370
Indeno(1,2,3-cd)Pyrene	0.049	--	--	0.049

NA = Criteria for this parameter is not applicable.

3. Determining the Need for WQBELs

The need for effluent limitations are based on water quality objectives in the Basin Plan and CTR criteria was evaluated in accordance with 40 CFR section 122.44(d) and guidance for statistically determining the “reasonable potential” for a discharged pollutant to exceed an objective, as provided in the SIP. SIP methodology specifies determining the maximum effluent concentration (MEC) and projecting receiving water values. When there is no dilution, the projected receiving water concentration is equal to the MEC. The projected receiving water concentrations are then compared to the appropriate objective or criteria to determine the potential for an exceedance of that objective and the need for an effluent limitation.

The San Diego Water Board conducted the Reasonable Potential Analysis (RPA) consistent with section 1.3 of the SIP. Although the SIP applies directly to the implementation of CTR priority pollutants, the State Water Board has held that regional water boards may use the SIP as guidance for water quality-based toxics control. The SIP states in the introduction, “The goal of this Policy is to establish a standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters in a manner that promotes statewide consistency.”

Therefore, in this Order the RPA procedures from the SIP were used to evaluate reasonable potential for both CTR and non-CTR constituents. Monitoring results for the effluent was used, which is expected to be consistent with water quality discharged to the receiving water during wet weather conditions. Effluent data from Discharge Point Nos. 001 and 002 were used as a combined dataset in the RPA. Effluent data from September 2011 through May 2017 was used in the RPA for constituents listed in Table F-9. For the RPA, the highest detected receiving water concentration was selected for use on a pollutant by pollutant basis in order to be fully protective of beneficial uses.

A summary of the RPA results is provided below. For constituents that were detected, the highest reported values are listed in Table F-9 as the Maximum Effluent Concentration. Constituents that were not detected in the effluent are shown in Table F-9 as less than the lowest Method Detection Limit.

Table F-9. RPA for CTR/NTR Criteria at Discharge Point Nos. 001 and 002

Parameter	Selected Criteria (µg/L) (c)	Maximum Effluent Concentration (MEC)	Receiving Water Concentration (B)	Reasonable Potential?
Antimony, Total Recoverable	4,300	<50	<50	No
Arsenic, Total Recoverable	36	<50	<50	No
Beryllium	No Criteria	<10	<10	No
Cadmium	9.36	<25	<25	No
Chromium (III)	No Criteria	<2	<2	No
Chromium (VI), Total Recoverable	50.35	<25	<25	No
Copper, Total Recoverable	3.73	37.5	NA	Yes, MEC>C
Lead, Total Recoverable	8.52	<25	<25	No
Mercury, Total Recoverable	0.051	<50	<50	No
Nickel, Total Recoverable	8.28	<50	<50	No
Selenium, Total Recoverable	71.14	<50	<50	No
Silver, Total Recoverable	2.24	4.03	NA	Yes, MEC >C
Thallium	6.30	<50	<50	No
Zinc, Total Recoverable	85.62	<10	<10	No
Cyanide, Total Recoverable	1.00	<5	<5	No
Asbestos	No Criteria	NA	NA	No
2,3,7,8 TCDD	0.000000014	<0.0051	<0.0051	No
TCDD Equivalents	0.000000014	<0.025	<0.025	No
Acrolein	780	<50	<50	No
Acrylonitrile	0.660	<50	<50	No
Benzene	71.0	<0.5	<0.5	No
Bromoform	360.0	44	<1	No
Carbon Tetrachloride	4.40	<0.5	<0.5	No
Chlorobenzene	21,000	<0.5	<0.5	No
Chlorodibromomethane	34.00	2	<0.5	No
Chloroethane	No Criteria	<0.5	<0.5	No
2-Chloroethylvinyl ether	No Criteria	NA	NA	No
Chloroform	No Criteria	<0.5	<0.5	No
Dichlorobromomethane	46.00	<0.5	<0.5	No
1,1-Dichloroethane	No Criteria	<0.5	<0.5	No
1,2-Dichloroethane	99.00	<0.5	<0.5	No
1,1-Dichloroethylene	3.200	<0.5	<0.5	No
1,2-Dichloropropane	39.00	<0.5	<0.5	No
1,3-Dichloropropylene	1,700	<2	<2	No
Ethylbenzene	29,000	<0.5	<0.5	No
Methyl Bromide	4,000	NA	NA	No
Methyl Chloride	No Criteria	<2	NA	No
Methylene Chloride	1,600.0	<0.5	<2	No
1,1,2,2-Tetrachloroethane	11.00	<0.5	<0.5	No
Tetrachloroethylene	8.9	<0.5	<0.5	No
Toluene	200,000	<0.5	<0.5	No
1,2-Trans-Dichloroethylene	140,000	<2	<0.5	No
1,1,1-Trichloroethane	No Criteria	<0.5	<0.5	No

Parameter	Selected Criteria (µg/L) (c)	Maximum Effluent Concentration (MEC)	Receiving Water Concentration (B)	Reasonable Potential?
1,1,2-Trichloroethane	42.0	<0.5	<0.5	No
Trichloroethylene	81.0	<0.5	<0.5	No
Vinyl Chloride	525	<0.5	<0.5	No
2-Chlorophenol	400	<0.5	<0.5	No
2,4-Dichlorophenol	790	<0.5	<0.5	No
2,4-Dimethylphenol	2,300	<0.5	<0.5	No
2-Methyl-4,6-Dinitrophenol	765.0	--	NA	No
2,4-Dinitrophenol	14,000	<5	<5	No
2-Nitrophenol	No Criteria	<0.5	<0.5	No
4-Nitrophenol	No Criteria	<2.5	<2.5	No
3-Methyl-4-Chlorophenol	No Criteria	NA	NA	No
Pentachlorophenol	7.90	<0.5	<0.5	No
Phenol	4,600,000	<0.5	<0.5	No
2,4,6-Trichlorophenol	6.5	<0.5	<0.5	No
Acenaphthene	2,700	<0.5	<0.5	No
Acenaphthylene	No Criteria	<0.5	<0.5	No
Anthracene	110,000	<5	<5	No
Benzidine	0.00054	<0.5	<0.5	No
Benzo(a)Anthracene	0.0490	<0.5	<0.5	No
Benzo(a)Pyrene	0.0490	<0.5	<0.5	No
Benzo(b)Fluoranthene	0.0490	<0.5	<0.5	No
Benzo(ghi)Perylene	No Criteria	<1	<1	No
Benzo(k)Fluoranthene	0.0490	<0.5	<0.5	No
Bis(2-Chloroethoxy) Methane	No Criteria	<0.5	<0.5	No
Bis(2-Chloroethyl) Ether	1.400	<0.5	<0.5	No
Bis(2-Chloroisopropyl) Ether	170,000	<0.5	<0.5	No
Bis(2-Ethylhexyl) Phtalate	5.9	<5[1]	NA	No
4-Bromophenyl Phenyl Ether	No Criteria	<0.5	<0.5	No
Butylbenzyl Phthalate	5,200	<0.5	<0.5	No
2-Chloronaphthalene	4,300	<0.5	<0.5	No
4-Chlorophenyl Phenyl Ether	No Criteria	<0.5	<0.5	No
Chrysene	0.0490	<0.5	<0.5	No
Dibenzo(a, h) Anthracene	0.0490	<0.5	<0.5	No
1,2-Dichlorobenzene	17,000	<0.5	<0.5	No
1,3-Dichlorobenzene	2,600	<0.5	<0.5	No
1,4-Dichlorobenzene	2,600	<0.5	<0.5	No
3,3 Dichlorobenzidine	0.08	<2.5	<2.5	No
Diethyl Phthalate	120,000	<0.5	<0.5	No
Dimethyl Phthalate	2,900,000	<0.5	<0.5	No
Di-n-Butyl Phthalate	12,000	<0.5	<0.5	No
2,4-Dinitrotoluene	9.10	<0.5	<0.5	No
2,6-Dinitrotoluene	No Criteria	<0.5	<0.5	No
Di-n-Octyl Phthalate	No Criteria	<0.5	<0.5	No

Parameter	Selected Criteria (µg/L) (c)	Maximum Effluent Concentration (MEC)	Receiving Water Concentration (B)	Reasonable Potential?
1,2-Diphenylhydrazine	0.540	<0.5	<0.5	No
Fluoranthene	370	<0.5	<0.5	No
Fluorene	14,000	<0.5	<0.5	No
Hexachlorobenzene	0.00077	<0.5	<0.5	No
Hexachlorobutadiene	50.00	<0.5	<0.5	No
Hexachlorocyclopentadiene	17,000	<2.5	<2.5	No
Hexachloroethane	8.9	<0.5	<0.5	No
Indeno(1,2,3-cd) Pyrene	0.0490	<1	<1	No
Isophorone	600.0	<0.5	<0.5	No
Naphthalene	No Criteria	<0.5	<0.5	No
Nitrobenzene	1,900	<0.5	<0.5	No
N-Nitrosodimethylamine	8.10000	<0.5	<0.5	No
N-Nitrosodi-n-Propylamine	1.400	<0.5	<0.5	No
N-Nitrosodiphenylamine	16.0	<0.5	<0.5	No
Phenanthrene	No Criteria	<0.5	<0.5	No
Pyrene	11000	<0.5	<0.5	No
1,2,4-Trichlorobenzene	No Criteria	<0.5	<0.5	No
Aldrin	0.00014	<0.005	<0.005	No
alpha-BHC	0.0130	<0.005	<0.005	No
beta-BHC	0.046	<0.005	<0.005	No
gamma-BHC	0.063	<0.005	<0.005	No
delta-BHC	No Criteria	<0.005	<0.005	No
Chlordane	0.00059	<0.1	<0.1	No
4,4'-DDT	0.00059	<0.005	<0.005	No
4,4'-DDE (linked to DDT)	0.00059	<0.005	<0.005	No
4,4'-DDD	0.00084	<0.005	<0.005	No
Dieldrin	0.00014	<0.005	<0.005	No
alpha-Endosulfan	0.0087	<0.005	<0.005	No
beta-Endosulfan	0.0087	<0.005	<0.005	No
Endosulfan Sulfate	240	<0.005	<0.005	No
Endrin	0.0023	<0.005	<0.005	No
Endrin Aldehyde	0.81	<0.005	<0.005	No
Heptachlor	0.00021	<0.005	<0.005	No
Heptachlor Epoxide	0.00011	<0.005	<0.005	No
PCBs sum	0.00017	<0.1	<0.1	No
Toxaphene	0.0002	<0.5	<0.5	No

NA = Not available.

[1] The highest reported concentration of Bis (2-Ethylhexyl) Phtalate was 9.2 µg/L. This reported value was not considered in determining reasonable potential, and was considered suspect due to the prevalence of Bis(2-Ethylhexyl) Phthalate in the environment. Bis(2-Ethylhexyl) Phthalate is used as a plasticizer.

Final RPA results for Discharge Point Nos. 001 and 002 demonstrate that WQBELs are required for copper and silver.

Table F-10. RPA for Basin Plan Criteria for Discharge Point Nos. 001 and 002

Parameter	Units	Criteria	Maximum Effluent Concentration (MEC)	Receiving Water Concentration (B)	Reasonable Potential?
pH[1]	s.u.	7.0 - 9.0	7.0 – 8.06	6.5 - 7.9	Yes
Ammonia, Unionized as N[2]	mg/L	0.025	0.22	2	Yes
Total Residual Chlorine[3]	mg/L	0	0.34	NA	Yes
Fecal Coliform[4]	MPN/100 mL	Narrative	8.81	NA	Yes
Total Coliform[5]	MPN /100 mL	Narrative	25	NA	Yes
Enterococcus[6]	MPN /100 mL	104	90	NA	Yes
Toxicity[7]	TU_c	Narrative	1	NA	Yes

ND = Non-detect
NA = Not available.

1 Expressed as instantaneous minimum and instantaneous maximum value.

2 The limits are based on basin plan unionized ammonia objectives of 0.025 mg/L (as N) and 21 to 1 dilution.

3 The Basin Plan does contain narrative objectives for total residual chlorine prohibiting discharges that cause toxicity to aquatic organisms.

4 The fecal coliform concentration based on a minimum of not less than five samples over a calendar month, shall not exceed a log mean of 200/100 mL, nor shall more than 10 percent of total samples during any calendar month exceed 400/100 mL. The MEC is expressed as log mean of minimum of five samples for any 30-day period.

5 The median total coliform concentration throughout the water column for any calendar month shall not exceed 70/100 mL nor shall more than 10 percent of the samples collected during any calendar month exceed 230/100 mL for a five-tube decimal dilution test or 330/100 mL when a three-tube dilution test is used. The MEC is expressed as 30-day median value.

6 The Basin Plan states that in waters designated for contact recreation (REC-1), the enterococci concentration shall not exceed 35/100 mL in all areas, 104/100 mL in designated beach areas, 276/100 mL in moderately or lightly used areas, and 500/100 mL in infrequently used areas. The MEC is expressed as instantaneous maximum value.

7 There shall be no chronic toxicity in effluent discharge.

Final RPA results for Discharge Point Nos. 001 and 002 demonstrate that WQBELs are required for indicator bacteria, pH, and total chlorine residual.

Mission Bay is 303(d) listed for indicator bacteria (fecal coliform, total coliform, and enterococcus) and these pollutants were detected in the effluent. Thus, reasonable potential was determined to exist and WQBELs for fecal coliform, total coliform, and enterococcus are required.

pH is a pollutant of interest within the effluent that exhibits variability over time and may impact water quality. An effluent pH limitation of 7.0-9.0 is included in the Order based on the water quality objective for pH in bays and estuaries specified in the Basin Plan. Reasonable potential (RP) exists for pH because the lowest receiving water pH value of 6.5 is below the lower limit of the water quality objective for pH (7.0).

The maximum effluent concentration during the previous permit term for ammonia of 0.22 mg/L exceeds the water quality objective of 0.025 mg/L for ammonia specified in the Basin Plan. An instantaneous maximum effluent limitation for ammonia of 0.55 mg/L has been established in the Order after applying a dilution factor of 21.

Seawater pumped from Mission Bay is filtered and disinfected with chlorine to produce a suitable habitat for the exhibit mammals tolerant to chlorine. Due to the nature of the discharge from the chlorine contact tanks and the potential for chlorine to be present in the

discharge, chlorine is pollutant of interest within the effluent. Chlorine is acutely toxic to aquatic life.

4. CTR/NTR WQBELs

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

i. If applicable and available, use the waste load allocation (WLA) established as part of a TMDL;

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

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

b. WQBELs are calculated following the procedures in section 1.4 of the SIP. Additionally, performance goals for the remaining CTR/NTR parameters are calculated based on section 1.4 of the SIP.

c. WQBELs Calculation Example

Using total recoverable copper and silver as examples, the following demonstrates how WQBELs and performance goals were established for CTR/NTR parameters in this Order. The procedure shown below was used in calculating WQBELs and performance goals for applicable constituents. However, because the effluent limitations calculated for copper using the procedure shown below were greater than the effluent limitations from the previous Order, the lower effluent limitations for copper from the previous Order were retained to be consistent with anti-backsliding requirements.

This process for developing these limitations and performance goals is consistent with section 1.4 of the SIP.

Calculation of aquatic life AMEL and MDEL for copper:

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

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

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

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH, and translators. Chronic criterion value of 5.835 µg/L when calculating ECA_{acute}, while 3.735 µg/L was used in calculating $ECA_{chronic}$

D = The dilution credit, 21

B = The ambient background concentration, 0

As discussed above, this Order allows for dilution of 21:1 and background data was non-detectable for copper. Using the dilution of 21 to 1 and no background data, effluent limitations was calculated such as:

ECA_{acute} = 127.226 µg/L

$ECA_{chronic}$ = 82.170 µg/L

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

$LTA = ECA \times Multiplier_{99}$

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

Copper has more than 10 samples in the dataset. Thus, the CV shall be estimated as 0.74 by dividing the standard deviation of 5.97 by the average of the dataset (8.02).

For copper, the following data was used to develop the acute and chronic LTAs using equations provided in section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals).

Table 1 of the SIP Effluent Concentration Allowance (ECA) Multipliers for Calculating Long–Term Averages (LTAs)

No. of Samples	CV	ECA $Multiplier_{acute}$	ECA $Multiplier_{chronic}$
46	0.74	0.266	0.462

LTA_{acute} = 127.226 µg/L x 0.66 = 33.842 µg/L

$LTA_{chronic}$ = 82.170 µg/L x 0.<u>462</u> = 37.963 µg/L

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

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

For copper, the most limiting LTA is LTA_{acute}

$LTA_{copper} = LTA_{acute}$ = 37.963 µg/L

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

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

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

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

For copper, the following data were used to develop the AMEL and MDEL for effluent limitations using equations provided in section 1.4, Step 5 of the SIP:

Table 2 of the SIP
Long-Term Average (LTA) Multipliers for Calculating Effluent Limitations

No. of Samples Per Month	CV	$Multiplier_{MDEL99}$	$Multiplier_{AMEL95}$
4	0.74	3.759	1.695

For copper:

$AMEL_{aquatic\ life}$ = 33.842 µg/L x 1.695 = 57.362 µg/L

$MDEL_{aquatic\ life}$ = 33.842 µg/L x 3.759 = 127.212 µg/L

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

For copper, there is no human health based criteria.

For copper in this receiving water, the ECA human health is not applicable.

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

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

For the CV of 0.74

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$	Ratio
4	0.**74**	**3.759**	**1.695**	**2.218**

For copper:

$MDEL_{human\ health}$ = Not applicable.

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

$AMEL_{aq.\ life}$	$MDEL_{aq.\ life}$	$AMEL_{HH}$	$MDEL_{HH}$
57.36	127.21	N/A	N/A

The lowest (most restrictive) effluent limits are based on chronic toxicity and were incorporated into this Order for copper. For copper there are no human health criteria; therefore, the AMEL and MDEL based on aquatic life criteria are established as the WQBELs. These limits are protective of aquatic life.

Calculation of aquatic life AMEL and MDEL for silver:

Step 1: Calculate ECA using the following steady state equation:

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

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH, and translators. Acute criterion of 2.235 µg/L was used since there is no chronic criterion for silver

D = The dilution credit, 21

B = The ambient background concentration, 0

As discussed above, this Order allows for dilution of 21:1 and background data was non-detectable for copper. Using the dilution of 21 to 1 and no background data, effluent limitations was calculated such as:

ECA_{acute} = 49.17 µg/L

Since there is no chronic criterion for silver, there was no need to determine the $ECA_{chronic}$

Step 2: Determine the LTA by multiplying the ECA by a factor (multiplier).

LTA = ECA x $Multiplier_{99}$

Silver has more than 10 samples in the dataset. Thus, the CV shall be estimated as 0.84 by dividing the standard deviation of 0.895 by the average of the dataset (1.062)

For copper, the following data was used to develop the acute and chronic LTAs using equations provided in section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals).

Table 1 of the SIP Effluent Concentration Allowance (ECA)

Multipliers for Calculating Long–Term Averages (LTAs)

No. of Samples	CV	ECA $Multiplier_{acute}$	ECA $Multiplier_{chronic}$
24	0.84	0.238	0.424

LTA_{acute} = 49.170 µg/L x 0.238 = 11.702 µg/L

Since there is no chronic criterion for silver, there was no need to determine the $LTA_{chronic}$

Step 3: Select LTA_{acute} there is no $LTA_{chronic}$

For silver, the most limiting LTA is LTA_{acute}

LTA_{silver} = LTA_{acute} = 11.704 µg/L

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as AMEL and MDEL.

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

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

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

For silver, the following data were used to develop the AMEL and MDEL for effluent limitations using equations provided in section 1.4, Step 5 of the SIP:

Table 2 of the SIP
Long-Term Average (LTA) Multipliers for Calculating Effluent Limitations

No. of Samples Per Month	CV	$Multiplier_{MDEL99}$	$Multiplier_{AMEL95}$
4	0.84	4.205	1.793

For silver:

$AMEL_{aquatic\ life}$ = 11.704 µg/L x 1.793 = 20.985µg/L

$MDEL_{aquatic\ life}$ = 11.704 µg/L x 4.025= 49.215µg/L

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

For silver, there is no human health based criteria.

For silver in this receiving water, the ECA human health is not applicable.

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

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

For the CV of 0.84

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$	Ratio
4	0.84	4.205	1.793	2.345

For silver:

$MDEL_{human\ health}$ = Not applicable.

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

$AMEL_{aq.\ life}$	$MDEL_{aq.\ life}$	$AMEL_{HH}$	$MDEL_{HH}$
20.985	49.215	N/A	N/A

For silver there are no human health criteria; therefore, the AMEL and MDEL based on aquatic life criteria are established as the WQBELs. These limits are protective of aquatic life.

A summary of the applicable CTR/NTR effluent limitations is provided below:

Table F-11. CTR-based Effluent Limitations at Discharge Point Nos. 001 and 002

Parameter	Unit	Effluent Limitations	
		Average Monthly	Maximum Daily
Copper, Total Recoverable	µg/L	57.36	127.21
Silver, Total Recoverable	µg/L	20.99	49.21

This Order retains the average monthly and daily maximum effluent limitations for copper, and the daily maximum effluent limitation for silver from Order No. R9-2011-0032 because there are more stringent than those calculated above. The average monthly effluent limitation for silver calculated above has been included in this Order

because it is more stringent than the average monthly effluent limitation established in the Order No. R9-2011-0032.

5. Intake Water Credits

In the ROWD, the Discharger requested that the San Diego Water Board allow for an intake water credit in establishing an effluent limitation for copper given the presence of copper in the influent. Section 1.4.4 of the SIP establishes the procedure for allowing intake water credits in determining effluent limitations for priority pollutants. The San Diego Water Board has determined that the discharge does not meet Item 4 of Section 1.4.4 of the SIP which specifies that for a Discharger to be allowed an intake water credit for a priority pollutant, the Discharger must demonstrate to the satisfaction of the Regional Water Board that the Facility does not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses. The Discharger reported that it discontinued the use of copper sulfate as a disinfectant in its aquariums in mid to late 2015. Although effluent copper concentrations have reduced since the Discharger discontinued the use of copper sulfate, effluent copper concentrations reported in 2016 and 2017 frequently exceeded influent copper concentrations in 2016 and 2017. This may indicate that copper is being concentrated in some form as the intake water moves through the treatment process. Influent copper concentrations from January 2016 to December 2016 ranged from 0.591 to 3.71 µg/L. Effluent copper concentrations during the same time period ranged from 1.71 to 7.51 µg/L.

There were no exceedances of the effluent limitations for copper within the previous term. As a result, not allowing for intake water credit should not preclude the discharge from complying with effluent limitations for copper.

6. Basin Plan WQBELs

This Order establishes effluent limitations for constituents listed in Table F-12 based on Basin Plan water quality objectives.

Table F-12. Basin Plan-based Effluent Limitations at Discharge Point Nos. 001 and 002

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH[1]	s.u.	--	--	7.0	9.0
Ammonia[2]	mg/L	--	--	--	0.55
Total Chlorine Residual[3]	mg/L	0.21	--	--	0.42
Fecal Coliform	MPN/100 mL	see section IV.A. 2 of Order			
Total Coliform	MPN/100 mL	see section IV.A .2 of Order			
Enterococcus	MPN/100 mL	see section IV.A 2 of Order			
Chronic Toxicity	TU_c	Pass and less than 50% effect			

1 Expressed as instantaneous minimum and instantaneous maximum value.

2 The limits are based on basin plan unionized ammonia objectives of 0.025 mg/L (as N) and a dilution factor of 21:1.

3 The Basin Plan contains narrative objectives for total residual chlorine prohibiting discharges that cause toxicity to aquatic organisms.

7. Mass-Based Limitation Calculation

40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to

additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH, turbidity, and settleable solids. The mass-based effluent limitations contained in this Order are based on a maximum total discharge flow rate of 3.24 MGD, established for Discharge Point No. 001 and a maximum total discharge flow rate of 6.12 MGD established for Discharge Point No. 002. When calculating the mass-based limitations for discharges, the appropriate flow, daily maximum limitations for daily maximum mass calculations, and the monthly average limitations when calculating the monthly average mass, should be used in the following equation:

Mass (lbs/day) = Permitted Flow Rate (MGD) x Effluent Limitation (mg/L) x 8.34

Using copper's monthly average effluent limitation (38.13 µg/L) as an example; the following equation demonstrates how WQBELs were established for this Order.

Mass (lbs/day) = 3.24 (MGD) x 0.0381 (mg/L) x 8.34 = 1.03 lbs/day

8. Whole Effluent Toxicity (WET)

The Basin Plan defines toxicity as the adverse response to organisms to chemical or physical agents.

The Basin Plan establishes a narrative water quality objective for toxicity:

"All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life."

This Order establishes an effluent limitation for chronic toxicity to ensure the aggregated impacts of pollutants present within the Discharger's effluent does not result in the presence of toxicity within the receiving water. Order No. R9-2011-0032 established chronic toxicity narrative limits for the discharge of treated effluent at Discharge Point Nos. 001 and 002, This Order establishes an IWC of 100 percent without credit for the dilution factor, and specifies that the effluent limitation for chronic toxicity is exceeded when a toxicity test results in a "fail" in accordance with the Test of Significant Toxicity (TST) approach and a percent effect of greater than or equal to 50 percent.

For improved WET analysis, the San Diego Water Board has begun implementing USEPA's TST method for WET effluent limitations within the San Diego Region. As such, a chronic WET effluent limitation has been established to be consistent with the TST method.

USEPA examined the side-by-side comparison of No-Observed-Effect-Concentration (NOEC) and TST results using California chronic toxicity test data (including data from publicly-owned treatment works (POTWs)) for the West Coast marine methods and test species required under this Order. *See* Table 1 (method types 1 through 5) on page 1103 in Diamond D, Denton D, Roberts, J, Zheng L. 2013. *Evaluation of the Test of Significant Toxicity for Determining the Toxicity of Effluents and Ambient Water Samples*. *Environ Toxicol Chem* 32:1101-1108. This comparison shows that while the TST and NOEC statistical approaches perform similarly most of the time, the TST performs better in identifying toxic and nontoxic samples, a desirable characteristic for chronic toxicity testing conducted under this Order. This examination also signals that the test methods' false positive rate (β no higher than 0.05 at a mean effect of 10%) and false negative rate (α no higher than 0.05 (0.25 for topsmelt) at a mean effect of 25%) are indeed low. This highlights that using the TST in this Order provides increased assurance that statistical error rates are more directly addressed and accounted for in decisions regarding chronic toxicity in the discharge. As a result, the San Diego Water Board is exercising its discretion to use the TST statistical approach for this discharge.

Compliance with this chronic toxicity effluent limitation (i.e., determination of "pass" or "fail") will be evaluated using the Test of Significant Toxicity (TST) statistical approach at the discharge "in-stream" waste concentration (IWC), as described in section VII.K of this Order and section III.B of the MRP (Attachment E). The TST statistical approach is 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. The TST null hypothesis shall be "mean discharge IWC response ≤ 0.75 × mean control response." A test that rejects this null hypothesis shall be reported as "pass." A test that does not reject this null hypothesis shall be reported as "fail." The Discharger shall also report the "Percent Effect" as part of chronic toxicity result.

The previous Order established performance goals for acute toxicity. 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 exposure period of time and may measure mortality, reproduction, and growth. A chemical at a low concentration could have chronic effects but no acute effects until the chemical was at a higher concentration. Thus, chronic toxicity is a more stringent requirement than acute toxicity. To ensure the aggregated impacts of pollutants present within the Discharger's effluent do not result in the presence of toxicity within the receiving water, this Order removes performance goals and monitoring requirements for acute toxicity and establishes effluent limitations for chronic toxicity. Removal of the acute toxicity performance goals does not constitute backsliding because chronic toxicity is a more stringent requirement than acute toxicity. Effluent limitations for chronic toxicity are necessary, feasible, and appropriate because effluent data exhibited reasonable potential to cause or contribute to an exceedance of the toxicity water quality objectives.

This Order contains chronic toxicity effluent limitations because effluent data exhibited reasonable potential to cause or contribute to an exceedance of the water quality objective (resulted in a "Fail"). Compliance with the chronic toxicity requirement contained in this Order shall be determined in accordance to section VII.J of this Order. Nevertheless, this Order contains a reopener to require the San Diego Water Board to modify this Order, if necessary, to make it consistent with any new policy, law, or regulation.

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 the following was recommended: "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 USEPA'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 Freshwater Organisms* (EPA/821/R-02/013, 2002), recognizes that, "the statistical methods 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 USEPA's WET testing program and acute and chronic WET methods rely on the measurement result for a specific test endpoint, not upon achievement of specified concentration-response patterns to determine toxicity. USEPA's WET methods do not require achievement of specified effluent or ambient concentration-response patterns prior to determining that toxicity is present[1]. Nevertheless, USEPA's acute and chronic WET

[1] See, Supplementary Information in support of the Final Rule establishing WET test methods at 67 Fed. Reg. 69952, 69963, Nov. 19, 2002.

methods require that effluent and ambient concentration-response patterns generated for multi-concentration acute and chronic toxicity tests be reviewed—as a component of test review following statistical analysis—to ensure that the calculated measurement result for the toxicity test is interpreted appropriately. (EPA-821-R-02-012, section 12.2.6.2; EPA-821-R-02-013, section 10.2.6.2). In 2000, USEPA provided guidance for such reviews to ensure that test endpoints for determining toxicity based on the statistical approaches utilized at the time the guidance was written NOEC, percent waste giving 50 percent survival of test organisms (lethal concentration 50, LC 50), effects concentration at 25 percent (EC25) were calculated appropriately (EPA 821-B-00-004).

USEPA designed its 2000 guidance as a standardized step-by step review process that investigates the causes for ten commonly observed concentration-response patterns and provides for the proper interpretation of the test endpoints derived from these patterns for NOECs, LC 50, and EC25, thereby reducing the number of misclassified test results. The guidance provides one of three determinations based on the review steps: that calculated effect concentrations are reliable and should be reported, that calculated effect concentrations are anomalous and should be explained, or that the test was inconclusive and should be repeated with a newly collected sample. The standardized review of the effluent and receiving water concentration-response patterns provided by USEPA's 2000 guidance decreased discrepancies in data interpretation for NOEC, LC 50, and EC25 test results, thereby lowering the chance that a truly nontoxic sample would be misclassified and reported as toxic.

Appropriate interpretation of the measurement result from USEPA's TST statistical approach ("Pass"/"Fail") for effluent and receiving water samples is, by design, independent from the concentration-response patterns of the toxicity tests for those samples. Therefore, when using the TST statistical approach, application of USEPA's 2000 guidance on effluent and receiving waters concentration-response patterns will not improve the appropriate interpretation of TST results as long as all Test Acceptability Criteria and other test review procedures—including those related to quality assurance (QA) for effluent and receiving water toxicity tests, reference toxicity tests, and control performance (mean, standard deviation, and coefficient of variation)—described by the WET test methods manual and TST guidance, are followed. The 2000 guidance may be used to identify reliable, anomalous, or inconclusive concentration-response patterns and associated statistical results to the extent that the guidance recommends review of test procedures and laboratory performance already recommended in the WET test methods manual. The guidance does not apply to single-concentration (IWC) and control statistical t-tests and does not apply to the statistical assumptions on which the TST is based. The San Diego Water Board and USEPA, Region IX 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 Percent Minimum Significant Differences (PMSDs) must be submitted for review by the San Diego Water Board, in consultation with the State Water Board's Quality Assurance Officer and Environmental Laboratory Accreditation Program (ELAP) (40 CFR section 122.44(h)). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality

Laboratory from the State Water Board dated August 7, 2014, and from the USEPA dated December 24, 2013, 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.

E. Final Effluent Limitation Considerations

1. Satisfaction of Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) prohibit backsliding in NPDES permits unless specific criteria apply. These anti-backsliding provisions require effluent limitations in a reissued permit to be at least as stringent as those in the previous permit, with some exceptions where limitations may be relaxed.

This Order establishes effluent limitations that apply to both Discharge Point Nos. 001 and 002. A combined dataset for the two systems was used to perform the RPA and to calculate effluent limitations and performance goals. The mass-based limits were calculated separately based on the physical restrictions to the effluent flows. The effluent limitations established in this Order are either the same as or more stringent than the effluent limitations from the previous Order, consistent with anti-backsliding requirements.

As discussed in section IV.C.9 above, this Order establishes an effluent limitation for chronic toxicity in lieu of the performance goal for acute toxicity in the previous Order. Removal of the acute toxicity performance goals does not constitute backsliding because chronic toxicity is a more stringent requirement than acute toxicity.

Performance goals for parameters with applicable water quality objectives/criteria have been established for Discharge Point Nos. 001 and 002.

2. Antidegradation Policies

The WDRs for the discharge must conform with federal and State antidegradation policies provided at 40 CFR section 131.12 and in State Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. The antidegradation policies require that beneficial uses and the water quality necessary to maintain those beneficial uses in the receiving waters of the discharge shall be maintained and protected, and, if existing water quality is better than the quality required to maintain beneficial uses, the existing water quality shall be maintained and protected unless allowing a lowering of water quality is necessary to accommodate important economic and social development or consistent with maximum benefit to the people of California. When a significant lowering of water quality is allowed by the San Diego Water Board, an antidegradation analysis is required in accordance with the *State Water Board's Administrative Procedures Update (July 2, 1990), Antidegradation Policy Implementation for NPDES Permitting*.

This Order retains the status quo of the previous Order for pollutant loading and flow, and does not provide for modified operational or discharge conditions that are anticipated to result in the degradation of the receiving water.

3. Stringency of Requirements for Individual Pollutants

This Order contains both TBELs and WQBELs for individual pollutants. The TBELs consist of restrictions on oil and grease, TSS, settleable solids, turbidity, and pH consistent with State and federal anti-backsliding requirements. This Order's technology-based pollutant restrictions implement minimum applicable federal technology-based requirements. The San Diego Water Board has considered the factors listed in Water Code section 13241.1 in establishing these requirements. These limitations remain unchanged from those established in the previous Order and are discussed in section IV.B.2 of this Fact Sheet.

The Discharger has demonstrated the ability to consistently comply with the limitations. No Facility upgrades are necessary to comply with the TBELs established within this Order.

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The procedures for calculating the individual WQBELs for priority pollutants are based on the CTR implemented by the SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 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 40 CFR section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

F. Performance Goals

Constituents that do not have reasonable potential are listed as performance goals in this Order. Performance goals were calculated in this Order using the procedure outlined in section 1.4 of the SIP (see example calculations in Section IV.D.4 of this Attachment). A CV value of 0.6 was assumed in determining the performance goals, which is the CV value recommended in the SIP when there are less than ten samples in the dataset. Performance goals serve to maintain existing treatment levels and effluent quality and support State and federal antidegradation policies. Additionally, performance goals provide all interested parties with information regarding the expected level of pollutants in the discharge that should not be exceeded in order to maintain the water quality objectives established in the Basin Plan and CTR/NTR. Performance goals are not limitations or standards for the regulation of the discharge. Effluent concentrations above the performance goals will not be considered as violations of this Order but serve as indicators that the effluent may be causing or contributing to a water quality exceedance. Repeated exceedances of performance goals may prompt the San Diego Water Board to reopen and amend this Order to replace performance goals for constituents of concern with effluent limitations, or the San Diego Water Board may coordinate such actions with the next permit renewal.

Constituents that do not have reasonable potential or had inconclusive RPA results are referred to as performance goal constituents and are assigned the performance goals listed in the following table. Performance goal constituents shall be monitored at EFF-001 and EFF-002, but the results will be used for informational purposes only, not compliance determination.

Table F-13. Summary of Performance Goals for Discharge Point Nos. 001 and 002

Parameter	Units	Performance Goals[1,2,3]	
		Maximum Daily	Average Monthly
Antimony	µg/L	9.46E+04	1.90E+05
	lbs/day[4]	2.56E+03	5.14E+03
	lbs/day[5]	4.83E+03	9.71E+03
Arsenic	µg/L	6.47E+02	1.30E+03
	lbs/day[4]	1.75E+01	3.51E+01
	lbs/day[5]	3.30E+01	6.63E+01
Cadmium	µg/L	1.68E+02	3.37E+02
	lbs/day[4]	4.54E+00	9.12E+00

Parameter	Units	Performance Goals[1,2,3]	
		Maximum Daily	Average Monthly
	lbs/day[5]	8.58E+00	1.72E+01
Chromium (VI)[6]	µg/L	9.05E+02	1.82E+03
	lbs/day[4]	2.45E+01	4.91E+01
	lbs/day[5]	4.62E+01	9.27E+01
Lead	µg/L	1.53E+02	3.07E+02
	lbs/day[4]	4.14E+00	8.30E+00
	lbs/day[5]	7.81E+00	1.57E+01
Mercury	µg/L	1.12E+00	2.26E+00
	lbs/day[4]	3.03E-02	6.09E-02
	lbs/day[5]	5.73E-02	1.15E-01
Nickel	µg/L	1.49E+02	2.99E+02
	lbs/day[4]	4.02E+00	8.07E+00
	lbs/day[5]	7.60E+00	1.52E+01
Selenium	µg/L	1.28E+03	2.57E+03
	lbs/day[4]	3.45E+01	6.93E+01
	lbs/day[5]	6.53E+01	1.31E+02
Thallium	µg/L	1.39E+02	2.79E+02
	lbs/day[4]	3.75E+00	7.53E+00
	lbs/day[5]	7.07E+00	1.42E+01
Zinc	µg/L	1.04E+03	2.09E+03
	lbs/day[4]	2.81E+01	5.65E+01
	lbs/day[5]	5.32E+01	1.07E+02
Cyanide[7]	µg/L	1.09E+01	2.20E+01
	lbs/day[4]	2.96E-01	5.93E-01
	lbs/day[5]	5.59E-01	1.12E+00
2,3,7,8-TCDD (Dioxin)	µg/L	3.08E-07	6.19E-07
	lbs/day[4]	8.32E-09	1.67E-08
	lbs/day[5]	1.57E-08	3.16E-08
Acrolein	µg/L	1.72E+04	3.45E+04
	lbs/day[4]	4.64E+02	9.32E+02
	lbs/day[5]	8.76E+02	1.76E+03
Acrylonitrile	µg/L	1.45E+01	2.92E+01
	lbs/day[4]	3.92E-01	7.89E-01
	lbs/day[5]	7.41E-01	1.49E+00
Benzene	µg/L	1.56E+03	3.14E+03
	lbs/day[4]	4.22E+01	8.48E+01
	lbs/day[5]	7.97E+01	1.60E+02
Bromoform	µg/L	7.92E+03	1.59E+04
	lbs/day[4]	2.14E+02	4.30E+02
	lbs/day[5]	4.04E+02	8.13E+02
Carbon Tetrachloride	µg/L	9.68E+01	1.95E+02
	lbs/day[4]	2.62E+00	5.26E+00
	lbs/day[5]	4.94E+00	9.93E+00
Chlorobenzene	µg/L	4.62E+05	9.29E+05
	lbs/day[4]	1.25E+04	2.51E+04
	lbs/day[5]	2.36E+04	4.74E+04
Chlordibromomethane	µg/L	7.48E+02	1.50E+03

Parameter	Units	Performance Goals[1,2,3]	
		Maximum Daily	Average Monthly
	lbs/day[4]	2.02E+01	4.06E+01
	lbs/day[5]	3.82E+01	7.67E+01
Dichlorobromomethane	µg/L	1.01E+03	2.03E+03
	lbs/day[4]	2.73E+01	5.50E+01
	lbs/day[5]	5.17E+01	1.04E+02
1,2-Dichloroethane	µg/L	2.18E+03	4.38E+03
	lbs/day[4]	5.89E+01	1.18E+02
	lbs/day[5]	1.11E+02	2.23E+02
1,1-Dichloroethylene	µg/L	7.04E+01	1.42E+02
	lbs/day[4]	1.90E+00	3.82E+00
	lbs/day[5]	3.59E+00	7.22E+00
1,2-Dichloropropane	µg/L	8.58E+02	1.72E+03
	lbs/day[4]	2.32E+01	4.66E+01
	lbs/day[5]	4.38E+01	8.80E+01
1,3-Dichloropropylene	µg/L	3.74E+04	7.52E+04
	lbs/day[4]	1.01E+03	2.03E+03
	lbs/day[5]	1.91E+03	3.84E+03
Ethylbenzene	µg/L	6.38E+05	1.28E+06
	lbs/day[4]	1.72E+04	3.47E+04
	lbs/day[5]	3.26E+04	6.55E+04
Methyl Bromide	µg/L	8.80E+04	1.77E+05
	lbs/day[4]	2.38E+03	4.78E+03
	lbs/day[5]	4.49E+03	9.03E+03
Methylene Chloride	µg/L	3.52E+04	7.08E+04
	lbs/day[4]	9.51E+02	1.91E+03
	lbs/day[5]	1.80E+03	3.61E+03
1,1,2,2-Tetrachloroethane	µg/L	2.42E+02	4.86E+02
	lbs/day[4]	6.54E+00	1.31E+01
	lbs/day[5]	1.24E+01	2.48E+01
Tetrachloroethylene	µg/L	1.95E+02	3.91E+02
	lbs/day[4]	5.26E+00	1.06E+01
	lbs/day[5]	9.94E+00	2.00E+01
Toluene	µg/L	4.40E+06	8.84E+06
	lbs/day[4]	1.19E+05	2.39E+05
	lbs/day[5]	2.25E+05	4.51E+05
1,2-Trans-Dichloroethylene	µg/L	3.08E+06	6.19E+06
	lbs/day[4]	8.32E+04	1.67E+05
	lbs/day[5]	1.57E+05	3.16E+05
1,1,2-Trichloroethane	µg/L	9.24E+02	1.86E+03
	lbs/day[4]	2.50E+01	5.02E+01
	lbs/day[5]	4.72E+01	9.48E+01
Trichloroethylene	µg/L	1.78E+03	3.58E+03
	lbs/day[4]	4.82E+01	9.68E+01
	lbs/day[5]	9.10E+01	1.83E+02
Vinyl Chloride	µg/L	1.16E+04	2.32E+04
	lbs/day[4]	3.12E+02	6.27E+02
	lbs/day[5]	5.90E+02	1.18E+03

Parameter	Units	Performance Goals[1,2,3]	
		Maximum Daily	Average Monthly
Chlorophenol	µg/L	8.80E+03	1.77E+04
	lbs/day[4]	2.38E+02	4.78E+02
	lbs/day[5]	4.49E+02	9.03E+02
2,4-Dichlorophenol	µg/L	1.74E+04	3.49E+04
	lbs/day[4]	4.70E+02	9.44E+02
	lbs/day[5]	8.87E+02	1.78E+03
2,4-Dimethylphenol	µg/L	5.06E+04	1.02E+05
	lbs/day[4]	1.37E+03	2.75E+03
	lbs/day[5]	2.58E+03	5.19E+03
2-Methyl-4,6-Dinitrophenol	µg/L	1.68E+04	3.38E+04
	lbs/day[4]	4.55E+02	9.14E+02
	lbs/day[5]	8.59E+02	1.73E+03
2,4-Dinitrophenol	µg/L	3.08E+05	6.19E+05
	lbs/day[4]	8.32E+03	1.67E+04
	lbs/day[5]	1.57E+04	3.16E+04
Pentachlorophenol	µg/L	1.42E+02	2.85E+02
	lbs/day[4]	3.84E+00	7.70E+00
	lbs/day[5]	7.25E+00	1.45E+01
Phenol	µg/L	1.01E+08	2.03E+08
	lbs/day[4]	2.73E+06	5.50E+06
	lbs/day[5]	5.17E+06	1.04E+07
2,4,6-Trichlorophenol	µg/L	1.43E+02	2.87E+02
	lbs/day[4]	3.86E+00	7.77E+00
	lbs/day[5]	7.30E+00	1.47E+01
Acenaphthene	µg/L	5.94E+04	1.19E+05
	lbs/day[4]	1.61E+03	3.23E+03
	lbs/day[5]	3.03E+03	6.09E+03
Anthracene	µg/L	2.42E+06	4.86E+06
	lbs/day[4]	6.54E+04	1.31E+05
	lbs/day[5]	1.24E+05	2.48E+05
Benzidine	µg/L	1.19E-02	2.39E-02
	lbs/day[4]	3.21E-04	6.45E-04
	lbs/day[5]	6.06E-04	1.22E-03
Benzo(a)Anthracene	µg/L	1.08E+00	2.17E+00
	lbs/day[4]	2.91E-02	5.85E-02
	lbs/day[5]	5.50E-02	1.11E-01
Benzo(a)Pyrene	µg/L	1.03E+00	2.07E+00
	lbs/day[4]	2.78E-02	5.59E-02
	lbs/day[5]	5.25E-02	1.06E-01
Benzo(b)Fluoranthene	µg/L	1.08E+00	2.17E+00
	lbs/day[4]	2.91E-02	5.85E-02
	lbs/day[5]	5.50E-02	1.11E-01
Benzo(k)Fluoranthene	µg/L	1.08E+00	2.17E+00
	lbs/day[4]	2.91E-02	5.85E-02
	lbs/day[5]	5.50E-02	1.11E-01
Bis(2-Chloroethyl)Ether	µg/L	3.08E+01	6.19E+01
	lbs/day[4]	8.32E-01	1.67E+00

Parameter	Units	Performance Goals[1,2,3]	
		Maximum Daily	Average Monthly
	lbs/day[5]	1.57E+00	3.16E+00
Bis(2-Chloroisopropyl)Ether	µg/L	3.74E+06	7.52E+06
	lbs/day[4]	1.01E+05	2.03E+05
	lbs/day[5]	1.91E+05	3.84E+05
Bis(2-Ethylhexyl)Phthalate	µg/L	1.30E+02	2.61E+02
	lbs/day[4]	3.51E+00	7.05E+00
	lbs/day[5]	6.63E+00	1.33E+01
Butylbenzyl Phthalate	µg/L	1.14E+05	2.30E+05
	lbs/day[4]	3.09E+03	6.21E+03
	lbs/day[5]	5.84E+03	1.17E+04
2-Chloronaphthalene	µg/L	9.46E+04	1.90E+05
	lbs/day[4]	2.56E+03	5.14E+03
	lbs/day[5]	4.83E+03	9.71E+03
Chrysene	µg/L	1.08E+00	2.17E+00
	lbs/day[4]	2.91E-02	5.85E-02
	lbs/day[5]	5.50E-02	1.11E-01
Dibenzo(a,h)Anthracene	µg/L	1.08E+00	2.17E+00
	lbs/day[4]	2.91E-02	5.85E-02
	lbs/day[5]	5.50E-02	1.11E-01
1,2-Dichlorobenzene	µg/L	3.74E+05	7.52E+05
	lbs/day[4]	1.01E+04	2.03E+04
	lbs/day[5]	1.91E+04	3.84E+04
1,3-Dichlorobenzene	µg/L	5.72E+04	1.15E+05
	lbs/day[4]	1.55E+03	3.11E+03
	lbs/day[5]	2.92E+03	5.87E+03
1,4-Dichlorobenzene	µg/L	5.72E+04	1.15E+05
	lbs/day[4]	1.55E+03	3.11E+03
	lbs/day[5]	2.92E+03	5.87E+03
3,3'-Dichlorobenzidine	µg/L	1.69E+00	3.40E+00
	lbs/day[4]	4.58E-02	9.20E-02
	lbs/day[5]	8.65E-02	1.74E-01
Diethyl Phthalate	µg/L	2.64E+06	5.31E+06
	lbs/day[4]	7.13E+04	1.43E+05
	lbs/day[5]	1.35E+05	2.71E+05
Dimethyl Phthalate	µg/L	6.38E+07	1.28E+08
	lbs/day[4]	1.72E+06	3.47E+06
	lbs/day[5]	3.26E+06	6.55E+06
Di-n-Butyl Phthalate	µg/L	2.64E+05	5.31E+05
	lbs/day[4]	7.13E+03	1.43E+04
	lbs/day[5]	1.35E+04	2.71E+04
2,4-Dinitrotoluene	µg/L	2.00E+02	4.02E+02
	lbs/day[4]	5.41E+00	1.09E+01
	lbs/day[5]	1.02E+01	2.05E+01
1,2-Diphenylhydrazine	µg/L	1.19E+01	2.39E+01
	lbs/day[4]	3.21E-01	6.45E-01
	lbs/day[5]	6.06E-01	1.22E+00
Fluoranthene	µg/L	8.14E+03	1.64E+04

Parameter	Units	Performance Goals[1,2,3]	
		Maximum Daily	Average Monthly
	lbs/day[4]	2.20E+02	4.42E+02
	lbs/day[5]	4.15E+02	8.35E+02
Fluorene	µg/L	3.08E+05	6.19E+05
	lbs/day[4]	8.32E+03	1.67E+04
	lbs/day[5]	1.57E+04	3.16E+04
Hexachlorobenzene	µg/L	1.69E-02	3.40E-02
	lbs/day[4]	4.58E-04	9.20E-04
	lbs/day[5]	8.65E-04	1.74E-03
Hexachlorobutadiene	µg/L	1.10E+03	2.21E+03
	lbs/day[4]	2.97E+01	5.97E+01
	lbs/day[5]	5.61E+01	1.13E+02
Hexachlorocyclopentadiene	µg/L	3.74E+05	7.52E+05
	lbs/day[4]	1.01E+04	2.03E+04
	lbs/day[5]	1.91E+04	3.84E+04
Hexachloroethane	µg/L	1.96E+02	3.94E+02
	lbs/day[4]	5.29E+00	1.06E+01
	lbs/day[5]	9.99E+00	2.01E+01
Indeno(1,2,3-cd) Pyrene	µg/L	1.08E+00	2.17E+00
	lbs/day[4]	2.91E-02	5.85E-02
	lbs/day[5]	5.50E-02	1.11E-01
Isophorone	µg/L	1.32E+04	2.65E+04
	lbs/day[4]	3.57E+02	7.17E+02
	lbs/day[5]	6.74E+02	1.35E+03
Nitrobenzene	µg/L	4.18E+04	8.40E+04
	lbs/day[4]	1.13E+03	2.27E+03
	lbs/day[5]	2.13E+03	4.29E+03
N-Nitrosodimethylamine	µg/L	1.78E+02	3.58E+02
	lbs/day[4]	4.82E+00	9.68E+00
	lbs/day[5]	9.10E+00	1.83E+01
N-Nitrosodi-n-Propylamine	µg/L	3.08E+01	6.19E+01
	lbs/day[4]	8.32E-01	1.67E+00
	lbs/day[5]	1.57E+00	3.16E+00
N-Nitrosodiphenylamine	µg/L	3.52E+02	7.08E+02
	lbs/day[4]	9.51E+00	1.91E+01
	lbs/day[5]	1.80E+01	3.61E+01
Pyrene	µg/L	2.42E+05	4.86E+05
	lbs/day[4]	6.54E+03	1.31E+04
	lbs/day[5]	1.24E+04	2.48E+04
Aldrin	µg/L	3.08E-03	6.19E-03
	lbs/day[4]	8.32E-05	1.67E-04
	lbs/day[5]	1.57E-04	3.16E-04
alpha-BHC	µg/L	2.86E-01	5.75E-01
	lbs/day[4]	7.73E-03	1.55E-02
	lbs/day[5]	1.46E-02	2.93E-02
beta-BHC	µg/L	1.01E+00	2.03E+00
	lbs/day[4]	2.73E-02	5.50E-02
	lbs/day[5]	5.17E-02	1.04E-01

Parameter	Units	Performance Goals[1,2,3]	
		Maximum Daily	Average Monthly
gamma-BHC	µg/L	1.39E+00	2.79E+00
	lbs/day[4]	3.75E-02	7.53E-02
	lbs/day[5]	7.07E-02	1.42E-01
Chlordane	µg/L	1.30E-02	2.61E-02
	lbs/day[4]	3.51E-04	7.05E-04
	lbs/day[5]	6.63E-04	1.33E-03
4,4-DDT	µg/L	1.30E-02	2.61E-02
	lbs/day[4]	3.51E-04	7.05E-04
	lbs/day[5]	6.63E-04	1.33E-03
4,4-DDE	µg/L	1.30E-02	2.61E-02
	lbs/day[4]	3.51E-04	7.05E-04
	lbs/day[5]	6.63E-04	1.33E-03
4,4-DDD	µg/L	1.85E-02	3.71E-02
	lbs/day[4]	4.99E-04	1.00E-03
	lbs/day[5]	9.43E-04	1.90E-03
Dieldrin	µg/L	3.08E-03	6.19E-03
	lbs/day[4]	8.32E-05	1.67E-04
	lbs/day[5]	1.57E-04	3.16E-04
alpha-Endosulfan	µg/L	1.56E-01	3.14E-01
	lbs/day[4]	4.22E-03	8.48E-03
	lbs/day[5]	7.98E-03	1.60E-02
beta-Endosulfan	µg/L	1.56E-01	3.14E-01
	lbs/day[4]	4.22E-03	8.48E-03
	lbs/day[5]	7.98E-03	1.60E-02
Endosulfan Sulfate	µg/L	5.28E+03	1.06E+04
	lbs/day[4]	1.43E+02	2.87E+02
	lbs/day[5]	2.69E+02	5.42E+02
Endrin	µg/L	4.13E-02	8.29E-02
	lbs/day[4]	1.12E-03	2.24E-03
	lbs/day[5]	2.11E-03	4.23E-03
Endrin Aldehyde	µg/L	1.78E+01	3.58E+01
	lbs/day[4]	4.82E-01	9.68E-01
	lbs/day[5]	9.10E-01	1.83E+00
Heptachlor	µg/L	4.62E-03	9.29E-03
	lbs/day[4]	1.25E-04	2.51E-04
	lbs/day[5]	2.36E-04	4.74E-04
Heptachlor Epoxide	µg/L	2.42E-03	4.86E-03
	lbs/day[4]	6.54E-05	1.31E-04
	lbs/day[5]	1.24E-04	2.48E-04
PCBs sum (2)	µg/L	3.74E-03	7.52E-03
	lbs/day[4]	1.01E-04	2.03E-04
	lbs/day[5]	1.91E-04	3.84E-04
Toxaphene	µg/L	3.59E-03	7.21E-03
	lbs/day[4]	9.71E-05	1.95E-04
	lbs/day[5]	1.83E-04	3.68E-04

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] The MER limitation, in lbs/day, was calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the permitted flow (MGD) and C is the concentration (mg/L).

[3] Scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates that position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation, a value of 6.1E-02 represents 6.1 x 10-2 or 0.061, 6.1E+02 represents 6.1 x 102 or 610, and 6.1E+00 represents 6.1 x 100 or 6.1.

[4] Based on a flow of 3.24 MGD at Discharge Point No. 001.

[5] Based on a flow of 6.12 MGD at Discharge Point No. 002.

[6] Dischargers may, at their option, apply this performance goal as a total chromium performance goal.

[7] If the Discharger can demonstrate to the satisfaction of USEPA and the State Water Resources Control Board (State Water Board) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, the performance goals may be evaluated with the combined measurement of free cyanide, simple alkali metals cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in Code of Federal Regulations, title 40 (40 CFR) part 136.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

Section 303(a-c) of the CWA requires states to adopt water quality standards, including criteria necessary to protect beneficial uses. The San Diego Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states "water quality objectives must protect the most sensitive of the beneficial uses which have been designated for a water body." The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. Receiving water limitations in this Order are derived from the Basin Plan, the Ocean Plan (2015), the Bays and Estuaries Policy (1974), the California Toxics Rule (2000), and the State Implementation Plan (2005). Surface water limitations in this Order are carried over from the previous Order.

B. Ground Water – Not Applicable

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

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

B. Special Provisions

1. Reopener Provisions

This Order may be re-opened and modified, revoked and reissued, or terminated in accordance with the provisions of 40 CFR parts 122, 123, 124, and 125. The San Diego Water Board may reopen the permit to modify permit conditions and requirements. Causes

for modifications 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 the San Diego Water Board, including revisions to the Basin Plan.

2. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program (PMP)

The Discharger is required to minimize the discharge of pollutants consistent with the requirements of section 2.4.5.1 of the SIP. The goal of the PMP is to reduce all potential sources of a priority pollutant through pollutant minimization strategies to maintain the effluent concentration at or below water quality-based effluent limitations.

b. Best Management Practices (BMP) Plans

This Order requires the Discharger to develop and implement Best Management Practices (BMP) Plans for Storm Water and Confined Aquatic Animals as specified in section VI.C.4.a and VI.C.4.b respectively of this Order. The Discharger is required to amend BMP Plans whenever there is a change in the Facility or in its operation which increases the generation of pollutants or their discharge to Mission Bay. Revision dates and summaries of revisions shall be documented in the BMP Plans.

3. Construction, Operation, and Maintenance Specifications – Not Applicable

4. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

5. Other Special Provisions – Not Applicable

6. Compliance Schedules – Not Applicable

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the San Diego Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) (Attachment E) establishes monitoring and reporting requirements that implement federal and State requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP (Attachment E) for this Facility.

A. Core Monitoring Requirements

1. Influent Monitoring

Influent monitoring is necessary to characterize the water quality of the influent into the Facility and to determine compliance with effluent limitations. Intake sampling stations are established at each intake location where representative samples are obtained. The intake monitoring requirements in this Order have been modified from those in the previous Order. This Order does not require influent monitoring for fecal, total coliform, enterococcus, copper, and temperature, and this Order requires total suspended solids (TSS) monthly instead of quarterly in order to show compliance with the effluent limitation for TSS. Intake monitoring requirements are summarized in Table F-14.

Table F-14. Monitoring of East and West Intakes at E-INF and W-INF

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total Suspended Solids (TSS)	mg/L	24-hour composite	1/Month

2. Effluent Monitoring

Effluent monitoring is required to determine compliance with the permit conditions and to identify operational problems and improve Facility performance. Effluent monitoring also provides information on wastewater characteristics and flows for use in interpreting water quality and biological data.

Pursuant to the requirements of 40 CFR section 122.44(i)(2), effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to ensure that the discharge is not the cause of unreasonable impacts on the receiving water. Monitoring frequencies have been increased from quarterly and semiannually to monthly for analytes with average monthly effluent limitations. The monitoring frequencies in the previous Order were insufficient to detect noncompliance. Several processes, such as the episodic discharges from quarantine/isolation tanks, may change the quality of the effluent. The monitoring frequencies in the previous Order were unable to capture these episodic discharges. The monitoring frequency for ammonia has increased from semiannually to monthly. The increase in ammonia monitoring is appropriate because the Facility houses confined animals. Ammonia can enter the aquatic environment from the excretion of wastes from animals and from the decay of uneaten feed. The monitoring frequency for chronic toxicity has been increased from once per year to once per quarter. The use of aquaculture chemical and drugs within unknown effects on water quality and aquatic life warrants the increase in frequency of chronic toxicity monitoring. The monitoring frequency for priority pollutants has been increase from once during the permit term to once per year to ensure that there is sufficient data to perform an RPA for the renewal of this Order. Effluent monitoring requirements are summarized in the Table F-15.

Table F-15. Effluent Monitoring Requirements for Discharge Nos. 001 and 002[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow Rate	MGD	Recorder/Totalized	Continuous
pH	Standard Units	Grab	1/Week
Temperature	˚C	Grab	1/Month
Fecal Coliform	MPN/100 mL	Grab	1/Week
Total Coliform	MPN/100 mL	Grab	1/Week
Enterococcus	MPN/100 mL	Grab	1/Week
Chlorine, Total Residual	µg/L	Grab	1/Week[2]
Total Suspended Solids (TSS)	mg/L	24-hr Composite	1/Month[2]
	% Removal	Calculated	1/Month
Settleable Solids	ml/L	24-hr Composite	1/Month
Turbidity	NTU	24-hr Composite	1/Month
Oil and Grease	mg/L	24-hr Composite	1/Month[2]
Ammonia, Unionized as N	mg/L	24-hr Composite	1/Month[2]
Copper, Total Recoverable	µg/L	24-hr Composite	1/Month[2]
Silver, Total Recoverable	µg/L	24-hr Composite	1/Month[2]
Chronic Toxicity	"Pass"/"Fail" (Test of Significant Toxicity)[4]	24-hr Composite	1/Quarter
PARAMETERS FOR PROTECTION OF MARINE AQUATIC LIFE			
Arsenic, Total Recoverable	µg/L	24-hr Composite	1/Year[2,3]

Parameter	Units	Sample Type	Minimum Sampling Frequency
Cadmium, Total Recoverable	µg/L	24-hr Composite	1/Year[2,3]
Chromium (VI), Total Recoverable	µg/L	24-hr Composite	1/Year[2,3]
Lead, Total Recoverable	µg/L	24-hr Composite	1/Year[2,3]
Mercury, Total Recoverable	µg/L	24-hr Composite	1/Year[2,3]
Nickel, Total Recoverable	µg/L	24-hr Composite	1/Year[2,3]
Selenium, Total Recoverable	µg/L	24-hr Composite	1/Year[2,3]
Zinc, Total Recoverable	µg/L	24-hr Composite	1/Year[2,3]
Cyanide, Total Recoverable	µg/L	24-hr Composite	1/Year[2,3]
Phenolic Compounds (nonchlorinated)[1]	µg/L	24-hr Composite	1/Year[2,3]
Chlorinated Phenolics[1]	µg/L	24-hr Composite	1/Year[2,3]
Endosulfan[1]	µg/L	24-hr Composite	2/Year[2,3]
Endrin	µg/L	24-hr Composite	2/Year[2,3]
HCH (BHC)[1]	µg/L	24-hr Composite	2/Year[2,3]
PARAMETERS FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS			
Acrolein	µg/L	Grab	1/Year[2,3]
Antimony, Total	µg/L	24-hr Composite	1/Year[2,3]
Bis (2-chloroethoxy) Methane	µg/L	24-hr Composite	1/Year[2,3]
Bis (2-chloroisopropyl) Ether	µg/L	24-hr Composite	1/Year[2,3]
Chlorobenzene	µg/L	Grab	1/Year[2,3]
Chromium (III), Total Recoverable	µg/L	24-hr Composite	1/Year[2,3]
Di-n-butyl Phthalate	µg/L	24-hr Composite	1/Year[2,3]
Dichlorobenzenes[1]	µg/L	Grab	1/Year[2,3]
Diethyl Phthalate	µg/L	24-hr Composite	1/Year[2,3]
Dimethyl Phthalate	µg/L	24-hr Composite	1/Year[2,3]
4,6-dinitro-2-methylphenol	µg/L	24-hr Composite	1/Year[2,3]
2,4-dinitrophenol	µg/L	24-hr Composite	1/Year[2,3]
Ethylbenzene	µg/L	Grab	1/Year[2,3]
Fluoranthene	µg/L	24-hr Composite	1/Year[2,3]
Hexachlorocyclopentadiene	µg/L	24-hr Composite	1/Year[2,3]
Nitrobenzene	µg/L	24-hr Composite	1/Year[2,3]
Thallium, Total Recoverable	µg/L	24-hr Composite	1/Year[2,3]
Toluene	µg/L	Grab	1/Year[2,3]
Tributyltin	µg/L	24-hr Composite	1/Year[2,3]
1,1,1-trichloroethane	µg/L	Grab	1/Year[2,3]
PARAMETERS FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS			
Acrylonitrile	µg/L	Grab	1/Year[2,3]
Aldrin	µg/L	24-hr Composite	1/Year[2,3]
Benzene	µg/L	Grab	1/Year[2,3]
Benzidine	µg/L	24-hr Composite	1/Year[2,3]
Beryllium	µg/L	24-hr Composite	1/Year[2,3]
Bis (2-chloroethyl) Ether	µg/L	24-hr Composite	1/Year[2,3]
Bis (2-ethlyhexyl) Phthalate	µg/L	24-hr Composite	1/Year[2,3]

Parameter	Units	Sample Type	Minimum Sampling Frequency
Carbon Tetrachloride	µg/L	Grab	1/Year[2,3]
Chlordane[1]	µg/L	24-hr Composite	1/Year[2,3]
Chlorodibromomethane	µg/L	Grab	1/Year[2,3]
Chloroform	µg/L	Grab	1/Year[2,3]
DDT[1]	µg/L	24-hr Composite	1/Year[2,3]
1,4-dichlorobenzene	µg/L	Grab	1/Year[2,3]
3,3'-dichlorobenzidine	µg/L	24-hr Composite	1/Year[2,3]
1,2-dichloroethane	µg/L	Grab	1/Year[2,3]
1,1-dichloroethylene	µg/L	Grab	1/Year[2,3]
Dichlorobromomethane	µg/L	Grab	1/Year[2,3]
Dichloromethane	µg/L	Grab	1/Year[2,3]
1,3-dichloropropene	µg/L	Grab	1/Year[2,3]
Dieldrin	µg/L	24-hr Composite	1/Year[2,3]
2,4-dinitrotoluene	µg/L	24-hr Composite	1/Year[2,3]
1,2-diphenylhydrazine	µg/L	24-hr Composite	1/Year[2,3]
Halomethanes[1]	µg/L	Grab	1/Year[2,3]
Heptachlor	µg/L	24-hr Composite	1/Year[2,3]
Heptachlor Epoxide	µg/L	24-hr Composite	1/Year[2,3]
Hexachlorobenzene	µg/L	24-hr Composite	1/Year[2,3]
Hexachlorobutadiene	µg/L	24-hr Composite	1/Year[2,3]
Hexachloroethane	µg/L	24-hr Composite	1/Year[2,3]
Isophorone	µg/L	24-hr Composite	1/Year[2,3]
N-nitrosodimethylamine	µg/L	24-hr Composite	1/Year[2,3]
N-nitrosodi-N-propylamine	µg/L	24-hr Composite	1/Year[2,3]
N-nitrosodiphenylamine	µg/L	24-hr Composite	1/Year[2,3]
Polynuclear Aromatic Hydrocarbons (PAHs)[1]	µg/L	24-hr Composite	1/Year[2,3]
Polychlorinated Biphenyls (PCBs)[1]	µg/L	24-hr Composite	1/Year[2,3]
TCDD equivalents[1]	µg/L	24-hr Composite	1/Year[2,3]
1,1,2,2-tetrachloroethane	µg/L	Grab	1/Year[2,3]
Tetrachloroethylene	µg/L	Grab	1/Year[2,3]
Toxaphene	µg/L	24-hr Composite	1/Year[2,3]
Trichloroethylene	µg/L	Grab	1/Year[2,3]
1,1,2-trichloroethane	µg/L	Grab	1/Year[2,3]
2,4,6-trichlorophenol	µg/L	24-hr Composite	1/Year[2,3]
Vinyl Chloride	µg/L	Grab	1/Year[2,3]

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The Discharger shall calculate and report the mass emission rate (MER) of the constituent for each sample taken. The MER shall be calculated in accordance with section VII.I.4 of this Order.
3. The minimum frequency of monitoring for this constituent is automatically increased to twice the minimum frequency specified, if any analysis for this constituent yields a result higher than the applicable effluent limitation or performance goal specified in this Order. The increased minimum frequency of monitoring shall remain in effect until the results of a minimum of four consecutive analyses for this constituent are below all applicable effluent limitations or performance goals specified in this Order.

4. For compliance determination, chronic toxicity results shall be reported as “Pass” or “Fail” and “Percent Effect.”

3. WET Testing Requirements

The Basin Plan states, “All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the San Diego Water Board.”

The Basin Plan further states, “survival of aquatic life in surface waters subjected to a waste discharge, shall not be less than that for the same water body in areas unaffected by the discharge…” and that effluent limitations based upon acute bioassays of effluent will be prescribed where appropriate. This Order incorporates chronic toxicity effluent limitations and monitoring requirements.

The Discharger uses a variety of chemicals for maintenance of animal health that are unmonitored and have been attributed to exceedances of the chronic toxicity limitation during the monitoring period of the previous Order. Consistent with the effluent limitation for chronic toxicity and to ensure the aggregated impacts of pollutants present within the Discharger’s effluent does not result in the presence of toxicity within the receiving water, this Order chronic toxicity monitoring monthly, instead of annually as required in the previous Order.

This Order and MRP (Attachment E) require the Discharger to conduct additional toxicity testing for exceedances of the chronic toxicity effluent limitation. If the additional tests demonstrate toxicity, the Discharger is required to submit a Toxicity Reduction Evaluation (TRE) work plan in accordance with USEPA guidance which shall include further steps taken by the Discharger to investigate, identify, and correct the causes of toxicity; actions the Discharge will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and a schedule for these actions. This provision also includes requirements to conduct the Toxicity Identification Evaluation (TRE/TIE) process in accordance with the Work Plan if the results of toxicity testing exceed the effluent limitation for toxicity.

B. Receiving Water Monitoring

1. Visual Observations Near Discharge Points

This Order retains the requirement for the Discharger to conduct visual observations in the vicinity of Discharge Point Nos. 001 and 002 on a monthly basis. The Discharger shall document the presence of any floating and suspended material, visible sheens, discoloration, or odors. Since the intakes at INF-001 and INF-002 are also from Mission Bay in the vicinity of Discharge Point Nos. 001 and 002, the influent monitoring program constitutes a portion of the receiving water monitoring program in addition to monthly visual observations in the vicinity of Discharge Point Nos. 001 and 002.

Refer to section IV.A of the MRP (Attachment E).

2. Receiving Water Monitoring Program

This Order establishes a requirement for the Discharger to develop a Receiving Water Monitoring Program designed to measure the effects of the Facility discharge on the receiving water, including the effects on water quality, marine life, and human health. The Discharger will submit a Work Plan to the San Diego Water Board that outlines the specific questions that will be addressed with the Receiving Water Monitoring Program; proposes receiving water sample locations, sample frequency, and constituents to be monitored;

proposes protocols for sample collection and processing and methods for analyzing the monitoring data; and includes an ELAP approved Quality Assurance Project Plan (QAPP). The Discharger will implement the Receiving Water Monitoring Program Work Plan sixty days after submission, unless otherwise directed by the San Diego Water Board.

Refer to section IV.B of the MRP (Attachment E).

3. Receiving Water Monitoring Reports

This Order establishes a requirement for the Discharger to submit annually a receiving water monitoring report. This report covers the visual observations near discharge points and the results from the receiving water monitoring program. The reports shall include a description of the climatic and receiving water characteristics at the time of sampling, a description of sampling stations including a description of characteristics unique to each station, and an in-depth discussion of the receiving water monitoring results.

Refer to section IV.C of the MRP (Attachment E).

4. Groundwater - Not Applicable

C. Regional Watershed Monitoring

Regional Watershed Monitoring

Regional water monitoring provides information about the sources, fates, and effects of anthropogenic contaminants necessary to make assessments over large areas. The large-scale assessments provided by regional monitoring describe and evaluate cumulative effects of all anthropogenic inputs and enable better decision making regarding protection of beneficial uses of Mission Bay. Regional monitoring data assists in the interpretation of core monitoring studies by providing a more accurate and complete characterization of reference conditions and natural variability. Regional monitoring also leads to methods standardization and improved quality control through inter-calibration exercise. The coalitions implementing regional monitoring enable sharing of technical resources, trained personnel, and associated costs. Focusing these resources on regional issues and developing a broader understanding of pollutants effects in ocean waters enables the development of more rapid and effective response strategies. Based on all of these considerations the San Diego Water Board supports regional approaches to monitoring Mission Bay.

Refer to section V of the MRP (Attachment E).

D. Special Studies Requirements

Climate Change Action Plan

This Order requires the Discharger to prepare and submit a Climate Change Action Plan (CAPP) within 3 years of the effective date of This Order. The CAPP will address challenges posed to the Discharger in addressing the impacts of changing climate conditions which may fundamentally alter the way treatment works are designed and operated as well as how aquatic systems are managed and regulated. Climate change research indicates the overarching driver of change is increased atmospheric carbon dioxide (CO2) from human activity. The increased CO2 emissions trigger changes to climatic patterns, which increase the intensity of sea level rise and coastal storm surges (Δ Sea Level), lead to more erratic rainfall and local weather patterns (Δ Weather Patterns), trigger a gradual warming of freshwater and ocean temperatures (Δ Water Temperature) and trigger changes to ocean water chemistry (Δ Water pH).

Refer to section VI of the MRP (Attachment E).

E. Other Monitoring Requirements

1. Aquaculture Chemicals and Drugs

The Discharger is required to submit an annual report with the information regarding the use of drugs, disinfectants, pesticides, and other chemicals that are used in the aquariums and may be present in the discharges to Mission Bay.

Refer to section VII.A of the MRP (Attachment E).

2. Outfall Inspection

The annual inspection of outfall structures is required to ensure a periodic assessment of the integrity of the outfall pipes and ballasting system.

Refer to section VII.B of the MRP (Attachment E).

3. Storm Water Monitoring

This Order removes the requirement from the previous Order for the Discharger to monitor storm water by-passes.

4. Priority Pollutant Monitoring

This Order removes the requirement from the previous Order for the Discharger to monitor priority pollutants in the receiving water.

VIII. PUBLIC PARTICIPATION

The San Diego Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the Facility. As a step in the WDR adoption process, the San Diego Water Board staff developed tentative WDRs and encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The San Diego Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the following San Diego Union Tribune and San Diego Water Board's website.

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

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 Officer at the San Diego Water Board at 2375 Northside Drive, Suite 100, San Diego, CA 92108.

To be fully responded to by staff and considered by the San Diego Water Board, the written comments were due at the San Diego Water Board office by 5:00 p.m. on May 12, 2018.

C. Public Hearing

The San Diego 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 20, 2018
Time:	9:00 AM
Location:	San Diego Regional Water Quality Control Board Board Meeting Room 2375 Northside Drive, Suite 100, San Diego, CA 92108

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

D. Appeal of Waste Discharge Requirements

Any person aggrieved by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and CCR, title 23, sections 2050 *et seq*. The State Water Board must receive the petition by 5:00 p.m. thirty calendar days after the adoption of this Order at the following address:

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

Copies of the law and regulations applicable to filing petitions may be found on the internet at http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

E. Information and Copying

The ROWD, other supporting documents, and comments received are on file and may be inspected at the San Diego Water Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108 at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the San Diego Water Board by calling 619-516-1990.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Fisayo Osibodu at 619-521-8036 or Olufisayo.Osibodu@waterboards.ca.gov.

ATTACHMENT G – BASIN PLAN DISCHARGE PROHIBITIONS

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code (Water Code) section 13050, is prohibited.
2. The discharge of waste to land, except as authorized by Waste Discharge Requirements (WDRs) or the terms described in Water Code section 13264 is prohibited.
3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by an National Pollutant Discharge Elimination System (NPDES) permit or a dredged or fill material permit (subject to the exemption described in Water Code section 13376) is prohibited.
4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this San Diego Water Board issues an NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State of California Department of Public Health and the operating agency of the impacted reservoir; and the Discharger has an approved fail-safe long-term disposal alternative.
5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the San Diego Water Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.
6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the Discharger is prohibited, unless the discharge is authorized by the San Diego Water Board.
7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit it being transported into the waters, is prohibited unless authorized by the San Diego Water Board.
8. Any discharge to a storm water conveyance system that is not composed entirely of storm water is prohibited unless authorized by the San Diego Water Board. [The Code of Federal Regulations, title 40 (40 CFR) section 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR section 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to an NPDES permit and discharges resulting from firefighting activities.] [section 122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].
9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.
10. The discharge of industrial wastes to conventional septic tank/ subsurface disposal systems, except as authorized by the terms described in Water Code section 13264, is prohibited.
11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.
12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.
13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the San Diego Water Board.

14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

ATTACHMENT H – ANALYTICAL METHODS FOR CTR/NTR PRIORITY POLLUTANTS AND OTHER TOXIC POLLUTANTS

The following table lists the suggested analytical methods and minimum levels (ML) for toxic pollutants that shall be used, unless otherwise specified.

For priority pollutant monitoring, when there is more than one ML value for a give substance, the Discharger may select any of the analytical methods cited in the following table for compliance determination, or any other method described in Code of Federal Regulations, title 40 (40 CFR) part 136 or approved by USEPA if authorized by the San Diego Water Board. However, the ML must be below the effluent limitation and water quality objective. If no ML value is below the effluent limitation and water quality objective, then the method must achieve an ML no greater than the lowest ML value indicated in the table below. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

List of Monitoring Parameters and Analytical Methods

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
1.	Antimony	204.2					10	5	50	0.5	5	0.5		1000
2.	Arsenic	206.3				20		2	10	2	2	1		1000
3.	Beryllium						20	0.5	2	0.5	1			1000
4.	Cadmium	200 or 213					10	0.5	10	0.25	0.5			1000
5a.	Chromium (III)	SM 3500												
5b.	Chromium (VI)	SM 3500				10	5							1000
	Chromium (total)[3]	SM 3500					50	2	10	0.5	1			1000
6.	Copper	200.9					25	5	10	0.5	2			1000
7.	Lead	200.9					20	5	5	0.5	2			10,000
8.	Mercury	1631 (note)[4]												
9.	Nickel	249.2					50	5	20	1	5			1000
10.	Selenium	200.8 or SM 3114B or C						5	10	2	5	1		1000
11.	Silver	272.2					10	1	10	0.25	2			1000
12.	Thallium	279.2					10	2	10	1	5			1000

[1] The suggested method is the USEPA Method unless otherwise specified (SM = Standard Methods). The Discharger may use another USEPA-approved or recognized method if that method has a level of quantification below the applicable water quality objective. Where no method is suggested, the Discharger has the discretion to use any standard method.

[2] Minimum levels are from the *State Implementation Policy*. They are the concentration of the lowest calibration standard for that technique based on a survey of contract laboratories. Laboratory techniques are defined as follows: GC = Gas Chromatography; GCMS = Gas Chromatography/Mass Spectrometry; LC = High Pressure Liquid Chromatography; Color = Colorimetric; FAA = Flame Atomic Absorption; GFAA = Graphite Furnace Atomic Absorption; ICP = Inductively Coupled Plasma; ICPMS = Inductively Coupled Plasma/Mass Spectrometry; SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption (i.e., USEPA 200.9); Hydride = Gaseous Hydride Atomic Absorption; CVAA = Cold Vapor Atomic Absorption; DCP = Direct Current Plasma.

[3] Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 ug/L).

[4] The Discharger shall use ultra-clean sampling (USEPA Method 1669) and ultra-clean analytical methods (USEPA Method 1631) for mercury monitoring. The minimum level for mercury is 2 ng/l (or 0.002 ug/L).

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
13.	Zinc	200 or 289					20		20	1	10			
14.	Cyanide	SM 4500 CN^- C or I				5								
15.	Asbestos (only required for discharges to MUN waters)[5]	0100.2 [6]												
16.	2,3,7,8-TCDD and 17 congeners (Dioxin)	1613												
17.	Acrolein	603	2.0	5										
18.	Acrylonitrile	603	2.0	2										
19.	Benzene	602	0.5	2										
33.	Ethylbenzene	602	0.5	2										
39.	Toluene	602	0.5	2										
20.	Bromoform	601	0.5	2										
21.	Carbon Tetrachloride	601	0.5	2										
22.	Chlorobenzene	601	0.5	2										
23.	Chlorodibromomethane	601	0.5	2										
24.	Chloroethane	601	0.5	2										
25.	2-Chloroethylvinyl Ether	601	1	1										
26.	Chloroform	601	0.5	2										
75.	1,2-Dichlorobenzene	601	0.5	2										
76.	1,3-Dichlorobenzene	601	0.5	2										
77.	1,4-Dichlorobenzene	601	0.5	2										
27.	Dichlorobromomethane	601	0.5	2										
28.	1,1-Dichloroethane	601	0.5	1										
29.	1,2-Dichloroethane	601	0.5	2										
30.	1,1-Dichloroethylene or 1,1-Dichloroethene	601	0.5	2										
31.	1,2-Dichloropropane	601	0.5	1										
32.	1,3-Dichloropropylene or 1,3-Dichloropropene	601	0.5	2										
34.	Methyl Bromide or Bromomethane	601	1.0	2										
35.	Methyl Chloride or Chloromethane	601	0.5	2										
36.	Methylene Chloride or Dichlorormethane	601	0.5	2										
37.	1,1,2,2-Tetrachloroethane	601	0.5	1										
38.	Tetrachloroethylene	601	0.5	2										
40.	1,2-Trans-Dichloroethylene	601	0.5	1										
41.	1,1,1-Trichloroethane	601	0.5	2										
42.	1,1,2-Trichloroethane	601	0.5	2										
43.	Trichloroethene	601	0.5	2										
44.	Vinyl Chloride	601	0.5	2										
45.	2-Chlorophenol	604	2	5										
46.	2,4-Dichlorophenol	604	1	5										
47.	2,4-Dimethylphenol	604	1	2										
48.	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10	5										
49.	2,4-Dinitrophenol	604	5	5										
50.	2-Nitrophenol	604		10										

[5] MUN = Municipal and Domestic Supply. This designation, if applicable, is in the Findings of the permit.
[6] Determination of Asbestos Structures over 10 [micrometers] in Length in Drinking Water Using MCE Filters, USEPA 600/R-94-134, June 1994.

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
51.	4-Nitrophenol	604	5	10										
52.	3-Methyl-4-Chlorophenol	604	5	1										
53.	Pentachlorophenol	604	1	5										
54.	Phenol	604	1	1		50								
55.	2,4,6-Trichlorophenol	604	10	10										
56.	Acenaphthene	610 HPLC	1	1	0.5									
57.	Acenaphthylene	610 HPLC		10	0.2									
58.	Anthracene	610 HPLC		10	2									
60.	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	10	5										
61.	Benzo(a)Pyrene	610 HPLC		10	2									
62.	Benzo(b)Fluoranthene or 3,4 Benzofluoranthene	610 HPLC		10	10									
63.	Benzo(ghi)Perylene	610 HPLC		5	0.1									
64.	Benzo(k)Fluoranthene	610 HPLC		10	2									
74.	Dibenzo(a,h)Anthracene	610 HPLC		10	0.1									
86.	Fluoranthene	610 HPLC	10	1	0.05									
87.	Fluorene	610 HPLC		10	0.1									
92.	Indeno(1,2,3-cd) Pyrene	610 HPLC		10	0.05									
100.	Pyrene	610 HPLC		10	0.05									
68.	Bis(2-Ethylhexyl)Phthalate	606 or 625	10	5										
70.	Butylbenzyl Phthalate	606 or 625	10	10										
79.	Diethyl Phthalate	606 or 625	10	2										
80.	Dimethyl Phthalate	606 or 625	10	2										
81.	Di-n-Butyl Phthalate	606 or 625		10										
84.	Di-n-Octyl Phthalate	606 or 625		10										
59.	Benzidine	625		5										
65.	Bis(2-Chloroethoxy)Methane	625		5										
66.	Bis(2-Chloroethyl)Ether	625	10	1										
67.	Bis(2-Chloroisopropyl)Ether	625	10	2										
69.	4-Bromophenyl Phenyl Ether	625	10	5										
71.	2-Chloronaphthalene	625		10										
72.	4-Chlorophenyl Phenyl Ether	625		5										
73.	Chrysene	625		10	5									
78.	3,3'-Dichlorobenzidine	625		5										
82.	2,4-Dinitrotoluene	625	10	5										
83.	2,6-Dinitrotoluene	625		5										
85.	1,2-Diphenylhydrazine (note)[7]	625		1										
88.	Hexachlorobenzene	625	5	1										
89.	Hexachlorobutadiene	625	5	1										
90.	Hexachlorocyclopentadiene	625	5	5										
91.	Hexachloroethane	625	5	1										
93.	Isophorone	625	10	1										
94.	Naphthalene	625	10	1	0.2									
95.	Nitrobenzene	625	10	1										

[7] Measurement for 1,2-Diphenylhydrazine may use azobenzene as a screen: if azobenzene is measured at >1 ug/L, then the Discharger shall analyze for 1,2-Diphenylhydrazine.

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
96.	N-Nitrosodimethylamine	625	10	5										
97.	N-Nitrosodi-n-Propylamine	625	10	5										
98.	N-Nitrosodiphenylamine	625	10	1										
99.	Phenanthrene	625		5	0.05									
101.	1,2,4-Trichlorobenzene	625	1	5										
102.	Aldrin	608	0.005											
103.	α-BHC	608	0.01											
104.	β-BHC	608	0.005											
105.	γ-BHC (Lindane)	608	0.02											
106.	δ-BHC	608	0.005											
107.	Chlordane	608	0.1											
108.	4,4'-DDT	608	0.01											
109.	4,4'-DDE	608	0.05											
110.	4,4'-DDD	608	0.05											
111.	Dieldrin	608	0.01											
112.	Endosulfan (alpha)	608	0.02											
113.	Endosulfan (beta)	608	0.01											
114.	Endosulfan Sulfate	608	0.05											
115.	Endrin	608	0.01											
116.	Endrin Aldehyde	608	0.01											
117.	Heptachlor	608	0.01											
118.	Heptachlor Epoxide	608	0.01											
119-125	PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260	608	0.5											
126.	Toxaphene	608	0.5											

ATTACHMENT I - STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. Implementation Schedule

The Discharger shall review its existing SWPPP to ensure it complies with the requirements of this Attachment to the Order (Attachment I). The updated SWPPP must include a Storm Water Best Management Practices (BMP) Plan, and must be completed by January 28, 2019.

2. Objectives

a. The Discharger's SWPPP shall be prepared to achieve these objectives:

i. To identify and evaluate sources of pollutants associated with activities that may affect the quality of facility's storm water discharges and authorized non-storm water discharges;

ii. To identify, describe and implement site-specific BMP to reduce or prevent pollutants associated with activities in storm water discharges and authorized non-storm water discharges;

iii. To identify and implement timely revisions and/or updates to the SWPPP.

b. To achieve the SWPPP objectives, the Discharger shall prepare a written facility specific SWPPP in accordance with all applicable SWPPP requirements of this Attachment to the Order (Attachment I). The SWPPP shall include all required maps, descriptions, schedules, checklists, and relevant copies or specific references to other documents that satisfy the requirements of this Attachment to the Order.

3. Planning and Organization

a. SWPPP Checklist

Upon completing the Facility's SWPPP, the Discharger shall prepare a SWPPP Checklist. For each requirement listed, the Discharger shall identify the page number where the requirement is located in the SWPPP (or the title, page number, and location of any reference documents), the implementation date or last revision date, and any SWPPP requirements that may not be applicable to the facility.

b. Pollution Prevention Team

i. The SWPPP shall identify specific 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 storm water monitoring program activities required of this Order.

ii. The SWPPP shall clearly identify the responsibilities, duties, and activities of each team member.

iii. The SWPPP shall identify, as appropriate, alternate individuals to perform the required SWPPP and monitoring program activities when team members are temporarily unavailable (due to vacation, illness, out of town meetings, etc.)

c. Review Other Requirements and Existing Facility Plans

i. The SWPPP shall be developed, implemented, and revised as necessary to be consistent with any applicable municipal, State, and Federal requirements that pertain to the requirements of this Order. For example, a municipal storm water management agency may require specific BMP implementation activities.

ii. The SWPPP may incorporate or reference the elements of the Discharger's existing plans, procedures, or regulatory compliance documents that contain storm water pollution control

practices or otherwise relate to the requirements of this Order. For example, facilities subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials, or facilities subject to regional air quality emission controls may already have evaluated activities that emit dust or particulate pollutants.

4. <u>Site Map</u>

The SWPPP shall include a site map. The site map shall be provided on an 8-1/2 x 11 inch or larger sheet and include notes, legends, north arrow and other data as appropriate to ensure that the site map is clear and understandable. If necessary, the Discharger may provide the required information on multiple site maps. The following information shall be included on the site map:

a. Outlines of the facility boundary, storm water drainage areas within the Facility boundary, and portions of any drainage area impacted by discharges from surrounding areas. Include the flow direction of each drainage area; on-site surface water bodies; areas of soil erosion; and location(s) of near-by water bodies (such as rivers, lakes, wetlands, etc.) or municipal storm drain inlets that may receive the Facility's storm water discharges and authorized non-storm water discharges.

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.

c. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

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

e. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in Description of Potential Pollutant Sources, section 6.a.iv, of this Attachment, have occurred.

f. Areas of industrial activity. Identify 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 reusing areas, and other of industrial activity which may have potential pollutant sources.

5. <u>List of Significant Materials</u>

The SWPPP shall include a list of significant materials handled and stored at the Facility. For each material on the list, describe the locations where the material is 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.

6. <u>Description of Potential Pollutant Sources</u>

a. For each area identified in section 4.e of this Attachment, the SWPPP shall include a narrative description of the Facility's industrial activities, potential pollutant sources, and potential pollutants that could be exposed to storm water or authorized non-storm water discharges. At a minimum, the following industrial activities shall be described as applicable:

i. Industrial Processes

Describe each industrial process including the manufacturing, cleaning, maintenance, recycling, disposal or other activities related to the process. Include the type,

characteristics, and approximate quantity of significant materials used in corresponding containment capacity shall be identified and described.

ii. Material Handling and Storage Areas

Describe each handling and storage area, including the type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Areas protected by containment structure and the corresponding containment capacity shall be identified and described.

iii. Dust and Particulate Generating Activities

Describe all industrial activities that generate dust or particulate pollutants that may be deposited within the Facility's boundaries. Include their discharge locations and the type, characteristics, and quantity of dust and particulate pollutants that may be deposited within the Facility's boundaries. Identify the primary areas of the Facility where dust and particulate pollutants would settle.

iv. Significant Spills and Leaks

Identify and describe materials that spill or leak in significant quantities in storm water discharges or non-storm water discharges upon adoption of this Order. Include toxic chemicals (listed in 40 CFR, Part 302) that have been discharged to storm water as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 Code of Federal Regulations [CFR], Parts 110, 117, and 302). The description shall include the location, characteristics, and approximate quantity of the materials 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 preventive measures taken to ensure spills or leaks of the material do not reoccur.

v. Non-Storm Water Discharges

1. The Discharger shall inspect the facility to identify all non-storm water discharges, sources, and drainage areas. All drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

2. All non-storm water discharges shall be described. The description shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area and shall identify whether the discharge is an authorized or unauthorized non-storm water discharge in accordance with section 11 of this Attachment. Examples of unauthorized non-storm water discharges are rinse and wash water (whether detergents are used or not), contact and non-contact cooling water, boiler blow-down, etc.

vi. Soil Erosion

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

7. <u>Assessment of Potential Pollutant Sources</u>

a. The SWPPP shall include a narrative assessment of all areas of industrial activity and potential pollutant sources as described in section 6 of this Attachment. To determine the likelihood that significant materials will be exposed to storm water or authorized non-storm water discharges, the assessment shall include consideration of the quantity, characteristics, and locations of

each significant material handled, produced, stored, recycled, or disposed; the direct and indirect pathways that significant materials may be exposed to storm water or authorized non-storm water discharges; history of spills or leaks; non-storm water discharges; prior sampling, visual observation, and inspection records; discharges from adjoining areas; and the effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

b. Based upon the assessment above, the SWPPP shall identify any areas of industrial activity and corresponding pollutant sources where significant materials are likely to be exposed to storm water or authorized non-storm water discharges and where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

8. <u>Stormwater Best Management Practices</u>

a. The SWPPP shall include a narrative description of BMPs implemented at the Facility. The BMPs, when developed and implemented, shall be effective in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges. The BMPs narrative description shall include:

i. The type of pollutants the BMPs are designed to reduce or prevent.

ii. The frequency, time(s) of day, or conditions when the BMPs are scheduled for implementation.

iii. The locations within each area of industrial activity or pollutant source where the BMPs shall be implemented.

iv. Identification of the person and/or position responsible for implementing the BMPs.

v. The procedures, including maintenance procedures, and/or instructions to implement the BMPs.

vi. The equipment and tools necessary to implement the BMPs.

b. The Discharger shall consider non-structural BMPs for implementation at the Facility. Non-structural BMPs generally consist of processes, prohibitions, procedures, training, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. Below is a list of non-structural BMPs that shall be considered:

i. Good Housekeeping

Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility.

ii. Preventive Maintenance

Preventive maintenance includes the regular inspection and maintenance of storm water structural controls (i.e. catch basins, oil/water separators, etc.) as well as other Facility equipment and systems.

iii. Spill Response

This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

iv. Material Handling and Storage

This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

v. Employee Training Program

This includes the development of a program to train personnel responsible for implementing the various compliance activities of this Order including BMP implementation, inspections and evaluations, monitoring activities, and storm water compliance management. The training program shall include:

1) A description of the training program and any training manuals or training materials.

2) A discussion of the appropriate training frequency.

3) A discussion of the appropriate personnel to receive training.

4) A training schedule.

vi. Documentation of all completed training classes and the personnel who received training.

vii. Waste Handling/Recycling

This includes the procedures or processes to handle, store, or dispose of waste or recyclable materials.

viii. Record Keeping and Internal Reporting

This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary to the appropriate Facility personnel.

ix. Erosion Control and Site Stabilization

This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

x. Inspections

Periodic visual inspections of the Facility are necessary to ensure that the SWPPP addresses any significant changes to the Facility's operations or BMPs implementation procedures.

1) A minimum of four quarterly visual inspections of all storm water drainage areas and associated potential pollutant sources shall be completed each reporting year. The annual comprehensive site compliance evaluation described in section 9 of this Attachment may substitute for one of the quarterly inspections.

2) Tracking and follow-up procedures shall be described to ensure appropriate corrective actions and/or SWPPP revisions are implemented.

3) A summary of the corrective actions and SWPPP revisions resulting from quarterly inspections shall be reported in the annual report.

4) The Discharger shall certify in the Annual Report that each quarterly visual inspection was completed.

5) All corrective actions and SWPPP revisions shall be implemented in accordance with sections 10.d and 10.e of this Attachment.

xi. Quality Assurance

This includes the management procedures to ensure that the appropriate staff adequately implements all elements of the SWPPP and Monitoring Program.

c. Structural BMPs

Where non-structural BMPs identified in section 8.b of this Attachment are not effective, structural BMPs shall be considered. Structural BMPs typically consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that shall be considered:

i. Overhead Coverage

This includes structures that protect materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

ii. Retention Ponds

This includes basins, ponds, surface impoundment, bermed areas, etc. that do not allow storm water to discharge from the Facility.

iii. Control Devices

This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

iv. Secondary Containment Structures

This includes containment structures around storage tanks and other areas that collect any leaks or spills.

v. Treatment

This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc., which reduce the pollutants in storm water discharges and authorized non-storm water discharges.

d. The SWPPP shall include a summary identifying each area of industrial activity and associated pollutant sources, pollutants, and BMPs in a table similar to Item A-3 at the end of this Attachment.

9. <u>Annual Comprehensive Site Compliance Evaluation</u>

The Discharger shall conduct one comprehensive Site Compliance Evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted no less than eight months from each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

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

b. A visual inspection of all areas of industrial activity and associated potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system. A visual inspection of equipment needed to implement the SWPPP.

c. A review and evaluation of all BMPs, both structural and non-structural, for each area of industrial activity and associated potential pollutant sources to determine whether the BMPs are properly designed, implemented, and are effective in reducing and preventing pollutants in storm water discharges and authorized non-storm water discharges.

i. An evaluation report that includes:

ii. Identification of personnel performing the evaluation,

iii. Date(s) of the evaluation,

iv. Summary and implementation dates of all significant corrective actions and SWPPP revisions for the reporting year,

v. Schedule for implementing any incomplete corrective actions and SWPPP revisions,

vi. Any incidents of non-compliance and the corrective actions taken, and

vii. A certification that the Discharger has completed the quarterly inspections specified in Stormwater BMPs, section 8.b.ix of this Attachment and that the Discharger is complying with this Order. If the above certification cannot be provided, explain in the evaluation report why the discharger is not complying with this Order.

viii. The Evaluation Report shall be submitted as part of the Annual Report, retained for at least five years, and signed and certified in accordance with Reporting Section V.B of this Order.

10. <u>SWPPP General Requirements</u>

a. The SWPPP shall be retained at the facility and made available upon request of a representative of the San Diego Water Board, State Water Board, USEPA, or local storm water management agency (local agency).

b. Upon notification by the San Diego Water Board and/or local agency that the SWPPP does not meet one or more of the minimum requirements of this Attachment, the Discharger shall revise the SWPPP and implement additional BMPs that are effective in reducing and eliminating pollutants in storm water discharges and authorized non-storm water discharges. As requested, the Discharger shall provide an implementation schedule and/or completion certification to the San Diego Water Board and/or local agency.

c. The SWPPP shall be revised, as appropriate, and implemented prior to changes in activities, which;

i. May significantly increase the quantities of pollutants in storm water discharge; or

ii. Cause a new area of industrial activity at the Facility to be exposed to storm water; or

iii. Begin an industrial activity that would introduce a new pollutant source at the facility.

d. The Discharger shall revise the SWPPP and implement the appropriate BMPs in a timely manner and in no case more than 90 days after a discharger determines that the SWPPP is in violation of any Order requirement.

e. When any part of the SWPPP is infeasible to implement by the deadlines specified above due to proposed significant structural changes, the Discharger shall:

i. Submit a report to the San Diego Water Board that:

1) Identifies the portion of the SWPPP that is infeasible to implement by the deadline;

2) Provides justification for a time extension, provides a schedule for completing and implementing that portion of the SWPPP; and (3) Describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized nonstorm water discharges.

3) Describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized nonstorm water discharges.

ii. Comply with any request by the San Diego Water Board to modify the report required in section 10.e.i of this Attachment or provide certification that the SWPPP revisions have been implemented.

f. The SWPPP shall be provided, upon request, to the San Diego Water Board, State Water Board, USEPA, local storm water management agency, or Compliance Inspection Designees. Pursuant to CWA section 308(b), the SWPPP shall be available to the public.

11. <u>Authorized Non-Storm Water Discharges Special Requirements</u>

a. The following non-storm water discharges are authorized provided they satisfy the conditions of section 11.b below:

i. Fire-hydrant flushing;

ii. Potable water sources, including potable water related to the operation, maintenance, or testing of potable water systems;

iii. Drinking fountain water; atmospheric condensate, including refrigeration, air conditioning, and compressor condensate;

iv. Irrigation drainage and landscape watering;

v. Natural springs, ground water, and foundation and footing drainage; and

vi. Seawater infiltration where the seawater is discharged back into the sea water source.

b. The non-storm water discharges identified in subsection a., above, are authorized by this Order if all the following conditions are satisfied:

i. The non-storm water discharges comply with this Order.

ii. The non-storm water discharges comply with local agency ordinances and requirements.

iii. BMPs are specifically included in the SWPPP to: (1) prevent or reduce the contact of non-storm water discharges with significant materials or equipment, and (2) minimize, to the extent practicable, the flow or volume of non-storm water discharges.

iv. The non-storm water discharges do not contain significant quantities of pollutants.

v. The monitoring program includes quarterly visual observations of non-storm water discharges and sources to ensure adequate BMP implementation and effectiveness.

vi. The non-storm water discharges are reported and described in the Annual Report.

c. The San Diego Water Board or local storm water management agency may establish additional monitoring and reporting requirements for any non-storm water discharge authorized by this Order.

d. Discharges from fire fighting activities are authorized by this Order and are not subject to the conditions of section 11.b of this Attachment.

DEFINITIONS

1. Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. The BMP also include treatment measures, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. The BMP may include any type of pollution prevention and pollution control measure necessary to achieve compliance with this Order.
2. Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted by Public Law 92-500 as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; 33 USC. 1251 et seq.
3. Facility is a collection of industrial processes discharging storm water associated with industrial activity within the property boundary or operational unit.
4. Non-Storm Water Discharge means any discharge to storm sewer systems that is not composed entirely of storm water.
5. 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 (CERLCA); 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.
6. Significant Quantities is the volume, concentrations, or mass of a pollutant that can cause or threaten to cause pollution, contamination, or nuisance; adversely impact human health or the environment; and/or cause or contribute to a violation of any applicable water quality standards for the receiving water.
7. Significant Spills includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 CFR 110.10 and 117.21) or Section 102 of CERCLA (see 40 CFR 302.4).
8. Storm water means storm water runoff, snowmelt runoff, and storm water surface runoff and drainage. It excludes infiltration and runoff from agricultural land.
9. Storm water discharge associated with industrial activity means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 CFR Part 122. For the facilities identified in the Fact Sheet of this Order, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters; sites used for residual treatment, storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that

meet the description of the facilities referenced in this paragraph) include those facilities designated under 40 CFR 122.26(a)(1)(v).

ACRONYM LIST

BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Federal Superfund)
CFR	Code of Federal Regulations
CWA	Clean Water Act
Order	General Industrial Activities Storm Water Permit
GMP	Group Monitoring Plan
NEC	No Exposure Certification
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
O&G	Oil and Grease
RCRA	Resource, Conservation, and Recovery Act
Regional Board	Regional Water Quality Control Board
RQ	Reportable Quantity
SARA	Superfund Amendments and Reauthorization Act of 1986
SIC	Standard Industrial Classification
SMCRA	Surface Mining Control and Reclamation Act
SPCC	Spill Prevention Control and Countermeasures
State Board	State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
TOC	Total Organic Carbon
TSS	Total Suspended Solids
U.S. EPA	U.S. Environmental Protection Agency
WDID	Waste Discharger Identification
WDR	Waste Discharge Requirement