CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

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ORDER NO. R9-2015-0002 as amended by R9-2016-0099
NPDES NO. CA0107492

WASTE DISCHARGE REQUIREMENTS FOR THE PADRE DAM MUNICIPAL WATER DISTRICT, RAY STOYER WATER RECYCLING FACILITY, DISCHARGE TO SYCAMORE CREEK, SAN DIEGO COUNTY

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

Table 1. Discharger Information

Discharger	**Padre Dam Municipal Water District**
Name of Facility	**Ray Stoyer Water Recycling Facility**
Facility Address	**12001 North Fanita Parkway**
	Santee, CA 92072
	San Diego County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Tertiary Treated Wastewater	32° 50' 45"	117° 00' 15"	Sycamore Creek (Hydrologic Subarea 907.12)

Table 3. Administrative Information

This Order was adopted on:	**May 13, 2015**
This Order originally became effective on:	**July 1, 2015**
This Order as amended by Order No. R9-2016-0099 became effective on:	**June 22, 2016**
This Order shall expire on:	**June 30, 2020**
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	**180 days prior to the Order expiration date**
The U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, 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

Contents

Tables

Attachments

I. FACILITY INFORMATION

Information describing the Ray Stoyer Water Recycling Facility (Facility) is summarized in Table 1 of this Order 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). It shall serve as an NPDES permit for point source discharges from this Facility to surface waters.

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, H, I, and J are also incorporated into this Order.

C. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections IV.B, IV.C, V.B, and VI.A.2.a are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

D. Notification of Interested Parties. The San Diego Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet (Attachment F).

E. 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. R9-2009-0037 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the San Diego Water Board from taking enforcement action for past violations of Order No. R9-2009-0037. If any part of this Order is subject to a temporary stay of enforcement, unless otherwise specified, the Discharger shall comply with the analogous portions of Order No. R9-2009-0037, which shall remain in effect for all purposes during the pendency of the stay.

III. DISCHARGE PROHIBITIONS

A. The Discharger must comply with Discharge Prohibitions contained in chapter 4 of the *Water Quality Control Plan for the San Diego Basin* (Basin Plan), incorporated into this Order as if fully set forth herein and summarized in Attachment G, as a condition of this Order.

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

C. The discharge of oil, trash, or other solids directly to Sycamore Creek, a tributary of the San Diego River, or in any manner which may permit it to be washed into surface waters, is prohibited.

D. The discharge of municipal and industrial waste sludge and untreated sludge digester supernatant, centrate, or filtrate to Sycamore Creek, a tributary of the San Diego River, is prohibited.

E. The deposition of rubbish or refuse into surface waters or at any place where they would be eventually transported to Sycamore Creek, a tributary of the San Diego River, is prohibited.

F. The discharge of waste shall not cause surface erosion or scouring of aquatic substrates.

G. The discharge of any substances in concentrations toxic to human, animal, plant, or aquatic life is prohibited.

H. The discharge of wastes with a noticeable odor to the Sycamore Creek, a tributary of the San Diego River, is prohibited.

I. The discharge of residual algaecides and aquatic herbicides to Sycamore Creek, a tributary of the San Diego River, is prohibited.

J. The discharge of residual algaecides and aquatic herbicides to the Discharger's ponds/lakes shall not create a condition of nuisance as defined in section 13050 of the California Water Code.

K. The discharge of residual algaecides and aquatic herbicides to the Discharger's ponds/lakes shall not cause, have a reasonable potential to cause, or contribute to an in-stream excursion in Sycamore Creek, a tributary of the San Diego River, above any applicable standard or criterion promulgated by USEPA pursuant to section 303 of the CWA, or water quality objective adopted by the State or San Diego Water Board.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations and Performance Goals – Discharge Point No. 001

1. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Locations EFF-001A as described in the MRP, Attachment E:

Table 4. Effluent Limitations for Discharge Point No. 001 (EFF-001A)[1]

Parameter	Units	Effluent Limitations[2]				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand 5-day @ 20°C (BOD_5)	milligrams per liter (mg/L)	15	23	25	--	--
	pounds per day (lbs/day)	250	384	417	--	--
Total Suspended Solids (TSS)	mg/L	15	23	25	--	--
	lbs/day	250	384	417	--	--
pH	standard units	--	--	--	6.5	8.5

Parameter	Units	Effluent Limitations[2]				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Oil and Grease	mg/L	5	--	7.5	--	--
	lbs/day	83	--	125	--	--
Bis(2-Ethylhexyl) Phthalate	micrograms per litter (µg/L)	1.8	--	3.6	--	--
	lbs/day	0.03	--	0.06	--	--
Zinc	µg/L	115		230	--	--
	lbs/day	1.91		3.84	--	--
Aluminum	mg/L	--	--	0.2	--	--
	lbs/day	--	--	3.3	--	--
Chloride	mg/L	--	--	400	--	--
	lbs/day	--	--	6,672	--	--
Iron, Total Recoverable	mg/L	--	--	0.30	--	--
	lbs/day	--	--	5.0	--	--
Total Chlorine Residual	µg/L	2	8	18	--	--
	lbs/day	0.033	0.13	0.30	--	--
Total Trihalomethanes	µg/L	80.0	--	160	--	--
	lbs/day	1.33	--	2.68	--	--
Manganese, Total Recoverable	mg/L	--	--	0.05	--	--
	lbs/day	--	--	0.83	--	--
Total Dissolved Solids	mg/L	--	--	1,000	--	--
	lbs/day	--	--	16,680	--	--
Dissolved Oxygen	mg/L	--	--	5.0[3]	--	--
Chronic Toxicity[4]	Pass/Fail, % Effect (Test of Significant Toxicity)	Pass[5]	--	Pass or % effect <50 [6]	--	--

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

2 The mass emission rate (MER) limitations, in pounds per day, were calculated based on the following equation: MER (lb/day) = 8.34 x Q x C, where Q is the maximum allowable flow rate (in million gallons per day (MGD)) and C is the concentration (in mg/L).

3 Applied as a Daily Minimum.

4 A numeric WQBEL is established because effluent data showed that there was reasonable potential for the effluent to cause or contribute to an exceedance of the chronic toxicity water quality objective. The chronic toxicity final effluent limitation is protective of both the numeric acute toxicity and the narrative toxicity Basin Plan water quality objectives. These final effluent limitations will be implemented using the Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (USEPA 2002, EPA-821-R-02-013), current USEPA guidance in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, June /2010) and EPA Regions 8, 9 and 10 Toxicity Training Tool (January 2010), http://www2.epa.gov/region8/epa-regions-8-9-and-10-toxicity-training-tool-january-2010.

5 The Median Monthly Effluent Limitation for chronic toxicity shall only apply when there is a discharge more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests may be conducted when one toxicity test results in "Fail".

6 As specified in section VII.O of this Order and section III.C of the MRP, Attachment E of this Order.

a. **Percent Removal:** The average monthly percent removal of BOD_5 and TSS shall not be less than 85 percent.

b. **Turbidity:** Effluent turbidity shall not exceed the following:

i. 2 Nephelometric Turbidity Units (NTU) as a daily average;

ii. 5 NTU more than five percent of the time within a 24-hour period; and

iii. 10 NTU at any time.

c. **Total Coliform Organisms:** Effluent total coliform organisms concentration shall not exceed the following:

i. 2.2 most probable number per 100 milliliters (MPN/100 mL) as a 7-day median based upon the last seven days;

ii. 23 MPN/100 mL more than once in any 30-day period; and

iii. 240 MPN/100 mL at any time.

d. **Fecal Coliform:** Effluent fecal coliform organisms concentration shall not exceed the following:

i. 200 MPN/100 mL geometric mean, based on a minimum of not less than five samples for any 30-day period; and

ii. 400 MPN/100 mL for more than 10 percent of the total samples during any 30-day period.

e. **Enterococci:** Effluent Enterococci concentration shall not exceed the following:

i. 33 MPN/100 mL geometric mean, based on all samples during a 30-day period; and

ii. 61 MPN/100 mL at any time.

f. **Escherichia coli:** Effluent Escherichia coli concentration shall not exceed the following:

i. 126 MPN/100 mL geometric mean, based on all samples during a 30-day period; and

ii. 235 MPN/100 mL at any time.

2. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Locations EFF-001B as described in the MRP, Attachment E:

Table 5. Effluent Limitations for Discharge Point No. 001 (EFF-001B)[1]

Parameter	Units	Effluent Limitations		
		Average Monthly	Maximum Daily	12-Month Average
Flow	MGD	2.0		

Parameter	Units	Effluent Limitations		
		Average Monthly	Maximum Daily	12-Month Average
Ammonia, Un-ionized (as Nitrogen)	mg/L	--	0.025	--
	lbs/day	--	0.42	--
Nitrate Nitrogen	mg/L		45	
	lbs/day		751	
Nitrogen, Total	lbs/day	--	--	17[2]
Phosphorous, Total	lbs/day	--	--	1.7[2]

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

2 Based on a running 12-month average.

3. Constituents that do not have reasonable potential to cause or contribute to an exceedance of water quality objectives (WQOs), or for which reasonable potential to cause or contribute to an exceedance of WQOs 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-001A, but the results will be used for informational purposes only, not compliance determination.

Table 6. Performance Goals at Discharge Point No. 001[1]

Parameter	Performance Goals[2,3]			
	Units	Average Monthly	Maximum Daily	Instantaneous Maximum[4]
BASED ON BASIN PLAN OBJECTIVES				
Radioactivity, Gross Alpha	picocuries per Liter (pCi/L)	--	--	15[5]
Radioactivity, Gross Beta	pCi/L	--	--	50
Radium 226 and 228	pCi/L	--	--	5
Percent Sodium	percent		60	
Color	AMDI Color Units	--	20	--
Boron	µg/L	--	--	7.5E+02
	lbs/day	--	--	1.25E+01
Fluoride	µg/L	--	--	1.00E+03
	lbs/day	--	--	1.67E+01
Methylene Blue Active Substances	µg/L	--	--	5.00E+02
	lbs/day	--	--	8.34E+00
Methyl Tert-Butyl Ether	µg/L	--	5	--
	lbs/day	--	8.3E-02	--
Sulfate	µg/L	--	--	5.00E+5
	lbs/day	--	--	8.34E+03
OBJECTIVES FOR THE PROTECTION OF AQUATIC LIFE				
Cadmium, Total Recoverable	µg/L	3.69E+00	7.40E+00	--
	lbs/day	6.16E-02	1.23E-01	--
Chromium VI, Total Recoverable[6]	µg/L	8.12E+00	1.63E+01	--
	lbs/day	1.35E-01	2.72E-01	--

Parameter	Performance Goals[2,3]			
	Units	Average Monthly	Maximum Daily	Instantaneous Maximum[4]
Copper, Total Recoverable	µg/L	1.44E+01	2.89E+01	--
	lbs/day	2.40E-01	4.82E-01	--
Cyanide, Total Recoverable[7]	µg/L	4.26E+00	8.54E+00	--
	lbs/day	7.10E-02	1.42E-01	--
Lead, Total Recoverable	µg/L	6.94E+00	1.39E+01	--
	lbs/day	1.16E-01	2.32E-01	--
Selenium, Total Recoverable	µg/L	4.09E+00	8.21E+00	--
	lbs/day	6.83E-02	1.37E-01	--
Silver, Total Recoverable	µg/L	7.61E+00	1.53E+01	--
	lbs/day	1.27E-01	2.55E-01	--
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH				
alpha Endosulfan	µg/L	4.59E-02	9.20E-02	--
	lbs/day	7.65E-4	1.53E-03	--
beta Endosulfan	µg/L	4.59E-02	9.20E-02	--
	lbs/day	7.65E-04	1.53E-03	--
Endosulfan Sulfate	µg/L	4.59E-02	9.20E-02	--
	lbs/day	7.65E-04	1.53E-03	--
Endrin	µg/L	2.95E-02	5.91E-02	--
	lbs/day	4.92E-04	9.86E-04	--
Endrin Aldehyde	µg/L	7.60E-01	1.52E+00	--
	lbs/day	1.27E-02	2.54E-02	--
Acrolein	µg/L	1.72E+01	3.45E+01	--
	lbs/day	2.87E-01	5.75E-01	--
Antimony	µg/L	6.00E+00	1.20E+01	--
	lbs/day	1.00E-01	2.01E-01	--
Arsenic, Total Recoverable	µg/L	5.00E+01	1.00E+02	--
	lbs/day	8.34E-01	1.67E+00	--
Asbestos	MFL[5]	7.00E+06	1.40E+07	--
Barium	µg/L	1.00E+03	2.01E+03	--
	lbs/day	1.67E+01	3.35E+01	--
Beryllium	µg/L	4.00E+00	8.02E+00	--
	lbs/day	6.67E-02	1.34E-01	--
Bis(2-chloroisopropyl)ether	µg/L	9.99E+01	2.00E+02	--
	lbs/day	1.67E+00	3.34E+00	--
Bromoform	µg/L	3.60E+02	7.20E+02	--
	lbs/day	6.00E+00	1.20E+01	--
Chlorobenzene	µg/L	7.00E+01	1.40E+02	--
	lbs/day	1.17E+00	2.34E+00	--
Chlorodibromomethane	µg/L	3.40E+01	6.80E+01	--
	lbs/day	5.67E-01	1.13E+00	--
Chromium III, Total Recoverable[6]	µg/L	5.00E+01	1.00E+02	--
	lbs/day	8.34E-01	1.67E+00	--
Dichlorobromomethane	µg/L	4.60E+01	9.20E+01	--
	lbs/day	7.67E-01	1.53E+00	--
Mercury, Total Recoverable	µg/L	5.00E-02	1.00E-01	--
	lbs/day	8.34E-04	1.67E-03	--
Nickel, Total Recoverable	µg/L	8.19E+01	1.64E+02	--
	lbs/day	1.37E+00	2.74E+00	--
Thallium, Total Recoverable	µg/L	1.70E+00	3.41E+00	--
	lbs/day	2.84E-02	5.69E-02	--

Parameter	Performance Goals[2,3]			
	Units	Average Monthly	Maximum Daily	Instantaneous Maximum[4]
Di-n-butyl Phthalate	µg/L	2.46E+00	4.93E+00	--
	lbs/day	4.10E-02	8.22E-02	--
1,2-Dichlorobenzene	µg/L	6.00E+02	1.20E+03	--
	lbs/day	1.00E+01	2.01E+01	--
1,3-Dichlorobenzene	µg/L	4.00E+02	8.02E+02	--
	lbs/day	6.67E+00	1.34E+01	--
1,4-Dichlorobenzene	µg/L	5.00E+00	1.00E+01	--
	lbs/day	8.34E-02	1.67E-01	--
Diethyl Phthalate	µg/L	4.69E+02	9.40E+02	--
	lbs/day	7.82E+00	1.57E+01	--
Dimethyl Phthalate	µg/L	2.46E+00	4.93E+00	--
	lbs/day	4.10E-02	8.22E-02	--
4,6-dinitro-2-methylphenol	µg/L	1.34E+01	2.69E+01	--
	lbs/day	2.24E-01	4.48E-01	--
2,4-dinitrophenol	µg/L	7.00E+01	1.40E+02	--
	lbs/day	1.17E+00	2.34E+00	--
Ethylbenzene	µg/L	2.90E+01	5.82E+01	--
	lbs/day	4.84E-01	9.70E-01	--
Fluoranthene	µg/L	3.00E+02	6.02E+02	--
	lbs/day	5.00E+00	1.00E+01	--
Hexachlorocyclopentadiene	µg/L	3.49E+00	7.00E+00	--
	lbs/day	5.82E-02	1.17E-01	--
Nitrate +Nitrite (sum as nitrogen)	µg/L	1.00E+01	2.01E+01	--
	lbs/day	1.67E-01	3.35E-01	--
Nitrobenzene	µg/L	1.70E+01	3.41E+01	--
	lbs/day	2.84E-01	5.69E-01	--
Perchlorate	µg/L	6.00E-03	1.21E-02	--
	lbs/day	1.00E-04	2.01E-04	--
Thallium, Total Recoverable	µg/L	1.70E+00	3.41E+00	--
	lbs/day	2.84E-02	5.69E-02	--
Toluene	µg/L	1.50E+02	3.01E+02	--
	lbs/day	2.50E+00	5.02E+00	--
Tributyltin	µg/L	5.16E-02	1.03E-01	--
	lbs/day	8.60E-04	1.73E-03	--
1,1,1-trichloroethane	µg/L	2.00E+02	4.01E+02	--
	lbs/day	3.34E+00	6.69E+00	--
Acrylonitrile	µg/L	5.90E-02	1.18E-01	--
	lbs/day	9.84E-04	1.97E-03	--
Aldrin	µg/L	1.30E-04	2.61E-04	--
	lbs/day	2.17E-06	4.35E-06	--
Benzene	µg/L	1.00E+00	2.01E+00	--
	lbs/day	1.67E-02	3.35E-02	--
Benzidine	µg/L	1.20E-04	2.41E-04	--
	lbs/day	2.00E-06	4.02E-06	--
Beryllium	µg/L	4.00E+00	8.02E+00	--
	lbs/day	6.67E-02	1.34E-01	--
Bis(2-chloroethyl) Ether	µg/L	3.10E-02	6.22E-02	--
	lbs/day	5.17E-04	1.04E-03	--
Carbon Tetrachloride	µg/L	2.50E-01	5.02E-01	--
	lbs/day	4.17E-03	8.37E-03	--

Parameter	Performance Goals[2,3]			
	Units	Average Monthly	Maximum Daily	Instantaneous Maximum[4]
Chlordane	µg/L	5.70E-04	1.14E-03	--
	lbs/day	9.51E-06	1.91E-05	--
4,4'-DDT	µg/L	5.90E-04	1.18E-03	--
	lbs/day	9.84E-06	1.97E-05	--
4,4'-DDE	µg/L	5.90E-04	1.18E-03	--
	lbs/day	9.84E-06	1.97E-05	--
4,4'-DDD	µg/L	8.30E-04	1.67E-03	--
	lbs/day	1.38E-05	2.78E-05	--
1,4-dichlorobenzene	µg/L	5.00E+00	1.00E+01	--
	lbs/day	8.34E-02	1.67E-01	--
3,3'-dichlorobenzidine	µg/L	4.00E-02	8.02E-02	--
	lbs/day	6.67E-04	1.34E-03	--
1,2-dichloroethane	µg/L	3.80E-01	7.62E-01	--
	lbs/day	6.34E-03	1.27E-02	--
1,1-dichloroethylene	µg/L	5.70E-02	1.14E-01	--
	lbs/day	9.51E-04	1.91E-03	--
Methyl Chloride (Chloromethane)	µg/L	5.48E+03	1.10E+04	--
	lbs/day	9.15E+01	1.83E+02	--
Methylene Chloride (Dichloromethane)	µg/L	4.70E+00	9.43E+00	--
	lbs/day	7.84E-02	1.57E-01	--
1,2-dichloropropane	µg/L	5.20E-01	1.04E+00	--
	lbs/day	8.67E-03	1.74E-02	--
1,3-dichloropropene	µg/L	5.00E-01	1.00E+00	--
	lbs/day	8.34E-03	1.67E-02	--
Dieldrin	µg/L	1.40E-04	2.81E-04	--
	lbs/day	2.34E-06	4.68E-06	--
2,4-dinitrotoluene	µg/L	7.00E+0.1	1.40E+02	--
	lbs/day	1.17E+00	2.34E+00	--
1,2-diphenylhydrazine	µg/L	4.00E-02	8.02E-02	--
	lbs/day	6.67E-04	1.34E-03	--
Heptachlor	µg/L	2.10E-04	4.21E-04	--
	lbs/day	3.50E-06	7.03E-06	--
Heptachlor Epoxide	µg/L	1.00E-04	2.01E-04	--
	lbs/day	1.67E-06	3.35E-06	--
Hexachlorobenzene	µg/L	7.50E-04	1.50E-03	--
	lbs/day	1.25E-05	2.51E-05	--
Hexachlorobutadiene	µg/L	4.40E-01	8.83E-01	--
	lbs/day	7.34E-03	1.47E-02	--
Hexachloroethane	µg/L	1.90E+00	3.81E+00	--
	lbs/day	3.17E-02	6.36E-02	--
Isophorone	µg/L	8.40E+00	1.69E+01	--
	lbs/day	1.40E-01	2.81E-01	--
N-nitrosodimethylamine	µg/L	6.90E-04	1.38E-03	--
	lbs/day	1.15E-05	2.31E-05	--
N-nitrosodi-N-propylamine	µg/L	5.00E-03	1.00E-02	--
	lbs/day	8.34E-05	1.67E-04	--
N-nitrosodiphenylamine	µg/L	5.00E+00	1.00E+01	--
	lbs/day	8.34E-02	1.67E-01	--
PCBs	µg/L	1.70E-04	3.41E-04	--
	lbs/day	2.84E-06	5.69E-06	--

Parameter	Performance Goals[2,3]			
	Units	Average Monthly	Maximum Daily	Instantaneous Maximum[4]
2,3,7,8-TCDD	µg/L	1.08E-10	2.17E-10	--
	lbs/day	1.08E-12	2.17E-10	--
TCDD equivalents	µg/L	1.30E-08	2.61E-08	--
	lbs/day	2.17E-10	4.35E-10	--
1,1,2,2-tetrachloroethane	µg/L	1.70E-01	3.41E-01	--
	lbs/day	2.84E-03	5.69E-03	--
Tetrachloroethylene	µg/L	8.00E-01	1.60E+00	--
	lbs/day	1.33E-02	2.68E-02	--
Toxaphene	µg/L	1.64E-04	3.29E-04	--
	lbs/day	2.73E-06	5.48E-06	--
Trichloroethylene	µg/L	2.70E+00	5.42E+00	--
	lbs/day	4.50E-02	9.04E-02	--
1,1,2-trichloroethane	µg/L	6.00E-01	1.20E+00	--
	lbs/day	1.00E-02	2.01E-02	--
2,4,6-trichlorophenol	µg/L	2.10E+00	4.21E+00	--
	lbs/day	3.50E-02	7.02E-02	--
Vinyl Chloride	µg/L	5.00E-01	1.00E+00	--
	lbs/day	8.34E-03	1.67E-02	--

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The MER limitations, in pounds per day, were calculated based on the following equation: MER (lb/day) = 8.34 x Q x C, where Q is the maximum allowable flow rate (in MGD) and C is the concentration (in 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. Not to be exceeded more than 10 percent of the time during any one year period.
5. Includes Radium 226 but excludes Radon and Uranium.
6. Dischargers may, at their option, meet this limitation (or apply this performance goal) as a total chromium limitation (or performance goal).
7. If a Discharger can demonstrate to the satisfaction of the San Diego Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by (or performance goals may be evaluated with) the combined measurement of free cyanide, simple alkali metals cyanides, and weakly complexed organometalic 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 the Code of Federal Regulations, title 40 (40 CFR), part136, as revised May 14, 1999.

B. Land Discharge Specifications – Not Applicable

C. Recycling Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

The receiving water limitations set forth below for the waters of Sycamore Creek and the San Diego River 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 discharges of waste shall not cause or contribute to violations of the receiving water limitations.

A. Water Quality Objectives and Criteria

The discharge of waste shall not cause violations of water quality objectives, federal pollutant criteria, or other provisions applicable to Sycamore Creek, a tributary of the San Diego River, contained in the water quality control plans, policies and federal regulations set forth below:

1. The San Diego Water Board's Basin Plan, including beneficial uses, water quality objectives, and implementation plans;
2. State Water Resources Control Board (State Board) water quality control plans and policies including the *Policy for Implementation of Toxics Standards for Inland Surface Waters, and Enclosed Bays, and Estuaries of California* (State Implementation Plan or SIP);
3. Priority pollutant criteria promulgated by USEPA through the following:
   a. National Toxics Rule (NTR)[1] (promulgated on December 22, 1992 and amended on May 4, 1995); and
   b. California Toxics Rule (CTR)[2,3]

B. Surface Water Limitations

1. **Bacterial Characteristics**
   a. **Total Coliform Organisms:** Total coliform organisms concentration shall not exceed the following:
      i. 1,000 MPN/100 mL geometric mean, based on a minimum of not less than five samples for any 30-day period; and
      ii. 10,000 MPN/100 mL at any time.
   b. Fecal Coliform: Fecal coliform organisms concentration shall not exceed the following:
      i. 200 MPN/100 mL geometric mean, based on a minimum of not less than five samples for any 30-day period; and
      ii. 400 MPN/100 mL for more than 10 percent of the total samples during any 30-day period.
   c. **Enterococci: Enterococci concentration shall not exceed the following:**
      i. 33 MPN/100 mL geometric mean, based on all samples during a 30-day period; and
      ii. 61 MPN/100 mL at any time.

[1] 40 CFR section 131.36
[2] 65 Federal Register 31682-31719 (May 18, 2000), adding section 131.38 to 40 CFR
[3] If a water quality objective and a CTR criterion are in effect for the same priority pollutant, the more stringent of the two applies.

d. **Escherichia coli: Escherichia coli concentration shall not exceed the following:**

i. 126 MPN/100 mL geometric mean, based on all samples during a 30-day period; and

ii. 235 MPN/100 mL at any time.

2. **Chemical Characteristics**

a. The dissolved oxygen concentration shall not at any time be less than five mg/L. The annual mean dissolved oxygen concentration shall not be less than seven mg/L more than 10 percent of the time.

b. Changes in normal ambient pH levels shall not exceed 0.5 units. The pH shall not be depressed below 6.5 nor raised above 8.5.

c. 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.

d. The discharge of wastes shall not cause concentrations of un-ionized ammonia (NH_3) to exceed 0.025 mg/L as nitrogen.

3. **Color**

Water 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.

4. **Floating Material**

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

5. **Oil and Grease**

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.

6. **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.

7. **Suspended Sediments**

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.

8. **Suspended and Settleable Solids**

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

9. **Taste and Odors**

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

10. **Temperature**

    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. At no time or place shall the temperature of any waters with designated cold freshwater habitat be increased more than 5°F above the natural receiving water temperature.

11. **Toxic Substances**

    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.

12. **Turbidity**

    Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

13. **Dissolved Oxygen**

    Dissolved oxygen levels shall not be less than 5.0 mg/l in inland surface waters with designated MAR or WARM beneficial uses or less than 6.0 mg/l in waters with designated COLD beneficial uses. The annual mean dissolved oxygen concentration shall not be less than 7 mg/l more than 10% of the time.

14. **Aquatic Communities.**

    Aquatic communities and populations, including vertebrates, invertebrates, and non-target plant species to be degraded.

C. Groundwater Limitations – Not Applicable

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D.
2. The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:
    a. The Facilities shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to title 23, division 3, chapter 26 of the California Code of Regulations (CCR).
    b. 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. The certification report shall be 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.

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 treatment facilities and expansions only);

c) An inspection of the facility has been made by the San Diego Water Board or their designated representatives (applicable to new treatment facilities and expansions only); and

d) The San Diego Water Board has provided the Discharger with written authorization to discharge at a daily flow rate in excess of its previously approved design capacity.

c. 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 agency.

d. All waste treatment, containment, and disposal facilities shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year, 24-hour storm event.

e. This Order expires on **June 30, 2020**, after which, the terms and conditions of this permit are automatically continued pending issuance of a new permit, provided that all requirements of 40 CFR section 122.6 and title 23, division 3, chapter 9, article 3, section 2235.4 of the CCR regarding the continuation of expired permits and WDRs are met.

f. A copy of this Order shall be posted at a prominent location at or near the treatment and disposal facilities and shall be available to operating personnel at all times.

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

a. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not

limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data. [State Implementation Policy]

b. 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 WQOs (Basin Plan, Chapter 3).

c. 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 develop, refine, implement, and/or coordinate a regional monitoring program; (ii) 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 (iii) to add provisions requiring the Discharger to evaluate and provide information on cost and values of the MRP.

d. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

   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)]

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

e. The filing of a request by the Discharger for modification, 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)]

f. If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307 (a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the San Diego Water Board may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition. [40 CFR section 122.4(b)(1)]

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

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

i. This Order may also be re-opened and modified, revoked and, reissued or terminated for cause 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 permit, and

endangerment to human health or the environment resulting from the permitted activity.

j. This Order may be reopened to add additional algaecide and aquatic herbicide active ingredients if new active ingredients are registered by USEPA and DPR.

k. This Order may be reopened to add numeric effluent limitations for the residual algaecide and aquatic herbicides exceeding the triggers if the additional investigation results show that to be necessary.

l. If USEPA develops biological opinions regarding algaecides and aquatic herbicides included in this Order, this Order may be re-opened to add or modify effluent limitations / monitoring requirements / monitoring triggers for aquatic herbicides and algaecides and their residues of concern, if necessary.

m. This Order will be reopened and modified to revise any and all of the chronic toxicity testing provisions and effluent limitations, to the extent necessary, to be consistent with any Toxicity Plan that is subsequently adopted by the State Water Board promptly after USEPA-approval of such Plan.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Spill Prevention and Response Plans**

i. For purposes of sections VI.C.2.a and VI.C.2.b of the Order, a spill is a discharge of treated or untreated wastewater that occurs at or downstream of the Facility headworks, in violation of Discharge Prohibition III.C of this Order, or a discharge of other materials related to the Facility. The term “spill” as used in sections VI.C.2.a and VI.C.2.b of the Order does not include sanitary sewer overflows from the sewage collection system that are covered under separate waste discharge requirements.

ii. Within 120 days after the effective date of this Order, the Discharger shall develop and maintain a Spill Prevention Plan (SPP) and Spill Response Plan (SRP) for the Facility in an up-to-date condition and shall amend the SPP/SRP whenever there is a change (e.g., in the design, construction, operation, or maintenance of the Facility) which materially affects the potential for spills and the response required for each potential spill. The Discharger shall review and amend the SPP/SRP as appropriate after each spill from the Facility. The SPP/SRP and any amendments thereto shall be subject to the approval of the San Diego Water Board and shall be modified as directed by the San Diego Water Board. The Discharger shall submit the SPP/SRP and any amendments thereto to the San Diego Water Board upon request of the San Diego Water Board. The Discharger shall ensure that the up-to-date SPP/SRP is readily available to Facility personnel at all times and that the Facility personnel are familiar with it.

b. **Spill Reporting Requirements**

The Discharger shall report spills, as defined in section VI.C.2.a.i above, in accordance with the following procedures:

i. If a spill results in a discharge of treated or untreated wastewater that is equal to or exceeds 1,000 gallons, and/or results in a discharge to a drainage channel and/or surface water; or results in a discharge to a storm drain that was not fully captured and returned to the sanitary sewer system, the Discharger shall:

a) Report the spill to the San Diego Water Board by telephone, by voice mail, or by FAX within 24 hours from the time the Discharger becomes aware of the spill. The Discharger shall inform the San Diego Water Board of the date of the spill, spill location and its final destination, time the spill began and ended, estimated total spill volume, and type of spill material.

b) Submit a written report, as well as any additional pertinent information, to the San Diego Water Board no later than five days from the time the Discharger becomes aware of the spill.

c) 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.

ii. If a spill results in a discharge of treated or untreated wastewater less than 1,000 gallons and the discharge does not reach a drainage channel, surface waters, or storm drain, the Discharger is not required to notify the San Diego Water Board within 24 hours, or provide a 5-day written report.

iii. For spills of material other than treated or untreated wastewater that cause, may cause, or are caused by significant operational failure, or endangers or may endanger human health or the environment, the Discharger shall notify the San Diego Water Board by telephone, by voice mail, or by FAX within 24 hours from the time the Discharger becomes aware of the spill. The Discharger shall inform the San Diego Water Board of the date of the spill, spill location and its final destination, time the spill began and ended, estimated total spill volume, and type of spill material.

iv. For all spills, the Discharger shall include a detailed summary of spills in the monthly self-monitoring report for the month in which the spill occurred. If no spills occurred during the calendar month, the Discharger shall report no spills in the monthly self-monitoring report for that calendar month.

v. The spill reporting requirements contained in this Order do not relieve the Discharger of responsibilities to report to other agencies, such as the California Office of Emergency Services and the County of San Diego Department of Environmental Health Services.

c. **Watercourse Monitoring and Management Plan**

The Discharger shall develop and submit an updated Watercourse Monitoring and Management Plan (WMMP) consistent with the requirements specified in chapter 4 of the Basin Plan, to the San Diego Water Board, via the State Water Board's California Integrated Water Quality System (CIWQS) Program website within 120 days of the effective date of this Order. The WMMP shall be consistent with the requirements in the Basin Plan, Chapter 4, *Implementation, Control of Point Source Pollutants, Reclaimed Water Conformance with Water Quality Objectives* and shall include an implementation schedule. Monitoring and management activities shall be implemented according to the final implementation schedule specified in the WMMP. The WMMP shall be subject to the approval of the San Diego Water Board and shall be modified as directed by the San Diego Water Board. Prior to the development and submittal of an updated WMMP, please continue to implement the previous WMMP.

d. **Data Collection Plan for WMMP**

The Discharger shall develop and submit a Data Collection Plan to the San Diego Water Board, via the State Water Board's CIWQS Program website within 120 days of the effective date of this Order. The Data Collection Plan shall describe the procedures to collect data in Sycamore Creek, Forrester Creek, and the San Diego River for the WMMP parameters listed below:

i. Vertical and diurnal oxygen profiles and BOD_5,

ii. Corrected chlorophyll a and pheophyton a,

iii. Diurnal and vertical temperature profiles,

iv. The diversity and numbers of macroinvertebrates and fish,

v. The dynamics of the aquatic flora (macroalgae, phytoplankton, and emergent vegetation) and the related dissolved oxygen regime, substrate composition, and

vi. Frequency of nuisance conditions.

The Data Collection Plan shall include an implementation schedule. Monitoring activities must be implemented according to the final implementation schedule. The Data Collection Plan shall be subject to the approval of the San Diego Water Board and shall be modified as directed by the San Diego Water Board.

e. **Treatment Optimization Update**

The Discharger shall submit a Treatment Optimization Update report detailing the methods utilized by the Discharger to reduce effluent concentrations of nitrogen and phosphorus to levels equal to the Basin Plan WQOs of 1.0 mg/L and 0.1 mg/L, respectively. The report shall be submitted to the San Diego Water Board, via the CIWQS Program website within 120 days of the effective date of this Order.

3. Best Management Practices (BMPs) and Pollution Prevention

a. **Pesticide Application to Storage Ponds and/or Santee Lakes**

i. If the following monitoring triggers below are exceeded at Discharge Point No. 001, as monitored at Monitoring Location EFF-001B, the Discharger shall perform the following actions: (1) initiate additional investigations for the cause of the exceedance; (2) implement additional BMPs to reduce the algaecide and aquatic herbicide residue concentration to be below the monitoring triggers in future applications; and (3) evaluate the appropriateness of using alternative products.

Ingredient	Unit	Instantaneous Maximum Monitoring Trigger	Basis
Imazapyr	mg/L	11.2	USEPA Office of Pesticides *Ecotoxicity Database*
Triclopyr Triethylamine	mg/L	13.0	USEPA Office of Pesticides *Ecotoxicity Database*

ii. The Discharger shall provide a phone number or other specific contact information to all persons who request the Discharger's pesticide application

schedule. The Discharger shall provide the requester with the most current pesticide application schedule and inform the requester if the schedule is subject to change. Information may be made available by electronic means, including posting prominently on a well-known website.

iii. Every calendar year, at least 15 days prior to the first application of algaecide or aquatic herbicide, the Discharger shall notify potentially affected public agencies. The Discharger shall post the notification on its website if available. The notification shall include the following information:

a) A statement of the Discharger's intent to apply algaecide or aquatic herbicide(s);

b) Name of algaecide and aquatic herbicide(s);

c) Purpose of use;

d) General time period and locations of expected use;

e) Any water use restrictions or precautions during treatment; and

f) A phone number that interested persons may call to obtain additional information from the Discharger.

iv. The Discharger shall submit an Aquatic Pesticides Application Plan (APAP) at least 90 days before the expected day of pesticide discharge. The APAP shall contain, but not be limited to, the following elements sufficient to address each proposed treatment area

a) Description of the water system to which algaecides and aquatic herbicides are being applied;

b) Description of the treatment area in the water system;

c) Description of types of weed(s) and algae that are being controlled and why;

d) Algaecide and aquatic herbicide products or types of algaecides and aquatic herbicides expected to be used and if known their degradation byproducts, the method in which they are applied, and if applicable, the adjuvants and surfactants used;

e) Discussion of the factors influencing the decision to select algaecide and aquatic herbicide applications for algae and weed control;

f) If applicable, list the gates or control structures to be used to control the extent of receiving waters potentially affected by algaecide and aquatic herbicide application and provide an inspection schedule of those gates or control structures to ensure they are not leaking;

g) Description of monitoring program;

h) Description of procedures used to prevent sample contamination from persons, equipment, and vehicles associated with algaecide and aquatic herbicide application;

i) Description of the BMPs to be implemented. The BMPs shall include, at the minimum:

1) Measures to prevent algaecide and aquatic herbicide spill and for spill containment during the event of a spill;

2) Measures to ensure that only an appropriate rate of application consistent with product label requirements is applied for the targeted weeds or algae;

3) The Discharger's plan in educating its staff and algaecide and aquatic herbicide applicators on how to avoid any potential adverse effects from the algaecide and aquatic herbicide applications;

4) Discussion on planning and coordination with nearby farmers and agencies with water rights diversion so that beneficial uses of the water (irrigation, drinking water supply, domestic stock water, etc.) are not impacted during the treatment period; and

5) A description of measures that will be used for preventing fish kill when algaecides and aquatic herbicides will be used for algae and aquatic weed controls.

j) Examination of Possible Alternatives. The Discharger should examine the alternatives to algaecide and aquatic herbicide use to reduce the need for applying algaecides and herbicides. Such methods include:

1) Evaluating the following management options, in which the impact to water quality, impact to non-target organisms including plants, algaecide and aquatic herbicide resistance, feasibility, and cost effectiveness should be considered:

i) No action;

ii) Prevention;

iii) Mechanical or physical methods;

iv) Cultural methods;

v) Biological control agents; and

vi) Algaecides and aquatic herbicides;

If there are no alternatives to algaecides and aquatic herbicides, Dischargers shall use the minimum amount of algaecides and aquatic herbicides that is necessary to have an effective control program and is consistent with the algaecide and aquatic herbicide product label requirements.

2) Using the least intrusive method of algaecide and aquatic herbicide application; and

3) Applying a decision matrix concept to the choice of the most appropriate formulation.

k) The Discharger shall submit the APAP and any amendments thereto to the San Diego Water Board upon request of the San Diego Water Board. The Discharger shall ensure that the up-to-date APAP is readily available to Facility personnel at all times and that the Facility personnel are familiar with it.

l) The Discharger shall maintain a log for each algaecide and aquatic herbicide application. The application log shall contain, at a minimum, the following information:

1) Date of application;

2) Location of application;

3) Name of applicator;

4) Type and amount of algaecide and aquatic herbicide used;

5) Application details, such as flow and level of water body, time application started and stopped, algaecide and aquatic herbicide application rate and concentration;

6) Visual monitoring assessment; and

7) Certification that applicator(s) followed the APAP.

b. **Pollutant Minimization Program**

i. The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as “Detected, but Not Quantified” (DNQ) when the effluent limitation is less than the Method Detection Limit (MDL), sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

a) A sample result is reported as DNQ and the effluent limitation is less than the Reporting Level (RL); or

b) A sample result is reported as "Not Detected" (ND) and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section VII.B.4.

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 priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;

b) Quarterly monitoring for the reportable priority 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 priority pollutant(s) in the effluent at or below the effluent limitation;

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

iii. An annual status report that shall be sent to the San Diego Water Board including the following:

a) All PMP monitoring results for the previous year;

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

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

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

4. Construction, Operation and Maintenance Specifications – Not Applicable

5. Special Provisions for Municipal Facilities (Publicly-Owned Treatment Works Only)

a. **Sludge (Biosolids) Disposal Requirements**

i. The handling, treatment, use, management, and disposal of sludge and solids derived from wastewater treatment must comply with applicable provisions of section 405 of the CWA and USEPA regulations at 40 CFR parts 257, 258, 501, and 503, including all monitoring, recordkeeping, and reporting requirements.

ii. Sludge and wastewater solids must be disposed of in a municipal solid waste landfill, reused by land application, disposed of in a sludge-only landfill, or used in an application approved by the San Diego Water Board in accordance with 40 CFR parts 258 and 503 and title 23, chapter 15 of the CCR. If the Discharger desires to dispose of solids and/or sludge in a different manner, a request for permit modification must be submitted to the USEPA and to this San Diego Water Board at least 180 days prior to beginning the alternative means of disposal.

iii. Sludge that is disposed of in a municipal solid waste landfill must meet the requirements of 40 CFR part 258 pertaining to providing information to the public. In the annual self-monitoring report, the Discharger shall include the amount of sludge placed in the landfill as well as the landfill to which it was sent.

iv. All requirements of 40 CFR part 503 and title 23, chapter 15 of the CCR are enforceable whether or not the requirements of those regulations are stated in an NPDES permit or any other permit issued to the Discharger.

v. The Discharger shall take all reasonable steps to prevent and minimize any sludge use or disposal in violation of this Order that has a likelihood of adversely affecting human health or the environment.

vi. Solids and sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination.

vii. The solids and sludge treatment and storage site shall have adequate facilities to divert surface water runoff from adjacent areas to protect the boundaries of the site from erosion, and to prevent drainage from the treatment and storage site. Adequate protection is defined as protection, at the minimum, from a 100-year 24-hour storm event, 100-year peak stream flows as defined by the San Diego County flood control agency, and protection from the highest possible tidal stage that may occur.

viii. The discharge of sewage sludge and solids shall not cause waste material to be in position where it is, or can be, conveyed from the treatment and storage sites and deposited in waters of the state.

ix. All sewage sludge/ biosolids generated at the Facility shall be returned to the sewer system for transport to the City of San Diego Point Loma Wastewater Treatment Plant. If the Discharger changes the method of disposal of sewage sludge/ biosolids generated at the Facility, the Discharger shall notify the San Diego Water Board at least 30 days before the change.

b. **Collection System**

On May 2, 2006, the State Water Board adopted State Water Board Order No. 2006-0003-DWQ, a Statewide General WDR for Sanitary Sewer Systems. Order No. 2006-0003 requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDR.

Regardless of the coverage obtained under Order No. 2006-0003, the Discharger's collection system is part of the treatment system that is subject to this Order. As such, pursuant to federal regulations, the Discharger must properly operate and maintain its collection system [40 CFR section 122.41(e)], report any non-compliance [40 CFR sections 122.41(l)(6) and (7)], and mitigate or prevent any discharge from the collection system in violation of this Order [40 CFR section 122.41(d)].

6. Other Special Provisions – Not Applicable

7. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

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

A. 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 Average Weekly Effluent Limitation (AWEL)

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

C. Compliance with Maximum Daily Effluent Limitation (MDEL)

The MDEL shall apply to flow weighted 24-hour composite samples, or grab, 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.

D. 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.)

E. 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).

F. Compliance with 12-Month Average Effluent Limitation

The 12-month average shall consist of the average of all monitoring results for a given parameter within any 12-month period. If the 12-month average of daily discharges over any 365-day period exceeds the 12-month average 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 365-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 365-day period and the analytical result for that sample exceeds the 12-month average, the Discharger will be considered out of compliance for the 365-day period. For any 365-day period during which no sample is taken, no compliance determination can be made for the 12-month average limitation.

G. 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 Minimum Level (ML).

H. 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”.

I. 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 (MGD) x C (mg/L)

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.

J. 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. For compliance determination purposes, individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as ND or DNQ.

K. Multiple Sample Data

When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND.

In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

L. Percent Removal

Compliance with percent removal requirements for average monthly percent removal of BOD_5 and TSS shall be determined separately for each wastewater treatment facility discharging through an outfall. For each wastewater treatment facility, the monthly average percent removal is the average of the calculated daily discharge percent removals only for days on which the constituent concentration is monitored in both the influent and effluent of the wastewater treatment facility at the locations specified in the MRP (Attachment E) within a calendar month.

The percent removal for each day shall be calculated according to the following equation:

$$\text{Daily discharge percent removal} = \frac{\text{Influent concentration} - \text{Effluent concentration}}{\text{Influent concentration}} \text{ x } 100 \text{ percent}$$

M. Bacterial Standards and Analysis

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

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

   Where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 mL) found on each day of sampling.

2. For all bacterial analyses, sample dilutions should be performed so the range of values extends from two to 16,000 colony-forming units (CFU). 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.

N. Single Operational Upset (SOU)

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 sections 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 sections 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).

O. 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 IWC response ≤0.75 × Mean control response. A test result that rejects this null hypothesis is reported as “Pass”. A test result that does not reject this null hypothesis is reported as “Fail”. The relative “Percent Effect” at the discharge IWC is defined and reported as: ((Mean control response - Mean discharge IWC response) ÷ Mean control response)) × 100. 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 Maximum Daily Effluent Limitation (MDEL) for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST statistical approach, results in “Fail” and the “Percent Effect” is ≥0.50.

The Median Monthly Effluent Limitation (MMEL) for chronic toxicity is exceeded and a violation will be flagged when the median of no more than three independent chronic toxicity tests, conducted within the same calendar month and analyzed using the TST statistical approach, results in “Fail”. The MMEL for chronic toxicity shall only apply when there is a discharge more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests may be conducted when one toxicity test results in “Fail”.

The chronic toxicity MDEL and MMEL are set at the IWC for the discharge (100% effluent) and expressed in units of the TST statistical approach ("Pass" or "Fail", "Percent Effect"). All NPDES effluent compliance monitoring for the chronic toxicity MDEL and MMEL shall be reported using the 100% 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 a multi-concentration test design when required by Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (USEPA 2002, EPA-821-R-02-013). The San Diego Board's review of reported toxicity test results will include review of concentration-response patterns as appropriate (see Fact Sheet discussion at IV.C.5). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Resources Control Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the NOEC and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. Standard Operating Procedures used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach, including those that incorporate a consideration of concentration-response patterns, must be submitted to the San Diego Water Board (40 CFR 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, the State Water Board's Quality Assurance Officer, or the State Water Board's Environmental Laboratory Accreditation Program as needed. The Board may consider results of any Toxicity Reduction Evaluation / Toxicity Identification Evaluation (TRE/TIE) studies in an enforcement action.

ATTACHMENT A – ABBREVIATIONS AND GLOSSARY

Part 1. – Abbreviations

Abbreviation	Definition
40 CFR	Code of Federal Regulations, title 40
AMEL	Average Monthly Effluent Limitation
APAP	Aquatic Pesticides Application Plan
AWEL	Average Weekly Effluent Limitation
Bacterial TMDL	Resolution No. R9-2010-0001 , A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)
Basin Plan	Water Quality Control Plan for the San Diego Basin
BAT	Best Available Technology
BMPs	Best Management Practices
BOD_5	Biochemical Oxygen Demand (5-Day at 20°C)
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
COD	Chemical Oxygen Demand
CSBP	California Stream Bioassessment Procedure
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
DDT	Dichlorodiphenyltrichloroethane
Discharger	Padre Dam Municipal Water District (Discharger)
DMRs	Discharge Monitoring Reports
DNQ	Detected, but Not Quantified
DO	Dissolved Oxygen
ECA	Effluent Concentration Allowance
°F	Degrees Fahrenheit
Facility	Ray Stoyer Water Recycling Facility
GPS	Global Positioning System
Ho	Null Hypothesis
HSA	Hydrologic Subareas
IBI	Index of Biotic Integrity
IWC	In-Stream Waste Concentration
lbs/day	Pounds per Day
LTA	Long-Term Average
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level
MDEL	Maximum Daily Effluent Limitation
MDL	Method Detection Limit
MEC	Maximum Effluent Concentration
MER	Mass Emission Rate

Abbreviation	Definition
MG	Million Gallons
MGD	Million Gallons per Day
mg/L	Milligrams per Liter
ML	Minimal Level
MPN	Most Probable Number
MPN/100ml	Most Probable Number per 100 milliliters
MRP	Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer System
MTBE	Methyl-tert-buty-ether
ND	Not Detected
NH_3	un-ionized ammonia
NPDES	National Pollutant Discharge Elimination System
NTR	National Toxics Rule
NTU	Nephelometric Turbidity Unit
OAL	Office of Administrative Law
PCB	Polychlorinated Biphenyls
pCi/L	Picocuries per Liter
PMP	Pollutant Minimization Program
POTWs	Publicly-Owned Treatment Works
QA	Quality Assurance
QC	Quality Control
RL	Reporting Level
RMDs	Regulatory Management Decisions
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
SM	Standard Methods, Policy for Implementation of Toxics Standards for Inland Surface Waters, and Enclosed Bays, and Estuaries of California
SMR	Self-monitoring Report
SOU	Single Operational Upset
SPP	Spill Prevention Plan
SRP	Spill Response Plan
SSMP	Sanitary Sewer Management Plans
SSOs	Sanitary Sewer Overflows
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
TBELs	Technology-Based Effluent Limitations
TDS	Total Dissolved Solids
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

Abbreviation	Definition
Water Code	California Water Code
WDRs	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WLA	Waste Load Allocation
WMMP	Watercourse Monitoring and Management Plan
WQBELs	Water Quality-Based Effluent Limitations
WQOs	Water Quality Objectives

Part 2. – Glossary of Common Terms

Acute Toxicity

a. Acute Toxicity (TUa)
Expressed in Toxic Units Acute (TUa)

$$TUa = 100/96\text{-hr } LC50$$

b. Lethal Concentration 50% (LC50)
LC50 (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay techniques using standard marine test species as specified in Ocean Plan Appendix III. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC50 may be determined after the test samples are adjusted to remove the influence of those substances. When it is not possible to measure the 96-hour LC50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$TUa = \log (100 - S)/1.7$$

where:
S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

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

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

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

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

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

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

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

Chronic Toxicity
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.

a. Chronic Toxicity (TUc)
   Expressed as Toxic Units Chronic (TUc)
   TUc = 100/NOEL

b. No Observed Effect Level (NOEL)

   The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Ocean Plan Appendix III.

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

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

The daily discharge may be determined by the analytical results of a composite sample taken over the course of 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 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.

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

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

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

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

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

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

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

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

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

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

Median
The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the n/2 and n/2+1).

Method Detection Limit (MDL)
MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 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.

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

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The 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.

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, Arolclor-1254, and Arcolor-1260.

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 approved 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.

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

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

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

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

Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

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

ATTACHMENT B – MAP

Figure B-1. Facility Location and Receiving Water Monitoring Stations

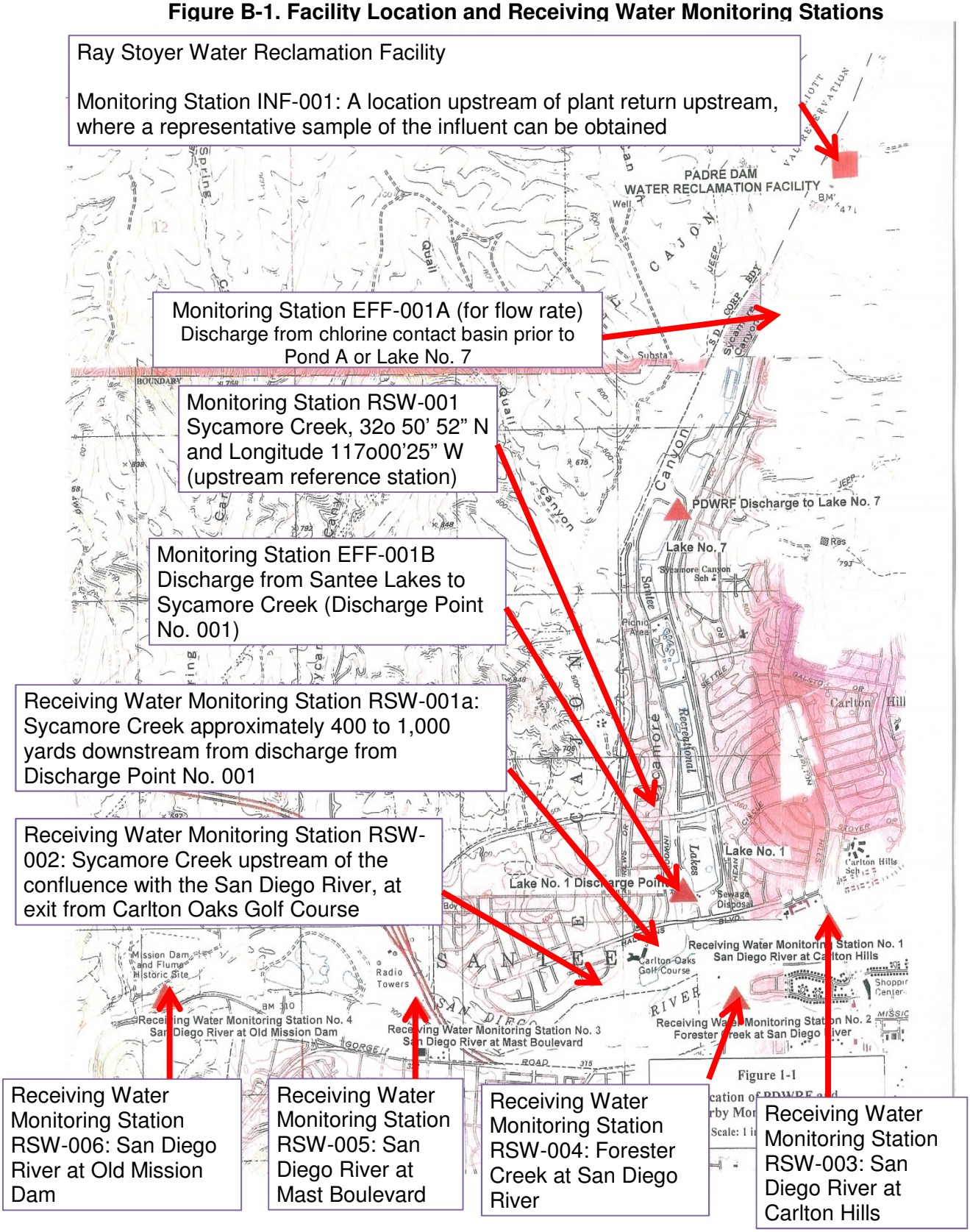
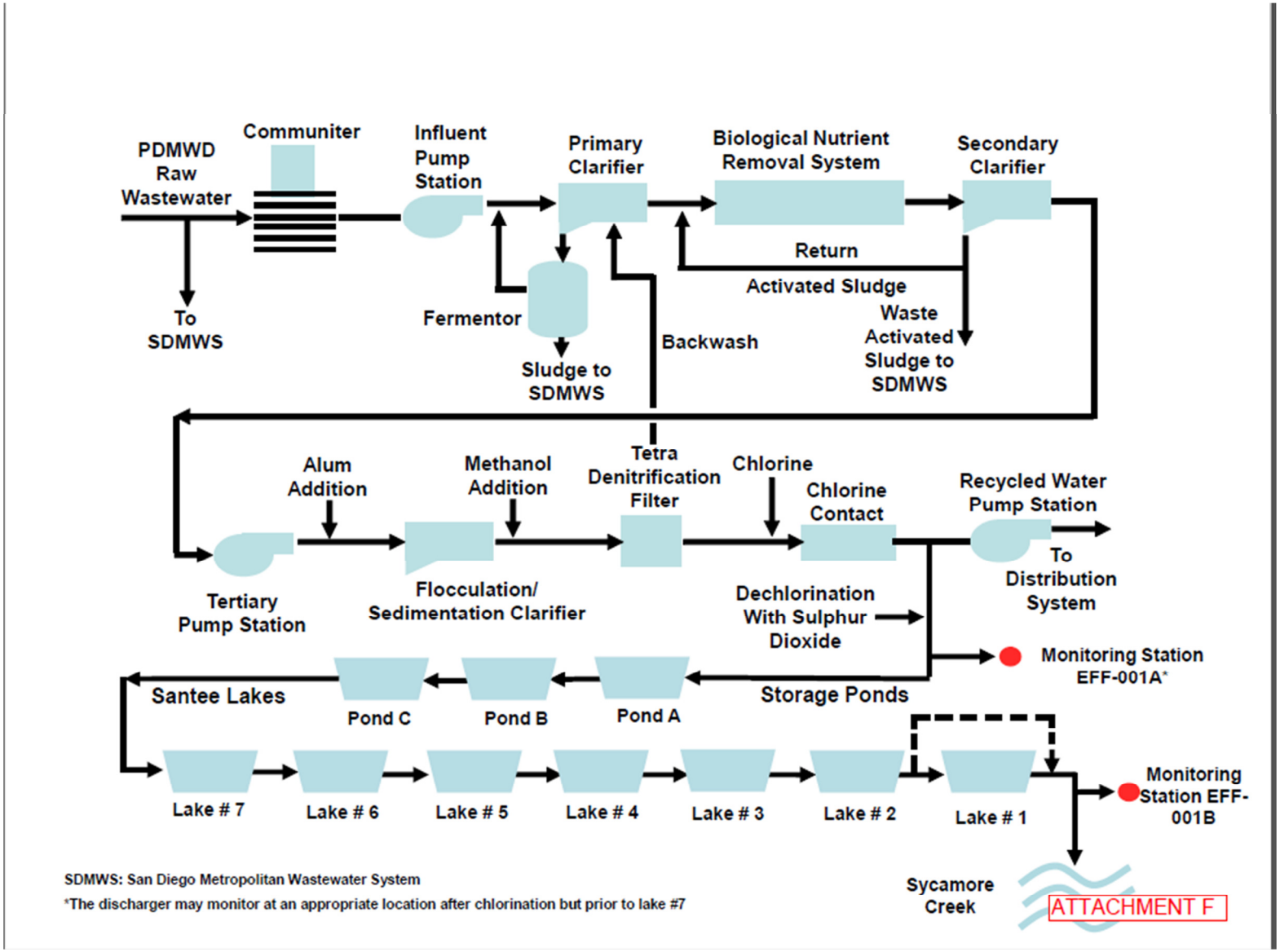


Figure B-2. Facility Location and Receiving Water Monitoring Stations

ATTACHMENT C – FLOW SCHEMATIC



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 federal Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (Code of Federal Regulations, title 40 (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 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 (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 (40 CFR section 122.41(i)(1));

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 CFR section 122.41(i)(2));

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 CFR section 122.41(i)(3)); 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. (40 CFR section 122.41(i)(4).)

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 Board as 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. (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). (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).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the 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 either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR section 122.22(a)(3).).
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).)
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 one 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 (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 Report of Waste Discharge (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).)

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the San Diego Water Board of the following (40 CFR section 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR section 122.42(b)(1)); and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 CFR section 122.42(b)(2).)
3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR section 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Contents

Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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 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 Monitoring and Reporting Program (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 the 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. The 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 the 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 monitoring discharge. All samples shall be taken at the monitoring points specified 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. Samples shall be collected at times representative of "worst case" conditions with respect to compliance with the requirements of this Order.

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 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 QA plan for laboratory analyses. Duplicate chemical analyses must be conducted on a minimum of 10 percent of the samples unless otherwise specified by the San Diego Water Board. A similar frequency shall be maintained for analyzing spiked samples. The Discharger should have a success rate equal or greater than 80 percent.

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

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

I. Analysis for toxic pollutants, including chronic toxicity, with performance goals based on water quality objectives (WQOs) and criteria of the Basin Plan and California Toxics Rule (CTR) shall be conducted in accordance with procedures described in the Basin Plan and the *Policy*

for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP).

J. The Discharger shall ensure that analytical procedures used to evaluate compliance with effluent limitations established in this Order use minimum levels (ML) no greater than the applicable effluent limitation and are consistent with the requirements of 40 CFR part 136 or otherwise approved by USEPA and authorized by the San Diego Water Board. If no authorized ML value is below the effluent limitation, then the method must achieve an ML no greater than the lowest ML value indicated in Attachment H of this Order (or if not listed in Attachment H of this Order, be the lowest ML provided for in 40 CFR part 136).

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
--	INF-001	A location upstream of plant return flows, where a representative sample of the influent can be obtained.
--	EFF-001A	Discharge from chlorine contact basin prior to Pond A or Lake No. 7 Latitude: 32, 53'01.24" Longitude: 116, 59'48.45"
001	EFF-001B	Discharge from Santee Lakes to Sycamore Creek Latitude: 32° 50' 45" Longitude: 117° 00' 15"
Receiving Water Stations		
--	RSW-001	Sycamore Creek (upstream reference station) Latitude: 32° 50' 52" Longitude: 117° 00' 25"
--	RSW-001a	Approximately 400 to 1,000 yards downstream from Discharge Point No. 001 to Sycamore Creek
--	RSW-002	Sycamore Creek, upstream of the confluence with the San Diego River, at exit from Carlton Oaks Golf Course
--	RSW-003	San Diego River at Carlton Hills Boulevard in Santee (upstream reference station)
--	RSW-004	Forrester Creek 50 feet upstream of confluence with the San Diego River
--	RSW-005	San Diego River at Mast Boulevard
--	RSW-006	San Diego River at the pond just downstream of Old Mission Dam

The North latitude and West longitude information in Table 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 questions:

(1) Is there a need for a pretreatment program to control pollutant loads?

(2) What is the frequency of unexpected pollutants loads which can cause or contribute to an upset in the wastewater process?

(3) Is the influent inhibiting or disrupting the Ray Stoyer Water Recycling Facility (Facility), its treatment processes or operations?

(4) Is the Facility complying with permit conditions, including but not limited to the biochemical oxygen demand 5-day @ 20 ℃ (BOD_5) and total suspended solids (TSS) percent removal limitations?

The Discharger shall monitor influent to the Facility at Monitoring Location INF-001 as follows:

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow Rate	million gallons per day (MGD)	recorder/totalizer	continuous	[1]
BOD_5	milligrams per liter (mg/L)	24-hour composite	3/week	[1]
TSS	mg/L	24-hour composite	3/week	[1]
pH	standards units	Grab	2/day	[1]
Nitrogen, Total	mg/L	24-hour composite	1/month	[1]
Phosphorus, Total	mg/L	24-hour composite	1/month	[1]
Total Dissolved Solids (TDS)	mg/L	24-hour composite	1/month	[1]

1 Consistent with the requirements of 40 CFR part 136.

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, or 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?

1. The Discharger shall monitor effluent at Monitoring Location EFF-001A as follows.

Table E-3. Effluent Monitoring for Discharge Point No. 001, at Monitoring Location EFF-001A[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow Rate	MGD	recorder/totalizer	continuous	[1]
Chemical Oxygen Demand	mg/L	24-hour composite	3/week	[1]
BOD_5[7]	mg/L	24-hour composite	3/week	[1]
	percent Removal	Calculate	3/week	[1]
TSS[7]	mg/L	24-hour composite	3/week	[1]
	percent Removal	Calculate	3/week	[1]
Turbidity	Nephelometric Turbidity Units (NTU)	recorder	continuous	[1]
Total Dissolved Solids[7]	mg/L	24-hour composite	1/month	[1]
Specific Conductance	µmhos/cm	recorder	continuous	[1]
Total Hardness (as $CaCO_3$)	mg/L	24-hour composite	1/quarter	[1]
Oil and Grease[7]	mg/L	grab	1/quarter	[1]
pH	standard units	recorder	continuous	[1]
Color	ADMI Color Units	24-hour composite	1/month	[1]
Total Organic Carbon	mg/L	24-hour composite	1/quarter	[1]
Dissolved Oxygen	mg/L	grab	1/week	[1]
Total Coliform	most probable number per 100 milliliters (MPN/100 mL)	grab	1/day	[1]
Fecal Coliform	MPN/100 mL	grab	1/day	[1]
Enterococcus	MPN/100 mL	grab	1/day	[1]
Escherichia coli	MPN/100 mL	grab	1/week	[1]
Nitrate Nitrogen	mg/L	24-hour composite	1/month	[1]
Nitrogen, Total (as N)	mg/L	24-hour composite	1/month	[1]
Phosphorous, Total (as P)	mg/L	24-hour composite	1/month	[1]
Ammonia, un-ionized (as N)	mg/L	24-hour composite	1/month	
Percent Sodium	percent	24-hour composite	1/month	[1]
Bromoform[7]	micrograms per litter (µg/L)	24-hour composite	1/ quarter	[2]
Chlorodibromomehtane[7]	ug/L	24-hour composite	1/ quarter	[2]
Chloroform[7]	ug/L	24-hour composite	1/ quarter	[2]
dichlorobromomethane[7]	ug/L	24-hour composite	1/ quarter	[2]
Aluminum, Total Recoverable[7]	mg/L	24-hour composite	1/month	[1]
Chloride[7]	mg/L	24-hour composite	1/month	[1]

Iron, Total Recoverable[7]	mg/L	24-hour composite	1/month	[1]
Manganese, Total Recoverable[7]	mg/L	24-hour composite	1/month	[1]
Bis(2-ethylhexyl)phthalate[7]	µg/L	grab	1/month[3]	[2]
Total Chlorine Residual[7]	µg/L	grab	1/day	[1]
Total Trihalomethanes[4, 7]	ug/L	24-hour composite	1/month	[1]
Methyl-tert-buty-ether (MTBE) [7]	µg/L	grab	1/quarter	[1]
Zinc[7]	µg/L	grab	1/month	[2]
Barium[7]	ug/L	grab	2/year	[1]
Boron[7]	mg/L	24-hour composite	2/year	[1]
Fluoride[7]	mg/L	24-hour composite	2/year	[1]
Methylene Blue Active Substances (MBAS) [7]	mg/L	24-hour composite	2/year	[1]
Sulfate[7]	mg/L	24-hour composite	2/year	[1]
Priority Pollutants[5, 7]	µg/L	24-hour composite	2/year	[2]
Chronic Toxicity	Pass/Fail, % effect (Test of Significant Toxicity)	24-hour composite	1/quarter	[6]

1 Consistent with the requirements of 40 CFR part 136.

2 Consistent with the requirements of 40 CFR part 136 and Attachment H of this Order.

3 Monitoring frequency may be reduced to 2/year after four consecutive months of results of non-detect. If the parameter is detected, monitoring shall return to monthly. The Discharger shall use a ML equal to or less than five µg/L and shall use sample collection and handling techniques to reduce the possibility of contamination.

4 Total trihalomethanes equal the sum of the concentrations of chloroform, bromodichloromethane, dibromochloromethane, and bromoform.

5 Priority pollutants as specified in 40 CFR section 131.38.

6 Monitoring for whole effluent toxicity (WET) shall be conducted as specified in section III.C of this MRP.

7 Calculate the mass emission rate (MER) limitations, in pounds per day, with the following equation: MER (lb/day) = 8.34 x Q x C, where Q is the maximum allowable flow rate (in million gallons per day (MGD)) and C is the concentration (in mg/L).

2. The Discharger shall monitor effluent at Monitoring Location EFF-001B as follows:

Table E-4. Effluent Monitoring for Discharge Point No. 001, at Monitoring Location EFF-001B[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow Rate	MGD	Recorder/totalizer	continuous	[1]
Total Coliform	MPN/100 mL	grab	1/week	[1]
Fecal Coliform	MPN/100 mL	grab	1/week	[1]
Enterococcus	MPN/100 mL	grab	1/week	[1]
Escherichia coli	MPN/100 mL	grab	1/week	[1]
Nitrogen series[2]	mg/L	24-hr composite	1/month	[1]
Phosphorous series[3]	mg/L	24-hr composite	1/month	[1]
Total Dissolved Solids[7]	mg/L	24-hr composite	1/month	[1]
Chronic Toxicity	Pass/Fail, % effect (Test of Significant Toxicity)	24-hour composite	1/quarter	[4]
Temperature	F	grab	1/quarter	[1]
pH	Standards Units	grab	1/quarter	[1]
Turbidity	NTU	grab	1/quarter	[1]
Electric Conductivity at 25 C	umhos/com	grab	1/quarter	[1]
Active Ingredient[5]	ug/L	grab	1/quarter	[1]
Nonylphenol[6]	ug/L	grab	1/quarter	[1]
Hardness (if copper is monitored)	mg/L	grab	1/quarter	[1]
Dissolved Oxygen	mg/L	grab	1/quarter	[1]

1 Consistent with the requirements of 40 CFR part 136.

2 Includes: total nitrogen (as N), total organic nitrogen (as N), total nitrate (as N), total nitrite (as N), and ammonia, un-ionized (as N)

3 Includes: total phosphorus (as P) and total orthophosphate (as P).

4 Monitoring for WET shall be conducted as specified in section III.C of this MRP.

5 2,4-D, acrolein, dissolved copper, diquat, endothall, fluridone, glyphosate, imazamox, imazapyr, penoxsulam, and triclopyr.

6 It is required only when a surfactant is used.

7 Calculate the mass emission rate (MER) limitations, in pounds per day, with the following equation: MER (lb/day) = 8.34 x Q x C, where Q is the maximum allowable flow rate (in million gallons per day (MGD)) and C is the concentration (in mg/L).

C. Whole Effluent Toxicity (WET) Testing Requirements

Whole effluent toxicity refers to the overall aggregate toxic effect of an effluent measured directly by an aquatic toxicity test(s). WET tests evaluate the 1) aggregate toxic effects of all chemicals in the effluent including additive, synergistic, or antagonistic toxicity effects; 2) the toxicity effects of unmeasured chemicals in the effluent; and 3) 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 comply with permit effluent limitations for chronic toxicity thereby ensuring that water quality standards are achieved in the receiving water?

(2) If the effluent does not comply with permit effluent limitations for chronic toxicity, are unmeasured pollutants causing risk to aquatic life?

(3) If the effluent does not comply with permit effluent limitations for chronic toxicity, are pollutants in combinations causing risk to aquatic life?

1. Monitoring Frequency for Chronic Toxicity

The Discharger shall conduct chronic toxicity monitoring once per quarter for Monitoring Locations EFF-001A and EFF-001B. The In-stream Waste Concentration (IWC) for this 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 Freshwater Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity <1 ppt, the Discharger shall conduct the following chronic toxicity tests on effluent samples at the in-stream waste concentration for the discharge in accordance with species and test methods in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136). 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 fathead minnow, Pimephales promelas (Larval Survival and Growth Test Method 1000.0).

b. A static toxicity test with the daphnid, Ceriodaphnia dubia (Survival and Reproduction Test Method 1002.0).

c. A static renewal toxicity test with the green alga, Selenastrum capricornutum (also named Raphidocelis subcapitata) (Growth Test Method 1003.0).

4. Species Sensitivity Screening

Species sensitivity screening shall be conducted beginning the first month the permit is in effect. 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 Ceriodaphnia dubia and the Fathead minnow, a second and third sample may be collected for use as test solution renewal water as the seven-day toxicity test progresses. However, that same sample shall be used to renew both the Ceriodaphnia dubia and the Fathead minnow. If the result of all three species is "Pass", then the species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit cycle. If only one species fails, then that species shall be used for routine monitoring during the permit cycle. If two or more species result in "Fail," then the species that exhibits the highest "Percent Effect" at the discharge IWC during the suite of species sensitivity screening shall be used for routine monitoring during the permit cycle, until such time as a rescreening is required (24 months later).

Species sensitivity rescreening is required every 24 months if there has been discharge during dry weather conditions. If the intermittent discharge is only during wet weather, rescreening is not required. If rescreening is necessary, the Discharger shall rescreen with the fish, an invertebrate, 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 shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites.

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

5. Quality Assurance and Additional Requirements

Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.

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". The relative "Percent Effect" at the discharge IWC is defined and reported as: ((Mean control response - Mean discharge IWC response) ÷ Mean control response)) × 100. This is a t-test (formally Student's t-Test), a statistical analysis comparing two sets of replicate observations—in the case of WET, only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is "Pass" or

"Fail")). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances.

a. The Median Monthly Effluent Limitation (MMEL) for chronic toxicity only applies when there is a discharge more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests may be conducted when one toxicity test results in "Fail".

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 Freshwater Organisms (U.S. EPA 2002, EPA-821-R-02-013) (see Table E-8, below), then the Discharger must resample and re-test within 14 days.

c. Dilution water and control water, including brine controls, shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.

d. Monthly reference toxicant testing is sufficient. All reference toxicant test results should be reviewed and reported using the EC25[5].

e. The Discharger shall perform toxicity tests on final effluent samples. Chlorine in the final effluent sample may be removed prior to conducting toxicity tests in order to simulate the dechlorination process at the facility. However, ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the Monitoring and Reporting Program and the rational is explained in the Fact Sheet (Attachment F).

USEPA Test Methods and Test Acceptability Criteria

Species & USEPA Test Method Number	**Test Acceptability Criteria (TAC)**
Fathead Minnow, *Pimephales promelas*, Larval Survival and Growth Test Method 1000.0 (Table 1 of the test method, above).	80% or greater survival in controls; average dry weight per surviving organism in control chambers equals or exceeds 0.25 mg. (required)
Daphnid, *Ceriodaphnia dubia*, Survival and Reproduction Test Method 1002.0 (Table 3 of the test method, above).	80% or greater survival of all control organisms and an average of 15 or more young per surviving female in the control solutions. 60% of surviving control females must produce three broods.(required)
Green Alga, *Selenastrum capricornutum*, Growth Toxicity Test Method 1003.0 (Table 3 of the test method, above).	Mean cell density of at least 1 X 106 cells/mL in the controls; and variability (CV%) among control replicates less than or equal to 20%. (required)

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 permit. 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) as guidance, or most current version. At a

minimum, the TRE Work Plan must contain the provisions in Attachment G. This work plan shall describe the steps that the Discharger intends to follow if toxicity is detected. At minimum, the work plan shall include:

a. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

b. A description of the Facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the Facility; and,

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

7. Accelerated Monitoring Schedule for Median Monthly Summary Result: "Fail"; and Accelerated Monitoring Schedule for Maximum Daily Single Result: "Fail and % Effect ≥50".

When there is discharge more than one day in a calendar month, the Median Monthly summary result shall be used to determine if accelerated testing needs to be conducted. When there is discharge of only one day in a calendar month, 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 implement an accelerated monitoring schedule within 48 hours for the Ceriodaphnia dubia test, and within 5 calendar days for both the Pimephales promelas and Selenastrum capricornutum tests. However, if the sample is contracted out to a commercial laboratory, the Discharger shall ensure that the first of four accelerated monitoring tests is initiated within seven calendar days of the Discharger becoming aware of the result. The accelerated monitoring schedule shall consist of four toxicity tests (including 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", the Discharger shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results in "Fail", the Discharger shall immediately implement the TRE Process conditions set forth below. During accelerated monitoring schedules, only TST results ("Pass" or "Fail", "Percent Effect") for chronic toxicity tests shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL and MMEL.

8. Toxicity Reduction Evaluation (TRE) Process

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

a. Preparation and Implementation of Detailed TRE Work Plan. The Discharger shall immediately initiate a TRE using, according to the type of treatment facility, USEPA manual Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants (EPA/833/B-99/002, 1999) and, within 15 days, submit to the San Diego Water Board a Detailed TRE Work Plan, which shall follow the 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.

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 routine effluent monitoring for compliance determination purposes while the TIE and/or TRE process is taking place. Additional accelerated monitoring and TRE work plans are not required once a TRE 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 monitoring finds there is no longer toxicity.

f. The San Diego Water Board may consider the results of any TIE/TRE 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 calendar month shall be reported on the SMR due date specified in Table E-6.

b. Summary water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).

c. The statistical analysis used in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010) Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1.

d. TRE/TIE results. The 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 TIE/TRE report, the Discharger shall provide status updates in the monthly monitoring reports, indicating which TIE/TRE steps are underway and which steps have been completed.

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

f. Graphical plots clearly showing the laboratory's performance 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 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. The overall 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) What is the relative contribution of the Facility discharge to pollution in the receiving water?

This program is intended to document conditions upstream and downstream of the discharge. 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. Monitoring Locations in Sycamore Creek at Stations RSW-001 and RSW-001a

1. The Discharger shall monitor Sycamore Creek at Monitoring Locations RSW-001 and RSW-001a as specified below.

Table E-5a. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow Rate	cfs	cross-sect. velocity/area	1/month[2]	--
Dissolved Oxygen	mg/L	grab	1/month[2]	[1]
pH	standard units	grab	1/month[2]	[1]
Fecal Coliform[3]	MPN/100 mL	grab	1/month[2]	[1]
Total Coliform[3]	MPN/100 mL	grab	1/month[2]	[1]
Enterococcus[3]	MPN/100 mL	grab	1/month[2]	[1]
Total Dissolved Solids	mg/L	grab	1/month[2]	[1]
Turbidity	NTU	grab	1/month[2]	[1]
Methyl Tert-Butyl Ether	µg/L	grab	1/month[2]	[1]
Nitrogen Series[4]	mg/L	grab	1/month[2]	[1]
Phosphorous Series[5]	mg/L	grab	1/month[2]	[1]
Temperature	°F	grab	1/month[2]	[1]
Specific Conductance	µmhos/cm	grab	1/month[2]	[1]
Chloride	mg/L	grab	1/quarter[2]	[1]
Chlorophyll-a	mg/cubic meter	grab	1/quarter[2]	[1]
Iron, Total Recoverable	mg/L	grab	1/quarter[2]	[1]
Manganese, Total Recoverable	mg/L	grab	1/quarter[2]	[1]
Sediment Phosphorous Series[6]	mg/kg	grab	1/quarter[2]	[1]
Total Hardness (as $CaCO_3$)	mg/L	grab	1/quarter[2]	[1]
Total Organic Carbon	mg/L	grab	1/year[2]	[1]
Boron	mg/L	grab	1/year[2]	[1]
Methylene Blue Active Substances	mg/L	grab	1/year[2]	[1]
Sulfate	mg/L	grab	1/year[2]	[1]
Priority Pollutants[7]	µg/L	grab	1/year[2]	[8]

1 Consistent with the requirements of 40 CFR part 136.

2 If no discharge occurred from Discharge Point No. 001 as monitored at Monitoring Location EFF-001B between the last sampling event for this parameter and the end of the monitoring period for this parameter, the Discharger is not required to monitor for this parameter during that monitoring period.

3 If exceedances of applicable receiving water limitations for total coliform, fecal coliform, and/or enterococcus specified in section V.A.1 of the Order are observed at Monitoring Location EFF-001A and immediately downstream of Discharge Point No. 001 (at Monitoring Location RSW-001a), the Discharger shall increase the receiving water monitoring frequency at Monitoring Locations RSW-001 and RSW-001a for that parameter(s) to three times per week until the receiving water has demonstrated compliance at Monitoring Location RSW-001a with applicable receiving water limitations for that parameter(s) specified in section V.A.1 of the Order for a minimum of one week or the Discharger demonstrates to the San Diego Water Board that Facility effluent is not a contributing source of that parameter(s) to the downstream receiving water exceedances at Monitoring Location RSW-001a.

4 Includes: total nitrogen (as N), total organic nitrogen (as N), total nitrate (as N), total nitrite (as N), and ammonia, un-ionized (as N)

5 Includes: total phosphorus (as P) and dissolved orthophosphate (as P).

6 Includes: total phosphorus (as P) and total orthophosphate (as P).
7 Priority pollutants as specified in 40 CFR section 131.38.
8 Consistent with the requirements of 40 CFR part 136 and Attachment H of this Order.

B. Monitoring Locations RSW-002 through RSW-006

The Discharger shall monitor the San Diego River at Monitoring Locations RSW-002 through RSW-006 as specified below.

Table E-5b. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow Rate	cfs	cross-sect. velocity/area	1/month[1,2]	--
Dissolved Oxygen[3]	mg/L	grab	1/month[1,2]	[4]
pH	standard units	grab	1/month[1,2]	[4]
Fecal Coliform	MPN/100 mL	grab	1/month[1,2]	[4]
Total Coliform	MPN/100 mL	grab	1/month[1,2]	[4]
Enterococcus	MPN/100 mL	grab	1/month[1,2]	[4]
Nitrogen Series[5]	mg/L	grab	1/month[1,2]	[4]
Phosphorous Series[6]	mg/L	grab	1/month[1,2]	[4]
Specific Conductance	µmhos/cm	grab	1/month[1,2]	[4]
Temperature	°F	grab	1/month[1,2]	[4]
Total Dissolved Solids	mg/L	grab	1/month[1,2]	[4]
Turbidity	NTU	grab	1/month[1,2]	[4]
Chlorophyll-a	mg/cubic meters	grab	1/quarter[1,2]	[4]
Sediment Phosphorous Series[7]	mg/L	grab	1/quarter[1,2]	[4]

1 If no discharge occurred from Discharge Point No. 001 as monitored at Monitoring Location EFF-001B between the last sampling event for this parameter and the end of the monitoring period for this parameter, the Discharger is not required to monitor for this parameter during that monitoring period.
2 If no discharge occurred from Discharge Point No. 001 as monitored at Monitoring Location EFF-001B between the last sampling event for this parameter and the end of the monitoring period for this parameter, the Discharger is not required to monitor for this parameter during that monitoring period.
3 If only one measurement is collected for dissolved oxygen, it shall be determined at the earliest time possible. For each measurement reported, the Discharger shall also report the percent saturation (calculated based on temperature).
4 Consistent with the requirements of 40 CFR part 136.
5 Includes: total nitrogen (as N), total organic nitrogen (as N), total nitrate (as N), total nitrite (as N), and ammonia, un-ionized (as N)
6 Includes: total phosphorus (as P) and dissolved orthophosphate (as P).
7 Includes: total phosphorus (as P) and total orthophosphate (as P).

C. Monitoring Surveys

1. Monitoring surveys conducted to meet receiving water monitoring requirements of this MRP (section IV.A and B of this MRP) shall include, as 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); oil and grease; turbidity; odor, and materials of sewage origin in the water or on the river banks; time of sampling; air temperature (Degrees Fahrenheit, °F); water temperature (°F); etc.].

   b. A description of sampling stations including a description of characteristics unique to each station [e.g. GPS coordinates for station location, photo documentation; sediment characteristics, rocks, river flow (contiguous or terminated), and estuary mouth conditions (i.e., open or closed due to sand deposition), etc.]

   c. An annual in-depth discussion of the survey results. The discussion shall compare data with the reference station(s) with data from the stations located in the area of the discharge. All tabulations and computations shall be explained.

2. Whenever possible, samples shall be collected from the Monitoring Locations RSW-001, RSW-001A, and RSW -002 through RSW-006 on the same days samples are collected at Monitoring Location EFF-001B for the same constituents. Sample methods, preservation, and analyses, when not specified, shall be approved by the San Diego Water Board.

D. Biological Monitoring in Sycamore Creek at Monitoring Location RSW-001a

1. Benthic Monitoring. The Discharger shall conduct benthic monitoring in Sycamore Creek at Monitoring Location RSW-001a twice per year. Benthic macroinvertebrate analysis shall be conducted in May and October of each year, using the California Stream Bioassessment Procedure (CSBP), professional level point source protocol, and reported using the Index of Biotic Integrity (IBI), as well as each of the individual endpoints. The sampling locations shall be downstream of the discharge and within ½ mile upstream or downstream of RSW-001a, at a reach with five riffles or runs. If necessary, reaches with three to four riffles will be acceptable. The site shall be selected at the time of sampling, using the sampler's direction. If a location is dry at the time of sampling the sampler benthic macroinvertebrate analysis shall attempt to conduct sampling whenever possible for that monitoring quarter.

2. Periphyton Monitoring. The Discharger shall monitor for periphyton in Sycamore Creek at Monitoring Location RSW-001a twice a year. Periphyton analysis shall be conducted in May and October of each year using the USEPA Rapid Bioassessment Protocols for Use in Wadeable Stream and River – Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition (July 1999) and reported using the IBI.

3. Fish Tissue Monitoring. The Discharger shall monitor fish tissue from any of the seven Santee Lakes once per year, and at Monitoring Location RSW-001a twice per year. Tissue of fish shall be collected and analyzed according to the latest criteria of Toxic Substances Monitoring Program. Sampling at Monitoring Location RSW-001a must take place at the same time as benthic macroinvertebrate analysis.

V. REGIONAL WATERSHED MONITORING.

The Discharger shall participate in the San Diego Water Board coordination of other monitoring in the San Diego River Watershed, such as monitoring conducted by municipal separate storm water system (MS4) dischargers and monitoring conducted as part of the Surface Water Ambient Monitoring Program (SWAMP). The Discharger shall also participate and coordinate with state and local agencies and other dischargers within the San Diego Region in the development and implementation of a regional watershed monitoring program for the San Diego River Watershed as directed by the San Diego Water Board. The intent of a regional watershed monitoring program is to maximize efforts of all monitoring partners using a more cost effective monitoring design and to best utilize the pooled scientific resources of the region. During a coordinated watershed sampling effort, the Discharger's sampling and analytical effort may be reallocated to provide a regional assessment of the condition of the watershed. In that event, the San Diego Water Board shall notify the Discharger in writing that the requirement to perform the receiving water sampling and analytical effort defined in section IV of this MRP is suspended for the duration of the reallocation.

VI. SPECIAL STUDIES REQUIREMENTS

Downstream Bacteria Evaluation and Action Plan

If effluent monitoring at Monitoring Location EFF-001A and downstream monitoring at Monitoring Location RSW-001a (as defined in the MRP) indicates an exceedance of the receiving water limitation for total coliform, fecal coliform, and/or enterococcus specified in section V.A.1 of this Order, the Discharger shall conduct accelerated receiving water monitoring as specified in section IV.A of this MRP for the specific bacterial parameter(s) exceeded. If effluent data at Monitoring Location EFF-001A and receiving water data at Monitoring Locations RSW-001 and RSW-001a indicate the Discharger is causing or contributing to the downstream exceedance of receiving water limitations for total coliform, fecal coliform, and/or enterococcus at Monitoring Location RSW-001a, the Discharger shall develop an Action Plan to minimize the discharge of total coliform, fecal coliform, and/or enterococcus to comply with receiving water limitations. The Action Plan shall detail the causes of the exceedances and operational changes to minimize the impact of these causes. An Action Plan shall be implemented and submitted to the San Diego Water Board within six months of the first determination that the Facility is causing or contributing to downstream exceedances of receiving water limitations for bacterial characteristics at Monitoring Location RSW-001a.

VII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

B. SMRs

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.
2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III and IV. The Discharger shall submit SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. 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-6. 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/day	**Permit effective date**	**(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.**	**Submit with monthly SMR**
1/week and 3/week	**Permit effective date**	**Sunday through Saturday**	**Submit with monthly SMR**
1/month[1]	**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**	**May 1 August 1 November 1 February 1**
2/year	**Closest of January 1 or July 1 following (or on) permit effective date**	**January 1 through June 30 July 1 through December 31**	**September 1 March 1**
1/year	**January 1 following (or on) permit effective date**	**January 1 through December 31**	**March 1**

1 Including all spills or no spill report as specified in section VI.C.2.b of the Order.

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

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

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

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

      For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± 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 priority pollutants shall be determined using sample reporting protocols defined above and Attachment A. 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 priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.

6. **Multiple Sample Data.** When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

   b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

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 (WDRs); discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

C. Discharge Monitoring Reports (DMRs)

1. The Discharger shall electronically submit DMRs using the State Water Board's CIWQS Program website (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS website will provide additional information for DMR submittal in the event there will be a planned service interruption for electronic submittal.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D).

D. Other Reports

1. The following reports are required under Special Provisions (section VI.C) and the California Code of Regulations and shall be submitted to the San Diego Water Board, signed and certified as required by Standard Provisions (Attachment D). The reports shall be submitted to the San Diego Water Board, via the State Water Board's CIWQS Program Web or via email to SanDiego@waterboards.ca.gov.

Table E-7. Other Reports

Report	Location of Requirement	Due Date
Monthly Summary of Spills	Section VI.C.2.b.iv (Order)	Each calendar month, submit as attachment with Monthly SMR
Watercourse Monitoring and Management Plan (WMMP)	Section VI.C.2.c (Order)	Within a 120 days of the effective date of this Order
Data Collection Plan for WMMP	Section VI.C.2.d (Order)	Within a 120 days of the effective date of this Order
Treatment Optimization Update	Section VI.C.2.e (Order)	Within a 120 days of the effective date of this Order
Aquatic Pesticides Application Plan (APAP)	Section VI.C.3.a.iv (Order)	As specified in section VI.C.3.a.iv of this Order
Pollutant Minimization Program (PMP)	Section VI.C.3 (Order)	As specified in section VI.C.3 of the Order.
Toxicity Reduction Evaluation (TRE) Workplan and Report	Section III.C (MRP)	As specified in section III.F of the MRP.
Downstream Bacteria Evaluation and Action Plan	Section VI (MRP)	As specified in section VI of this MRP.
Report of Waste Discharge (ROWD) (for reissuance)	Title 23, California Code of Regulations	180 days before the Order expiration date

ATTACHMENT F – FACT SHEET

Contents

Tables

ATTACHMENT F – FACT SHEET

As described in section I 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 000000053
Discharger	Padre Dam Municipal Water District
Name of Facility	Ray Stoyer Water Recycling Facility
Facility Address	12001 North Fanita Parkway
	San Diego, CA 92072
	San Diego County
Facility Contact, Title and Phone	Robert Northcote, Plant Manager, (619) 258-4697
Authorized Person to Sign and Submit Reports	Albert C. Lau, Director of Engineering and Planning, (619) 258-4695
Mailing Address	P.O. Box 719003 Santee, CA 92072
Billing Address	Same as Mailing Address
Type of Facility	Publicly Owned Treatment Works (POTWs)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	No
Recycling Requirements	Producer
Facility Permitted Flow	2.0 Million Gallons per Day (MGD)
Facility Design Flow	2.0 MGD
Watershed	San Diego River
Receiving Water	Sycamore Creek (within Sycamore Canyon)
Receiving Water Type	Inland Surface Water

A. Padre Dam Municipal Water District (Discharger) is the owner and operator of Ray Stoyer Water Recycling Facility (Facility), previously named the Padre Dam Water Recycling Facility. The Facility is a POTW.

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

B. The Facility discharges wastewater to Sycamore Creek, a water of the U.S. that is tributary to the San Diego River within San Diego River watershed. The Discharger was previously regulated by Order No. R9-2009-0037, adopted on April 8, 2009 and expired on June 1, 2014. In accordance with the Code of Federal Regulations, title 40 (40 CFR), section 122.6 and title 23, division 3, chapter 9, article 3, section 2235.4 of the California Code of Regulations (CCR), the terms of Order No. R9-2009-0037 were administratively extended and continued in effect after the permit expiration date until the adoption of this Order. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. The State Water Board retains the jurisdictional authority to enforce such requirements under Water Code section 1211.

C. The Discharger filed a report of waste discharge (ROWD) and submitted an application for reissuance of its WDRs and NPDES permit on December 3, 2013. Supplemental information was requested and received on December 4, 2013. The application was deemed complete on March 13, 2014. A site visit was conducted on June 17, 2014, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment and Controls

The Discharger produces up to 2.0 MGD of recycled water at the Facility, by directing and treating a portion of the raw wastewater from the San Diego Metropolitan Sewerage System. The raw wastewater is primarily residential and commercial collected from the City of Santee, the City of El Cajon, and the unincorporated community of Lakeside. The remaining raw wastewater continues through the San Diego Metropolitan Sewerage System, operated by the City of San Diego Public Utilities Department, for treatment and disposal under separate waste discharge requirements.[1]

The treatment process at the Facility consists of primary clarification, a five-stage Bardenpho process, secondary clarification, alum and polymer addition, flocculation, sedimentation, denitrification, chlorine disinfection, dechlorination, and lakes that serve to stabilize the quality of the effluent discharge to Sycamore Creek by reducing the total nitrogen concentrations.

Approximately half of the tertiary effluent is sent to sites in the Santee and El Cajon hydrologic subareas (HSAs) for use as irrigation water. The use of the tertiary effluent is regulated under separate waste discharge requirements.[2] Between January 2009 and December 2014, 1760.15 million gallons (MG) of tertiary effluent (48.45 percent of effluent produced) were distributed to the Santee and El Cajon HSAs for use as irrigation water.

The remaining effluent is released into a series of holding ponds and lakes (Santee Lakes) before being discharged to Sycamore Creek. The ponds and Santee Lakes are considered a continuation of the treatment system and are not considered waters of the U.S. In a letter dated September 6, 2005, the U.S. Corps of Engineers stated, “the manmade Padre Dam

1 Order No. R9-2009-0001, NPDES Permit No. CA0107409, *Waste Discharge Requirements and National Pollutant Discharge Elimination System Permit for the City of San Diego E.W. Blom Point Loma Metropolitan Wastewater Treatment Plant Discharge to the Pacific Ocean through the Point Loma Ocean Outfall, San Diego County*.

2 Order No. 97-49, *Waste Discharge and Water Recycling Requirements for the Production and Purveyance of Recycled water for Padre Dam Municipal Water District, San Diego County*.

Municipal Water District Water Reclamation Facility ponds and Santee Lakes are part of a waste treatment system designed to meet the requirements of the Clean Water Act and therefore are not waters of the United States (33 CFR 328.3 (a)(8))." [3] The lakes serve to stabilize the quality of the effluent discharge to Sycamore Creek by reducing the total nitrogen concentrations before discharging to Sycamore Creek.

The holding ponds consist of three ponds with a total volume of 38.0 MG, which flow in series beginning with Pond A and ending with Pond C, which discharges to the Santee Lakes. The Santee Lakes consist of seven lakes with a total volume of 131.5 MG, which flow in series beginning with Lake No. 7 and ending with Lake No.1. Lake No. 1 ultimately discharges to Sycamore Creek, a tributary to the San Diego River. Due to the variable demand for tertiary effluent for use as irrigation water and due to evaporation from the ponds and lakes (approximately 12 percent of total effluent for one year), flow from Lake No. 1 to Sycamore Creek varies from less than 0.1 MGD to 2.1 MGD (approximately 35 percent of total effluent for one year).

Between January 2009 and December 2014, 1872.98 MG of tertiary treated wastewater (51.55 percent of tertiary treated wastewater produced) were distributed to the holding ponds and the Santee Lakes. During the same time period, 1510.45 MG tertiary effluent (41.57 percent of effluent produced) were discharged to Sycamore Creek.

Biosolids and waste sludge from clarification are sent to the San Diego Metropolitan Sewerage System for treatment and disposal.

The Discharger applies algaecide and herbicide to the Discharger's ponds/lakes to control the algae and weeds within the Discharger's ponds/lakes. The primary application is typically in the summer, when there is typically minimal to no discharge from Lakes Nos. 1 and 2 to Sycamore Creek at Monitoring Location EFF-001B. The Discharger reports that the monitoring results at Monitoring location EFF-001B have been non-detect for residual algaecide and herbicide.

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

B. Discharge Points and Receiving Waters

The Facility discharges treated wastewater from Lake No. 1 into Sycamore Creek, approximately 1,000 feet north of Carlton Oaks Drive (Latitude 32° 50' 45"; Longitude 117° 00' 15"). Sycamore Creek flows through decorative ponds within the Carlton Oaks Country Club golf course for approximately one mile before entering the San Diego River.

The Lower San Diego River is a 20-mile urban waterway in the San Diego River Watershed of the San Diego Region with year-round flow. The San Diego River originates in East County, passing through Lakeside, Santee, and Mission Trails Regional Park, and then runs parallel to Interstate 8 all the way to the Pacific Ocean coastline where it discharges near Ocean Beach. The lower portion of the river begins just north of Lake Jennings, near the town of Lakeside.

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

1. Effluent limitations contained in Order No. R9-2009-0037 for discharges from Discharge Point No. 001 (Monitoring Location EFF-001A) and representative monitoring data from the term of Order No. R9-2009-0037 are as follows:

3 Letter from the Mark Durham, Chief, South Coast Section, Regulatory Branch, Department of the Army, Los Angeles District, Corps of Engineers, San Diego Field Office to Mary Ellis-Lindquist, Padre Dam Municipal Water District, dated September 6, 2005.

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 – To December 2014)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Biochemical Oxygen Demand 5-day @ 20°C (BOD_5)	milligrams per liter (mg/L)	15	23	25	3.29	4.47	7.97
	pounds per day (lbs/day)	250	384	417	51.7	66.4	109.48
BOD_5 percent removal	percent	85[1]	--	--	99.03[1]	--	--
Total Suspended Solids (TSS)	mg/L	15	23	25	2.35	2.79	3.4
	lbs/day	250	384	417	32.02	38.85	51.14
TSS percent removal	percent	85[1]	--	--	99.18[1]	--	--
Aluminum, Total Recoverable	mg/L	--	--	0.2	--	--	0.2
	lbs/day	--	--	3.3	--	--	3.12
Chloride	mg/L	--	--	400	--	--	220
	lbs/day	--	--	6,672	--	--	3,117
Color	AMDI Color Units	--	--	20	--	--	5
Iron, Total Recoverable	mg/L	--	--	0.30	--	--	0.114
	lbs/day	--	--	5.0	--	--	1.79
Manganese, Total Recoverable	mg/L	--	--	0.05	--	--	0.05
	lbs/day	--	--	0.83	--	--	0.79
Nitrate Nitrogen	mg/L	--	--	45	--	--	8.96
	lbs/day	--	--	751	--	--	143.02
Oil and Grease	mg/L	5	--	7.5	--	--	<5
	lbs/day	--	--	125	--	--	ND
Percent Sodium	percent	--	--	60	--	--	56.9
pH	standard units	--	--	6.5 – 8.5[2]	--	--	6.02 – 8.19[2]
Total Dissolved Solids	mg/L	--	--	1,000	--	--	990
	lbs/day	--	--	16,680	--	--	14,390
Turbidity	Nephelometric Turbidity Units (NTU)	--	--	[3]	--	--	5.3

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 – To December 2014)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Total Coliform Organisms	most probable number per 100 milliliters (MPN/ 100 mL)	--	--	[4]	--	--	23
Dissolved Oxygen	mg/L	--	--	5.0[5]	--	--	0.6[5]

1 Minimum average percent removal.
2 Instantaneous maximum and minimum.
3 2 NTU as a daily average; five NTU more than five percent of the time within a 24-hour period; and 10 NTU at any time.
4 2.2 MPN/100 mL as a 7-day median based on the last seven days; 23 MPN/100 mL more than once in any 30-day period; and 240 MPN/100 mL at any time.
5 Minimum daily average

2. Effluent limitations contained in Order No. R9-2009-0037 for discharges from Discharge Point No. 001 (Monitoring Location EFF-001B) and representative monitoring data from the term of Order No. R9-2009-0037 are as follows:

Table F-3. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 – To December 2014)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Flow Rate	MGD	--	--	2.0	--	--	2.11
Ammonia, Un-ionized (as Nitrogen)	mg/L	--	--	0.025	--	--	0.025
	lbs/day	--	--	0.42	--	--	0.013
Nitrogen, Total	lbs/day	17[1]	--	--	15.3	--	--
Phosphorous, Total	lbs/day	1.7[1]	--	--	0.54	--	--
Bis(2-Ethylhexyl)Phthhalate	micrograms per litter (µg/L)	1.8	--	3.6	5.25[3]	--	5.25[3]
	lbs/day	0.03	--	0.06	0.05	--	0.05
Methyl Tert Butyl Ether	µg/L	--	--	5	--	--	ND
	lbs/day	--	--	0.083	--	--	ND
Total Chlorine Residual	µg/L	2	8	18	ND	ND	ND
	lbs/day	0.033	0.13	0.30	ND	ND	ND
Acute Toxicity	percent Survival	--	--	[2]	--	--	90[4]

1 12-month running average.

2 No less than 70 percent survival for any one bioassay and no less than 90 percent survival for the median for any three or more consecutive bioassays.

3 Interim effluent limitations (maximum daily effluent limitation of 58 ug/L) were effective from June 1, 2009 to May 18, 2010. The highest reported result after May 18, 2010 was 1.6 µg/L and 0.007 lbs/day.

D. Compliance Summary

1. Inspections of the Facility were conducted on four occasions between 2010 and 2014. Compliance issues noted by the inspectors were as follows.
   a. On April 6, 2010:
      i. The inspector reported that the Discharger failed to provide proper notification of an anticipated bypass of the entire plant from March 9-16, 2010;
      ii. The inspector reported a transcription date error for the chemical oxygen demand (COD) analytical results for the November and December 2009 reports;
      iii. The inspector reported that the Discharger was not able to clearly demonstrate that the effluent flow meter had been calibrated at a minimum of annually as required by the permit; and
      iv. The inspector reported that the Discharger was not able to clearly demonstrate that the pH analysis was conducted within fifteen minutes of sample collection.
   b. On April 5, 2012, there were no major findings.
   c. On June 5, 2013, there were no major findings.
   d. On June 17, 2014, there were no major findings.
2. Between 2009 and 2014, the following violations were noted in the SMRs:
   a. On September 5, 2009, the dissolved oxygen (DO) daily average (4.6 mg/L) was below the minimal effluent limitation (5.0 mg/L);
   b. On January 8, March 4, and March 22, 2011, the effluent flow (2.05 MGD, 2.11 MGD, and 2.11 MGD, respectively) exceeded the average daily effluent limitation for flow (2.0 MGD);
   c. For the July 2009 SMR, a deficient reporting violation was cited because the method detection limit for aluminum (1 mg/L) was above the USEPA Standard Method 200.7 method detection limit for aluminum (0.02 mg/L) and above the maximum daily effluent limitation in Order No. R9-2009-0037 for total recoverable aluminum (0.2 mg/L);
   d. On February 20, 2012, the BOD test results for the raw influent samples taken were not reported due to a lab error and the results were invalid due to the mistake;
   e. On March 16, 2010, there were no tests conducted for pH, specific conduction, and turbidity as required by Order No. R9-2009-0037;
   f. On October 19, 2010, there were no results for total coliform and fecal coliform as required by Order No. R9-2009-0037; and
   g. On June 3, 2014, bis (2-ethylhexyl) phthalate exceeded the daily maximum effluent limitation (3.6 ug/L) with a reported value was 8.03 ug/L at monitoring location EFF-001B.

h. On June 30, 2014, bis (2-ethylhexyl) phthalate exceeded the monthly average effluent limitation (1.8 ug/L) with a reported value was 8.03 ug/L at monitoring location EFF-001B.

i. On December 1, 2014, flow exceeded the daily average effluent limitation (2.0 MGD) with a reported value of 2.08 MGD at monitoring location EFF-001B.

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 Waste Discharge Requirements (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). 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 the *Water Quality Control Plan for the San Diego Basin* (Basin Plan) on September 8, 1994 and last amended on April 4, 2011, that designates beneficial uses, establishes water quality objectives (WQOs), and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Sycamore Creek (located within Sycamore Canyon) is identified within the Basin Plan as having an exception from the municipal or domestic supply beneficial use; however groundwater uses for the hydrologic subarea include municipal and domestic supply. Beneficial uses applicable to Sycamore Creek are as follows:

Table F-4. Basin Plan Beneficial Uses

Discharge Point No.	Receiving Water Name	Beneficial Use(s)
001	Sycamore Creek (within Sycamore Canyon watershed)	Existing surface waters beneficial uses: Agricultural Supply (AGR); Industrial Service Supply (IND); Contact Water Recreation (REC-1); Non-Contact Water Recreation (REC-2); Warm Freshwater Habitat (WARM); Wildlife Habitat (WILD); Preservation of Rare, Threatened or Endangered Species (RARE)
001	Santee Hydrologic Subarea (907.12)	Existing ground waters beneficial uses: Municipal and Domestic Supply (MUN); Industrial Service and Process Supply (IND and PROC); and Agricultural Supply (AGR)

2. **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.

3. **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.

4. **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. 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.

5. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

6. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered

Species Act (Fish and Game Code, sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 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.

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

Under section 303(d) of the 1972 Clean Water Act, 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. On October 11, 2011 the USEPA gave final approval to California's 2010 section 303(d) List of Water Quality Limited Segments. The 303(d) list includes the listings for the Lower San Diego River for: enterococcus, fecal coliform, low dissolved oxygen, nitrogen, phosphorus, total dissolved solids, and toxicity.

On February 10, 2010 the San Diego Water Board adopted Resolution No. R9-2010-00014, *A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)* (The Bacterial TMDL). The Bacteria TMDL was subsequently approved by the State Water Board on December 14, 2010, the Office of Administrative Law (OAL) on April 4, 2011, and the USEPA on June 22, 2011. The Bacteria TMDL establishes waste load allocations (WLAs) for bacteria for the Facility. The requirements of the Bacteria TMDL have been incorporated into this Order.

TMDLs for the remaining 303(d) listed parameters have not been developed. Effluent limitations based on applicable WQOs have been established for dissolved oxygen, nitrogen, phosphorus, total dissolved solids, and chronic toxicity.

E. Other Plans, Polices and Regulations

Storm Water. Sewage treatment works with a design flow of 1.0 MGD or greater are required to comply with Water Quality Order No. 97-03-DWQ (NPDES General Permit No. CAS000001), WDRs for Discharges of Storm Water Associated with Industrial Activity, Excluding Construction Activities.

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 in the Code of Federal Regulations: 40 CFR section 122.44(a) requires that permits include applicable technology-based effluent limitations (TBELs) and standards; and 40 CFR 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.

A. Discharge Prohibitions

This Order retains the following discharge prohibitions from Order No. R9-2009-0037:

[4] California Regional Water Quality Control Board, San Diego Region, Resolution No. R9-2010-0001, *A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)*, adopted February 10, 2010.

1. **Discharge Prohibition A**. Requirements to comply with Waste Discharge Prohibitions as stated in the Basin Plan are retained from Order No. R9-2009-0037.
2. **Discharge Prohibition B.** Discharge 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. This prohibition is 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 Report of Waste Discharge, and subsequently in this Order, or other WDRs, are prohibited. This requirement is retained from Order No. R9-2009-0037.
3. **Discharge Prohibition C.** Discharge of oil, trash, or other solids is prohibited. This requirement is based on the requirements of the Basin Plan and is retained from Order No. R9-2009-0037.
4. **Discharge Prohibition D.** Discharge of waste sludge and untreated digester supernatant, centrate, or filtrate is prohibited. This requirement is based on the requirements of the Basin Plan and is retained from Order No. R9-2009-0037.
5. **Discharge Prohibition E.** The deposition of rubbish or refuse into surface waters is prohibited. This requirement is based on the requirements of the Basin Plan and is retained from Order No. R9-2009-0037.
6. **Discharge Prohibition F.** The discharge of waste shall not cause surface erosion or scouring of aquatic substrates. This requirement is retained from Order No. R9-2009-0037.
7. **Discharge Prohibition G.** The discharge of toxic substances is prohibited. This requirement is based on the requirements of the Basin Plan and is retained from Order No. R9-2009-0037.
8. **Discharge Prohibition H.** The discharge of wastes with a noticeable odor to the Sycamore Creek, a tributary of the San Diego River, is prohibited. This requirement is based on Table 3-2 of the Basin Plan and has been carried over from Order No. R9-2009-0037.
9. **Discharge Prohibition I.** The discharge of residual algaecides and aquatic herbicides to Sycamore Creek, a tributary of the San Diego River, is prohibited. This prohibition is based on 40 C.F.R. 122.21(a), “Duty to Apply,” and California Water Code section 13260, which requires filing a Report of Waste Discharge before discharges can occur. Discharges not described in the ROWD, and subsequently not discharged in the manner permitted by this Order, are prohibited.
10. **Discharge Prohibition J.** The discharge of residual algaecides and aquatic herbicides to the Discharger’s ponds/lakes shall not create a condition of nuisance as defined in section 13050 of the California Water Code. This prohibition is based on California Water Code section 13050 for water quality control for achieving water quality objectives.
11. **Discharge Prohibition K.** The discharge of residual algaecides and aquatic herbicides to the Discharger’s ponds/lakes shall not cause, have a reasonable potential to cause, or contribute to an in-stream excursion in Sycamore Creek, a tributary of the San Diego River, above any applicable standard or criterion promulgated by USEPA pursuant to section 303 of the CWA, or water quality objective adopted by the State or San Diego Water Board. This prohibition is based on CWA section 301 and California Water Code.

Order No. R9-2009-0037 prohibited discharges in excess of 2.0 MGD (average daily flow rate). This prohibition is an effluent limitation. Because effluent limitations are included in section IV of this Order, this requirement was not retained in section III, Discharge Prohibitions.

B. 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 Secondary Treatment Standards at 40 CFR part 133.

Regulations promulgated in 40 CFR section 125.3(a)(1) require TBELs for municipal dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTWs [defined in section 304(d)(1)]. Section 301(b)(1)(B) of that Act requires that such treatment works must, as a minimum, meet effluent limitations based on secondary treatment as defined by the USEPA Administrator.

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in 40 CFR part 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD_5, TSS, and pH.

2. Applicable TBELs

Technology-based regulations, specified in 40 CFR part 133, are summarized in the table below.

Table F-5. Secondary Treatment Standards

Parameter	Unit	Monthly Average	Weekly Average
BOD_5	mg/L	30[1]	45
TSS	mg/L	30[1]	45
pH	Standard units	6.0 to 9.0 at all times	

1 The 30-day average percent removal of BOD_5 and TSS shall not be less than 85 percent.

a. **BOD_5.** The Facility employs tertiary treatment technology. Order No. R9-2009-0037 established effluent limitations for BOD_5 based in part on plant performance. Consistent with anti-backsliding requirements, effluent limitations for BOD_5 have been carried over from Order No. R9-2009-0037.

b. **TSS.** The Facility employs tertiary treatment technology. Order No. R9-2009-0037 established effluent limitations for TSS based in part on plant performance. Consistent with anti-backsliding requirements, effluent limitations for TSS have been carried over from Order No. R9-2009-0037.

c. **pH.** 40 CFR part 133 establish TBELs based on secondary treatment for pH. The secondary treatment standards require the pH of the effluent to be no lower than 6.0 standard units and no higher than 9.0 standard units. Order No. R9-2009-0037

established effluent limitations for pH based on applicable water quality standards, which are more stringent than the secondary treatment standards. The water quality standards require the pH of the effluent to be no lower than 6.5 standard units and no higher than 8.5 standard units. Consistent with anti-backsliding requirements, the effluent limitation for pH has been carried over from Order No. R9-2009-0037.

d. **Oil and Grease.** Oil and grease limitations were established in Order No. R9-2009-0037. Consistent with anti-backsliding requirements, effluent limitations for oil and grease have been carried over from Order No. R9-2009-0037.

e. **Flow.** Order No. R9-2009-0037 established an average daily flow rate of 2.0 MGD. This Order modifies the effluent limitation for flow from an average daily flow to an average monthly flow because the modification does not have the potential to cause or contribute to an exceedance of WQOs. The previous Order did not take into account the treatment capacity of the ponds and lakes prior to discharge. An effluent limit calculated as average monthly flow better accommodates natural fluctuations in the Facility's treatment ponds and lakes due to seasonal wet weather events because pursuant to 40 CFR 122.45(d)(2) effluent limitations for continuous discharges from POTWs are calculated on an average monthly or average weekly discharge rate. The previous Order erroneously used an average daily discharge rate.

Table F-6. Summary of Applicable TBELs

Parameter	Unit	Monthly Average	Weekly Average	Maximum Daily
Flow	MGD	2.0	--	--
BOD_5	mg/L	15[1]	23	25
	lbs/day	250	384	417
TSS	mg/L	15[1]	23	25
	lbs/day	250	384	417
Oil and Grease	mg/L	5	--	7.5
	lbs/day	83	--	125
pH	standard units	6.5 to 8.5 at all times		

1 The 30-day average percent removal of BOD_5 and TSS shall not be less than 85 percent.

C. 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 WQOs, 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 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 WQOs 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 WQOs, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The beneficial uses applicable to Sycamore Creek and groundwater are summarized in Table F-3 of this Fact Sheet. The Basin Plan includes both narrative and numeric WQOs applicable to the receiving waters.

a. **BOD_5.** The Lower San Diego River is 303(d) listed for dissolved oxygen. The discharge of BOD_5 contributes to lower dissolved oxygen concentration in the receiving water. Thus, more stringent effluent limitations based on TBELs for BOD_5, described in section IV.B.2.a of this Fact Sheet, continue to be necessary for the protection of water quality.

b. **TSS.** The Lower San Diego River is 303(d) listed for dissolved oxygen. The discharge of organic material contributes to lower dissolved oxygen concentration in the receiving water. Thus, more stringent effluent limitations based on TBELs for TSS, described in section IV.B.2.b of this Fact Sheet, continue to be necessary for the protection of water quality.

c. **pH.** As discussed in section IV.B.2.c of this Fact Sheet, Order No. R9-2009-0037 established effluent limitations for pH based on applicable water quality standards, which are more stringent than the secondary treatment standards. The water quality standards require the pH of the effluent to be no lower than 6.5 standard units and no higher than 8.5 standard units. Consistent with anti-backsliding requirements, the effluent limitation for pH has been carried over from Order No. R9-2009-0037.

d. **Bacteria.** The Bacteria TMDL establishes WLAs for bacteria for the Facility.

The San Diego Water Board Technical Report for the Bacteria TMDL (Bacteria TMDL Technical Report) clearly states that, “Padre Dam’s bacterial discharges do not contribute to the San Diego River’s bacterial impairment because Padre Dam’s effluent meets the REC-1 water quality standard.”

Additionally, the data sources, methodology, wet weather modeling configuration, dry weather model configuration, and assumptions specified in the Bacteria TMDL Technical Report do not reference Padre Dam’s effluent as a contributing source to the receiving water impairment in the San Diego River. Based on facts presented in the Bacteria TMDL Technical Report, it appears that the TMDL assumed that if the Discharger complied with REC-1 water quality standards for bacteria, the Discharger would not be a contributing source of impairment.

In consultation with the USEPA, it has been determined that the implementation of the current effluent limitations for total coliform (based on California Code of Regulations title 22 criteria, which is more stringent than REC-1 standards specified in the Bacteria TMDL Technical Report), and new effluent limitations for fecal coliform, escherichia coli, and enterococcus based on the REC-1 water quality standards, along with receiving water limitations for total coliform, fecal coliform, escherichia coli, and enterococcus based on REC-1 standards, will be consistent with the intent of the Bacteria TMDL and be protective of water quality.

Attachment A to the Bacteria TMDL Technical Report specifies that for the application of the Basin Plan's enterococci REC-1 WQOs, unless otherwise specified in the Basin Plan, all waterbodies in the San Diego Region designated with REC-1 beneficial use are assumed to have a "designated beach" usage frequency. The "designated beach" usage frequency has the lowest and most stringent enterococci REC-1 WQOs (61 MPN/100 mL for freshwater). Thus, WLAs for enterococci have been established assuming a "designated beach" usage frequency.

In 2012, USEPA issued new recreational water quality criteria (2012 RWQC) recommendations for protecting human health in all coastal and non-coastal waters designated for primary contact recreation use. The 2012 RWQC recommends the use of two bacteria indicators of fecal contamination, escherichia coli and enterococci. The 2012 RWQC is based on the latest studies which conclude that fecal coliform is not a good indicator of fecal contamination. Studies have also found that while enterococci acts as a good indicator in some fresh waters, it can exist and multiply in other fresh waters and create false positives in samples. escherichia coli has been found to be the most reliable indicator organism in all fresh waters.

Further, to ensure the discharge from the Facility is consistent with the assumption made in the Bacteria TMDL Technical Report that discharges from the Facility do not contribute to the bacterial impairment in the San Diego River, the Discharger is required to conduct additional monitoring in response to receiving water exceedances for bacteria immediately downstream of Discharge Point No. 001 at Monitoring Location RSW-001a. If both the receiving water and effluent are determined to exceed applicable WLAs for bacteria, the Discharger shall be required to take immediate action to minimize the impact to the receiving water.

The requirements of the Bacteria TMDL have been incorporated into this Order.

e. **Turbidity.** Order No. R9-2009-0037 contained effluent limitations for turbidity based on the California Department of Public Health reclamation criteria (California Code of Regulations title 22), for the reuse of wastewater at Monitoring Location EFF-001A. These effluent limitations are more stringent than the WQOs contained in Tables 3-2 and 3-3 of the Basin Plan, thus remain protective of beneficial uses. The limitations for turbidity have been carried over from Order No. R9-2009-0037.

f. **Odor.** Order No. R9-2009-0037 contained an effluent limitation specifying "no odor" based on Table 3-2 of the Basin Plan. This requirement was not retained in section IV because the discharge of waste with a noticeable odor to the receiving water has been established as a discharge prohibition in section III of this Order.

g. **Priority Pollutants.** The Basin Plan specifies both surface and groundwater criteria for Santee Hydrologic Subarea (HSA) 7.12, which include human health criteria for consumption of "water and organisms."

The CTR and NTR specifies 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."

Ambient hardness data were used to calculate WQOs for priority pollutants that are hardness dependent. The data were collected from January 2009 through December 2014 at Monitoring Location RSW-001 in Sycamore Creek upstream from Discharge Point No. 001. A hardness of 31 mg/L as CaCO3 was used to

determine the WQOs. This is the lowest hardness measurement reported at Monitoring Location RSW-001.

Applicable Basin Plan criteria for Discharge Point No. 001 are summarized below and applicable CTR and NTR criteria for Discharge Point No. 001 are contained in Attachment I of this Order.

Table F-7. Summary of Basin Plan Criteria

Parameter	Basin Plan Criteria		Source of Criteria
	Surface Water (mg/L) Non-MUN	Groundwater (mg/L) MUN	
Aluminum, Total Recoverable	--	0.2	Secondary Maximum Contaminant Level (MCL)
Ammonia, Un-ionized	0.025	--	Protection of Aquatic Life
Barium	--	1.0	Primary MCL
Chloride	400	400	Table 3-2 Objective and Table 3-3 Objective
Iron, Total Recoverable	1.0	0.3	Table 3-2 Objective and Table 3-3 Objective
Nitrate	--	45	Primary MCL
Manganese, Total Recoverable	0.05	0.05	Table 3-2 Objective and Secondary MCL
Methylene Blue Active Substances	0.5	0.5	Table 3-2 Objective and Table 3-3 Objective
Total Chlorine Residual	0.011[1]	--	[1]
Boron	1.0	0.75	Table 3-2 Objective and Table 3-3 Objective
Fluoride (µg/L)	--	1.0	Table 3-3 Objective
Methyl Tert-Butyl Ether	--	0.005	Primary MCL
pH (standard units)	6.5 – 8.5	6.5 – 8.5	Chapter 3, WQOs
Percent Sodium	60	60	Table 3-2 Objective and Table 3-3 Objective
Total Dissolved Solids	1,000	1,000	Table 3-2 Objective and Table 3-3 Objective
Sulfate	500	500	Table 3-2 Objective and Table 3-3 Objective
Total Trihalomethanes (µg/L)	--	0.080	Primary MCL
Total Phosphorus	0.1	--	Table 3-2 Objective
Total Nitrogen	1.0	--	Table 3-2 Objective[2]
Color (AMDI color units)	20	15	Table 3-2 Objective and Table 3-3 Objective
Dissolved Oxygen	5.0	--	Chapter 3, WQOs

1 Interpretation of narrative Basin Plan criteria based on USEPA Freshwater Aquatic Life Chronic Criteria.

2 Based on footnote "a" to Table 3-2 of the Basin Plan, which states a ratio of nitrogen to phosphorus of 10:1 shall be used.

3. Determining the Need for WQBELs

The need for WQBELs was evaluated in accordance with 40 CFR section 122.44(d) and guidance for statistically determining the "reasonable potential" for a discharged pollutant to cause or contribute to an exceedance of WQOs.

The San Diego Water Board conducted a 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 San Diego Water Boards may use the SIP as guidance for all water quality-based toxics control[5]. 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 toxic constituents, such as Bis(2-Ethylhexyl)Phthalate and aluminum. Effluent data provided in the Discharger's monitoring reports for the Facility from June 2009 through December 2014 were used in the analyses. Upstream receiving water data provided in the Discharger's monitoring reports from June 2009 through December 2014 were used in the analyses. For the RPA, the highest detected effluent concentration (at Monitoring Location EFF-001A or 001B) and receiving water concentration was selected for use on a pollutant by pollutant basis in order to be fully protective of beneficial uses.

Section 1.4.2 of the SIP establishes procedures for granting mixing zones and the assimilative capacity of the receiving water. The Discharger has not requested dilution nor provided the necessary dilution analysis to grant dilution. Therefore, no dilution has been granted.

The need for effluent limitations for pH was determined through an RPA. The need for nutrient limitations was based on the alternative method of conformance in the Basin Plan, as discussed in section IV.C.3.a of this Fact Sheet. The need for effluent limitations for bacteria are based on the requirements of the Bacteria TMDL.

Due to the potential to impact groundwater quality once the effluent is discharged into Sycamore Creek, the municipal water use beneficial use has been considered in the RPA.

A summary of the RPA results for the Basin Plan parameters is in Table 7 below and for the CTR/NTR Criteria in Attachment J of this Order.

Table F-8. RPA for Basin Plan Criteria (Discharge Point No. 001)

Parameter	Maximum Effluent Concentration (MEC) (mg/L)	Background (mg/L)	Basin Plan Criteria		Reasonable Potential?
			Surface Water (mg/L) Non-MUN	Groundwater (mg/L) MUN	
Aluminum, Total Recoverable	0.2	1.69	--	0.2	Yes MEC>C
Ammonia, Un-ionized	0.025[1]	0.0007	0.025	--	Yes MEC=C
Barium	0.07	0.14	--	1.0	No
Chloride	220	550	400	400	Yes B>C and MEC is detected
Iron, Total Recoverable	0.114	16	1.0	0.3	Yes B>C and MEC is detected

[5] See Order WQO 2001-16 (Napa) and Order WQO 2004-0013 (Yuba City).

Parameter	Maximum Effluent Concentration (MEC) (mg/L)	Background (mg/L)	Basin Plan Criteria		Reasonable Potential?
			Surface Water (mg/L) Non-MUN	Groundwater (mg/L) MUN	
Nitrate	8.96	2.4	--	45	Yes 303(d) list includes lower San Diego River for nitrogen
Manganese, Total Recoverable	0.05	4.73	0.05	0.05	Yes B>C and MEC is detected
Methylene Blue Active Substances	<0.02	<0.5	0.5	0.5	No
Total Chlorine Residual	<0.141[1]	NA	0.011[2]	--	Yes, based on Step 7 of the SIP (type of discharge, POTW)
Boron	0.03	<0.5	1.0	0.75	No
Fluoride (µg/L)	0.69	NA	--	1.0	No
Methyl Tert-Butyl Ether	<1[1]	<1	--	0.005	No
pH (standard units)	6.0 – 8.2	7.1 – 7.7	6.5 – 8.5	6.5 – 8.5	Yes MEC < C[3]
Percent Sodium (%)	58.9	NA	60	60	No
Total Dissolved Solids	990	1,716	1,000	1,000	Yes B>C, MEC is detected, and the 303(d) list includes lower San Diego River for total dissolved solids
Sulfate	357	175	500	500	No
Total Trihalomethanes (µg/L)	0.0805	NA	--	0.080	Yes, based on Step 7 of the SIP (type of discharge, chlorinated wastewater)
Total Phosphorus	0.15	0.6	0.1	--	Yes MEC & B>C, and the 303(d) list includes lower San Diego River for phosphorus
Total Nitrogen	9.52	14.7	1.0[4]	--	Yes MEC & B>C, and the 303(d) list includes lower San Diego River for nitrogen

Parameter	Maximum Effluent Concentration (MEC) (mg/L)	Background (mg/L)	Basin Plan Criteria		Reasonable Potential?
			Surface Water (mg/L) Non-MUN	Groundwater (mg/L) MUN	
Color (AMDI color units)	5	NA	20	15	No
Dissolved Oxygen	0.6[5]	<0.1	5.0[5]	--	Yes MEC & B < C, and the 303(d) list includes lower San Diego River for dissolved oxygen

1 Data was not available for Monitoring Location EFF-001A, thus data was used from Monitoring Location EFF-001B.

2 Interpretation of narrative Basin Plan criteria based on USEPA Freshwater Aquatic Life Chronic Criteria.

3 WQOs for pH are more stringent than the applicable TBELs. Effluent limitations established in the Order cannot be allowed to cause or contribute to an exceedance of WQOs, thus WQBELs must be established.

4 Based on footnote "a" to Table 3-2 of the Basin Plan, which states a ratio of nitrogen to phosphorus of 10:1 shall be used.

5 Applied as a minimum concentration.

4. RPA Results

Final RPA results demonstrate that WQBELs are required for zinc, bis(2-ethylhexyl)phthalate, aluminum, ammonia, chloride, iron, manganese, total chlorine residual, pH, total dissolved solids, total trihalomethanes, total phosphorus, total nitrogen, and dissolved oxygen at Discharge Point No. 001.

a. **Nutrients.** The Basin Plan objective for phosphorus in streams is 0.1 mg/L, not to be exceeded more than 10 percent of the time unless studies of the specific water body in questions clearly show that WQO changes are permissible and changes are approved by the San Diego Water Board. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of nitrogen to phosphorus of 10:1, on a weight to weight basis, shall be used. Chapter 4 of the Basin Plan allows for the San Diego Water Board to establish an alternative method for conformance with the nitrogen and phosphorus objectives. The San Diego Water Board approved an alternative method for conformance for this Discharger through Order No. 98-60 and established effluent limitations for nitrogen and phosphorus at Monitoring Location EFF-001B and nitrate nitrogen at Monitoring Location EFF-001A. Effluent limitations for nitrate nitrogen, based on MUN beneficial use, has been moved from Monitoring Location EFF-001A to Monitoring Location EFF-001B, where surface waters are hydrologically connected to groundwater and MUN beneficial use apply.

Chapter 4 of the Basin Plan specifies that the San Diego Water Board may determine compliance with the narrative objective for biostimulatory substances based on the following four factors:

i. Measurement of ambient concentrations of nitrogen and phosphorus;

ii. The dissolved oxygen requirements of downstream beneficial uses;

iii. Use of best available technology (BAT) economically feasible for the removal of nutrients; and

iv. The development and implementation of a watercourse monitoring management plan.

b. Order No. R9-2009-0037 used the alternative conformance method described in Order No. 98-60, as modified to comply with the phosphorus and nitrogen Basin Plan WQOs, using an average annual mass loading effluent limitation instead of a concentration effluent limitation. Order No. R9-2009-0037 also established an effluent limitation of 45 mg/L for nitrate nitrogen, based on MUN beneficial use. Consistent with anti-backsliding requirements, effluent limitations for nutrients have been carried over from Order No. R9-2009-0037 and the conditions of the alternative conformance method have been applied. Effluent limitations for nitrate nitrogen, based on MUN beneficial use, has been moved from Monitoring Location EFF-001A to Monitoring Location EFF-001B, where surface waters are hydrologically connected to groundwater and MUN beneficial use apply.

i. **Measurement of Ambient Concentrations of Nitrogen and Phosphorus.** Under Order No. R9-2009-0037, the Discharger monitors Sycamore Creek, Forrester Creek, and the San Diego River for total nitrogen and total phosphorus at seven locations to assess ambient conditions upstream and downstream of the discharge.

ii. **Dissolved Oxygen Requirements of Downstream Beneficial Uses.** The Basin Plan states that dissolved oxygen shall not be less than 5.0 mg/L in inland surface waters with designated marine habitat or warm freshwater habitat. The annual mean dissolved oxygen concentration shall not be less than 7.0 mg/L more than 10 percent of the time. Results of dissolved oxygen monitoring in Sycamore Creek, Forrester Creek, and the San Diego River from December 2011 through December 2014 resulted in the following:

Table F-9. Effluent and Receiving Water Dissolved Oxygen Analysis

Monitoring Location	Summary Statistics of DO Concentrations (mg/L)				
	Min	Max	Average	Median	90th Percentile
RSW-001 (upstream) (Reference Station)	<0.1	10.48	6.2	5.9	9.1
RSW-001a (400 to 1,000 yards downstream)	**1.6**	**10.1**	**6.5**	**6.5**	**8.7**
RSW-002 (Sycamore Creek, upstream of confluence with San Diego River)	**<0.1**	**9.8**	**6.8**	**6.5**	**9.5**
RSW-003 (San Diego River, upstream of confluent with Sycamore Creek) (Reference Station)	0.89	9.3	3.2	3.0	5.2
RSW-004 (Forrester Creek, 50 feet upstream of confluence with San Diego River) (Reference Station)	2.1	10.7	5.5	5.2	8.8
RSW-005 (San Diego River at Mast Blvd)	**4.8**	**9.5**	**6.8**	**6.5**	**8.4**
RSW-006 (San Diego River downstream of Old Mission Dam)	**6.0**	**14.0**	**9.2**	**8.9**	**11.1**

Based on data from January 2010 through December 2012, the Discharger submitted a Receiving Water Quality Report with the ROWD. The report concluded the Discharger's contribution of both nitrogen and phosphorus to the San Diego River is approximately seven percent, and that the Discharger's contributions to the receiving waters are significantly less than the contributions from all other upstream sources evaluated.

Until the data and biological processes are better understood, applicable effluent limitations have been carried forward unchanged.

iii. **Use of BAT Economically Feasible for the Removal of Nutrients.** The Facility's treatment system currently includes a 5-stage Bardenpho biological nutrient removal system as well as advanced treatment via chemical phosphorus removal by alum addition, flocculation and sedimentation and denitrifying filtration. This technology has not changed since the San Diego Water Board adopted Order No. R9-2003-0179 and determined this level of treatment met the minimum standards for BAT.

iv. **The Development and Implementation of a Watercourse Monitoring and Management Plan (WMMP).** The Basin Plan states that, "The implementation of the watercourse monitoring and management plan will often require close coordination between many different public and private entities. The San Diego Water Board shall recognize an agency to implement the watercourse monitoring and management plan and such recognition shall be made part of the provisions of appropriate waste discharge requirements for the discharge."

On June 13, 1995, the Discharger submitted a "Middle San Diego River Monitoring and Management Program." Consistent with the requirements of Order No. R9-2009-0037, on September 29, 2009, the Discharger submitted a revised WMMP to address five additional "corrective items" specified in the Basin Plan that had not been previously addressed.

As a condition of the alternative conformance method, this Order requires the Discharger to update the WMMP and collect additional monitoring data as specified in the Basin Plan. If, upon review of the submitted data, the San Diego Water Board determines that impacts to water quality may occur, this Order may be reopened to include concentration-based limitations for nitrogen and phosphorus equal to the Basin Plan WQOs.

c. **Bacteria.** The San Diego Water Board developed WQBELs for bacteria (total and fecal coliform, and enterococcus) that are consistent with the Bacteria TMDL, as discussed in section IV.C.2.b of this Fact Sheet.

5. CTR/NTR WQBEL Calculations

a. If a reasonable potential to cause or contribute to an exceedance of WQOs, then a WQBEL must be established in accordance with one or more of the three procedures contained in section 1.4 of the SIP. These procedures include:

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

ii. Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs); 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. This Order has established performance goals using the same procedures. The performance goals are summarized in section IV.E.

c. The only CTR/NTR constituents that were found to have reasonable potential to cause or contribute to an exceedance of WQOs based on the data provided between June 2009 and December 2014 were zinc and bis(2-ethylhexyl)phthalate.

d. The CTR establishes human health criteria for bis(2-ethylhexyl)phthalate; WQBELs for this parameter were calculated following the procedures in section 1.4 of the SIP.

e. WQBELs Calculation Example

Using bis(2-ethylhexyl)phthalate (effluent limitations) and total recoverable copper (performance goals) as examples, the following demonstrates how WQBELs and performance goals were established for this Order.

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

Calculation of aquatic life AMEL and MDEL:

Step 1: For each constituent requiring an effluent limitation (or performance goal), 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. For discharges from the Facility, criteria for saltwater are independent of hardness and pH.

D = The dilution credit.

B = The ambient background concentration.

As discussed above D=0; therefore:

$ECA = C$

Bis(2-ethylhexyl) phthalate

For bis(2-ethylhexyl)phthalate:

ECA human health = 1.8 µg/L (based on MUN beneficial use)

Total Recoverable Copper

For total recoverable copper, the applicable water quality criteria are from the CTR. Thus, for total recoverable copper:

ECA_{acute} = 5 µg/L

$ECA_{chronic}$ = 3.4 µg/L

$ECA_{human\ health}$ = 1,300 µg/L

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average (LTA) discharge condition by multiplying the ECA by a factor (multiplier). The multiplier is a statistically-based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 3 of the SIP.

LTA = ECA x Multiplier99

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

All CTR/NTR pollutants with the exception of bis(2-ethylhexyl)phthalate, bromoform, chlorodibromomethane, chloroform, and dichlorobromomethane have less than 10 effluent samples. Bis(2-ethylhexyl)phthalate, bromoform, chlorodibromomethane, chloroform, and dichlorobromomethane all have at least 80 percent of the samples in the data set are reported as non-detected. Thus, the CV shall be set equal to 0.6 for all CTR/NTR parameters.

Bis(2-ethylhexyl) phthalate

Aquatic life criteria is not applicable to bis(2-ethylhexyl)phthalate, skip to Step 5 for this parameter.

Total Recoverable Copper

For total recoverable copper, the following data was used in this Order to develop the acute and chronic LTAs using equations provided in section 1.4, Step 3 of the SIP. Because the data set is less than 10 (6 samples) and 100 percent of the samples in the data are reported as non-detected, the CV shall be equal to 0.6 for the purpose of calculating the revised performance goal.

Based on Table 1 of the SIP:

ECA Acute Multiplier = 0.321

ECA Chronic Multiplier = 0.527

LTA calculations:

LTAacute = 5 µg/L x 0.321 = 1.6 µg/L

LTAchronic = 3.4 µg/L x 0.527 = 1.8 µg/L

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

LTA = most limiting of LTAacute or LTAchronic

Bis(2-ethylhexyl) phthalate

Aquatic life criteria is not applicable to bis(2-ethylhexyl)phthalate, skip to Step 5 for this parameter.

Total Recoverable Copper

For copper, the most limiting LTA is LTAacute

LTAcopper = LTAacute = 1.6 µg/L

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as AMEL and MDEL. The multiplier is a statistically-based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the CV of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 5 of the SIP.

AMELaquatic life = LTA x AMELmultiplier95

MDELaquatic life = LTA x MDELmultiplier99

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.

Bis(2-ethylhexyl) phthalate

Aquatic life criteria is not applicable to bis(2-ethylhexyl)phthalate, skip to Step 5 for this parameter.

Total Recoverable Copper

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

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$	Ratio
4	0.6	3.11	1.55	2.0

AMELaquatic life = 1.6 µg/L x 1.55 = 2.48 µg/L

MDELaquatic life = 1.6 µg/L x 3.11 = 4.98 µg/L

Step 5: For the ECA based on human health, set the AMEL equal to the ECAhuman health.

Bis(2-ethylhexyl)phthalate

AMELhuman health = 1.8 µg/L

Total Recoverable Copper

AMELhuman health = ECAhuman health

AMELhuman health = 1,300 µg/L

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

MDELhuman health = AMELhuman health x (MultiplierMDEL/ MultiplierAMEL)

Bis(2-ethylhexyl)phthalate

MDELhuman health = 1.8 µg/L x 2.0 = 3.6 µg/L

Total Recoverable Copper

For the default CV of 0.6:

MDELhuman health = 1,300 µg/L x 2.0 = 2,600 µg/L

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

Bis(2-ethylhexyl)phthalate

Because there is no aquatic life criteria for bis(2-ehtylhexyl)phthalate, the human health-based effluent limitations have been established in the Order.

Total Recoverable Copper

The aquatic life-based performance goals are more stringent than the human health-based performance goals for copper, thus the aquatic life-based performance goals have been established in the Order.

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

Table F-10. CTR-based Effluent Limitations (Discharge Point No. 001)

Parameter	Units	MDEL	AMEL
Zinc, Total Recoverable	µg/L	230	115
	lbs/day	3.84	1.91
Bis(2-ethylhexyl)phthalate	µg/L	3.6	1.8
	lbs/day	0.06	0.03

6. Basin Plan Objective Effluent Limitations

Previous orders for the Discharger have established limitations for Basin Plan WQOs by applying them directly as daily maximums. The resulting effluent limitations are protective of beneficial uses and the same methodology was applied to develop WQBELs for this Order. Consistent with the intent of WQBELs to protect the beneficial uses of the receiving water, WQBELs are applied as far downstream of the treatment system as reasonable. The majority of the parameters are treated within the first half of the Facility, from the primary clarifiers to the point of dechlorination. The second half of the treatment Facility, from Pond A to Lakes No. 7, serves to stabilize the quality of the effluent discharge to Sycamore Creek by reducing the total nitrogen concentrations. Given this, the majority of the WQBELs are applied at Monitoring Location EFF-001A, while nutrients and flow WQBELs are applied at Monitoring Location EFF-001B. The San Diego Water Board approved an alternative method for conformance for this Discharger through Order No. 98-60 and established effluent limitations for nitrogen and phosphorus at Discharge Point No. EFF-001B and nitrate nitrogen at Dischager Point No. EFF-001A. Effluent limitations for nitrate nitrogen, based on MUN beneficial use, has been moved from Monitoring Location EFF-001A to Monitoring Location EFF-001B, where surface waters are hydrologically connected to groundwater and MUN beneficial use apply.

Table F-11. Basin Plan-based Effluent Limitations at Monitoring Location EFF-001A (Discharge Point No. 001)[1]

Parameter	Units	Effluent Limitations[2]					
		Average Monthly	Average Weekly	Maximum Daily	12-Month Average	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	--	--	6.5	8.5
Aluminum	mg/L	--	--	0.2	--	--	--
	lbs/day	--	--	3.3	--	--	--
Chloride	mg/L	--	--	400	--	--	--
	lbs/day	--	--	6,672	--	--	--
Iron, Total Recoverable	mg/L	--	--	0.30	--	--	--
	lbs/day	--	--	5.0	--	--	--
Total Chlorine Residual	µg/L	2	8	18	--	--	--
	lbs/day	0.033	0.13	0.30	--	--	--
Total Trihalomethanes	µg/L	80.0	--	160	--	--	--
	lbs/day	1.33	--	2.68	--	--	--
Manganese, Total Recoverable	mg/L	--	--	0.05	--	--	--
	lbs/day	--	--	0.83	--	--	--
Total Dissolved Solids	mg/L	--	--	1,000	--	--	--
	lbs/day	--	--	16,680	--	--	--
Dissolved Oxygen	mg/L	--	--	5.0[3]	--	--	--
Chronic Toxicity[4]	Pass/Fail, % Effect (Test of Significant Toxicity)	--	--	Pass or <40% effect[5]	--	--	--

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

2 The mass emission rate (MER) limitations, in pounds per day, were calculated based on the following equation: MER (lb/day) = 8.34 x Q x C, where Q is the maximum allowable flow rate (in MGD) and C is the concentration (in mg/L).

3 Applied as a Daily Minimum.

4 A numeric WQBEL is established because effluent data showed that there was reasonable potential for the effluent to cause or contribute to an exceedance of the chronic toxicity water quality objective. The chronic toxicity final effluent limitation is protective of the narrative toxicity Basin Plan water quality objectives. These final effluent limitations will be implemented using the Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (USEPA 2002, EPA-821-R-02-013), current USEPA guidance in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, June /2010) and EPA Regions 8, 9 and 10 Toxicity Training Tool (January 2010), http://www2.epa.gov/region8/epa-regions-8-9-and-10-toxicity-training-tool-january-2010.

5 As specified in section III.C.1 of the MRP, Attachment E of this Order.

Table F-13. Basin Plan-based Effluent Limitations at Monitoring Location EFF-001B (Discharge Point No. 001)[1]

Parameter	Units	MDEL	12-Month Average
Ammonia, Un-ionized	mg/L	0.025	--
	lbs/day	0.42	--
Nitrate Nitrogen	mg/L	45	--
	lbs/day	751	--
Nitrogen, Total	lbs/day	--	17[2]
Phosphorous, Total	lbs/day	--	1.7[2]

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

2 Based on a running 12-month average.

7. Whole Effluent Toxicity (WET)

The Basin Plan defines toxicity as the adverse response of 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."

Whole effluent toxicity (WET) testing protects receiving waters from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a short or a longer 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. Because of the nature of industrial discharges into the POTW sewershed, it is possible that toxic constituents could be present in the Facility effluent, or could have synergistic or additive effects.

For this Order, the above narrative objective is translated into a numeric criterion of 1.0 chronic toxicity unit (TUc). At 1.0 TUc, there is no observable detrimental effect when the indicator organism is exposed to 100 percent effluent; therefore, 1.0 TUc is a direct translation of the narrative objective into a number. Moreover, in the Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001) (see section 3.3.3, "Step 3: Decision Criteria for Permit Limit Development"), USEPA recommends that 1.0 TUc be used as a criterion continuous concentration. Such concentrations are typically expressed as four-day averages.

Order No. R9-2009-0037 required quarterly chronic toxicity tests. Out of 22 chronic toxicity tests, two exceeded one TUc. One of those results was 4 TUc (March 2010) and the other was two TUc (March 2012). Using the RPA procedures from the SIP, the effluent does have reasonable potential to cause an exceedance of the narrative water quality objective for toxicity and an effluent limitation for chronic toxicity is required.

Order No. R9-2009-0037 established acute toxicity effluent limitations for the discharge of treated wastewater. However, chronic toxicity is a more stringent requirement than acute toxicity. Therefore, 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 replaces effluent limitations for acute toxicity with effluent limitations for chronic toxicity. Removal of the numeric acute toxicity effluent limitations does not constitute backsliding because chronic toxicity is a more stringent requirement than acute toxicity. Numeric 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 WQOs.

In the past, the State Water Board reviewed the circumstances warranting a numeric chronic toxicity effluent limitation when there is reasonable potential with respect to SWRCB/OCC Files A-1496 & A-1496(a) [Los Coyotes/Long Beach Petitions]. On September 16, 2003, at a public hearing, the State Water Board adopted Order No. 2003-0012 (Los Coyotes Order) deferring the issue of numeric chronic toxicity effluent limitations until a subsequent Phase of the SIP is adopted. In the meantime, the State Water Board replaced the numeric chronic toxicity limit with a narrative effluent limitation and a 1.0 TUc trigger, in the Long Beach and Los Coyotes WRP NPDES permits.

However, many facts have changed since the State Water Board adopted the Los Coyotes Order in 2003. USEPA published two new guidance documents with respect to chronic toxicity testing; the California Regional Water Quality Board, Los Angeles Region adopted NPDES permits for industrial facilities incorporating TST-based effluent limits for chronic toxicity and has adopted numeric chronic toxicity effluent limits for industrial facilities and POTWs with TMDL WLAs of 1 TUc; and the California Regional Water Quality Board, Santa Ana Region adopted an NPDES permit for a POTW incorporating TST-based effluent limits for chronic toxicity. In addition to these and other factual developments, the State Water Board has not adopted a revised policy that addresses chronic toxicity effluent limitations in NPDES permits for inland discharges, as anticipated by the Los Coyotes Order. Because the Los Coyotes Order explicitly "declined to make a determination … regarding the propriety of the final numeric effluent limitations for chronic toxicity…," (Los Coyotes Order, p. 9) and because of the differing facts before the San Diego Water Board in 2015 as compared to the facts that were the basis for the Los Coyotes Order in 2003, the San Diego Water Board concludes that the Los Coyotes Order does not require inclusion of narrative rather than numeric effluent limitations for chronic toxicity. Further, the San Diego Water Board finds that numeric 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 objective. This Order contains numeric chronic toxicity effluent limitations. Compliance with the chronic toxicity requirement contained in this Order shall be determined in accordance with sections VII.O of this Order.

On July 7, 2014, the Chief Deputy of the Water Quality Division announced that the State Water Board would be releasing a revised version of the Chronic Toxicity Plan for public comment within a few weeks. San Diego Water Board awaits its release. Because effluent data exhibited reasonable potential to cause or contribute to an exceedance of the water quality objective, this Order contains numeric chronic toxicity effluent limitations. Compliance with the chronic toxicity requirement contained in this Order shall be determined in accordance to sections VII.O of this Order. Never the less, this Order contains a reopener to require the San Diego Water Board to modify the permit, if necessary, to make it consistent with any new policy, law, or regulation.

For this permit, chronic toxicity in the discharge is evaluated using a median monthly effluent limitation and a maximum daily effluent limitation that utilizes USEPA's 2010 Test of Significant Toxicity (TST) hypothesis testing approach. The chronic toxicity effluent limitations are expressed as "Pass" for the median monthly summary results and as "Pass" or "<50% Effect" for each maximum daily individual results.

In January 2010, USEPA published a guidance document titled; "*EPA Regions 8, 9 and 10 Toxicity Training Tool*," which among other things discusses permit limit expression for chronic toxicity. The document acknowledges that NPDES regulations at 40 CFR 122.45(d) require that all permit limits be expressed, unless impracticable, as an average weekly limit (AWL) and Average Monthly Limitation (AML) for POTWs. Following section 5.2.3 of the Technical Support Document (TSD), the use of an AWL is not appropriate for WET. In lieu of an AWL for POTWs, USEPA recommends establishing a Maximum Daily Limitation (MDL) for toxic pollutants and pollutants in water quality permitting, including WET. This is appropriate for two reasons. The basis for the average weekly requirement for POTWs derives from secondary treatment regulations and is not related to the requirement to assure achievement of water quality standard. Moreover, an average weekly requirement comprising up to seven daily samples could average out daily peak toxic concentrations for WET and therefore, the discharge's potential for causing acute and chronic effects would be missed. It is impracticable to use an AWL, because short-term spikes of toxicity levels that would be permissible under the 7-day average scheme would not be adequately protective of all beneficial uses. The MDL is the highest allowable value for the discharge measured during a calendar day or 24-hour period representing a calendar day. The AML is the highest allowable value for the average of daily discharges obtained over a calendar month. For WET, this is the average of individual WET test results for that calendar month. However, in cases where a chronic mixing zone is not authorized, EPA Regions 8, 9 and 10 continue to recommend that the AML for chronic WET should be expressed as a median monthly limit (MML).

Later in June 2010, USEPA published another guidance document titled, National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, June 2010), in which they recommend the following: "Permitting authorities should consider adding the TST approach to their implementation procedures for analyzing valid WET data for their current NPDES WET Program." The TST approach is another statistical option for analyzing valid WET test data. Use of the TST approach does not result in any changes to 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.

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.[6] Nevertheless, USEPA's acute and chronic WET methods require that effluent and ambient concentration-response patterns generated for multi-concentration acute and chronic toxicity tests be reviewed—as a component of test review following statistical analysis—to ensure that the calculated measurement result for the toxicity test is interpreted appropriately. (EPA-821-R-02-012, section 12.2.6.2; EPA-821-R-02-013, section 10.2.6.2.). In 2000, EPA provided guidance for such reviews to ensure that test endpoints for determining toxicity based on the statistical approaches utilized at the time the guidance was written (NOEC, LC50's, IC25s) were calculated appropriately (EPA 821-B-00-004).

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

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, LC50s, and IC25s, 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 EPA's 2000 guidance decreased discrepancies in data interpretation for NOEC, LC50, and IC25 test results, thereby lowering the chance that a truly nontoxic sample would be misclassified and reported as toxic.

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

Any Data Quality Objectives or Standard Operating Procedure used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent or receiving water toxicity test measurement results from the TST statistical approach which include a consideration of concentration-response patterns and/or PMSDs must be submitted for review by the San Diego Water Board, in consultation with USEPA and the State Water Board's Quality Assurance Officer and Environmental Laboratory Accreditation Program (40 CFR 122.44(h)). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Resources Control 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.

D. Final Effluent Limitation Considerations

1. Satisfaction of Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and 40 CFR section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, unless an exception applies. This Order complies with the anti-backsliding provisions because the effluent limitations in this Order are at least as stringent as the effluent limitations in Order No. R9-2009-0037, with the exception of the effluent limitations for flow, color, percent sodium, acute toxicity, odor, and MTBE. The changes to the effluent limitations for flow, color, percent sodium, acute toxicity, odor, and MTBE are consistent with federal anti-backsliding requirements for the reasons stated below:

As discussed in section IV.B, this order modifies the effluent limitation for flow from an average daily flow to an average monthly flow. This relaxation of the effluent limitation for flow is governed by 40 CFR section 122.44(l), which states that effluent limitations may be relaxed when the circumstances justify a permit modification under 40 CFR section 122.62. Under 40 CFR section 122.61(15) permit modifications are permissible "to correct technical mistakes, such as errors in calculation, or mistaken interpretations of law." Here, the previous Order made two technical errors: 1) it classified the effluent limitation as a discharge prohibition and 2) the discharge prohibition for flow was based on the facility's average daily discharge rather than its average monthly discharge. The relaxation of the effluent limitation is therefore consistent with anti-backsliding regulations because it corrects technical errors.

The effluent limitations for color, percent sodium, and MTBE have been removed and, instead, performance goals have been assigned for these parameters. This relaxation of water quality effluent limitations are governed by section 402(o)(2) of the CWA. Section 402(o)(2)(B(i) permits the relaxation of an effluent limitation when new information becomes available that would have justified the application of a less stringent standard. Since the previous order was issued, new monitoring data indicates that the discharge does not have reasonable potential to cause or contribute to an exceedance of WQOs for color, percent sodium, and MTBE. Because color, percent sodium, and MTBE do not have reasonable potential to degrade water quality, their removal is consistent with the anti-backsliding requirements of the CWA and federal regulations.

Further, the compliance determination for effluent limitations for MTBE, bis(2-ethylhexyl)phthalate, and total chlorine residual have been moved from Monitoring Location EFF-001B to Monitoring Location EFF-001A and compliance determination for effluent limitations for nitrate nitrogen have been moved from Monitoring Location EFF-001A to Monitoring Location EFF-001B. As stated in section IV.C.6 of this Fact Sheet, given that MTBE, bis(2-ethylhexyl)phthalate, and total chlorine residual are treated within the first half of the Facility, from the primary clarifiers to the point of dechlorination, the WQBELs for these parameters are applied at Monitoring Location EFF-001A. Also, as stated in section IV.C.6 of this Fact Sheet, given that nitrogen is treated within the second half of the Facility, from Pond A to Lakes No. 7, the WQBELs for nitrate nitrogen are applied at Monitoring Location EFF-001B.

2. Antidegradation Policies

WDRs for the Discharger 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.

Changes in this Order are not expected to result in a lowering of water quality of the receiving water. The requirements of this Order are consistent with federal and state antidegradation requirements for the following reasons:

As discussed in section IV.B, the effluent limitation for flow has been modified from an average daily flow to an average monthly flow. This change accommodates natural fluctuations in the discharge flow from Lake No. 1 to Sycamore Creek due to storm water inflow. This change is not expected to affect the quality of the discharge or to degrade the receiving waters. Any increase in flow volume are minor, temporally limited, and within the treatment capacity of the ponds and lakes. Thus, the effluent limitation for flow is consistent with federal and state antidegradation policy and a complete anti-degradation analysis is not required.

As discussed in section IV.C.2.f, this Order changes the odor effluent limitation ("no odor") to a discharge prohibition. This change is not expected to affect the quality of the discharge or to degrade the receiving waters. The discharge prohibition for odor is expected to ensure that the Discharger maintains the same level of treatment. Thus, a discharge prohibition for odor is consistent with federal and state antidegradation policy and a complete antidegradation analysis is not required.

This Order removes WQBELs for color, percent sodium, and MTBE as discussed above. This change is not expected to affect the quality of the discharge or to degrade the receiving waters. The discharge was found to have no reasonable potential to contribute to an exceedance. Requirements of this permit require the Discharger to continue operating at current treatment efficiency. Additionally, performance goals for color, percent sodium, and MTBE were included in this Order to signal where impacts may be significant. Thus, the removal of these effluent limitations. is consistent with federal and state antidegradation policy and a complete anti-degradation analysis is not required.

3. Stringency of Requirements for Individual Pollutants

This Order contains both TBELs and WQBELs for individual pollutants. This Order includes effluent limitations for BOD_5, TSS, and pH that are more stringent than applicable federal standards, but that are nonetheless necessary to meet numeric objectives or protect beneficial uses. The San Diego Water Board has considered the factors listed in section 13241.1 of the Water Code in establishing these requirements. These limitations remain unchanged from those established in Order No. R9-2009-0037, and the Discharger has demonstrated the ability to consistently comply with the limitations.

WQBELs have been derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that 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 WQOs contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR section 131.21(c)(1). The remaining WQOs and beneficial uses implemented by this Order were approved by USEPA and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

E. Performance Goals

Constituents that do not have reasonable potential to cause or contribute to an exceedance of WQOs have been assigned performance goals. Performance goals serve to maintain existing treatment levels and effluent quality and supports 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 WQOs established in the Basin Plan. 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 the permit 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 the permit 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.

Order No. R9-2009-0037 established performance goals at Monitoring Location EFF-001A (Discharge Point No. 001). A summary of applicable CTR/NTR performance goals is provided below:

Table F-15. Performance Goals[1]

Parameter	Performance Goals[2]			
	Units	Average Monthly	Maximum Daily	Instantaneous Maximum[3]
BASED ON BASIN PLAN OBJECTIVES				
Radioactivity, Gross Alpha	picocuries per Liter (pCi/L)	--	--	15[4]
Radioactivity, Gross Beta	pCi/L	--	--	50
Radium 226 and 228	pCi/L	--	--	5
Percent Sodium	percent		60	
Color	AMDI Color Units	--	20	--
Boron	µg/L	--	--	7.5E+02
	lbs/day	--	--	1.25E+01
Fluoride	µg/L	--	--	1.00E+03
	lbs/day	--	--	1.67E+01
Methylene Blue Active Substances	µg/L	--	--	5.00E+02
	lbs/day	--	--	8.34E+00
Methyl Tert-Butyl Ether	µg/L	--	5	--
	lbs/day	--	8.3E-02	--
Sulfate	µg/L	--	--	5.00E+5
	lbs/day	--	--	8.34E+03
Total Trihalomethanes	µg/L	8.00E+01	1.60E+02	--
	lbs/day	1.33E+00	2.68E+00	--

Parameter	Performance Goals[2]			
	Units	Average Monthly	Maximum Daily	Instantaneous Maximum[3]
OBJECTIVES FOR THE PROTECTION OF AQUATIC LIFE				
Cadmium, Total Recoverable	µg/L	3.69E+00	7.40E+00	--
	lbs/day	6.16E-02	1.23E-01	--
Chromium VI, Total Recoverable[5]	µg/L	8.12E+00	1.63E+01	--
	lbs/day	1.35E-01	2.72E-01	--
Copper, Total Recoverable	µg/L	1.44E+01	2.89E+01	--
	lbs/day	2.40E-01	4.82E-01	--
Cyanide, Total Recoverable[6]	µg/L	4.26E+00	8.54E+00	--
	lbs/day	7.10E-02	1.42E-01	--
Lead, Total Recoverable	µg/L	6.94E+00	1.39E+01	--
	lbs/day	1.16E-01	2.32E-01	--
Selenium, Total Recoverable	µg/L	4.09E+00	8.21E+00	--
	lbs/day	6.83E-02	1.37E-01	--
Silver, Total Recoverable	µg/L	7.61E+00	1.53E+01	--
	lbs/day	1.27E-01	2.55E-01	--
Zinc, Total Recoverable	µg/L	1.15E+02	2.30E+02	--
	lbs/day	1.91E+00	3.84E+00	--
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH				
alpha Endosulfan	µg/L	4.59E-02	9.20E-02	--
	lbs/day	7.65E-4	1.53E-03	--
beta Endosulfan	µg/L	4.59E-02	9.20E-02	--
	lbs/day	7.65E-04	1.53E-03	--
Endosulfan Sulfate	µg/L	4.59E-02	9.20E-02	--
	lbs/day	7.65E-04	1.53E-03	--
Endrin	µg/L	2.95E-02	5.91E-02	--
	lbs/day	4.92E-04	9.86E-04	--
Endrin Aldehyde	µg/L	7.60E-01	1.52E+00	--
	lbs/day	1.27E-02	2.54E-02	--
Acrolein	µg/L	1.72E+01	3.45E+01	--
	lbs/day	2.87E-01	5.75E-01	--
Antimony	µg/L	6.00E+00	1.20E+01	--
	lbs/day	1.00E-01	2.01E-01	--
Arsenic, Total Recoverable	µg/L	5.00E+01	1.00E+02	--
	lbs/day	8.34E-01	1.67E+00	--
Asbestos	MFL[5]	7.00E+06	1.40E+07	--
Barium	µg/L	1.00E+03	2.01E+03	--
	lbs/day	1.67E+01	3.35E+01	--
Beryllium	µg/L	4.00E+00	8.02E+00	--
	lbs/day	6.67E-02	1.34E-01	--
Bis(2-chloroisopropyl)ether	µg/L	9.99E+01	2.00E+02	--
	lbs/day	1.67E+00	3.34E+00	--
Bromoform	µg/L	3.60E+02	7.20E+02	--
	lbs/day	6.00E+00	1.20E+01	--
Chlorobenzene	µg/L	7.00E+01	1.40E+02	--
	lbs/day	1.17E+00	2.34E+00	--
Chlorodibromomethane	µg/L	3.40E+01	6.80E+01	--
	lbs/day	5.67E-01	1.13E+00	--
Chromium III, Total Recoverable[5]	µg/L	5.00E+01	1.00E+02	--
	lbs/day	8.34E-01	1.67E+00	--
Dichlorobromomethane	µg/L	4.60E+01	9.20E+01	--
	lbs/day	7.67E-01	1.53E+00	--

Parameter	Performance Goals[2]			
	Units	Average Monthly	Maximum Daily	Instantaneous Maximum[3]
Mercury, Total Recoverable	µg/L	5.00E-02	1.00E-01	--
	lbs/day	8.34E-04	1.67E-03	--
Nickel, Total Recoverable	µg/L	8.19E+01	1.64E+02	--
	lbs/day	1.37E+00	2.74E+00	--
Thallium, Total Recoverable	µg/L	1.70E+00	3.41E+00	--
	lbs/day	2.84E-02	5.69E-02	--
Di-n-butyl Phthalate	µg/L	2.46E+00	4.93E+00	--
	lbs/day	4.10E-02	8.22E-02	--
1,2-Dichlorobenzene	µg/L	6.00E+02	1.20E+03	--
	lbs/day	1.00E+01	2.01E+01	--
1,3-Dichlorobenzene	µg/L	4.00E+02	8.02E+02	--
	lbs/day	6.67E+00	1.34E+01	--
1,4-Dichlorobenzene	µg/L	5.00E+00	1.00E+01	--
	lbs/day	8.34E-02	1.67E-01	--
Diethyl Phthalate	µg/L	4.69E+02	9.40E+02	--
	lbs/day	7.82E+00	1.57E+01	--
Dimethyl Phthalate	µg/L	2.46E+00	4.93E+00	--
	lbs/day	4.10E-02	8.22E-02	--
4,6-dinitro-2-methylphenol	µg/L	1.34E+01	2.69E+01	--
	lbs/day	2.24E-01	4.48E-01	--
2,4-dinitrophenol	µg/L	7.00E+01	1.40E+02	--
	lbs/day	1.17E+00	2.34E+00	--
Ethylbenzene	µg/L	2.90E+01	5.82E+01	--
	lbs/day	4.84E-01	9.70E-01	--
Fluoranthene	µg/L	3.00E+02	6.02E+02	--
	lbs/day	5.00E+00	1.00E+01	--
Hexachlorocyclopentadiene	µg/L	3.49E+00	7.00E+00	--
	lbs/day	5.82E-02	1.17E-01	--
Nitrate +Nitrite (sum as nitrogen)	µg/L	1.00E+01	2.01E+01	--
	lbs/day	1.67E-01	3.35E-01	--
Nitrobenzene	µg/L	1.70E+01	3.41E+01	--
	lbs/day	2.84E-01	5.69E-01	--
Perchlorate	µg/L	6.00E-03	1.21E-02	--
	lbs/day	1.00E-04	2.01E-04	--
Thallium, Total Recoverable	µg/L	1.70E+00	3.41E+00	--
	lbs/day	2.84E-02	5.69E-02	--
Toluene	µg/L	1.50E+02	3.01E+02	--
	lbs/day	2.50E+00	5.02E+00	--
Tributyltin	µg/L	5.16E-02	1.03E-01	--
	lbs/day	8.60E-04	1.73E-03	--
1,1,1-trichloroethane	µg/L	2.00E+02	4.01E+02	--
	lbs/day	3.34E+00	6.69E+00	--
Acrylonitrile	µg/L	5.90E-02	1.18E-01	--
	lbs/day	9.84E-04	1.97E-03	--
Aldrin	µg/L	1.30E-04	2.61E-04	--
	lbs/day	2.17E-06	4.35E-06	--
Benzene	µg/L	1.00E+00	2.01E+00	--
	lbs/day	1.67E-02	3.35E-02	--
Benzidine	µg/L	1.20E-04	2.41E-04	--
	lbs/day	2.00E-06	4.02E-06	--

Parameter	Performance Goals[2]			
	Units	Average Monthly	Maximum Daily	Instantaneous Maximum[3]
Beryllium	µg/L	4.00E+00	8.02E+00	--
	lbs/day	6.67E-02	1.34E-01	--
Bis(2-chloroethyl) Ether	µg/L	3.10E-02	6.22E-02	--
	lbs/day	5.17E-04	1.04E-03	--
Carbon Tetrachloride	µg/L	2.50E-01	5.02E-01	--
	lbs/day	4.17E-03	8.37E-03	--
Chlordane	µg/L	5.70E-04	1.14E-03	--
	lbs/day	9.51E-06	1.91E-05	--
4,4'-DDT	µg/L	5.90E-04	1.18E-03	--
	lbs/day	9.84E-06	1.97E-05	--
4,4'-DDE	µg/L	5.90E-04	1.18E-03	--
	lbs/day	9.84E-06	1.97E-05	--
4,4'-DDD	µg/L	8.30E-04	1.67E-03	--
	lbs/day	1.38E-05	2.78E-05	--
1,4-dichlorobenzene	µg/L	5.00E+00	1.00E+01	--
	lbs/day	8.34E-02	1.67E-01	--
3,3'-dichlorobenzidine	µg/L	4.00E-02	8.02E-02	--
	lbs/day	6.67E-04	1.34E-03	--
1,2-dichloroethane	µg/L	3.80E-01	7.62E-01	--
	lbs/day	6.34E-03	1.27E-02	--
1,1-dichloroethylene	µg/L	5.70E-02	1.14E-01	--
	lbs/day	9.51E-04	1.91E-03	--
Methyl Chloride (Chloromethane)	µg/L	5.48E+03	1.10E+04	--
	lbs/day	9.15E+01	1.83E+02	--
Methylene Chloride (Dichloromethane)	µg/L	4.70E+00	9.43E+00	--
	lbs/day	7.84E-02	1.57E-01	--
1,2-dichloropropane	µg/L	5.20E-01	1.04E+00	--
	lbs/day	8.67E-03	1.74E-02	--
1,3-dichloropropene	µg/L	5.00E-01	1.00E+00	--
	lbs/day	8.34E-03	1.67E-02	--
Dieldrin	µg/L	1.40E-04	2.81E-04	--
	lbs/day	2.34E-06	4.68E-06	--
2,4-dinitrotoluene	µg/L	7.00E+0.1	1.40E+02	--
	lbs/day	1.17E+00	2.34E+00	--
1,2-diphenylhydrazine	µg/L	4.00E-02	8.02E-02	--
	lbs/day	6.67E-04	1.34E-03	--
Heptachlor	µg/L	2.10E-04	4.21E-04	--
	lbs/day	3.50E-06	7.03E-06	--
Heptachlor Epoxide	µg/L	1.00E-04	2.01E-04	--
	lbs/day	1.67E-06	3.35E-06	--
Hexachlorobenzene	µg/L	7.50E-04	1.50E-03	--
	lbs/day	1.25E-05	2.51E-05	--
Hexachlorobutadiene	µg/L	4.40E-01	8.83E-01	--
	lbs/day	7.34E-03	1.47E-02	--
Hexachloroethane	µg/L	1.90E+00	3.81E+00	--
	lbs/day	3.17E-02	6.36E-02	--
Isophorone	µg/L	8.40E+00	1.69E+01	--
	lbs/day	1.40E-01	2.81E-01	--
N-nitrosodimethylamine	µg/L	6.90E-04	1.38E-03	--
	lbs/day	1.15E-05	2.31E-05	--

Parameter	Performance Goals[2]			
	Units	Average Monthly	Maximum Daily	Instantaneous Maximum[3]
N-nitrosodi-N-propylamine	µg/L	5.00E-03	1.00E-02	--
	lbs/day	8.34E-05	1.67E-04	--
N-nitrosodiphenylamine	µg/L	5.00E+00	1.00E+01	--
	lbs/day	8.34E-02	1.67E-01	--
PCBs[6]	µg/L	1.70E-04	3.41E-04	--
	lbs/day	2.84E-06	5.69E-06	--
2,3,7,8-TCDD	µg/L	1.08E-10	2.17E-10	--
	lbs/day	1.08E-12	2.17E-10	--
TCDD equivalents[7]	µg/L	1.30E-08	2.61E-08	--
	lbs/day	2.17E-10	4.35E-10	--
1,1,2,2-tetrachloroethane	µg/L	1.70E-01	3.41E-01	--
	lbs/day	2.84E-03	5.69E-03	--
Tetrachloroethylene	µg/L	8.00E-01	1.60E+00	--
	lbs/day	1.33E-02	2.68E-02	--
Toxaphene	µg/L	1.64E-04	3.29E-04	--
	lbs/day	2.73E-06	5.48E-06	--
Trichloroethylene	µg/L	2.70E+00	5.42E+00	--
	lbs/day	4.50E-02	9.04E-02	--
1,1,2-trichloroethane	µg/L	6.00E-01	1.20E+00	--
	lbs/day	1.00E-02	2.01E-02	--
2,4,6-trichlorophenol	µg/L	2.10E+00	4.21E+00	--
	lbs/day	3.50E-02	7.02E-02	--
Vinyl Chloride	µg/L	5.00E-01	1.00E+00	--
	lbs/day	8.34E-03	1.67E-02	--

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

2 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.

3 Not to be exceeded more than 10 percent of the time during any one year period.

4 Includes Radium 226 but excludes Radon and Uranium.

5 Dischargers may, at their option, meet this limitation (or apply this performance goal) as a total chromium limitation (or performance goal).

6 If a Discharger can demonstrate to the satisfaction of the San Diego Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by (or performance goals may be evaluated with) the combined measurement of free cyanide, simple alkali metals cyanides, and weakly complexed organometalic 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 40 CFR part 136, as revised May 14, 1999.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

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 WQOs in the Basin Plan. The Basin Plan states "WQOs must protect the most sensitive of the beneficial uses which have been designated for a water body." The Basin Plan includes numeric and narrative WQOs for various beneficial uses and water bodies.

Receiving water limitations of this Order are derived from the WQOs for Inland Surface Waters established by the Basin Plan and from the Bacteria TMDL. Consistent with anti-backsliding requirements, numeric and narrative receiving water limitations for dissolved oxygen, pH, nutrients, color, floating material, oil and grease, radioactivity, suspended sediments, suspended and settleable solids, taste and odors, temperature, toxic substances, and turbidity are carried over from Order No. R9-2009-0037. The Bacteria TMDL has established WLAs for total coliform, fecal coliform, escherichia coli, and enterococci for the Facility. To be consistent with the Bacteria TMDL, receiving water limitations for fecal coliform and escherichia coli have been modified from Order No. R9-2009-0037 and receiving water limitations for total coliform and enterococci have been established in this Order.

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 USEPA, State Water Board, or the San Diego Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

a. Spill Prevention and Response Plans

The CWA largely prohibits any discharge of pollutants from point sources to waters of the U.S. except as authorized under an NPDES permit. In general, any point source discharge of sewage effluent to waters of the U.S. must comply with technology-based, secondary treatment standards, at a minimum, and any more stringent requirements necessary to meet applicable water quality standards and other requirements. The unpermitted discharge of wastewater to waters of the U.S. is illegal under the CWA. Further, the Basin Plan prohibits discharges of waste to land, except as authorized by WDRs or the terms described in Water Code section 13264. The Basin Plan also prohibits the unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system.

Further, Discharge Prohibition III.B of the Order prohibits the discharges of wastes in a manner or to a location which have not been specifically authorized by this Order and for which valid waste discharge requirements are not in force.

Sanitary collection and treatment systems experience periodic failures resulting in discharges that may affect waters of the state. There are many factors which may affect the likelihood of a spill. To ensure appropriate funding, management, and planning to reduce the likelihood of a spill, and increase the spill preparedness, this Order requires the Discharger to maintain and implement Spill Prevention and Response Plans.

b. Spill Reporting Requirements

To determine compliance with Discharge Prohibition III.B and provide appropriate notification to the general public for the protection of public health, spill reporting requirements have been established in section VI.C.2.b of this Order.

c. Watercourse Monitoring and Management Plan (WMMP)

As a condition of demonstrating alternative conformance to Basin Plan objectives for nitrogen and phosphorus, the Discharger is required to provide updated information for the WMMP. Specific requirements of the WMMP are provided in the Basin Plan.

d. Date Collection for the WMMP Update

A condition of the alternative conformance determination is the development and implementation of a watercourse monitoring and management plan. The purpose of the watercourse monitoring and management plan is to collect receiving water data necessary to measure any impacts to beneficial uses. The Basin Plan specifies several parameters that the program shall target for data collection. These requirements shall continue to be incorporated into the Discharger's watercourse monitoring and management plan.

e. Treatment Optimization Update

The Discharger's Treatment Optimization Study[7] identifies methods that the Discharger can take to reduce effluent concentrations of nitrogen and phosphorus to levels equal to the Basin Plan WQOs of 1.0 mg/L and 0.1 mg/L, respectively. These efforts shall be documented in a Treatment Optimization Update report to be submitted to the San Diego Water Board.

f. Whole Effluent Toxicity

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 acute and chronic toxicity effluent limitations and monitoring requirements.

This Order and MRP require the Discharger to conduct additional toxicity testing for exceedances of the chronic toxicity effluent limitations. If the additional tests demonstrate toxicity, the Discharger is required to submit a Toxicity Reduction Evaluation (TRE) workplan 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 Workplan if the results of toxicity testing exceed the effluent limitation for toxicity.

3. Best Management Practices and Pollution Prevention

In algaecide or aquatic herbicide applications, it is reasonable to conclude that some residual algaecides or aquatic herbicides will remain in the waters. These residual algaecides or aquatic herbicides may cause toxicity to aquatic life. However, information regarding the specific amount of algaecide or aquatic herbicide residues in the waters as a result of direct applications for weed control is not adequate to develop limitations for these algaecides and aquatic herbicides. Therefore, this Order contains monitoring triggers and/or monitoring requirements for these algaecides or aquatic herbicides. The monitoring triggers and monitoring data will be used to assess whether the discharges of these algaecide or aquatic herbicide residues have the reasonable potential to cause or contribute to an excursion of a water quality standard, including numeric and narrative objectives within a standard, in Sycamore Creek, a tributary of the San Diego River.

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 pollutant minimization program is to reduce all potential sources of a priority pollutant through pollutant minimization strategies to maintain the effluent concentration at or below WQBELs.

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

5. Special Provisions for Municipal Facilities (POTWs Only)

a. **Biosolids.** The use and disposal of biosolids is regulated under federal and state laws and regulations, including permitting requirements and technical standards included in 40 CFR part 503. The Discharger is required to comply with the standards and time schedules contained in 40 CFR part 503.

Title 27, division 2, subdivision 1, commencing with section 20005 of the California Code of Regulations establishes approved methods for the disposal of collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes. Requirements to ensure the Discharger disposes of solids in compliance with state and federal regulations have been included in this Order.

Since all sewage sludge/ biosolids are returned to the sewer system for transport to the City of San Diego Point Loma Wastewater Treatment Plant, the Discharger is not required to monitor solids generated at the Facility pursuant to 40 CFR part 503. The requirements for the annual biosolids monitoring report have not been carried over from Order No. R9-2009-0037.

b. **Collection System.** The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order 2006-0003-DWQ (General Order) on May 2, 2006. The Monitoring and Reporting Requirements for the General Order were amended by Water Quality Order No. WQ 2008-0002-EXEC on February 20, 2008 and by Water Quality Order No. 2013-0058-EXEC on

August 6, 2013 (effective September 9, 2013). The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

6. Other Special Provisions – Not Applicable

7. 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 MRP, Attachment E of this Order, 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 for this facility.

A. Core Monitoring Requirements

1. Influent Monitoring

   Influent monitoring is required to assess the performance of treatment facilities, and to evaluate compliance with TBELs for percent removal of BOD_5 and TSS. Influent monitoring requirements have been carried over from Order No. R9-2009-0037.

2. Effluent Monitoring

   Effluent monitoring is required to determine compliance with the permit conditions and to identify operational problems and to improve plant performance. Effluent monitoring also provides information on wastewater characteristics and flows for use in interpreting water quality and biological data. Many effluent monitoring requirements at Monitoring Locations EFF-001A and EFF-001B have been carried over from Order No. R9-2009-0037 with the following exceptions:

   a. The daily effluent monitoring for enterococcus was added to Monitoring Location EFF-001A to ensure compliance with the new enterococcus effluent limitations.

   b. The effluent monitoring for enterococcus (weekly), total dissolved solids (monthly), and dissolved oxygen (weekly) was added to Monitoring Locations EFF-001B to ensure the discharge from the Santee Lakes are not causing or contributing to exceedances in the San Diego River, which is on the 303(d) list for enterococcus, total dissolved solids, and dissolved oxygen.

   c. The quarterly effluent monitoring for chronic toxicity was added to Monitoring Location EFF-001A to ensure compliance with the toxicity effluent limitations at Monitoring Location EFF-001A. The quarterly effluent monitoring for chronic toxicity is still required at Monitoring Location EFF-001B to ensure the application of pesticides in the ponds/lakes is not causing or contributing to exceedances in the San Diego River, which is on the 303(d) list for toxicity and because chronic toxicity is a more stringent than acute toxicity. The quarterly effluent monitoring for acute toxicity being removed at Monitoring Location EFF-001B since chronic toxicity is more stringent than acute toxicity.

   d. The effluent monitoring for percent sodium, bromoform, dibromochloromethane, chloroform, and dichlorobromomethane at Monitoring Location EFF-001A has been

reduced from once per month to once per quarter. Since there was no reasonable potential to cause or contribute to an exceedance of WQOs, these parameters did not require an effluent limitation and monitoring frequency was reduced.

e. The daily effluent monitoring for total chlorine residual was added to Monitoring Location EFF-001A to ensure compliance with the total chlorine residual effluent limitations at Monitoring Location EFF-001A.

f. The effluent monitoring for bromoform, dibromochloromethane, chloroform, dichlorobromomethane, total chlorine residual and total trihalomethantes at Monitoring Location EFF-001B is no longer required since the effluent limitations for these parameters are at EFF-001A.

g. The effluent monitoring for total recoverable aluminum, chloride, total recoverable iron, and total recoverable manganese at Monitoring Location EFF-001A was increased from quarterly to monthly, since there was reasonable potential to cause or contribute to an exceedance of WQOs for these parameters, effluent limitations were required for these parameters and monitoring was increased.

h. The effluent monitoring for boron, fluoride, methylene blue active substances (MBAS), sulfate, and the remaining priority pollutants at Monitoring Location EFF-001A was increased from annually to twice per year, Although there was no reasonable potential to cause or contribute to an exceedance of WQOs for these parameters, a minimum of ten data points is needed to conduct the reasonable potential analysis over the course of a five-year permit.

i. The monthly effluent monitoring for bis (2-ethylhexyl) phthalate and zinc was added to Monitoring Location EFF-001A to ensure compliance with the bis (2-ethylhexyl) phthalate and zinc effluent limitations at Monitoring Location EFF-001A.

j. The effluent monitoring for MTBE at Monitoring Location EFF-001A has been reduced from monthly to quarterly. Since there was no reasonable potential to cause or contribute to an exceedance of WQOs, this parameter did not require an effluent limitation and monitoring frequency was reduced.

k. The twice per year effluent monitoring for barium at Monitoring Location EFF-001A has been added. Although there was no reasonable potential to cause or contribute to an exceedance of WQOs for this parameter, a minimum of ten data points is needed to conduct the reasonable potential analysis over the course of a five-year permit.

l. Quarterly monitoring for temperature, pH, turbidity, electric conductivity, 2,4-D, acrolein, dissolved copper, diquat, endothall, fluridone, glyphosate, imazamox, imazapyr, penoxsulam, triclopyr, nonylphenol, hardness (if copper is monitored), and dissolved oxygen was added to Monitoring Location EFF-001B to comply with Discharge Prohibitions I, “The discharge of residual algaecides and aquatic herbicides to Sycamore Creek, a tributary of the San Diego River is prohibited.”

m. Monthly effluent monitoring for ammonia was added to ensure protection of the public health and aquatic life in the Santee Lakes.

3. Whole Effluent Toxicity Testing Requirements

As discussed in section IV.C.6 of this Fact Sheet, chronic toxicity limitations have been established in this Order based on USEPA's TST method and percent effect. Monitoring has been established to evaluate compliance with these requirements.

An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects until it gets to the higher level. For this permit, chronic toxicity in the discharge is evaluated using USEPA's 2010 Test of Significant Toxicity (TST) hypothesis testing approach, and is expressed as "Pass" or "Fail" and "Percent Effect" for the median monthly summary results and "Pass" or :"Fail" and "Percent Effect" for each individual chronic toxicity result. The chronic toxicity effluent limitations protect the narrative water quality objective in the Basin Plan.

This Order requires the Discharger to conduct additional toxicity testing for exceedances of the toxicity effluent limitations. If the additional tests demonstrate toxicity, the Discharger is required to submit a TRE workplan 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 TRE/TIE process in accordance with the submitted Workplan if the results of toxicity testing exceed the effluent limitations for toxicity. The rationale for WET testing has been discussed extensively in section IV.C.5. of this fact sheet.

B. Receiving Water Monitoring

1. Surface Water

Order No. R9-2009-0037 established receiving water monitoring to evaluate compliance with applicable WQOs and to evaluate reasonable potential.

The Discharger requested receiving water monitoring be eliminated for periods when the Discharger is not discharging to the receiving water. Because the intent of receiving water monitoring is to evaluate the impact of the discharge on the receiving water and determine compliance with applicable WQOs within the receiving water, the Discharger's request has been implemented and receiving water monitoring is only required after or during periods of discharges from Discharge Point No. 001 as monitored at Monitoring Location EFF-001B.

Order No. R9-2009-0037 established quarterly receiving water monitoring for acute and chronic toxicity. Effluent monitoring for whole effluent toxicity has been established and does not consider dilution. As such, whole effluent toxicity receiving water data does not provide significant value in evaluating the impact of the effluent on the receiving water, and thus has been eliminated.

Accelerated monitoring for bacteria has been established at Monitoring Locations RSW-001 and RSW-001a if exceedances are observed at Monitoring Location RSW-001a. This requirement is to provide sufficient data to evaluate if the Discharger is contributing to bacteria exceedances within the receiving water [which is 303(d) listed for fecal coliform and enterococcus and for which the Discharger has WLAs for bacteria]. Further, monitoring requirements at Monitoring Locations RSW-001 through RSW-006 for

enterococcus have been added so that compliance with applicable WLAs can be evaluated.

Monitoring surveys have been carried over from Order No. R9-2009-0037 to provide more details on the receiving water conditions.

2. Groundwater – not applicable

3. Biological Monitoring at Monitoring Location RSW-001a

a. **Benthic Monitoring**

Benthic monitoring requirements at Monitoring Location RSW-001a have been carried over from Order No. R9-2009-0037 to evaluate the impact of the discharge on the benthic community within the influence of Discharge Point No. 001.

b. **Periphyton**

Monitoring requirements for periphyton at Monitoring Location RSW-001a have been carried over from Order No. R9-2009-0037 to continue monitoring for potential biostimulatory effects downstream of the discharge.

c. **Fish Tissue Monitoring**

Fish tissue monitoring requirements have been carried over from Order No. R9-2009-0037. Fish tissue monitoring is necessary to monitor potential human health effects from the discharge. Further, fish tissue sampling, combined with benthic monitoring provides a reliable indication of the health of the receiving water and the impacts of the discharge.

C. Regional Monitoring

The Discharger's effluent has the potential to impact the receiving water, and downstream receiving waters to which Sycamore Creek is a tributary. The Discharger is required to participate in regional monitoring activities as required by the San Diego Water Board. The intent of regional monitoring activities is to maximize efforts of all monitoring partners using a more cost effective monitoring design and to best utilize the pooled resources of the region.

D. Special Studies Requirements

1. Downstream Bacteria Evaluation and Action Plan

As discussed in sections III.D and IV.C.2.b of this Fact Sheet, the Lower San Diego River is 303(d) listed for total coliform, fecal coliform, and enterococcus and WLA for bacteria are applicable to the Discharger. This requirement specifies that the Discharger minimize the contribution of bacteria to the receiving water if effluent data and receiving water indicate that Facility effluent is causing or contributing to an exceedance of WQOs within the receiving water immediately downstream of Discharge Point No. 001.

VIII. PUBLIC PARTICIPATION

The San Diego Water Board 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 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 San Diego Union Tribune newspaper and the San Diego Water Board's website.

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the 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 Monday, April 13, 2015.

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:	May 13, 2005
Time:	9:00 AM
Location:	Regional Water Quality Control Board Regional 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 California Code of Regulations, title 23, sections 2050. The State Water Board must receive the petition by 5:00 p.m. 30 days after the San Diego Water Board's action 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 at the following website: http://www.waterboards.ca.gov/public_notices/petitions/water_quality.

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 Joann Lim at 619-521-3362 or Joann.Lim@waterboards.ca.gov or at 2375 Northside Drive, Suite 100, San Diego, CA 92108.

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 Water Code section 13050, is prohibited.

2. The discharge of waste to land, except as authorized by 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 U.S. 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 its 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 federal regulations, 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 (MLs) 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 (AMDI Color Units)	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

[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 two ng/l (or 0.002 ug/l).

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color (AMDI Color Units)	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
12.	Thallium	279.2					10	2	10	1	5			1000
13.	Zinc	200 or 289					20		20	1	10			
14.	Cyanide	SM 4500 CN^- C or I				5								
15.	Asbestos (only required for dischargers 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										

[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 (AMDl Color Units)	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
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										
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										

[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 (AMDI Color Units)	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
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										
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											

PERMITTEE NAME
FACILITY NAME
ORDER NO. XX-XXXX-XXX
NPDES NO. CAXXXXXXX

ATTACHMENT I – SUMMARY OF CTR/NTR PRIORITY POLLUTANTS

Is it a RB2 facility (Y/N)? N
Hardness (mg/L CaCO3) 31
pH (s.u.) 6.02

Note: DO NOT enter any value for the column that is NOT applicable
Note: Numbers in blue have formula in the cells - calculates values automatically
Note: Criteria for metals are expressed as total recoverable metal

# in CTR	PRIORITY POLLUTANTS	*Lowest (most stringent) Criteria*	Most Stringent Criteria			Basin Plan Criteria				CTR Water Quality Criteria (ug/L)						Factors for Metals Freshwater Criteria Calculation				Conversion Factor (CF)			
						Title 22 MCLs				Freshwater		Saltwater		Human Health for consumption of:									
			Human Health Criterion	Lowest Chronic Criterion	Lowest Acute Criterion	4-day	1-hr	24-hr	Primary MCLs	CMC (acute)	CCC (chronic)	CMC (acute)	CCC (chronic)	Water & organisms	Organisms only	ma	ba	mc	bc	freshwater acute criteria (MDEL)	freshwater chronic criteria (AMEL)	saltwater acute criteria (MDEL)	saltwater chronic criteria (AMEL)
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L								
1	Antimony	6	4,300						6						4,300								
2	Arsenic	10		150	10				10	340	150									1	1	1	1
3	Beryllium	4			4.0				4														
4	Cadmium	1.0		1.0	1.2				5	1.2	1.0					1.128	-3.6867	0.7852	-2.715	0.993	0.958	0.994	0.994
5a	Chromium (III)	79		79	665					665	79					0.8190	3.6880	0.8190	1.5610	0.316	0.86		
5b	Chromium (VI)	11		11	16					16	11									0.982	0.962	0.993	0.993
	Chromium (Total)	50			50				50														
6	Copper	3.4		3.4	5					5	3.4					0.9422	-1.7000	0.8545	-1.7020	0.96	0.96	0.83	0.83
7	Lead	0.7		0.7	18					18	0.7					1.2730	-1.4600	1.2730	-4.7050	0.962	0.962	0.951	0.951
8	Mercury	0.051	0.05		2.0				2						0.051								
9	Nickel	19	4,600	19	100				100	174	19				4,600	0.8460	2.2550	0.8460	0.0584	0.998	0.997	0.99	0.99
10	Selenium	5		5.0	20				50	20	5											0.998	0.88
11	Silver	0.5			0.5				50	0.5						1.7200	-6.5200			0.85		0.85	
12	Thallium	2	6.30000		2.0				2						6.3								
13	Zinc	44		44	44					44	44					0.8473	0.8840	0.8473	0.8840	0.978	0.986	0.946	0.946
14	Cyanide	5.2	220,000	5.2	22				150	22	5.2				220,000								
15	Asbestos	7000000			7000000				7000000														
16	2,3,7,8-TCDD	0.000000014	0.000000014		0.000000030				3.0E-08						0.000000014								
17	Acrolein	780	780												780								
18	Acrylonitrile	0.66	0.66000												0.66								
19	Benzene	1	71		1.0				1						71								
20	Bromoform	360	360												360								
21	Carbon Tetrachloride	0.5	4.40000		0.50				0.5						4.4								
22	Chlorobenzene	70	21,000		70				70						21,000								
23	Chlorodibromomethane	34													34								

Version: 2005.1

PERMITTEE NAME
FACILITY NAME
ORDER NO. XX-XXXX-XXX
NPDES NO. CAXXXXXXX

			34.000																				
24	Chloroethane	No Criteria																					
25	2-Chloroethylvinyl Ether	No Criteria																					
26	Chloroform	No Criteria																					
27	Dichlorobromomethane	46	46.00													46							
28	1,1-Dichloroethane	5			5.0				5														
29	1,2-Dichloroethane	0.5	99		0.50				0.5							99							
30	1,1-Dichloroethylene	3.2	3.20000		6.0				6							3.2							
31	1,2-Dichloropropane	5	39		5.0				5							39							
32	1,3-Dichloropropylene	0.5	1,700		0.50				0.5							1,700							
33	Ethylbenzene	300	29,000		300				300							29,000							
34	Methyl Bromide	4000	4,000													4,000							
35	Methyl Chloride	No Criteria																					
36	Methylene Chloride (Dichloromethane)	5	1,600		5.0				5							1,600							
37	1,1,2,2-Tetrachloroethane	1	11		1.0				1							11							
38	Tetrachloroethylene	5	8.85000		5.0				5							8.85							
39	Toluene	150	200,000		150				150							200,000							
40	1,2-Trans-Dichloroethylene	10	140,000		10				10							140,000							
41	1,1,1-Trichloroethane	200			200				200														
42	1,1,2-Trichloroethane	5	42		5.0				5							42							
43	Trichloroethylene	5	81		5.0				5							81							
44	Vinyl Chloride	1	525		0.50				0.5							525							
45	Chlorophenol	400	400													400							
46	2,4-Dichlorophenol	790	790													790							
47	2,4-Dimethylphenol	2300	2,300													2,300							
48	2-Methyl-4,6-Dinitrophenol	765	765													765							
49	2,4-Dinitrophenol	14000	14,000													14,000							
50	2-Nitrophenol	No Criteria																					
51	4-Nitrophenol	No Criteria																					
52	3-Methyl-4-Chlorophenol	No Criteria																					
53	Pentachlorophenol	1	8.20000	2	1.0				1	3	2					8.2							
54	Phenol	4600000	4,600,000													4,600,000							
55	2,4,6-Trichlorophenol	6.5	6.50000													6.5							
56	Acenaphthene	2700	2,700													2,700							
57	Acenephthylene	No Criteria																					
58	Anthracene	110000	110,000													110,000							
59	Benzidine	0.00054	0.00054													0.00054							
60	Benzo(a)Anthracene	0.049	0.04900													0.049							
61	Benzo(a)Pyrene	0.049	0.04900		0.20				0.2							0.049							
62	Benzo(b)Fluoranthene	0.049	0.04900													0.049							

Version: 2005-1

PERMITTEE NAME
FACILITY NAME
ORDER NO. XX-XXXX-XXX
NPDES NO. CAXXXXXXX

63	Benzo(ghi)Perylene	No Criteria																				
64	Benzo(k)Fluoranthene	0.049	0.04900												0.049							
65	Bis(2-Chloroethoxy)Methane	No Criteria																				
66	Bis(2-Chloroethyl)Ether	1.4	1.40000												1.4							
67	Bis(2-Chloroisopropyl)Ether	170000	170,000												170,000							
68	Bis(2-Ethylhexyl)Phthalate	5.9	5.90000												5.9							
69	4-Bromophenyl Phenyl Ether	No Criteria																				
70	Butylbenzyl Phthalate	5200	5,200												5,200							
71	2-Chloronaphthalene	4300	4,300												4,300							
72	4-Chlorophenyl Phenyl Ether	No Criteria																				
73	Chrysene	0.049	0.04900												0.049							
74	Dibenzo(a,h)Anthracene	0.049	0.04900												0.049							
75	1,2-Dichlorobenzene	600	17,000		600				600						17,000							
76	1,3-Dichlorobenzene	2600	2,600												2,600							
77	1,4-Dichlorobenzene	5	2,600		5.0				5						2,600							
78	3,3'-Dichlorobenzidine	0.077	0.07700												0.077							
79	Diethyl Phthalate	120000	120,000												120,000							
80	Dimethyl Phthalate	2900000	2,900,000												2,900,000							
81	Di-n-Butyl Phthalate	12000	12,000												12,000							
82	2,4-Dinitrotoluene	9.1	9.10000												9.1							
83	2,6-Dinitrotoluene	No Criteria																				
84	Di-n-Octyl Phthalate	No Criteria																				
85	1,2-Diphenylhydrazine	0.54	0.54000												0.54							
86	Fluoranthene	370	370												370							
87	Fluorene	14000	14,000												14,000							
88	Hexachlorobenzene	0.00077	0.00077		1.0				1						0.00077							
89	Hexachlorobutadiene	50	50												50							
90	Hexachlorocyclopentadiene	50	17,000		50				50						17,000							
91	Hexachloroethane	8.9	8.90000												8.9							
92	Indeno(1,2,3-cd) Pyrene	0.049	0.04900												0.049							
93	Isophorone	600	600												600							
94	Naphthalene	No Criteria																				
95	Nitrobenzene	1900	1,900												1,900							
96	N-Nitrosodimethylamine	8.1	8.10000												8.1							
97	N-Nitrosodi-n-Propylamine	1.4	1.40000												1.4							
98	N-Nitrosodiphenylamine	16	16												16							
99	Phenanthrene	No Criteria																				
100	Pyrene	11000	11,000												11,000							
101	1,2,4-Trichlorobenzene	5			5.00				5													
102	Aldrin	0.00014	0.00014		3.00					3					0.00014							
103	alpha-BHC	0.013	0.01300												0.013							

Version: 2005-1

PERMITTEE NAME
FACILITY NAME
ORDER NO. XX-XXX-XXX
NPDES NO. CAXXXXXXX

104	beta-BHC	0.046	0.04600												0.046								
105	gamma-BHC (Lindane)	0.063	0.06300		0.20				0.2	0.95					0.063								
106	delta-BHC	No Criteria																					
107	Chlordane	0.00059	0.00059	0.00430	0.10				0.1	2.4	0.0043				0.00059								
108	4,4-DDT	0.00059	0.00059	0.00100	1.10					1.1	0.001				0.00059								
109	4,4-DDE	0.00059	0.00059												0.00059								
110	4,4-DDD	0.00084	0.00084												0.00084								
111	Dieldrin	0.00014	0.00014	0.05600	0.24					0.24	0.056				0.00014								
112	alpha-Endosulfan	0.056	240	0.05600	0.22					0.22	0.056				240								
113	beta-Endosulfan	0.056	240	0.05600	0.22					0.22	0.056				240								
114	Endosulfan Sulfate	240	240												240								
115	Endrin	0.036	0.81000	0.03600	0.09				0.2	0.086	0.036				0.81								
116	Endrin Aldehyde	0.81	0.81000												0.81								
117	Heptachlor	0.00021	0.00021	0.00380	0.01				0.01	0.52	0.0038				0.00021								
118	Heptchlor Epoxide	0.00011	0.00011	0.00380	0.01				0.01	0.52	0.0038				0.00011								
119-125	PCBs sum	0.00017	0.00017	0.01400	0.50				0.5		0.014				0.00017								
126	Toxaphene	0.0002	0.00075	0.00020	0.73				3	0.73	0.0002				0.00075								

Version: 2005-1

ATTACHMENT J – RPA FOR CTR/NTR PRIORITY POLLUTANTS (DISCHARGE POINT NO. 001)

Beginning			Step 2	Step 3					Step 4		Step 2	Step 3		Step 4.	Step 5.	Step 6.	Step 7 & 8.		
	Constituent name	C (µg/L) Lowest (most stringent) Criteria [a] (Enter "No Criteria" for no criteria)	Effluent Data Available?	Are all data points non-detects?	Minimum MDL (ug/L) if all data ND.	Enter the pollutant effluent detected max conc (ug/L)	If all data points are ND and MinDL>C, interim monitoring is required	Maximum Pollutant Concentration (MEC) (ug/L) (MEC= deteted max value; if all ND & MDL<C then MEC = MDL)	MEC vs. C Y if If MEC >= C, effluent limitation is required; 2. If MEC<C, go to Step 5		Background Data Available?	Are all background data points non-detects?	If all background data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant background detected max conc (ug/L)	If all B is ND, is MDL>C? (If Y, Go To Step 7)	B vs. C If B>C, effluent limitation is required	7) Review other information in the SIP page 4. Y if other information indicates limits are required. If information is unavailable or insufficient: 8) the RWQCB shall establish interim monitoring requirements.	RPA Result	Reason
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Antimony	6	y	y	10		MDL > C, Interim Monitor, Go To Step 5				y	Y	10		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
2	Arsenic	10	y	y	10		MDL<=C, MDL=MEC				y	Y	10		N	No detected value of B, Step 7			
3	Beryllium	4	y	y	10		MDL > C, Interim Monitor, Go To Step 5				y	Y	10		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
4	Cadmium	1.0	y	y	50		MDL > C, Interim Monitor, Go To Step 5				y	Y	10		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
5a	Chromium (III)	79	y	y	50		MDL<=C, MDL=MEC	50	MEC<C, go to Step 5		y	Y	50		N	No detected value of B, Step 7			
5b	Chromium (VI)	11	y	y	50		MDL > C, Interim Monitor, Go To Step 5				y	Y	50		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
6	Copper	3.4	y	y	50		MDL > C, Interim Monitor, Go To Step 5				y	Y	50		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
7	Lead	0.7	y	y	10		MDL > C, Interim Monitor, Go To Step 5				y	Y	50		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
8	Mercury	0.051	y	y	50		MDL > C, Interim Monitor, Go To Step 5				y	Y	0.01		N	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
9	Nickel	19	y	y	50		MDL > C, Interim Monitor, Go To Step 5				y	Y	50		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
10	Selenium	5	y	y	5.2		MDL > C, Interim Monitor, Go To Step 5				y	Y	5.2		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
11	Silver	0.5	y	y	200		MDL > C, Interim Monitor, Go To Step 5				y	Y	100		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
12	Thallium	2	y	y	50		MDL > C, Interim Monitor, Go To Step 5				y	Y	50		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
13	**Zinc**	44	y	y	20		MDL<=C, MDL=MEC	20	MEC<C, go to Step 5		y			111		Y		Y	**B > C [111.000 ug/l vs 44.417ug/l]**
14	Cyanide	5.2	y	y	100		MDL > C, Interim Monitor, Go To Step 5				y	Y	100		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
15	Asbestos	7000000	y	y	0.02		MDL<=C, MDL=MEC	0.02	MEC<C, go to Step 5		y	Y	0.02		N	No detected value of B, Step 7			
16	2,3,7,8-TCDD	1.4E-08	y	y	1.00E-06		MDL > C, Interim Monitor, Go To Step 5				y	Y	1000000		Y	No detected value of B, Step 7			
17	Acrolein	780	y	y	15.4		MDL<=C, MDL=MEC	15.4	MEC<C, go		y	Y	15.4		N	No detected value			

PERMIT NUMBER CAXXXXXXX
FACILITY NO. CA0107492-XXXX-XXX
ORDER NO. R9-2015-0002
NPDES NO. CA0107492

Version: 2005-1

PERMITTEE NAME
FACILITY NAME
ORDER NO XX-XXXX-XXX
NPDES NO. CAXXXXXXX

									to Step 5						of B, Step 7			
18	Acrylonitrile	0.66	y	y	0.66		MDL<=C, MDL=MEC				y		0.66		N	No detected value of B, Step 7			
19	Benzene	1	y	y	1		MDL<=C, MDL=MEC				y		1		N	No detected value of B, Step 7			
20	Bromoform	360	y	n		1.38		1.38	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
21	Carbon Tetrachloride	0.5	y	y	2		MDL > C, Interim Monitor, Go To Step 5				y	Y	2		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
22	Chlorobenzene	70	y	y	1		MDL<=C, MDL=MEC	1	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
23	Chlorodibromomethane	34	y	n		10.7		10.7	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
24	Chloroethane	No Criteria	y	y	2		No Criteria	2	No Criteria		y	Y	2		N	No Criteria	No Criteria		**Uo - No Criteria**
25	2-Chloroethylvinyl ether	No Criteria	y	y	2		No Criteria	2	No Criteria		y	Y	2		N	No Criteria	No Criteria		**Uo - No Criteria**
26	Chloroform	No Criteria	y	n		42	No Criteria	42	No Criteria		y	Y	1		N	No Criteria	No Criteria		**Uo - No Criteria**
27	Dichlorobromomethane	46	y	n		23.8		23.8	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
28	1,1-Dichloroethane	5	y	y	1		MDL<=C, MDL=MEC	1	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
29	1,2-Dichloroethane	0.5	y	y	1		MDL > C, Interim Monitor, Go To Step 5				y	Y	1		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
30	1,1-Dichloroethylene	3.2	y	y	1		MDL<=C, MDL=MEC	1	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
31	1,2-Dichloropropane	5	y	y	1		MDL<=C, MDL=MEC	1	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
32	1,3-Dichloropropylene	0.5	y	y	1		MDL > C, Interim Monitor, Go To Step 5				y	Y	1		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
33	Ethylbenzene	300	y	y	1		MDL<=C, MDL=MEC	1	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
34	Methyl Bromide	4000	y	y	0.67		MDL<=C, MDL=MEC	0.67	MEC<C, go to Step 5		y	Y	0.67		N	No detected value of B, Step 7			
35	Methyl Chloride	No Criteria	y	y	2		No Criteria	2	No Criteria		y	Y	2		N	No Criteria	No Criteria		**Uo - No Criteria**
36	Methylene Chloride	5	y	y	5		MDL<=C, MDL=MEC				y	Y	5		N	No detected value of B, Step 7			
37	1,1,2,2-Tetrachloroethane	1	y	y	2		MDL > C, Interim Monitor, Go To Step 5				y	Y	2		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
38	Tetrachloroethylene	5	y	y	1		MDL<=C, MDL=MEC	1	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
39	Toluene	150	y	y	1		MDL<=C, MDL=MEC	1	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
40	1,2-Trans-Dichloroethylene	10	y	y	0.19		MDL<=C, MDL=MEC	0.19	MEC<C, go to Step 5		y	Y	0.19		N	No detected value of B, Step 7			
41	1,1,1-Trichloroethane	200	y	y	2		MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
42	1,1,2-Trichloroethane	5	y	y	1		MDL<=C, MDL=MEC	1	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
43	Trichloroethylene	5	y	y	1		MDL<=C, MDL=MEC	1	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
44	Vinyl Chloride	0.5	y	y	2		MDL > C, Interim Monitor, Go To Step 5				y	Y	2		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
45	2-Chlorophenol	400	y	y	2		MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
46	2,4-Dichlorophenol	790	y	y	1.6		MDL<=C, MDL=MEC	1.6	MEC<C, go to Step 5		y	Y	1.6		N	No detected value of B, Step 7			
47	2,4-Dimethylphenol	2300	y	y	2.5		MDL<=C, MDL=MEC	2.5	MEC<C, go to Step 5		y	Y	2.5		N	No detected value of B, Step 7			
48	2-Methyl- 4,6-Dinitrophenol	765	y	y	1.02		MDL<=C, MDL=MEC	1.02	MEC<C, go to Step 5		y	Y	1.02		N	No detected value of B, Step 7			
49	2,4-Dinitrophenol	14000	y	y	5		MDL<=C, MDL=MEC	5	MEC<C, go to Step 5		y	Y	5		N	No detected value of B, Step 7			
50	2-Nitrophenol	No Criteria	y	y	4		No Criteria	4	No Criteria		y	Y	4		N	No Criteria	No Criteria		**Uo - No Criteria**

Version: 2005-1

PERMITTEE NAME
FACILITY NAME
ORDER NO. XX-XXXX-XXX
NPDES NO. CAXXXXXXX

51	4-Nitrophenol	No Criteria	y	y	5		No Criteria	5	No Criteria		y		5		N	No Criteria	No Criteria		**Uo - No Criteria**
52	3-Methyl 4-Chlorophenol	No Criteria	y	y	1.72		No Criteria	1.72	No Criteria		y		1.72		N	No Criteria	No Criteria		**Uo - No Criteria**
53	Pentachlorophenol	1	y	y	5		MDL > C, Interim Monitor, Go To Step 5				y		5		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
54	Phenol	4600000	y	y	2		MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
55	2,4,6-Trichlorophenol	6.5	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
56	Acenaphthene	2700	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
57	Acenaphthylene	No Criteria	y	y	2		No Criteria	2	No Criteria		y	Y	2		N	No Criteria	No Criteria		**Uo - No Criteria**
58	Anthracene	110000	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
59	Benzidine	0.00054	y	y	50		MDL > C, Go to Step 5				y	Y	50		Y	No detected value of B, Step 7			
60	Benzo(a)Anthracene	0.049	y	y	2		MDL > C, Go to Step 5				y	Y	2		Y	No detected value of B, Step 7			
61	Benzo(a)Pyrene	0.049	y	y	2		MDL > C, Go to Step 5				y	Y	2		Y	No detected value of B, Step 7			
62	Benzo(b)Fluoranthene	0.049	y	y	2		MDL > C, Go to Step 5				y	Y	2		Y	No detected value of B, Step 7			
63	Benzo(ghi)Perylene	No Criteria	y	y	2		No Criteria	2	No Criteria		y	Y	2		N	No Criteria	No Criteria		**Uo - No Criteria**
64	Benzo(k)Fluoranthene	0.049	y	y	2		MDL > C, Go to Step 5				y	Y	2		Y	No detected value of B, Step 7			
65	Bis(2-Chloroethoxy)Methane	No Criteria	y	y	2		No Criteria	2	No Criteria		y	Y	2		N	No Criteria	No Criteria		**Uo - No Criteria**
66	Bis(2-Chloroethyl)Ether	1.4	y	y	2		MDL > C, Interim Monitor, Go To Step 5				y	Y	2		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
67	Bis(2-Chloroisopropyl)Ether	170000	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
68	**Bis(2-Ethylhexyl)Phthalate**	5.9	y	n		7.53		7.53	Y		y			25.6		Y		Y	**MEC => C [7.5 ug/l vs 5.90 ug/l]**
69	4-Bromophenyl Phenyl Ether	No Criteria	y	y	2		No Criteria	2	No Criteria		y	Y	2		N	No Criteria	No Criteria		**Uo - No Criteria**
70	Butylbenzyl Phthalate	5200	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
71	2-Chloronaphthalene	4300	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
72	4-Chlorophenyl Phenyl Ether	No Criteria	y	y	2		No Criteria	2	No Criteria		y	Y	2		N	No Criteria	No Criteria		**Uo - No Criteria**
73	Chrysene	0.049	y	y	2		MDL > C, Go to Step 5				y	Y	2		Y	No detected value of B, Step 7			
74	Dibenzo(a,h)Anthracene	0.049	y	y	2		MDL > C, Go to Step 5				y	Y	2		Y	No detected value of B, Step 7			
75	1,2-Dichlorobenzene	600	y	y	1		All ND MDL<=C, MDL=MEC	1	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
76	1,3-Dichlorobenzene	2600	y	y	1		All ND MDL<=C, MDL=MEC	1	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
77	1,4-Dichlorobenzene	5	y	y	1		All ND MDL<=C, MDL=MEC	1	MEC<C, go to Step 5		y	Y	1		N	No detected value of B, Step 7			
78	3,3 Dichlorobenzidine	0.077	y	y	10		MDL > C, Go to Step 5				y	Y	10		Y	No detected value of B, Step 7			
79	Diethyl Phthalate	120000	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
80	Dimethyl Phthalate	2900000	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
81	Di-n-Butyl Phthalate	12000	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
82	2,4-Dinitrotoluene	9.1	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
83	2,6-Dinitrotoluene	No Criteria	y	y	2		No Criteria	2	No Criteria		y	Y	2		N	No Criteria	No Criteria		**Uo - No Criteria**
84	Di-n-Octyl Phthalate	No Criteria	y	y	2.5		No Criteria	2.5	No Criteria		y	Y	2.5		N	No Criteria	No Criteria		**Uo - No Criteria**
85	1,2-Diphenylhydrazine	0.54	y	y	10		MDL > C, Interim Monitor, Go To Step 5				y	Y	10		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim**

Version: 2005-1

NPDES NO. CAXXXXXXX
ORDER NO. XX-XXXX-XXX
FACILITY NAME
PERMITTEE NAME
Version: 2005-1

																		Monitor
86	Fluoranthene	370	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y		2		N	No detected value of B, Step 7			
87	Fluorene	14000	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y		2		N	No detected value of B, Step 7			
88	Hexachlorobenzene	0.00077	y	y	2		MDL > C, Go to Step 5				y	Y	2		Y	No detected value of B, Step 7			
89	Hexachlorobutadiene	50	y	y	2.5		All ND MDL<=C, MDL=MEC	2.5	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
90	Hexachlorocyclopentadiene	50	y	y	2.5		All ND MDL<=C, MDL=MEC	2.5	MEC<C, go to Step 5		y	Y	2.5		N	No detected value of B, Step 7			
91	Hexachloroethane	8.9	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
92	Indeno(1,2,3-cd)Pyrene	0.049	y	y	2		MDL > C, Go to Step 5				y	Y	2		Y	No detected value of B, Step 7			
93	Isophorone	600	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
94	Naphthalene	No Criteria	y	y	2		No Criteria	2	No Criteria		y	Y	2		N	No Criteria	No Criteria		**Uo - No Criteria**
95	Nitrobenzene	1900	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
96	N-Nitrosodimethylamine	8.1	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
97	N-Nitrosodi-n-Propylamine	1.4	y	y	2		MDL > C, Interim Monitor, Go To Step 5				y	Y	2		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
98	N-Nitrosodiphenylamine	16	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
99	Phenanthrene	No Criteria	y	y	2		No Criteria	2	No Criteria		y	Y	2		N	No Criteria	No Criteria		**Uo - No Criteria**
100	Pyrene	11000	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
101	1,2,4-Trichlorobenzene	5	y	y	2		All ND MDL<=C, MDL=MEC	2	MEC<C, go to Step 5		y	Y	2		N	No detected value of B, Step 7			
102	Aldrin	0.00014	y	y	0.1		MDL > C, Go to Step 5				y	Y	0.1		Y	No detected value of B, Step 7			
103	alpha-BHC	0.013	y	y	0.05		MDL > C, Interim Monitor, Go To Step 5				y	Y	0.05		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
104	beta-BHC	0.046	y	y	0.05		MDL > C, Interim Monitor, Go To Step 5				y	Y	0.05		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
105	gamma-BHC	0.063	y	y	0.05		All ND MDL<=C, MDL=MEC	0.05	MEC<C, go to Step 5		y	Y	0.05		N	No detected value of B, Step 7			
106	delta-BHC	No Criteria	y	y	0.05		No Criteria	0.05	No Criteria		y	Y	0.05		N	No Criteria	No Criteria		**Uo - No Criteria**
107	Chlordane	0.00059	y	y			MDL > C, Go to Step 5				y	Y	0		N	No detected value of B, Step 7			
108	4,4'-DDT	0.00059	y	y	0.1		MDL > C, Go to Step 5				y	Y	0.1		Y	No detected value of B, Step 7			
109	4,4'-DDE	0.00059	y	y	0.1		MDL > C, Go to Step 5				y	Y	0.1		Y				
110	4,4'-DDD	0.00084	y	y	0.1		MDL > C, Go to Step 5				y	Y	0.1		Y	No detected value of B, Step 7			
111	Dieldrin	0.00014	y	y	0.1		MDL > C, Go to Step 5				y	Y	0.1		Y				
112	alpha-Endosulfan	0.056	y	y	0.05		All ND MDL<=C, MDL=MEC	0.05	MEC<C, go to Step 5		y	Y	0.05		N	No detected value of B, Step 7			
113	beta-Endolsulfan	0.056	y	y	0.05		All ND MDL<=C, MDL=MEC	0.05	MEC<C, go to Step 5		y	Y	0.05		N	No detected value of B, Step 7			
114	Endosulfan Sulfate	240	y	y	0.1		All ND MDL<=C, MDL=MEC	0.1	MEC<C, go to Step 5		y	Y	0.1		N	No detected value of B, Step 7			
115	Endrin	0.036	y	y	0.1		MDL > C, Interim Monitor, Go To Step 5				y	Y	0.1		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
116	Endrin Aldehyde	0.81	y	y	0.1		All ND MDL<=C, MDL=MEC	0.1	MEC<C, go to Step 5		y	Y	0.1		N	No detected value of B, Step 7			
117	Heptachlor	0.00021	y	y	0.05		MDL > C, Interim Monitor, Go To Step 5				y	Y	0.05		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim Monitor**
118	Heptachlor Epoxide	0.00011	y	y	0.05		MDL > C, Interim Monitor, Go To Step 5				y	Y	0.05		Y	No detected value of B, Step 7			**Effluent MDL > C, Interim**

																			Monitor
119-125	PCBs sum	0.00017	y	y	0.5		MDL > C, Interim Monitor, Go To Step 5				y	0.5		Y	No detected value of B, Step 7				
126	Toxaphene	0.0002	y	y	1		MDL > C, Interim Monitor, Go To Step 5				y	1		Y	No detected value of B, Step 7				**Effluent MDL > C, Interim Monitor**

PERMITTEE NAME
FACILITY NAME
ORDER NO. XX-XXXX-XXX
NPDES NO. CAXXXXXXX

Version: 2005-1