CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

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ORDER R9-2017-0020
NPDES NO. CA0108952

WASTE DISCHARGE REQUIREMENTS FOR THE SWEETWATER AUTHORITY RICHARD A. REYNOLDS DESALINATION FACILITY DISCHARGE TO THE LOWER SWEETWATER RIVER BASIN

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

Table 1. Discharger Information

Discharger	Sweetwater Authority
Name of Facility	Richard A. Reynolds Desalination Facility
Facility Address	3066 North Second Avenue
	Chula Vista, CA 91910
	San Diego County

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001a[1]	Demineralization Brine	32º 39’ 34.0”	117º 05’ 00.0”	Tidal Prism of San Diego Bay via Lower Sweetwater River
001b[1,2]	Demineralization Brine	32º 39’ 19.8”	117º 05’ 26.5”	Tidal Prism of San Diego Bay via Lower Sweetwater River

[1] By letter dated April 1, 2014, the Discharger notified the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) that as of March 28, 2014, the demineralization brine is being discharged at Discharge Location 001b and that Discharge Location 001a will function only as an emergency outfall.

[2] Plant feed water and valve pressure relief water may be discharged through Discharge Point No. 001b when the Facility is not discharging demineralization brine. Such discharges are regulated separately under the Drinking Water Permit WQ 2014-0194-DWQ.

Table 3. Administrative Information

This Order was adopted on:	June 21, 2017
This Order shall become effective on:	August 1, 2017
This Order shall expire on:	July 31, 2022
The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations (CCR), and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	**180 days prior to the Order expiration date**
The U.S. Environmental Protection Agency (USEPA) and the San Diego Water Board have classified this discharge as follows:	**Minor discharge**

I, David W. Gibson, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, San Diego Region, on the date indicated above.

David W. Gibson, Executive Officer

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I. FACILITY INFORMATION

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

II. FINDINGS

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

A. Legal Authorities. This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (Water Code; commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). 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 and G through H are also incorporated into this Order.

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

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

E. Notification of Interested Parties. The San Diego Water Board has notified 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.

F. Consideration of Public Comment. The San Diego Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the public hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED that this Order supersedes Order No. R9-2010-0012, as amended by Order No. R9-2014-0109, 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 violations of the previous Order.

III. DISCHARGE PROHIBITIONS

A. All discharges regulated under this Order shall comply with waste discharge prohibitions contained in the *San Diego Water Board's Water Quality Control Plan for the San Diego Basin* (Basin Plan) and other applicable statewide water quality control plans described in Attachment F of this Order. All such prohibitions are hereby incorporated in this Order by reference as if fully set forth herein. The Basin Plan waste discharge prohibitions are listed in Attachment G to 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 WDRs are not in force are prohibited.

Discharges at Discharge Point No. 001b shall not exceed 2.5 million gallons per day (MGD).

C. Discharges at Discharge Point No. 001a are prohibited during normal operation of the Facility. Discharges at Discharge Point No. 001a may occur only during emergency conditions, when discharge through Discharge Point No. 001b is not possible due to temporary maintenance activities, or other conditions that otherwise temporarily prevent the use of Discharge Point No. 001b. Discharges at Discharge Point No. 001a shall not exceed 0.8 MGD between June 1st through November 30th and 1.0 MGD between December 1st through May 31st.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

1. Final Effluent Limitations – Discharge Point No. 001a

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001a, with compliance measured at Monitoring Location EFF-001a as described in the Monitoring and Reporting Program (MRP; Attachment E):

Table 4. Effluent Limitations for Brine at Discharge Point No. 001a

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous	
				Minimum	Maximum
Flow Rate	MGD	0.8[1]	--	--	--
Oils and Grease	mg/L	25	--	--	75
Total Suspended Solids (TSS)	mg/L	30	--	--	50
Settleable Solids	mg/L	1.0	--	--	3.0
Turbidity	NTU	75	--	--	225
pH	s.u.	--	--	6.0	9.0
Salinity	Ppt	7-11[6]	--	--	--
Nitrogen, Total (as N)	mg/L	--	1.0	--	--
	lbs/day[2]	--	6.7	--	--
	lbs/day[3]		8.3	--	--
Phosphorus, Total (as P)	mg/L	--	0.1	--	--
	lbs/day[2]	--	0.67	--	--
	lbs/day[3]		0.83	--	--
Cyanide, Total	µg/L	0.50	1.0	--	--
	lbs/day[2]	0.0033	0.0067	--	--
	lbs/day[3]	0.0042	0.0083	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous	
				Minimum	Maximum
Copper, Total Recoverable	µg/L	2.1	5.8	--	--
	lbs/day[2]	0.014	0.039	--	--
	lbs/day[3]	0.018	0.048	--	--
Selenium, Total Recoverable	µg/L	4.1	8.2	--	--
	lbs/day[2]	0.027	0.055	--	--
	lbs/day[3]	0.034	0.068	--	--
Chronic Toxicity (Test of Significant Toxicity)[4,5]	"Pass"/"Fail"	--	"Pass"	--	--

1 Discharges at Discharge Point No. 001a shall not exceed 0.8 MGD between June 1st through November 30th and 1.0 MGD between December 1st through May 31st.
2 Applicable to discharges between June 1st and November 30th. The Mass Emission Rate (MER) limits were calculated using a flow rate of 0.8 MGD and the indicated concentration values.
3 Applicable to discharges between December 1st and May 31st. The MER limits were calculated using a flow rate of 1.0 MGD and the indicated concentration values.
4 As specified in section VII.L of this Order and section III.B of the MRP (Attachment E).
5 The Chronic Toxicity final effluent limitation is protective of the narrative Basin Plan amendment for toxicity. The final effluent limitation will be implemented using *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995), current USEPA guidance in the *National Pollutant Discharge Elimination System Test of Significant Toxicity implementation Document* (USEPA 833-R-10-003, June 2010) (https://www3.epa.gov/npdes/pubs/wet_final_tst_implementation2010.pdf) and USEPA Regions 8, 9, and 10, Toxicity Training Tool (January 2010).
6 The average monthly effluent values for salinity shall be maintained within the limits of 7 ppt to 11 ppt.

b. The maximum temperature of the effluent shall not exceed the natural receiving water temperature by more than 20 ºF at Discharge Point No. 001a, with compliance measured at Monitoring Location EFF-001a as described in the Monitoring and Reporting Program (MRP; Attachment E).

2. Final Effluent Limitations – Discharge Point No. 001b

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001b, with compliance measured at Monitoring Location EFF-001b as described in the MRP (Attachment E):

Table 5. Effluent Limitations for Brine at Discharge Point No. 001b

Parameter	Units[1]	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous	
				Minimum	Maximum
Flow Rate	MGD	2.5	--	--	--
Oils and Grease	mg/L	25	--	--	75
Total Suspended Solids (TSS)	mg/L	30	--	--	50
Settleable Solids	mg/L	1.0	--	--	3.0

Parameter	Units[1]	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous	
				Minimum	Maximum
Turbidity	NTU	75	--	--	225
pH	s.u.	--	--	6.0	9.0
Salinity	ppt	7-11[4]	--	--	--
Nitrogen, Total (as N)	mg/L	--	1.0	--	--
	lbs/day	--	21	--	--
Phosphorus, Total (as P)	mg/L	--	0.1	--	--
	lbs/day	--	2.1	--	--
Cyanide, Total	µg/L	0.50	1.0	--	--
	lbs/day	0.011	0.021	--	--
Copper, Total Recoverable	µg/L	2.1	5.8	--	--
	lbs/day	0.044	0.12	--	--
Selenium, Total Recoverable	µg/L	4.1	8.2	--	--
	lbs/day	0.085	0.17	--	--
Chronic Toxicity (Test of Significant Toxicity)[2,3]	"Pass"/"Fail"	--	"Pass"	--	--

1 The MER limits were calculated using a flow rate of 2.5 MGD and the indicated concentration values.

2 As specified in section VII.L of this Order and section III.B of the MRP (Attachment E).

3 The Chronic Toxicity final effluent limitation is protective of the narrative Basin Plan amendment for toxicity. The final effluent limitation will be implemented using *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995), current USEPA guidance in the *National Pollutant Discharge Elimination System Test of Significant Toxicity implementation Document* (USEPA 833-R-10-003, June 2010) (https://www3.epa.gov/npdes/pubs/wet_final_tst_implementation2010.pdf) and USEPA Regions 8, 9, and 10, Toxicity Training Tool (January 2010).

4 The average monthly effluent values for salinity shall be maintained within the limits of 7 ppt to 11 ppt.

b. The maximum temperature of the effluent shall not exceed the natural receiving water temperature by more than 20 ºF at Discharge Point No. 001b, with compliance measured at Monitoring Location EFF-001b as described in the MRP (Attachment E).

B. Performance Goals – Discharge Point No. 001b

Constituents that do not have reasonable potential to cause or contribute to an exceedance of water quality objectives, or for which reasonable potential to cause or contribute to an exceedance of water quality objectives cannot be determined, are referred to as performance goal constituents and are assigned the performance goals listed in the following table. Performance goal constituents shall be monitored at Monitoring Location EFF-001b as described in the MRP (Attachment E). The San Diego Water Board will use the monitoring results for informational purposes only, the results will not be used for compliance determinations.

Table 6. Performance Goals for Discharge Point No. 001b

Parameter	Performance Goals		
	Units[1]	Average Monthly	Maximum Daily
Antimony, Total Recoverable	µg/L	4.30E+03	8.64E+03
	lbs/day	8.97E+01	1.80E+02
Arsenic, Total Recoverable	µg/L	2.94E+01	5.90E+01
	lbs/day	6.13E-01	1.23E+00
Cadmium, Total Recoverable	µg/L	5.97E+00	1.20E+01
	lbs/day	1.24E-01	2.50E-01
Chromium (III) , Total Recoverable	µg/L	5.26E+02	1.06E+03
	lbs/day	1.10E+01	2.20E+01
Chromium (VI) , Total Recoverable	µg/L	7.96E+00	1.60E+01
	lbs/day	1.66E-01	3.33E-01
Lead, Total Recoverable	µg/L	6.96E+00	1.40E+01
	lbs/day	1.45E-01	2.91E-01
Mercury, Total Recoverable	µg/L	5.10E-02	1.03E-01
	lbs/day	1.06E-03	2.14E-03
Nickel, Total Recoverable	µg/L	5.00E+00	1.30E+01
	lbs/day	1.04E-01	2.10E-01
Silver, Total Recoverable	µg/L	1.11E+00	2.23E+00
	lbs/day	2.32E-02	4.66E-02
Thallium, Total Recoverable	µg/L	6.30E+00	1.27E+01
	lbs/day	1.31E-01	2.64E-01
Zinc, Total Recoverable	µg/L	4.73E+01	9.50E+01
	lbs/day	9.87E-01	1.98E+00
Acrolein	µg/L	7.80E+02	1.57E+03
	lbs/day	1.63E+01	3.27E+01
Acrylonitrile	µg/L	6.60E-01	1.33E+00
	lbs/day	1.38E-02	2.77E-02
Benzene	µg/L	7.10E+01	1.43E+02
	lbs/day	1.48E+00	2.98E+00
Bromoform	µg/L	3.60E+02	7.24E+02
	lbs/day	7.51E+00	1.51E+01
Carbon Tetrachloride	µg/L	4.40E+00	8.84E+00
	lbs/day	9.17E-02	1.84E-01
Chlorobenzene	µg/L	2.10E+04	4.22E+04
	lbs/day	4.38E+02	8.80E+02
Chlorodibromomethane	µg/L	3.40E+01	6.83E+01
	lbs/day	7.09E-01	1.42E+00
Dichlorobromomethane	µg/L	4.60E+02	9.25E+01
	lbs/day	9.59E-01	1.93E+00
1,2-Dichloroethane	µg/L	9.90E+01	1.99E+02
	lbs/day	2.06E+00	4.15E+00
1,1-Dichloroethylene	µg/L	3.20E+00	6.43E+00
	lbs/day	6.67E-02	1.34E-01
1,2-Dichloropropane	µg/L	3.90E+01	7.84E+01
	lbs/day	8.13E-01	1.63E+00
1,3-Dichloropropylene	µg/L	1.70E+03	3.42E+03
	lbs/day	3.54E+01	7.12E+01
Ethylbenzene	µg/L	2.90E+04	5.83E+04
	lbs/day	6.05E+02	1.22E+03
Methyl Bromide	µg/L	4.00E+03	8.04E+03
	lbs/day	8.34E+01	1.68E+02
Methylene Chloride	µg/L	1.60E+03	3.22E+03

Parameter	Performance Goals		
	Units[1]	Average Monthly	Maximum Daily
	lbs/day	3.34E+01	6.71E+01
1,1,2,2-Tetrachloroethane	µg/L	1.10E+01	2.21E+01
	lbs/day	2.29E-01	4.61E-01
Tetrachloroethylene	µg/L	8.85E+00	1.78E+01
	lbs/day	1.85E-01	3.71E-01
Toluene	µg/L	2.00E+05	4.01E+05
	lbs/day	4.17E+03	8.38E+03
1,2-Trans-Dichloroethylene	µg/L	1.40E+05	2.81E+05
	lbs/day	2.92E+03	5.87E+03
1,1,2-Trichloroethane	µg/L	4.20E+01	8.44E+01
	lbs/day	8.76E-01	1.76E+00
Trichloroethylene	µg/L	8.10E+01	1.63E+02
	lbs/day	1.69E+00	3.39E+00
Vinyl Chloride	µg/L	5.25E+02	1.06E+03
	lbs/day	1.09E+01	2.20E+01
Chlorophenol	µg/L	4.00E+02	8.04E+02
	lbs/day	8.34E+00	1.68E+01
2,4-Dichlorophenol	µg/L	7.90E+02	1.59E+03
	lbs/day	1.65E+01	3.31E+01
2,4-Dimethylphenol	µg/L	2.30E+03	4.62E+03
	lbs/day	4.80E+01	9.64E+01
2-Methyl-4,6-Dinitrophenol	µg/L	7.65E+02	1.54E+03
	lbs/day	1.60E+01	3.21E+01
2,4-Dinitrophenol	µg/L	1.40E+04	2.81E+04
	lbs/day	2.92E+02	5.87E+02
Pentachlorophenol	µg/L	3.32E+00	6.65E+00
	lbs/day	6.92E-02	1.39E-01
Phenol	µg/L	4.60E+06	9.25E+06
	lbs/day	9.59E+04	1.93E+05
2,4,6-Trichlorophenol	µg/L	6.50E+00	1.31E+01
	lbs/day	1.36E-01	2.72E-01
Acenaphthene	µg/L	2.70E+03	5.43E+03
	lbs/day	5.63E+01	1.13E+02
Anthracene	µg/L	1.10E+05	2.21E+05
	lbs/day	2.29E+03	4.61E+03
Benzidine	µg/L	5.40E-04	1.09E-03
	lbs/day	1.13E-05	2.26E-05
Bis(2-Chloroethyl)Ether	µg/L	1.40E+00	2.81E+00
	lbs/day	2.92E-02	5.87E-02
Bis(2-Chloroisopropyl)Ether	µg/L	1.70E+05	3.42E+05
	lbs/day	3.54E+03	7.12E+03
Butylbenzyl Phthalate	µg/L	5.20E+03	1.05E+04
	lbs/day	1.08E+02	2.18E+02
2-Chloronaphthalene	µg/L	4.30E+03	8.64E+03
	lbs/day	8.97E+01	1.80E+02
1,2-Dichlorobenzene	µg/L	1.70E+04	3.42E+04
	lbs/day	3.54E+02	7.11E+02
1,3-Dichlorobenzene	µg/L	2.60E+03	5.23E+03
	lbs/day	5.42E+01	1.09E+02
1,4-Dichlorobenzene	µg/L	2.60E+03	5.23E+03
	lbs/day	5.42E+01	1.09E+02
3,3'-Dichlorobenzidine	µg/L	7.70E-02	1.55E-01

Parameter	Performance Goals		
	Units[1]	Average Monthly	Maximum Daily
	lbs/day	1.61E-03	3.23E-03
Diethyl Phthalate	µg/L	1.20E+05	2.41E+05
	lbs/day	2.50E+03	5.03E+03
Dimethyl Phthalate	µg/L	2.90E+06	5.83E+06
	lbs/day	6.05E+04	1.22E+05
Di-n-Butyl Phthalate	µg/L	1.20E+04	2.41E+04
	lbs/day	2.50E+02	5.03E+02
2,4-Dinitrotoluene	µg/L	9.10E+00	1.83E+01
	lbs/day	1.90E-01	3.81E-01
1,2-Diphenylhydrazine	µg/L	5.40E-01	1.09E+00
	lbs/day	1.13E-02	2.26E-02
Fluoranthene	µg/L	3.70E+02	7.44E+02
	lbs/day	7.71E+00	1.55E+01
Fluorene	µg/L	1.40E+04	2.81E+04
	lbs/day	2.92E+02	5.87E+02
Hexachlorobenzene	µg/L	7.70E-04	1.55E-03
	lbs/day	1.61E-05	3.23E-05
Hexachlorobutadiene	µg/L	5.00E+01	1.01E+02
	lbs/day	1.04E+00	2.10E+00
Hexachlorocyclopentadiene	µg/L	1.70E+04	3.42E+04
	lbs/day	3.54E+02	7.12E+02
Hexachloroethane	µg/L	8.90E+00	1.79E+01
	lbs/day	1.86E-01	3.73E-01
Isophorone	µg/L	6.00E+02	1.21E+03
	lbs/day	1.25E+01	2.51E+01
Nitrobenzene	µg/L	1.90E+03	3.82E+03
	lbs/day	3.96E+01	7.96E+01
N-Nitrosodimethylamine	µg/L	8.10E+00	1.63E+01
	lbs/day	1.69E-01	3.39E-01
N-Nitrosodi-n-Propylamine	µg/L	1.40E+00	2.81E+00
	lbs/day	2.92E-02	5.87E-02
N-Nitrosodiphenylamine	µg/L	1.60E+01	3.22E+01
	lbs/day	3.34E-01	6.71E-01
Pyrene	µg/L	1.10E+04	2.21E+04
	lbs/day	2.29E+02	4.61E+02
Aldrin	µg/L	1.40E-04	2.81E-04
	lbs/day	2.92E-06	5.87E-06
alpha-BHC	µg/L	1.30E-02	2.61E-02
	lbs/day	2.71E-04	5.45E-04
beta-BHC	µg/L	4.60E-02	9.25E-02
	lbs/day	9.59E-04	1.93E-03
gamma-BHC (Lindane)	µg/L	6.30E-02	1.27E-01
	lbs/day	1.31E-03	2.64E-03
Chlordane	µg/L	5.90E-04	1.19E-03
	lbs/day	1.23E-05	2.47E-05
4,4-DDT	µg/L	5.90E-04	1.19E-03
	lbs/day	1.23E-05	2.47E-05
4,4-DDE	µg/L	5.90E-04	1.19E-03
	lbs/day	1.23E-05	2.47E-05
4,4-DDD	µg/L	8.40E-04	1.69E-03
	lbs/day	1.75E-05	3.52E-05
Dieldrin	µg/L	1.40E-04	2.80E-04

Parameter	Performance Goals		
	Units[1]	Average Monthly	Maximum Daily
	lbs/day	2.92E-06	5.87E-06
alpha-Endosulfan	µg/L	7.11E-03	1.43E-02
	lbs/day	1.48E-04	2.97E-04
beta-Endosulfan	µg/L	7.11E-03	1.43E-02
	lbs/day	1.48E-04	2.97E-04
Endosulfan Sulfate	µg/L	2.40E+02	4.82E+02
	lbs/day	5.00E+00	1.00E+01
Endrin	µg/L	1.88E-03	3.77E-03
	lbs/day	3.92E-05	7.86E-05
Endrin Aldehyde	µg/L	8.10E-01	1.63E+00
	lbs/day	1.69E-02	3.40E-02
Heptachlor	µg/L	2.10E-04	4.22E-04
	lbs/day	4.38E-06	8.80E-06
Heptchlor Epoxide	µg/L	1.10E-04	2.21E-04
	lbs/day	2.29E-06	4.61E-06
Polychlorinated biphenyls (PCBs)	µg/L	1.70E-04	3.42E-04
	lbs/day	3.54E-06	7.12E-06
Benzo(a)Anthracene	µg/L	4.90E-02	9.80E-02
	lbs/day	1.02E-03	2.04E-03
Benzo(a)Pyrene	µg/L	4.90E-02	9.80E-02
	lbs/day	1.02E-03	2.04E-03
Benzo(b)Fluoranthene	µg/L	4.90E-02	9.80E-02
	lbs/day	1.02E-03	2.04E-03
Benzo(k)Fluoranthene	µg/L	4.90E-02	9.80E-02
	lbs/day	1.02E-03	2.04E-03
Bis(2-Ethylhexyl)Phthalate	µg/L	5.90E+00	1.20E+01
	lbs/day	1.23E-01	2.50E-01
Chrysene	µg/L	4.90E-02	9.80E-02
	lbs/day	1.02E-03	2.04E-03
Dibenzo(a,h)Anthracene	µg/L	4.90E-02	9.80E-02
	lbs/day	1.02E-03	2.04E-03
Indeno(1,2,3-cd)Pyrene	µg/L	4.90E-02	9.80E-02
	lbs/day	1.02E-03	2.04E-03

[1] The Mass Emission Rate (MER) values in this table were calculated using a flow rate of 2.5 MGD and the indicated concentration values. When the discharge flow rate is lower than 2.5 MGD, the MER calculations should be correspondingly lower.

C. Land Discharge Specifications – NOT APPLICABLE

D. Recycling Specifications – NOT APPLICABLE

V. RECEIVING WATER LIMITATIONS

The receiving water limitations set forth below for the Tidal Prism of San Diego Bay, Lower Sweetwater River, and Upper Paradise Creek are based on applicable water quality standards contained in water quality control plans and policies and federal regulations and are a required part of this Order. The discharge of waste shall not cause or contribute to violations of these receiving water limitations.

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 the Tidal Prism of San Diego Bay 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 Board water quality control plans and policies including the:
   a. Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries (Thermal Plan);
   b. Water Quality Control Plan for the Enclosed Bays and Estuaries – Part 1 Sediment Quality (Sediment Quality Plan)
   c. Policy for Implementation of Toxics Standards for Inland Surface Waters, and Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP); and
3. Priority pollutant criteria promulgated by the USEPA through the:
   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. Bacterial Characteristics

1. Total Coliform Organisms: Total coliform organisms concentration shall not exceed the following:
   a. 1,000 MPN/100 mL geometric mean, based on a minimum of not less than five samples for any 30-day period; and
   b. 10,000 MPN/100 mL at any time.
2. Fecal Coliform: Effluent Fecal Coliform organisms concentration shall not exceed the following:
   a. 200 MPN/100 mL geometric mean, based on a minimum of not less than five samples for any 30-day period or one sample per discharge event; and
   b. 400 MPN/100 mL for more than 10 percent of the total samples during any 30-day period.
3. Enterococci: Effluent Enterococci concentration shall not exceed the following:
   a. 33 MPN/100 mL geometric mean, based on all samples during a 30-day period; and
   b. 61 MPN/100 mL at any time.

C. Chemical Characteristics

1. The dissolved oxygen concentration shall not at any time be less than 5 mg/L. The annual mean dissolved oxygen concentration shall not be less than 7 mg/L more than 10% of the time.
2. Within the Lower Sweetwater River, changes in normal ambient pH levels shall not exceed 0.5 units. The pH shall not be depressed below 6.5 or raised above 8.5. Within the Tidal Prism of San Diego Bay and San Diego Bay, changes in normal ambient pH levels shall not exceed 0.2 units. The pH shall not be depressed below 7.0 or raised above 9.0.

[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.

3. 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.
4. The discharge of wastes shall not cause concentrations of un-ionized ammonia (NH3) to exceed 0.025 mg/L as N.

D. Chemical Characteristics

1. **Color:** Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses. The natural color of fish, shellfish, or other resources shall not be impaired.
2. **Floating Material:** Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses.
3. **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.
4. **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.
5. **Suspended and Settleable Solids:** Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses.
6. **Turbidity:** Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.
7. **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. The maximum temperature of waste shall not exceed the natural temperature of the receiving waters by more than 20 ºF.

E. 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.

F. Biological Characteristics

1. **Taste and Odors:** Waters shall not contain taste or odor producing substances at concentrations which cause a nuisance or adversely affect beneficial uses.
2. **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.
3. **Benthic Communities:** Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities.

4. **Bioaccumulation:** Pollutants shall not be present in sediments at levels that will bioaccumulate in aquatic life to levels that are harmful to human health.

G. 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. 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 the following have occurred:
         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 staff of the San Diego Water Board or their designated representatives (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.
   b. 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.
   c. 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.

d. This Order expires on July 31, 2022, after which, the terms and conditions of this permit are automatically continued pending issuance of a new permit, provided that all requirements of USEPA's NPDES regulations at Title 40, Code of Federal Regulations (CFR) section 122.6 and the State's regulations at California Code of Regulations (CCR) title 23, division 3, chapter 9, article 3, section 2235.4 regarding the continuation of expired permits and waste discharge requirements are met.

e. 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 or the San Diego Water Board 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 include, but are not limited to, fish tissue sampling, whole effluent toxicity (WET) testing, 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. [SIP]

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 a performance goal(s) set forth in section IV.B Table 9 or any water quality objective described in Chapter 3 of the Basin Plan. [40 CFR section 122.44(d)(1)]

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 to require the Discharger to evaluate and provide information on cost and values of the monitoring and reporting program.

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

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 122.44(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 122.63(a)(2)]

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

j. This Order will be reopened and modified to revise any and all of the chronic toxicity testing provisions and effluent limitations, to the extent necessary, to 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 – Not Applicable

3. Best Management Practices (BMPs) and Pollution Prevention

a. **Pollutant Minimization Program (PMP).** The Discharger shall develop and conduct a PMP as further described below when there is evidence that a priority pollutant is present in the effluent above an effluent limitation and either:

i. A sample result is reported as detected, but not quantified (DNQ) and the effluent limitation is less than the reporting level (RL); or

ii. A sample result is reported as not detected (ND) and the effluent limitation is less than the method detection limit (MDL), using definitions described in Attachment A and reporting protocols described in MRP sections VII.B.4 and 5.

b. Evidence that a priority pollutant is present in the effluent may include sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity (WET), health advisories for fish consumption, results of benthic or aquatic organism tissue sampling

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

i. 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;

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

iii. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

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

v. An annual status report that shall be sent to the San Diego Water Board and containing the following information:

(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.

D. Construction, Operation and Maintenance Specifications – Not Applicable

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

F. Other Special Provisions – Not Applicable

G. 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 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.

C. 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).

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 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).

F. Compliance with Effluent Laminations expressed as a Sum of Several Constituents

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

G. 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 “Not Detected” (ND) or “Detected but not quantified” (DNQ), the corresponding mass emission rate (MER) determined from that sample concentration shall also be reported as “ND” or “DNQ”.

H. Mass Emission Rate (MER)

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

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

I. Multiple Sample Date Reduction

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

J. Bacterial Standards and Analysis

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

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

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

2. For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000 CFU (colony-forming units). 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 or by any other method approved by the San Diego Water Board.

K. 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 of this Order.
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).

L. 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* (USEPA 833-R-10-004, 2010), Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is:

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

A test result that rejects this null hypothesis is reported as “Pass.” A test result that does not reject this null hypothesis is reported as “Fail.” This is a t-test (formally Student’s t-test), a statistical analysis comparing two sets of replicate observations—in the case of whole effluent toxicity (WET) test, only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is “Pass” or “Fail”)). The Welch’s t-test employed by the TST statistical approach is an adaptation of Student’s t-test and is used with two samples having unequal variances.

The 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.”

The chronic toxicity MDEL is set at the IWC for the discharge (100% effluent) and expressed in units of the TST statistical approach (“Pass” or “Fail”). All NPDES effluent compliance monitoring for the chronic toxicity MDEL shall be reported using the IWC effluent concentration

and negative control, expressed in units of the TST. The TST hypothesis (Ho) (see above) is statistically analyzed using the IWC and a negative control. Effluent toxicity tests shall be run using *Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine Estuarine Organisms* (EPA/600/R-95/136, 1995). The San Diego Water Board's review of reported toxicity test results will include review of concentration-response patterns as appropriate. As described in the laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Board dated August 07, 2014, and from USEPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the no-observed-effect-concentration (NOEC) and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. Standard operating procedures (SOPs) used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach, including those that incorporate a consideration of concentration-response patterns, must be submitted to the San Diego Water Board (40 CFR section 122.41(h)). The San Diego Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Discharger, USEPA, Region IX, the State Water Board's Quality Assurance Officer, or the State Water Board, Division of Drinking Water (DDW) Environmental Laboratory Accreditation Program (ELAP) as needed.

ATTACHMENT A – ABBREVIATIONS AND GLOSSARY

Part 1. – Abbreviations

Abbreviation	Definition
40 CFR	Code of Federal Regulations, title 40
AMEL	Average Monthly Effluent Limitation
AWEL	Average Weekly Effluent Limitation
Basin Plan	Water Quality Control Plan for the San Diego Basin
BMPs	Best Management Practices
$CBOD_5$	Carbonaceous 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
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
DDT	Dichlorodiphenyltrichloroethane
Discharger	Sweetwater Authority
DMRs	Discharge Monitoring Reports
DNQ	Detected, but Not Quantified
DO	Dissolved Oxygen
ECA	Effluent Concentration Allowance
ELAP	Environmental Laboratory Accreditation Program
°F	Degrees Fahrenheit
Facility	Richard A. Reynolds Desalination Facility
GPS	Global Positioning System
Ho	Null Hypothesis
HSA	Hydrologic Subareas
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
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
MTBE	Methyl Tertiary Butyl Ether

Abbreviation	Definition
ND	Not Detected
NH_3	un-ionized ammonia
NPDES	National Pollutant Discharge Elimination System
NTR	National Toxics Rule
NTU	Nephelometric Turbidity Unit
PCBs	Polychlorinated Biphenyls
pCi/L	Picocuries per Liter
PMP	Pollutant Minimization Program
POTWs	Publicly-Owned Treatment Works
PPT	Parts per Thousand
QA	Quality Assurance
QC	Quality Control
RL	Reporting Level
ROWD	Report of Waste Discharge
RPA	Reasonable Potential Analysis
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SIP	State Implementation Policy
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
State Implementation Policy	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
U.S.	United States
Water Code	California Water Code
WDRs	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WLA	Waste Load Allocation
WQBELs	Water Quality-Based Effluent Limitations
WQOs	Water Quality Objectives

Part 2. – Glossary of Common Terms

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

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

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

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

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

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.

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

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

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

> The discharge is subject to determination of “Pass” or “Fail” and “Percent Effect” from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (USEPA 833-R-10-004, 2010), Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is:
>
> Mean discharge “in-stream” waste concentration (IWC) response ≤0.75 × Mean control response.

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

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.

Polychlorinated Biphenyls (PCBs)
PCBs represent the sum of chlorinated biphenyls: 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 Identification Evaluation (TIE)
A set of procedures conducted to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.

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

Figure B-1. Facility Location Map

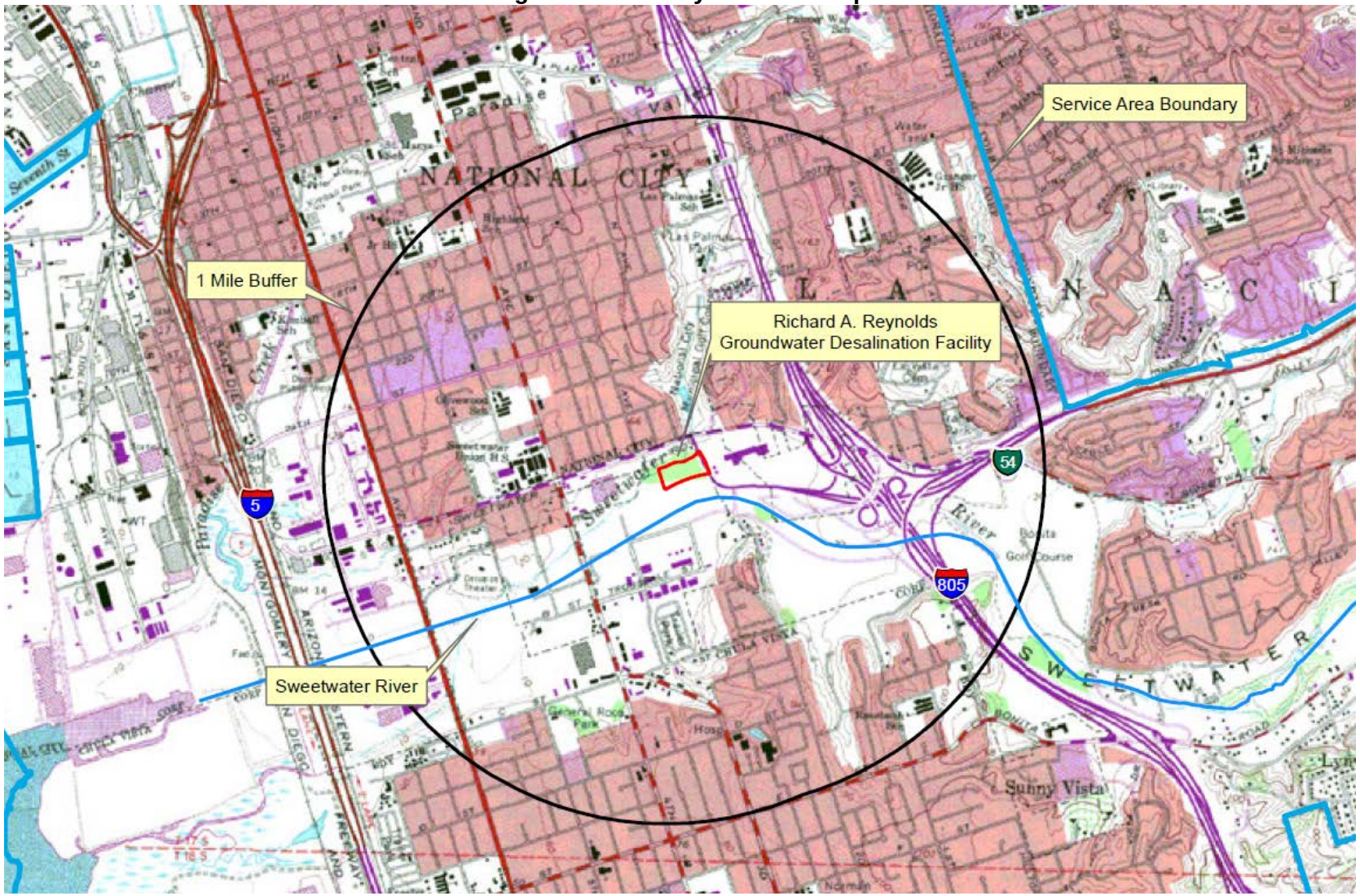


Figure B-2. Discharge Locations

Drawing Reference:

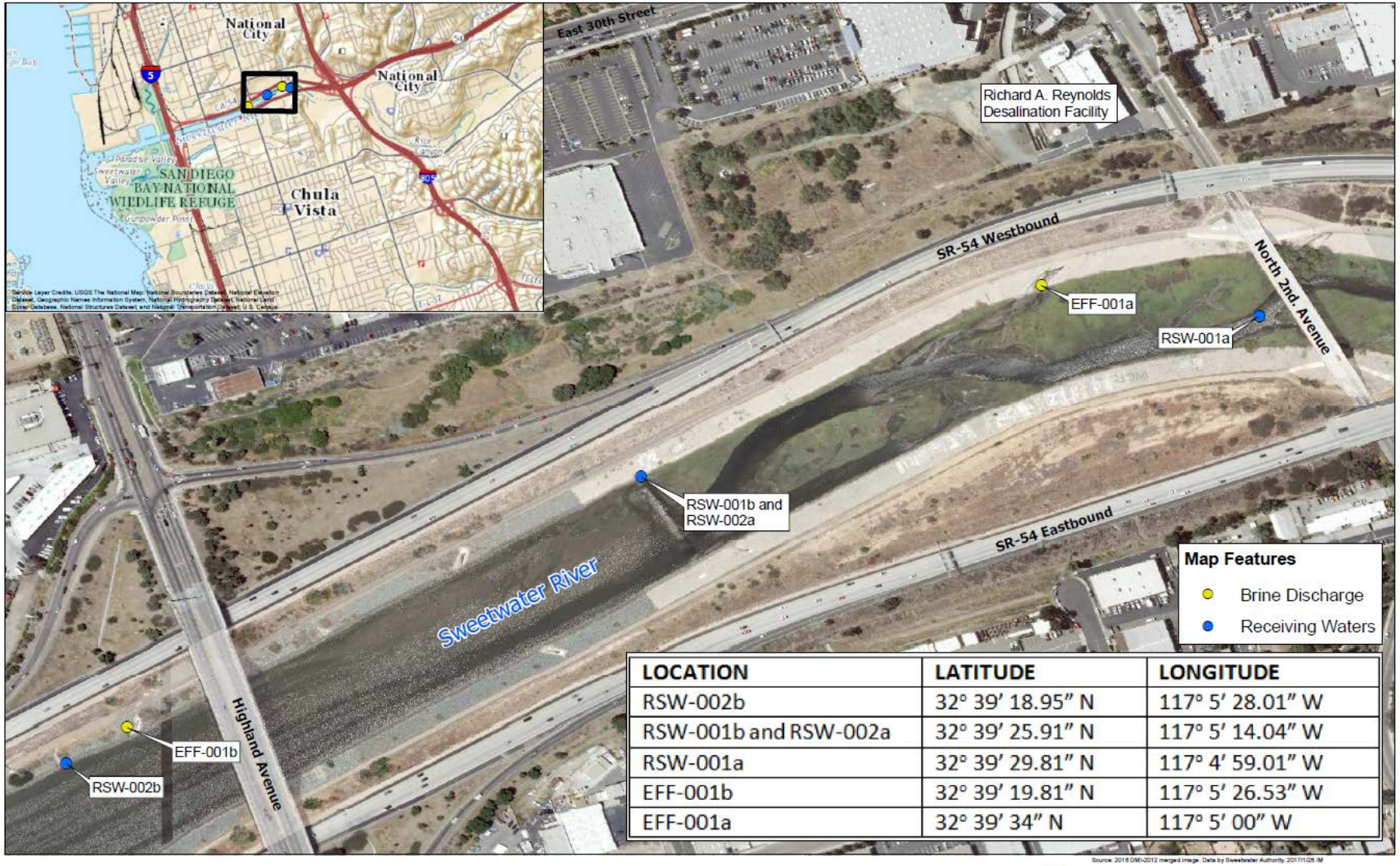
ESRI World Street Map Service

Copyright:© 2009 ESRI, AND, TANA, UNEP-WCMC

DISCHARGE LOCATION MAP

REYNOLDS DESALINATION FACILITY, CHULA VISTA

Figure B-3. Receiving Water Monitoring Locations



LOCATION	LATITUDE	LONGITUDE
RSW-002b	32° 39′ 18.95″ N	117° 5′ 28.01″ W
RSW-001b and RSW-002a	32° 39′ 25.91″ N	117° 5′ 14.04″ W
RSW-001a	32° 39′ 29.81″ N	117° 4′ 59.01″ W
EFF-001b	32° 39′ 19.81″ N	117° 5′ 26.53″ W
EFF-001a	32° 39′ 34″ N	117° 5′ 00″ W

Discharge Permit Order No. R9-2010-0012 Receiving Waters Monitoring Stations
Sweetwater Authority Richard A. Reynolds Desalination Facility

N 0 150 300 600 Feet

ATTACHMENT C – FLOW SCHEMATIC FOR BRINE DISCHARGE

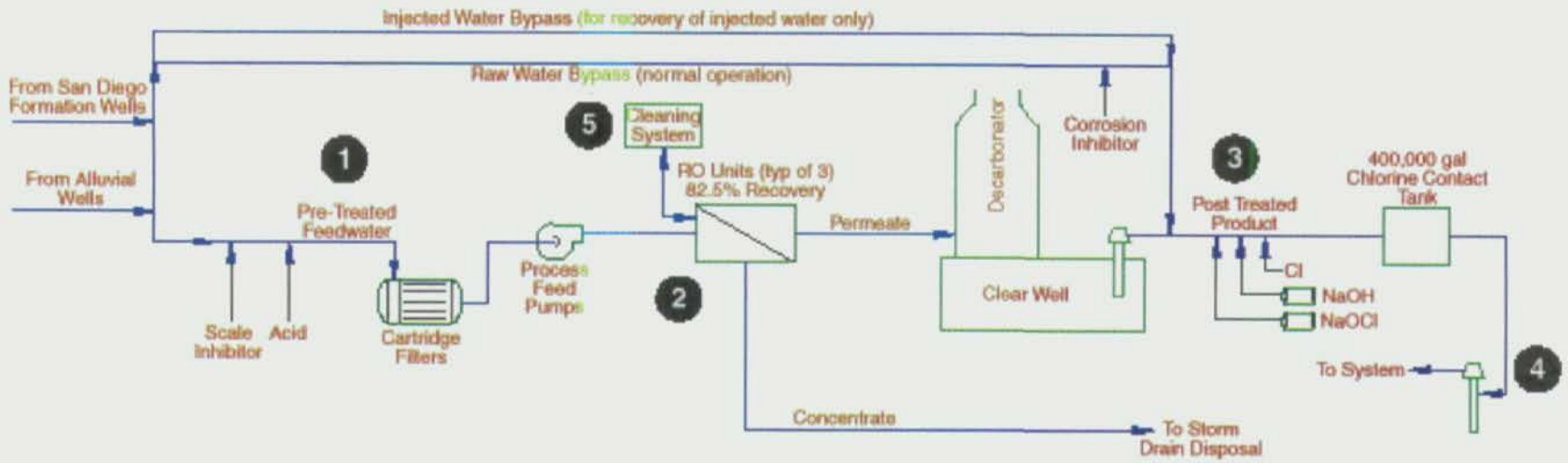


Figure 2 - Facility Schematic

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 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. (Title 40, Code of Federal Regulations (40 CFR) section 122.41(a) and Water Code, sections 13261, 13263, 13265, 13268, 13304, 13350, 13385.)

2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR 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 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) and Water Code, sections 13267 and 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 CFR section 122.41(i)(1) and Water Code sections 13267 and 13383);

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) and Water Code sections 13267 and 13383);

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 CFR section 122.41(i)(3) and Water Code sections 13267 and 13383); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 CFR section 122.41(i)(4) and Water Code sections 13267 and 13383.)

G. Bypass

1. Definitions

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

b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR section 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR section 122.41(m)(2).)

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

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

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR section 122.41(m)(4)(i)(B)); and

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

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

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (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 must be conducted according to test procedures approved under 40 CFR part 136 for the analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 CFR part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

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

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

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

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

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

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

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

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

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

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

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).)

6. Any person providing the electronic signature for documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all relevant requirements of 40 CFR part 3 (Cross-Media Electronic Reporting) and 40 CFR part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 CFR § 122.22(e).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR 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. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J and comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR 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 subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR reporting form specified by the San Diego Water Board or State 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 could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 CFR § 122.41(l)(1)(ii).)

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).)

J. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 CFR part 127 to the initial recipient defined in 40 CFR section 127.2(b). USEPA will identify and publish the list of initial recipients on its

website and in the Federal Register, by State and by NPDES data group [see 40 CFR section 127.2(c)]. USEPA will update and maintain this listing. (40 CFR § 122.41(l)(9).)

VI. STANDARD PROVISIONS – ENFORCEMENT

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 13268, 13350, 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

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

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

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

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

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (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

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Section 308 of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of the Code of Federal Regulations, title 40 (40 CFR) require that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. California Water Code 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, 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, 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:

- Management Information Need – Why does the San Diego Water Board need to know the answer?
- Monitoring Criteria – What monitoring will be conducted for deriving an answer to the question?
- Expected Product – How should the answer be expressed and reported?
- 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 monitored 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 the U.S. Environmental Protection Agency (USEPA) test procedures approved at 40 CFR part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act* as amended, unless other test procedures are specified in this Order and/or in this MRP or otherwise specified by the San Diego Water Board and/or USEPA, Region IX.

D. Laboratories analyzing monitoring samples shall be certified by the State Water Resources Control Board (State Water Board) Division of Drinking Water (DDW), in accordance with the provision of Water Code section 13176, and must include quality assurance (QA) /quality control (QC) data with their reports. 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/Permit. Additional information on ELAP can be accessed at
http://www.waterboards.ca.gov/drinking_water/certlic/labs/index.shtml
and
http://www.waterboards.ca.gov/drinking_water/programs/elap/ELAPContacts.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 to or greater than 80 percent.

H. The Discharger shall ensure that the results of the Discharge Monitoring Report-QA (DMR-QA) Study is submitted annually to the State Water Board at the following address:

State Water Resources Control Board Quality Assurance Program Officer
Office of Information Management and Analysis
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 criteria of the California Toxics Rule (CTR) shall be conducted in accordance with procedures described in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP) and restated in this MRP.

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. The MLs defined in Appendix 4 of the SIP are applicable to these discharges. 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	Coordinates[1]
001a	EFF-001a	Emergency Outfall for Discharge of Demineralization Brine to the Lower Sweetwater River	32º 39’ 34” N; 117º 05’ 00” W
001b	EFF-001b[2]	Discharge of Demineralization Brine to the Lower Sweetwater River	32º 39’ 19.8” N; 117º 05’ 26.5” W
--	RSW-001a[3]	Lower Sweetwater River just west of N. 2nd Ave., approximately 450 feet upstream of the confluence of the Upper Paradise Creek Flood Control Channel and the Lower Sweetwater River	32º 39’ 29.81” N; 117º 04’ 59.01” W
--	RSW-002a[3]	Drop Structure Location approximately 850 feet west of the confluence of the Upper Paradise Creek Flood Control Channel and the Lower Sweetwater River. Same as RSW-001b	32º 39’ 25.91” N; 117º 05’ 14.04” W
--	RSW-001b[4]	Drop Structure Location approximately 850 feet west of the confluence of the Upper Paradise Creek Flood Control Channel and the Lower Sweetwater River. Same as RSW-002a	32º 39’ 25.91” N; 117º 05’ 14.04” W
--	RSW-002b[4]	Approximately 150 feet west of the Relocated Discharge of Demineralization Brine in the Lower Sweetwater River	32º 39’ 18.95” N; 117º 05’ 28.01” W

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

2 Plant feed water and valve pressure relief water may be discharged through Discharge Point No. 001b when the Facility is not discharging demineralization brine. Such discharges are regulated separately under the Drinking Water Permit WQ 2014-0194-DWQ.

3 When Discharge Point No. 001a is utilized, receiving water monitoring shall occur at Monitoring Locations RSW-001a and RSW-002a.

4 When Discharge Point No. 001b is utilized, receiving monitoring shall occur at Monitoring Locations RSW-001b and RSW-002b.

III. CORE MONITORING REQUIREMENTS

A. 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:

- Does the effluent comply with effluent limitations, performance goals, and other requirements of this Order, thereby ensuring that water quality standards are achieved in the receiving water?
- What is the mass of constituents that are discharged daily, monthly, semiannually, and annually?
- Is the effluent concentration or mass changing over time?
- Is the Facility being properly operated and maintained to ensure compliance with the conditions of the Order?

1. Monitoring Locations EFF-001a and EFF-001b – Demineralization Brine.

a. The Discharger shall notify the San Diego Water Board within seven calendar days when effluent is discharged at Discharge Point No. 001a. The notification shall include the reason for diverting to Discharge Point No. 001a, the duration of discharge, and any other relevant information.

b. The Discharger shall monitor effluent at Monitoring Locations EFF-001a and EFF-001b as follows:

Table E-2. Effluent Monitoring for Discharge Point Nos. 001a[1] and 001b

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow Rate	MGD	Meter	Daily	--
pH	s.u.	Grab	Monthly	[2]
TSS	mg/L	Grab	Monthly	[2]
Oil and Grease	mg/L	Grab	Monthly	[2]
Temperature	ºF	Grab	Weekly	[2]
Turbidity	NTU	Grab	Monthly	[2]
Cyanide, Total	µg/L	Grab	Monthly	[2]
Copper, Total Recoverable	µg/L	Grab	Monthly	[2,3]
Selenium, Total Recoverable	µg/L	Grab	Quarterly	[2,3]
Nitrogen (series)[4]	mg/L	Grab	Monthly	[2]
Phosphorous (series)[5]	mg/L	Grab	Monthly	[2]
Settleable Solids	ml/L	Grab	Monthly	[2]
Salinity	ppt	Grab	Monthly	[2]
Benzo(a)Anthracene	µg/L	Grab	Semiannually	[2]
Benzo(a)Pyrene	µg/L	Grab	Semiannually	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Benzo(b)Fluoranthene	µg/L	Grab	Semiannually	[2]
Benzo(k)Fluoranthene	µg/L	Grab	Semiannually	[2]
Bis(2-Ethylhexyl)Phthalate	µg/L	Grab	Semiannually	[2]
Chrysene	µg/L	Grab	Semiannually	[2]
Dibenzo(a,h)Anthracene	µg/L	Grab	Semiannually	[2]
Indeno(1,2,3-cd)Pyrene	µg/L	Grab	Semiannually	[2]
Chronic Toxicity	"Pass"/"Fail"[9]	Grab	Semiannually	[10]
Antimony, Total Recoverable[6]	µg/L	Grab	Semiannually	[7]
Arsenic, Total Recoverable[6]	µg/L	Grab	Semiannually	[7]
Beryllium, Total Recoverable[6]	µg/L	Grab	Semiannually	[7]
Cadmium, Total Recoverable[6]	µg/L	Grab	Semiannually	[7]
Chromium (III) [6]	µg/L	Grab	Semiannually	[7]
Chromium (VI) [6]	µg/L	Grab	Semiannually	[7]
Lead, Total Recoverable[6]	µg/L	Grab	Semiannually	[7]
Mercury, Total Recoverable[6]	µg/L	Grab	Semiannually	[7]
Nickel, Total Recoverable	µg/L	Grab	Semiannually	[2,3]
Silver, Total Recoverable[6]	µg/L	Grab	Semiannually	[7]
Thallium, Total Recoverable[6]	µg/L	Grab	Semiannually	[7]
Zinc, Total Recoverable[6]	µg/L	Grab	Semiannually	[7]
Asbestos[6]	µg/L	Grab	Semiannually	[7]
Acrolein	µg/L	Grab	Semiannually	[7]
2,3,7,8-TCDD (Dioxin)	µg/L	Grab	Semiannually	[7]
TCDD Equivalents[8]	µg/L	Grab	Semiannually	[2]
Acrylonitrile[6]	µg/L	Grab	Semiannually	[7]
Benzene[6]	µg/L	Grab	Semiannually	[7]
Bromoform[6]	µg/L	Grab	Semiannually	[7]
Carbon Tetrachloride[6]	µg/L	Grab	Semiannually	[7]
Chlorobenzene[6]	µg/L	Grab	Semiannually	[7]
Chlorodibromomethane[6]	µg/L	Grab	Semiannually	[7]
Chloroethane[6]	µg/L	Grab	Semiannually	[7]
2-Chloroethylvinyl Ether[6]	µg/L	Grab	Semiannually	[7]
Chloroform[6]	µg/L	Grab	Semiannually	[7]
Dichlorobromomethane[6]	µg/L	Grab	Semiannually	[7]
1,1-Dichloroethane[6]	µg/L	Grab	Semiannually	[7]
1,2-Dichloroethane[6]	µg/L	Grab	Semiannually	[7]
1,1-Dichloroethylene[6]	µg/L	Grab	Semiannually	[7]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
1,2-Dichloropropane[6]	µg/L	Grab	Semiannually	[7]
1,3-Dichloropropylene[6]	µg/L	Grab	Semiannually	[7]
Ethylbenzene[6]	µg/L	Grab	Semiannually	[7]
Methyl Bromide[6]	µg/L	Grab	Semiannually	[7]
Methyl Chloride[6]	µg/L	Grab	Semiannually	[7]
Methylene Chloride (Dichloromethane) [6]	µg/L	Grab	Semiannually	[7]
1,1,2,2-Tetrachloroethane[6]	µg/L	Grab	Semiannually	[7]
Tetrachloroethylene[6]	µg/L	Grab	Semiannually	[7]
Toluene[6]	µg/L	Grab	Semiannually	[7]
1,2-Trans-Dichloroethylene[6]	µg/L	Grab	Semiannually	[7]
1,1,1-Trichloroethane[6]	µg/L	Grab	Semiannually	[7]
1,1,2-Trichloroethane[6]	µg/L	Grab	Semiannually	[7]
Trichloroethylene[6]	µg/L	Grab	Semiannually	[7]
Vinyl Chloride[6]	µg/L	Grab	Semiannually	[7]
Chlorophenol[6]	µg/L	Grab	Semiannually	[7]
2,4-Dichlorophenol[6]	µg/L	Grab	Semiannually	[7]
2,4-Dimethylphenol[6]	µg/L	Grab	Semiannually	[7]
2-Methyl-4,6-Dinitrophenol[6]	µg/L	Grab	Semiannually	[7]
2,4-Dinitrophenol[6]	µg/L	Grab	Semiannually	[7]
2-Nitrophenol[6]	µg/L	Grab	Semiannually	[7]
4-Nitrophenol[6]	µg/L	Grab	Semiannually	[7]
3-Methyl-4-Chlorophenol[6]	µg/L	Grab	Semiannually	[7]
Pentachlorophenol[6]	µg/L	Grab	Semiannually	[7]
Phenol[6]	µg/L	Grab	Semiannually	[7]
2,4,6-Trichlorophenol[6]	µg/L	Grab	Semiannually	[7]
Acenaphthene[6]	µg/L	Grab	Semiannually	[7]
Acenaphthylene[6]	µg/L	Grab	Semiannually	[7]
Anthracene[6]	µg/L	Grab	Semiannually	[7]
Benzidine[6]	µg/L	Grab	Semiannually	[7]
Benzo(ghi)Perylene[6]	µg/L	Grab	Semiannually	[7]
Bis(2-Chloroethoxy)Methane[6]	µg/L	Grab	Semiannually	[7]
Bis(2-Chloroethyl)Ether[6]	µg/L	Grab	Semiannually	[7]
Bis(2-Chloroisopropyl)Ether[6]	µg/L	Grab	Semiannually	[7]
4-Bromophenyl Phenyl Ether[6]	µg/L	Grab	Semiannually	[7]
Butylbenzyl Phthalate[6]	µg/L	Grab	Semiannually	[7]
2-Chloronaphthalene[6]	µg/L	Grab	Semiannually	[7]
4-Chlorophenyl Phenyl Ether[6]	µg/L	Grab	Semiannually	[7]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
1,2-Dichlorobenzene[6]	µg/L	Grab	Semiannually	[7]
1,3-Dichlorobenzene[6]	µg/L	Grab	Semiannually	[7]
1,4-Dichlorobenzene[6]	µg/L	Grab	Semiannually	[7]
3,3-Dichlorobenzidine[6]	µg/L	Grab	Semiannually	[7]
Diethyl Phthalate[6]	µg/L	Grab	Semiannually	[7]
Dimethyl Phthalate[6]	µg/L	Grab	Semiannually	[7]
Di-n-Butyl Phthalate[6]	µg/L	Grab	Semiannually	[7]
2,4-Dinitrotoluene[6]	µg/L	Grab	Semiannually	[7]
2,6-Dinitrotoluene[6]	µg/L	Grab	Semiannually	[7]
Di-n-Octyl Phthalate[6]	µg/L	Grab	Semiannually	[7]
1,2-Diphenylhydrazine[6]	µg/L	Grab	Semiannually	[7]
Fluoranthene[6]	µg/L	Grab	Semiannually	[7]
Fluorene[6]	µg/L	Grab	Semiannually	[7]
Hexachlorobenzene[6]	µg/L	Grab	Semiannually	[7]
Hexachlorobutadiene[6]	µg/L	Grab	Semiannually	[7]
Hexachlorocyclopentadiene[6]	µg/L	Grab	Semiannually	[7]
Hexachloroethane[6]	µg/L	Grab	Semiannually	[7]
Isophorone[6]	µg/L	Grab	Semiannually	[7]
Naphthalene[6]	µg/L	Grab	Semiannually	[7]
Nitrobenzene[6]	µg/L	Grab	Semiannually	[7]
N-Nitrosodimethylamine[6]	µg/L	Grab	Semiannually	[7]
N-Nitrosodi-n-Propylamine[6]	µg/L	Grab	Semiannually	[7]
N-Nitrosodiphenylamine[6]	µg/L	Grab	Semiannually	[7]
Phenanthrene[6]	µg/L	Grab	Semiannually	[7]
Pyrene[6]	µg/L	Grab	Semiannually	[7]
1,2,4-Trichlorobenzene[6]	µg/L	Grab	Semiannually	[7]
Aldrin[6]	µg/L	Grab	Semiannually	[7]
alpha-BHC[6]	µg/L	Grab	Semiannually	[7]
beta-BHC[6]	µg/L	Grab	Semiannually	[7]
gamma-BHC (Lindane) [6]	µg/L	Grab	Semiannually	[7]
delta-BHC	µg/L	Grab	Semiannually	[7]
Chlordane[6]	µg/L	Grab	Semiannually	[7]
4,4-DDT[6]	µg/L	Grab	Semiannually	[7]
4,4-DDE[6]	µg/L	Grab	Semiannually	[7]
4,4-DDD[6]	µg/L	Grab	Semiannually	[7]
Dieldrin[6]	µg/L	Grab	Semiannually	[7]
alpha-Endosulfan[6]	µg/L	Grab	Semiannually	[7]
beta-Endosulfan[6]	µg/L	Grab	Semiannually	[7]
Endosulfan Sulfate[6]	µg/L	Grab	Semiannually	[7]
Endrin[6]	µg/L	Grab	Semiannually	[7]
Endrin Aldehyde[6]	µg/L	Grab	Semiannually	[7]
Heptachlor[6]	µg/L	Grab	Semiannually	[7]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Heptachlor Epoxide[6]	µg/L	Grab	Semiannually	[7]
PCBs sum[6]	µg/L	Grab	Semiannually	[7]
Toxaphene[6]	µg/L	Grab	Semiannually	[7]

[1] Effluent limitations specified in section IV.A of this Order will apply to EFF-001a when it is being utilized as an emergency outfall when the discharge through Discharge Point No. 001b is not possible due to temporary maintenance activities, or other conditions that temporarily prevent the use of the outfall at Discharge Point No. 001b.

[2] Consistent with the requirements of 40 CFR part 136.

[3] USEPA Method 1640 (reductive precipitation sample pre-concentration)/USEPA Method 200.8 (ICP-MS) may be used to determine copper and nickel; USEPA Method 7742 (hydride) may be used to determine selenium.

[4] Nitrogen (series) = total nitrogen, organic nitrogen, nitrate, nitrite, ammonia.

[5] Phosphorous (series) = total phosphorous and orthophosphate phosphorous.

[6] Priority pollutants as specified in 40 CFR section 131.38. Priority pollutants shall be monitored semiannually and shall be conducted concurrently with effluent monitoring for pH.

[7] Consistent with the requirements of 40 CFR part 136 and Appendix E-1 of this MRP.

[8] Tetrachlorodibenzo-p-dioxin (TCDD) equivalents (dioxin) 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

[9] For compliance determination, chronic toxicity results shall be reported as “Pass” or “Fail.” For monitoring purpose only, chronic toxicity results shall also include “Percent Effect.”

[10] As specified in section VII.L of this Order and section III.B of this MRP.

B. Whole Effluent Toxicity (WET) Testing Requirements

Whole Effluent Toxicity (WET) refers to the overall aggregate toxic effect to aquatic organisms from all pollutants contained in a facility's effluent. The control of WET is one approach this Order uses to control the discharge of toxic pollutants. WET tests evaluate the 1) aggregate toxic effects of all chemicals in the effluent including additive, synergistic, or antagonistic effects; 2) the 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:

- Does the effluent comply with permit effluent limitations for acute and chronic toxicity thereby ensuring that water quality standards are achieved in the receiving water?

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

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

   The chronic IWC is calculated by dividing 100 percent by the dilution ratio. This Order does not allow for dilution. The chronic toxicity IWC 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. During accelerated monitoring, 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 between the conclusion of sample collection and test initiation.

3. Chronic Marine Species and Test Methods

   If effluent is discharging to receiving waters with salinity greater than one parts per thousand (ppt), estuarine/marine organisms are used for the toxicity testing. The average salinity in the receiving water over the permit term was 26 ppt so toxicity testing will be conducted using estuarine/marine organisms. The Discharger shall conduct the following chronic toxicity tests on effluent samples, at the in-stream waste concentration for the discharge, in accordance with species and test methods in *Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine Estuarine Organisms* (EPA/600/R-95/136, 1995). Artificial sea salts or hypersaline brine shall be used to increase sample salinity if needed. In no case shall these species be substituted with another test species unless written authorization from the San Diego Water Board is received.

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

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

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

4. Species Sensitivity Screening

   Species sensitivity screening shall be conducted during this Order's first required sample collection. The Discharger shall collect a single effluent sample to initiate and concurrently conduct three toxicity tests using the fish, an invertebrate, and the alga species previously referenced. This sample shall also be analyzed for the parameters required on a monthly frequency for the discharge, during that given month. As allowed under the test method for the *Atherinops affinis*, a second and third sample shall be collected for use as test solution renewal water as the seven-day toxicity test progresses. If the result of all three species is "Pass," then the species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during this Order cycle. If only one species fails, then that species shall be used for routine monitoring during

this Order cycle. Likewise, if two or more species result in "Fail," then the species that exhibits the highest "Percent Effect" at the discharge IWC during the suite of species sensitivity screening shall be used for routine monitoring during this Order cycle, until such time as a rescreening is required.

Species sensitivity rescreening is required every 24 months if there has been a discharge. If the discharge is intermittent and occurs only during wet weather, rescreening is not required. If rescreening is necessary, the Discharger shall rescreen with the marine vertebrate species, a marine invertebrate species, and the alga species previously referenced, and continue to monitor with the most sensitive species. If the first suite of rescreening tests demonstrates that the same species is the most sensitive then no further rescreening is necessary. If a different species is the most sensitive or if there is ambiguity, then the Discharger may proceed with suites of screening tests for a minimum of three, but not to exceed five suites.

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

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

5. QA and Additional Requirements

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

a. The discharge is subject to determination of "Pass" or "Fail" from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (USEPA 833- R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is: Mean discharge IWC response ≤0.75 × Mean control response. A test result that rejects this null hypothesis is reported as "Pass." A test result that does not reject this null hypothesis is reported as "Fail." This is a t-test (formally Student's t-test), a statistical analysis comparing two sets of replicate observations—in the case of WET, only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is "Pass" or "Fail"). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances. The relative "Percent Effect" at the discharge IWC is defined and reported as: ((Mean control response - Mean discharge IWC response) ÷ Mean control response) × 100.

b. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95-136, 1995), the test should be declared invalid, then the Discharger must resample and re-test within 14 days of test termination.

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

d. Monthly reference toxicant testing is sufficient. All reference toxicant test results should be reviewed and reported using the effects concentration at 25 percent (EC25).

e. The Discharger shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of this MRP and the rationale is explained in the Fact Sheet (Attachment F).

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

The Discharger shall prepare and submit a copy of the Discharger's Initial Investigation TRE Work Plan to the San Diego Water Board for approval within 90 days of the effective date of this Order. If the San Diego Water Board does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use USEPA manual: *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600-2-88/070) as guidance, or most current version. The TRE Work Plan shall describe the steps that the Discharger intends to follow if toxicity is detected, and shall include, at a minimum:

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

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

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

7. Accelerated Monitoring Schedule for Maximum Daily Single Result: "Fail."

The Maximum Daily single result shall be used to determine if accelerated testing needs to be conducted.

Once the Discharger becomes aware of this result, the Discharger shall notify the San Diego Water Board and implement an accelerated monitoring schedule within seven calendar days of the receipt 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") for chronic toxicity tests shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL.

8. TRE Process

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

a. Preparation and Implementation of Detailed TRE Work Plan. The Discharger shall immediately initiate a TRE using, USEPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs) (EPA/600/2-88/070, April 1989*) and, within 15 days of receiving validated results during accelerated monitoring, submit to the San Diego Water Board a detailed TRE Work Plan, which shall follow the

Initial Investigation TRE Work Plan revised as appropriate for this toxicity event. It shall include the following information, and comply with additional conditions set by the San Diego Water Board:

i. Further actions by the Discharger to investigate, identify, and correct the causes of toxicity;

ii. Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and

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

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

c. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.

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

e. The San Diego Water Board recognizes that toxicity may be episodic and identification of causes and reduction of sources of toxicity may not be successful in all cases. The TRE may be ended at any stage if monitoring finds there is no longer toxicity.

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-7.

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* (USEPA 833-R-10-003, 2010) Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1.

d. TRE/TIE results. The San Diego Water Board shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. Prior to the completion of the final TRE/TIE report, the Discharger shall provide status updates in the monthly monitoring reports, indicating which TRE/TIE steps are underway and which steps have been completed.

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

f. Graphical plots and tables 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.

C. Land Discharge Monitoring Requirements – NOT APPLICABLE

D. Recycling Monitoring Requirements – NOT APPLICABLE

IV. RECEIVING WATER AND SEDIMENT 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:

- Does the receiving water meet water quality standards?
- Are the receiving water conditions getting better or worse over time?
- 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. Receiving Water Quality Monitoring

1. Monitoring Locations RSW-001a/RSW-001b (Upstream) and RSW-002a/RSW002b (Downstream) Lower Sweetwater River

The Discharger shall monitor the Lower Sweetwater River at stations RSW-001a/RSW-001b and RSW-002a/RSW-002b as follows:

Table E-3. Receiving Water Monitoring at RSW-001a/RSW-001b and RSW-002a/RSW002b[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	s.u.	Grab	Quarterly	[2]
TSS	mg/L	Grab	Quarterly	[2]
Temperature	ºF	Grab	Quarterly	[2]
Copper, Total Recoverable	µg/L	Grab	Quarterly	[2,3]
Selenium, Total Recoverable	µg/L	Grab	Quarterly	[2,3]
Ammonia, Un-unionized as N	mg/L	Grab	Quarterly	[2]
Dissolved Oxygen	mg/L	Grab	Quarterly	[2]
Nitrogen (series)[4]	mg/L	Grab	Quarterly	[2]
Phosphorus (series)[5]	mg/L	Grab	Quarterly	[2]
Settleable Solids	mg/L	Grab	Quarterly	[2]
Priority Pollutants[6]	µg/L	Grab	Annually[7]	[8]
TCDD Equivalents	µg/L	Grab	Annually[7,9]	[2]
Salinity	ppt	Grab	Quarterly	[2]
Harness ($CaCO_3$)	mg/L	Grab	Quarterly	[2]

1 When Discharge Point No. 001a is utilized, monitoring shall occur at RSW-001a and RSW-002a. When Discharge Point 001b is utilized, monitoring shall occur at RSW-001b and RSW-002b.
2 Consistent with the requirements of 40 CFR part 136.
3 USEPA Method 1640 (reductive precipitation sample pre-concentration)/USEPA Method 200.8 (ICP-MS) may be used to determine copper and nickel; USEPA Method 7742 (hydride) may be used to determine selenium.
4 Nitrogen (series) = total nitrogen, organic nitrogen, nitrate, nitrite, ammonia.
5 Phosphorous (series) = total phosphorous and orthophosphate phosphorous.
6 Priority pollutants as specified in 40 CFR section 131.38.
7 Priority pollutants shall be sampled at RWS-001 and RSW-002 shall be conducted concurrently with effluent monitoring for pH.
8 Consistent with the requirements of 40 CFR part 136.
9 The Discharger shall monitor for the presence of the 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD or Dioxin) congeners. 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

B. Sediment Quality Monitoring

1. **Sediment Monitoring Plan.** The Discharger shall prepare and submit a Sediment Monitoring Plan to assess compliance with Receiving Water Limitations of this Order. The Sediment Monitoring Plan shall be submitted within 12 months of the effective date of this Order. The Sediment Monitoring Plan shall contain the following elements:

   a. **Quality Assurance Project Plan (QAPP).** A QAPP describing the project objectives and organization, functional activities, and QA/QC protocols for the sediment monitoring.

   b. **Sampling and Analysis Plan.** A Sampling and Analysis Plan based on methods or metrics described in 40 CFR part 136, *Guidelines Establishing Test Procedures for the Analysis of* Pollutants *under the Clean Water Act* and the State Water Board's *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality* (Sediment Quality Plan). The Sampling and Analysis Plan shall include a list of chemical analytes for the sediment as well as the monitoring frequency and sample station locations.

   c. **Frequency**. Sediment chemistry, toxicity and benthic community monitoring shall be done at least once during the term of this Order.

   d. **Station Locations.** Triad station locations shall be identified after evaluating the items in section IV.B.1.g through IV.B.1.k below.

   e. **Sediment Chemistry, Toxicity, and Benthic Community Condition**. Sediment chemistry, toxicity, and benthic community monitoring shall be done in accordance with, at a minimum, the requirements set forth in the State Water Board's *Sediment Quality Plan*. The proposal must also include the following:

      i. Sediment Chemistry. Bulk sediment chemical analysis shall include at a minimum the pollutants identified in Attachment A of the State Water Board's *Sediment Quality Plan* and listed in Attachment K of this Order.

      ii. Sediment Toxicity. Short term survival tests and sublethal tests shall be performed as specified in section V.F of the State Board's *Sediment Quality Plan*. The results shall be recorded as "Percent of control response".

      iii. Benthic Community - Subtidal Habitat The benthic community shall be evaluated using the line of evidence approach described in section V.G of the State Water Board's *Sediment Quality Plan*.

   f. **Aquatic-Dependent Wildlife and Human Health Risk Assessment.** An aquatic-dependent wildlife and human health screening-level risk assessment shall be conducted to evaluate if sediment conditions potentially pose an unacceptable risk to aquatic-dependent wildlife and human health. The Tier I screening-level risk assessment shall be based on tissue data derived from the exposure of the clam *Macoma nasuta* to site sediments for 28 days using American Society for Testing and Materials (ASTM) protocols or similar procedures. In conducting a human health or ecological risk assessment the Discharger shall consider any applicable and relevant human health or ecological risk information, including policies and guidance from California Environmental Protection Agency's (Cal/EPA) Office of Environmental Health Hazard Assessment (OEHHA) policies for fish consumption and risk assessment, Cal/EPA's Department of Toxic Substances Control (DTSC) Risk Assessment, U.S. EPA,, California Department of Fish and Wildlife, National Oceanographic Atmospheric Administration, and U.S. Fish and Wildlife Service

g. **Conceptual Model**. A Conceptual Model identifying the physical and chemical factors that control the fate and transport of pollutants and receptors that could be exposed to pollutants in the sediment shall be developed and included in the Sediment Monitoring Plan. The Conceptual Model will serve as the basis for assessing the appropriateness of the Sediment Monitoring Plan design. The Conceptual Model shall consider:

   i. Points of discharge into the segment of the water body or region of interest;

   ii. Tidal flow and/or direction of predominant currents;

   iii. Historic or legacy conditions in the vicinity;

   iv. Nearby land and marine uses or actions;

   v. Beneficial Uses;

   vi. Potential receptors of concern;

   vii. Change in grain size salinity water depth and organic matter; and

   viii. Other sources or discharges in the immediate vicinity.

h. **Spatial Representation**. The Sediment Monitoring Plan shall be designed to ensure that the sample stations are spatially representative of the sediment within the water body segment or region of interest.

i. **Existing Data and Information**. The Sediment Monitoring Plan design shall take into consideration existing data and information of appropriate quality including ongoing monitoring programs conducted by other entities.

j. **Strata**. Identification of appropriate strata shall consider characteristics of the water body including sediment transport, hydrodynamics, depth, salinity, land uses, inputs (both natural and anthropogenic) and other factors that could affect the physical, chemical, or biological condition of the sediment.

k. **Index Period**. All sediment stations shall be sampled between the months of June through September to correspond with the benthic community index period.

l. **Report Completion Schedule**. The Sediment Monitoring Plan shall include a schedule for completion of all sample collection and analysis activities and submission of the Sediment Monitoring Report described in section IV.C. of this MRP.

2. Sediment Quality Monitoring Plan Implementation.

The Discharger or water body monitoring coalition shall implement the Sediment Monitoring Plan in accordance with the schedule contained in the Sediment Monitoring Plan unless otherwise directed in writing by the San Diego Water Board within 90 days of submission. At the latest, implementation of the sediment monitoring shall begin within 36 months of the effective date of this Order. Before beginning sample collection activities, the Discharger or water body monitoring coalition shall comply with any conditions set by the San Diego Water Board with respect to sample collection methods such as providing split samples.

C. Receiving Water Quality and Sediment Quality Monitoring Reports.

The Discharger or water body monitoring coalition shall submit annual receiving water column monitoring reports and a sediment monitoring report by March 1st of the year after the sampling occurs as shown in Table E-7. The Water Column and Sediment Monitoring Reports shall contain the following information:

1. **Monitoring Results**. The results of the monitoring in tabular and graphical form.
2. **Data Analysis, Interpretations, and Conclusions**. An analysis of the data to evaluate trends and interpretations and conclusions on the data.
3. **Sediment Aquatic Life Analysis.** The data, analyses, interpretation, and integration of the multiple lines of evidence (MLOE), and station assessment shall be performed using the MLOE approach as prescribed in the State Water Board's *Sediment Quality Plan*. Compliance with receiving water limitations for sediment quality shall be determined for each station by integrating the sediment chemistry, toxicity, and benthic community lines of evidence to derive a benthic triad station assessment in accordance with the methodology in section V.I of the State Water Board's *Sediment Quality Plan*.
4. **Receiving Water Limitation Attainment Determination.** A determination shall be made as to whether:
   a. Compliance with the aquatic life sediment quality objectives specified in Receiving Water Limitations section V.F.3 and V.F.4 of this Order have been attained at each sediment quality monitoring station; and
   b. Compliance with applicable water quality objectives, federal criterion and other receiving water limitations specified in Receiving Water Limitations section V.C, V.D, and V.F of this Order for have been attained at each receiving water quality monitoring station.
5. **Sample Location Map.** The locations, type, and number of samples shall be identified and shown on a site map(s).
6. **Laboratory Reports.** The reports from laboratories with the original analysis results including any QA/QC information.

D. Receiving Water Quality and Sediment Quality Monitoring Provisions

1. Monitoring conducted to meet receiving water and sediment monitoring requirements of this MRP shall include, at a minimum, the following information:
   a. A description of climatic and receiving water characteristics at the time of sampling [e.g. observations of wind (direction and speed); weather (e.g. cloudy, sunny, rainy, etc.; observations of water color or discoloration (percent algal cover at surface and bottom); presence of oil and grease, turbidity, odor, and other materials of sewage origin in the water or on the river banks; time of sampling; air temperature (°F); water temperature (°F); etc.].
   b. A description of sampling stations including a description of characteristics unique to each station [e.g. Global Positioning System (GPS) coordinates for station location; photo documentation; sediment characteristics; presence of rocks; river flow; etc.]
2. Whenever possible, samples shall be collected on the same days as samples are collected at Monitoring Locations EFF-001a and/or EFF-001b.
3. For any monitoring period in which no discharge occurred, receiving water monitoring is not required if a statement is submitted certifying that no discharge occurred during the period.
4. Receiving water and sediment monitoring shall be performed individually by the Discharger to assess compliance with receiving water limits or through the Discharger's participation in a regional or water body monitoring coalition or both as determined by the San Diego Water Board.
5. To achieve maximum efficiency and economy of resources, the Discharger may establish or join a San Diego Bay water body monitoring coalition. If a San Diego Bay monitoring

coalition is formed, revised monitoring requirements will be established to ensure that appropriate monitoring is conducted in a timely manner.

V. REGIONAL WATERSHED MONITORING

The Discharger shall upon written request from the San Diego Water Board, participate with other regulated entities, other interested parties, and the San Diego Water Board in development, refinement, implementation, and coordination of regional monitoring and assessment programs to:

1. Determine the status and trends of conditions in the San Diego Bay watershed, including downstream San Diego Bay waters, with regard to beneficial uses, e.g.
   a. Are fish and shellfish safe to eat?
   b. Is water quality safe for swimming?
   c. Are ecosystems healthy?
2. Identify the stressors causing or contributing to conditions of concern;
3. Identify the sources of the stressors causing or contributing to conditions of concern; *and*
4. Evaluate the effectiveness (i.e., environmental outcomes) of actions taken to address such stressors.

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. The Discharger may decline to participate in regional watershed monitoring in which case the Discharger's individual sampling and analytical efforts will not be reallocated or otherwise affected.

VI. OTHER MONITORING REQUIREMENTS – NOT APPLICABLE

VII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

2. The Discharger shall report all instances of noncompliance whether or not reported under sections V.E, V.G, and V.H of the Standard Provisions (Attachment D) at the time monitoring reports are submitted.

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

4. 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 California Integrated Water Quality System (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.

5. 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.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall electronically submit SMRs using the State Water Board's CIWQS Program website at http://www.waterboards.ca.gov/water_issues/programs/ciwqs/. The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal. SMRs must be signed and certified as required by section V of the Standards Provisions (Attachment D). The Discharger shall maintain sufficient staffing and resources to ensure it submits SMRs that are complete and timely. This includes provision for training and supervision of individuals on how to prepare and submit SMRs. Any reports not in CIWQS shall be submitted electronically to the San Diego Water Board's email at sandiego@waterboards.ca.gov or as otherwise directed by the San Diego Water Board. The Discharger shall enter all violations into CIWQS.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP. 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. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Unless otherwise noted in this MRP, monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-4. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with quarterly SMR
Monthly	Permit effective date	1st day of calendar month through last day of calendar month	Submit with quarterly SMR
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	June 1 September 1 December 1 March 1
Semiannually	January 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	September 1 March 1
1/ Discharge Event	Permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	Submit with quarterly SMR
Annual (Receiving Water and Sediment)	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through December 31	March 1

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable 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 reported RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

b. Sample results less than the reported 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.

c. 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.

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

e. The Discharger shall instruct laboratories to establish calibration standards so that the RL 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 in Attachment A of this Order. For purposes of reporting and administrative enforcement by the San Diego Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL. The MLs defined in Appendix 4 of the SIP are applicable to these discharges

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

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

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

C. Discharge Monitoring Reports (DMRs)

1. DMRs are USEPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal shall be in addition to electronic

SMR submittal. Information about electronic DMR submittal is available at the DMR website at: http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring.

D. Other Reports

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

Table E-5. Other Reports

Report	Location of Requirement	Due Date
Initial Toxicity Reduction Evaluation (TRE) Work Plan	MRP section III.B.6.	90 days after the effective date of this Order
Sediment Monitoring Plan	MRP section IV.B.1	12 months after the effective date of this Order

ATTACHMENT F – FACT SHEET

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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 000000858
Discharger	Sweetwater Authority
Name of Facility	Richard A. Reynolds Desalination Facility
Facility Address	3066 North Second Avenue Chula Vista, CA 91910 San Diego County
Facility Contact, Title and Phone	Peter Baranov, Interim Director of Water Quality, Sweetwater Authority, (619) 409-6812, pbaranov@sweetwater.org
Authorized Person to Sign and Submit Reports	Peter Baranov, Interim Director of Water Quality, Sweetwater Authority, (619) 409-6812, pbaranov@sweetwater.org
Mailing Address	P.O. Box 2328 Chula Vista, CA 91912-2328
Billing Address	Same as Mailing Address
Type of Facility	Groundwater Demineralization Plant, SIC code 4941
Major or Minor Facility	Minor
Threat to Water Quality	III
Complexity	B
Pretreatment Program	NA
Recycling Requirements	NA
Facility Permitted Flow	2.5 million gallons per day (MGD) Or during emergencies and maintenance only: 0.8 MGD at 001a between June 1st through November 30th 1.0 MGD at 001a December 1st through May 31st
Facility Design Flow	2.5 MGD
Watershed	San Diego Bay
Receiving Water	Lower Sweetwater River, Tidal Prism of San Diego Bay
Receiving Water Type	Inland Surface Water, Estuary, and Enclosed Bay

A. Sweetwater Authority (Discharger) is the owner and operator of the Richard A. Reynolds Desalination Facility (Facility), a Groundwater Demineralization Plant.

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 the Lower Sweetwater River and the Tidal Prism of San Diego Bay, waters of the United States, and is currently regulated by Order No. R9-2010-0012, which was adopted on May 12, 2010, as amended on December 11, 2014 by Order No. R9-2014-0109, and expired on July 1, 2015. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order.

C. The Discharger filed a report of waste discharge (ROWD) and submitted an application for reissuance of its WDRs and NPDES permit on July 31, 2014.

D. Regulations at 40 CFR section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. However, pursuant to California Code of Regulations (CCR), title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

II. FACILITY DESCRIPTION

A. Description of Wastewater

The Facility is a groundwater desalination plant capable of pumping up to 10 MGD of brackish groundwater for desalination and use as a potable water supply to approximately 180,000 customers through approximately 35,000 service connections in the Cities of Chula Vista and National City. The Facility has a current discharge rate of 2.5 MGD. The main waste stream is a brine concentrate that is discharged through Discharge Point No. 001b to the Tidal Prism of San Diego Bay via the Lower Sweetwater River. The Facility may discharge through Discharge Point No. 001a only during emergencies or maintenance at a discharge rate of 0.8 MGD from June 1st through November 30th and 1.0 MGD from December 1st through May 31st. Eleven groundwater wells draw from the San Diego Formation Aquifer to provide plant feed-water to the existing Facility. Plant feed-water is pretreated by addition of scale inhibitors and then passes through cartridge filters to remove larger particles prior to treatment by reverse osmosis units. The reverse osmosis units separate feed-water into permeate and concentrate (brine). Sodium hypochlorite (NaOCl) is added to the permeate combined with raw water to provide disinfection for potable water. The brine solution comprises the Facility's continuous discharge to the Lower Sweetwater River. Other intermittent discharges, including groundwater well purges, plant feedwater dumps, and chlorine contact tank overflow, are regulated separately under the State Water Resources Control Board's Order WQ 2014-0194-DWQ General Order No. CAG140001 *Statewide National Pollutant Discharge Elimination System (NPDES) Permit for Drinking Water System Discharges to Waters of the United States*.

The brine concentrate is generated from the desalination process and the discharge occurs daily and continuously when the Facility is operating. The maximum discharge rate observed in monitoring data collected from July 2012 through September 2016, was 0.824 MGD from Discharge Location 001a, with the last reported discharge occurring on April 30, 2014. Order No. R9-2010-0012 permitted up to 0.8 MGD of brine discharge through Discharge Point No. 001a. Order R9-2010-0012 was amended in 2014 to authorize the Facility to increase the potable water production capacity from 5 MGD to 10 MGD, to relocate the brine discharge location to a point approximately 2,200 feet (ft) downstream of the confluence of the Upper Paradise Creek Flood Control Channel and the Lower Sweetwater River (designated as Discharge Point No. 001b in this Order), and to increase the discharge flow Discharge Point No.

001b to 2.5 MGD. Discharges through Discharge Point No. 001b began on March 27, 2014, with a maximum reported flow of 0.78 MGD through September 2016.

B. Discharge Points and Receiving Waters

Effluent from Discharge Point No. 001b enters the Lower Sweetwater River approximately 2,200 feet downstream of the confluence of the Upper Paradise Creek Flood Control Channel and the Lower Sweetwater River. Effluent from Discharge Point No. 001a and Discharge Point No. 002 enter the Upper Paradise Creek Flood Control Channel, a concrete lined conveyance that delivers upstream, ephemeral flow as well as the plant wastewaters to the Lower Sweetwater River Estuary. Discharge Point No. 001a is located approximately 750 feet upstream of the confluence of the Upper Paradise Creek Flood Control Channel with the Lower Sweetwater River. The Facility may discharge through Discharge Point No. 001a during emergencies and maintenance of Discharge Point No. 001b at a discharge rate of 0.8 MGD from June 1st through November 30th and 1.0 MGD from December 1st through May 31st, subject to prior notification to the Executive Officer of the San Diego Water Board.

The salinity and mixing conditions at the locations of Discharge Point Nos. 001b, and 001a in the Lower Sweetwater River are such that the San Diego Water Board determined the discharge locations are within the Tidal Prism of San Diego Bay.

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

Effluent limitations contained in the existing Order for discharges from Discharge Point Nos. 001a and 001b, (Monitoring Locations EFF-001a and 001b) and representative monitoring data from the term of the previous Order are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data for All Discharge Points

Parameter	Units	Historic Effluent Limitations (Beginning July 1, 2010)		Monitoring Data (From July 27, 2012 through September 30, 2016)	
		Average Monthly	Maximum Daily	Highest Average Monthly	Highest Maximum Daily
Discharge Point No. 001a					
Flow Rate (Jun – Nov)	MGD	0.8	--	0.6[1]	0.82
Flow Rate (Dec – May)	MGD	0.8	--	0.7[1]	0.82
Oil and Grease	mg/l	25	75[2]	ND	ND
TSS	mg/l	30	50[2]	7	7
Settleable Solids	mg/l	1.0	3.0[2]	ND	ND
Turbidity	NTU	75	225[2]	0.15	0.15
Temperature Δ	ºF	--	Δ 20 ºF	--	Δ 15 ºF
pH	s.u.	6.0-9.0[3]		7.6-7.8[3]	
Salinity	ppt	7-11	--	8.1-9.0	--
Nitrate Nitrogen, Total (as N)	mg/L	--	5	--	0.1
Nitrogen, Total (as N)	mg/L	--	1.0	--	1.1

Parameter	Units	Historic Effluent Limitations (Beginning July 1, 2010)		Monitoring Data (From July 27, 2012 through September 30, 2016)	
		Average Monthly	Maximum Daily	Highest Average Monthly	Highest Maximum Daily
Phosphorus, Total (as P)	mg/L	--	0.1	--	0.1
Copper, Total Recoverable	µg/L	2.9	5.8	0.90	0.90
Nickel, Total Recoverable	µg/L	6.6	14	3.5	8.1
Selenium, Total Recoverable	µg/L	4.1	8.2	ND	0.3
Discharge Point No. 001b					
Flow Rate	MGD	2.5	--	0.72[1]	0.78
Oil and Grease	mg/l	25	75[2]	5.1	5.1
TSS	mg/l	30	50[2]	4	4
Settleable Solids	mg/l	1.0	3.0[2]	ND	ND
Turbidity	NTU	75	225[2]	0.26	0.26
Temperature Δ	ºF	--	Δ 20 ºF	--	Δ 12 ºF
pH	s.u.	6.0 – 9.0[3]		7.5-7.9[3]	
Salinity	ppt	7-11	--	7.8-9.4	--
Nitrate Nitrogen, Total (as N)	mg/L	--	5.0	--	0.13
Nitrogen, Total (as N)	mg/L	--	1.0	--	0.78
Phosphorus, Total (as P)	mg/L	--	0.1	--	0.2
Copper, Total Recoverable	µg/L	2.9	5.8	2.8	2.8
Nickel, Total Recoverable	µg/L	6.6	14	0.35	0.35
Selenium, Total Recoverable	µg/L	4.1	8.2	0.06	0.06

NA = Criteria for this parameter is not applicable.
ND = Non-detectable.
1 Average daily discharge flow, 30 day rolling average.
2 Instantaneous maximum limitation.
3 Instantaneous minimum and maximum values.

D. Compliance Summary

Review of the Sweetwater Authority's self-monitoring reports reveals 11 noncompliance incidents during the term of the previous order, Order No. R9-2010-0012 as amended by Order No. R9-2014-0014. These noncompliance incidents are generally classified as follows:

- Two deficient monitoring and/or reporting violations, and

- Nine violations of effluent limitations, including effluent limitations for nickel (four times), total dissolved solids (one time), copper (two times), phosphorus (one time), and nitrogen (one time).

The San Diego Water Board has addressed all 11 violations. The San Diego Water Board sent staff enforcement letters to the Sweetwater Authority requiring that steps be taken to prevent the reoccurrence of such violations. Additionally, the San Diego Water Board assessed administrative civil liabilities (ACLs) for effluent limitation violations in February 2012 for $15,000 and in April 2013 for $6,000.

E. Planned Changes – NOT APPLICABLE

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U. S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from the Facility to surface waters.

B. California Environmental Quality Act (CEQA)

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

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

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

Table F-3. Basin Plan Beneficial Uses

Discharge Point No.	Receiving Water Name	Beneficial Use(s)
001b	Tidal Prism of San Diego Bay via Lower Sweetwater River	Existing: Industrial service supply (IND); navigation (NAV); contact water recreation (REC-1); non-contact water recreation (REC-2); commercial and sport fishing (COMM); biological habitats of special significance (BIOL); estuarine habitat (EST); wildlife habitat (WILD); preservation of rare, threatened or endangered species (RARE); marine habitat; migration of aquatic organisms (MAR); spawning (SPWN); and shellfish harvesting (SHELL)
001a	Tidal Prism of San Diego Bay via Upper Paradise Creek Flood Control Channel and Lower Sweetwater River	Existing: Industrial service supply (IND); navigation (NAV); contact water recreation (REC-1); non-contact water recreation (REC-2); commercial and sport fishing (COMM); biological habitats of special significance (BIOL); estuarine habitat (EST); wildlife habitat (WILD); preservation of rare, threatened or endangered species (RARE); marine habitat; migration of aquatic organisms (MAR); spawning (SPWN); and shellfish harvesting (SHELL)

2. **Thermal Plan.** The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on January 7, 1971, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. The discharge from Discharge Point No. 001b constitutes a new discharge of an elevated temperature waste. As such, the Thermal Plan is applicable to the discharge. Requirements of this Order implement the Thermal Plan.

3. **Sediment Quality.** The State Water Board adopted the *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* (Sediment Quality Plan) on September 16, 2008, and it became effective on August 25, 2009. This plan supersedes other narrative sediment quality objectives, and establishes new sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. Requirements of this Order implement sediment quality objectives of this Plan.

4. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.

5. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the San Diego Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with

respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

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

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

8. **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 Clean Water Act (CWA) 303(d) List

Under section 303(d) of the 1972 CWA, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. In July 2015, the USEPA approved a revised *303(d) List of Water Quality Limited Segments in California*. The 303(d) list includes listings for San Diego Bay for polychlorinated biphenyls (PCBs), Paradise Creek for selenium, and Chula Vista Marina for copper. Because PCBs were not detected in the discharge, the discharge is not anticipated to contribute to PCB concentrations in San Diego Bay and this Order establishes monitoring and a performance goal for PCB discharges to San Diego Bay. Because selenium was detected in the discharge, this Order establishes monitoring and an effluent limitation for selenium. The Chula Vista Marina is located 3.78 miles from the confluence of Upper Paradise Creek and the Lower Sweetwater River Estuary and due to the distance, the discharge is not a major source of copper to Chula Vista Marina.

The 303(d) list also includes Lower Sweetwater River for enterococcus, fecal coliform, phosphorus, selenium, total dissolved solids (TDS), total nitrogen, and toxicity. Because the source is groundwater and the product is drinking water, the discharge is not anticipated to contribute to loadings of enterococcus or fecal coliform. This Order establishes effluent limitations to control contributions of phosphorus, selenium, TDS, total nitrogen, and toxicity.

Total maximum daily loads (TMDLs) for the 303(d) listed parameters have not been developed.

E. Other Plans, Polices and Regulations

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

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

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

   For the purpose of this policy, treated ballast waters and innocuous non-municipal wastewater such as clear brines, wash water, and pool drains are not necessarily considered industrial process wastes, and may be allowed by San Diego Water Board under discharge requirements that provide protection to the beneficial uses of the receiving water. For the purpose of the Bays and Estuaries Policy and this Order, the discharge of reverse osmosis brine concentrate, groundwater well-purge water, plant feed-water dump, and chlorine contact-tank overflow associated with the Facility are considered innocuous non-municipal wastewaters and, as such, will not be considered industrial process wastes. Therefore, the discharges of such wastes may be allowed by this San Diego Water Board under WDRs that provide protection of the beneficial uses of the receiving waters.

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

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

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

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

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

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

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

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the CFR: 40 CFR section 122.44(a) requires that permits include applicable technology-based 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

Effluent and receiving water limitations in this Order are based on the CWA, Basin Plan, State Water Board plans and policies, USEPA guidance and regulations, and best practicable waste treatment technology. This Order authorizes the discharge of demineralization brine from Discharge Point Nos. 001a (when discharge occurs) and 001b. This Order also authorizes the discharge of storm water runoff, chlorine contact tank water, plant feed-water dump water, valve pressure relief. It does not authorize any other types of discharges.

1. Prohibition A incorporates by reference Basin Plan Waste Discharge Prohibitions.
2. Prohibitions B, C, and D are based on 40 CFR section 122.21(a) and Water Code section 13260, which require filing an application and ROWD before a discharge can occur. Discharges not described in the application and ROWD, and subsequently in this Order, are prohibited.

B. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with part 125, section 125.3.

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

a. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

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

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

2. Applicable Technology-Based Effluent Limitations (TBELS)

There are currently no effluent limitations guidelines that are specific to the type of discharge from this Facility. The previous Order established TBELs at Discharge Point Nos. 001a and 001b for oil and grease, TSS, settleable solids, turbidity, and pH based on BPJ. Effluent data from July 2012 through September 2016 indicates that the Discharger is capable of complying with the previous effluent limitations. Based on anti-backsliding considerations, the technology-based effluent limitations established for oil and grease, TSS, settleable solids, turbidity, and pH have been retained.

Table F-4. Summary of TBELs

Parameter	Unit[1]	Effluent Limitations			
		Monthly Average	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Oil and Grease	mg/L	25	--	--	75
TSS	mg/L	30	--	--	50
Settleable Solids	mg/L	1.0	--	--	--
Turbidity	NTU	75	--	--	--
pH	s.u.	Within 6.0 to 9.0 at all times			

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

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

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

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

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

a. Basin Plan. The Basin Plan at page 2-12 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan does not specifically identify beneficial uses for Upper Paradise Creek Flood Control Channel but does identify present and potential uses for the Lower Sweetwater River Estuary within the San Diego Bay Tidal Prism, to which the Upper Paradise Creek Flood Control Channel, is tributary. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. The Lower Sweetwater River is not designated for municipal supply. Receiving water salinity within the vicinity of the Discharge Point Nos. 001a and 001b range from 3.6 to 33 ppt, with an average salinity of 26 ppt (TDS data is not available). The Lower Sweetwater River discharges into San Diego Bay within 3,000 meters of Discharge Point No. 001b. As such, downstream municipal use is not anticipated.

The Basin Plan does not establish a goal for nitrogen, however, the Basin Plan provides a recommendation that natural ratios of nitrogen to phosphorus (N:P) "be determined by surveillance and monitoring and upheld". Nitrogen and phosphorus monitoring was conducted over the previous permit term and the Lower Sweetwater River is 303(d) listed for total nitrogen and phosphorus. For this reason, determining a "natural ratio of nitrogen to phosphorus" based on upstream data is not reasonable at this time. In the absence of a natural ratio, the Basin Plan specifies a ratio of N:P of 10:1 be used to determine nitrogen concentrations that would prevent impairment of beneficial uses. As such, this Order assumes a water quality objective of 1 mg/L for nitrogen.

The Basin Plan numeric water quality objectives applicable to the receiving waters are listed below.

Table F-5. Summary of Applicable Basin Plan Criteria - Lower Sweetwater River

Parameter	Units	Criteria	Basis
pH	s.u.	6.5-8.5[1]	Basin Plan
Ammonia, Un-ionized as N	mg/L	0.025	Basin Plan
Chloride	mg/L	500	Basin Plan
Iron	mg/L	0.3	Basin Plan
Manganese	mg/L	0.05	Basin Plan
Methylene Blue Active Substances (MBAS)	mg/L	0.5	Basin Plan

Parameter	Units	Criteria	Basis
Boron	mg/L	0.75	Basin Plan
% Sodium	mg/L	60	Basin Plan
Dissolved Oxygen	mg/L	>5.0[2]	Basin Plan
Total Dissolved Solids (TDS)	mg/L	1,500	Basin Plan
Sulfate	mg/L	500	Basin Plan
Nitrogen, Total (as N)	mg/L	1[3]	Basin Plan
Phosphorous, Total (as P)	mg/L	0.1[4]	Basin Plan
Odor	mg/L	None	Basin Plan
Color	Units	20	Basin Plan
Turbidity	NTU	20	Basin Plan

1 Between 6.5 and 8.5 at all times. Changes in normal ambient pH shall not exceed 0.5 units.
2 Dissolved oxygen levels shall not be less than 5.0 mg/L in inland surface waters with designated MAR or WARM beneficial uses. The annual mean dissolved oxygen concentration shall not be less than 7 mg/L more than 10% of the time.
3 Where natural ratios of N/P are lacking, a ratio of N:P equal to10:1, on a weight-to-weight basis shall be used.
4 Goal to prevent plant nuisance in streams and other flowing waters, not to be exceeded more than 10% of the time.

Table F-6. Summary of Applicable Basin Plan Criteria - San Diego Bay including Tidal Prism

Parameter	Units	Criteria	Basis
pH	s.u.	7.0-9.0[1]	Basin Plan
Ammonia, Un-ionized as N	mg/L	0.025	Basin Plan
Nitrogen, Total (as N)	mg/L	1[2]	Basin Plan
Phosphorous, Total (as P)	mg/L	0.1[3]	Basin Plan
Turbidity	NTU	Within San Diego Bay, the transparency of bay waters, insofar as it may be influenced by any controllable factor, either directly or through induced conditions, shall not be less than 8 feet in more than 20 percent of the readings in any zone, as measured by a standard Secchi disk. Wherever the water is less than 10 feet deep, the Secchi disk reading shall not be less than 80 percent of the depth in more than 20 percent of the readings in any zone.	Basin Plan – Turbidity Narrative Objective

1 Between 7.0 and 9.0 at all times. Changes in normal ambient pH shall not exceed 0.2 units.
2 Where natural ratios of N/P are lacking, a ratio of N:P equal to10:1, on a weight-to-weight basis shall be used.
3 Goal to prevent plant nuisance in streams and other flowing waters, not to be exceeded more than 10% of the time.

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

Priority pollutant water quality criteria in the CTR are applicable to the tidal prism of San Diego Bay and the Lower Sweetwater River. The CTR contains both saltwater and freshwater criteria. As specified in the CTR, “(1) freshwater criteria apply at salinities of 1

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

Demineralization brine from Discharge Point No. 001b enters the Lower Sweetwater River approximately 2,200 feet downstream of the confluence of the Upper Paradise Creek Flood Control Channel and the Lower Sweetwater River, in an area considered within the tidal prism of San Diego Bay. Effluent from Discharge Point No. 001a and enters the Upper Paradise Creek Flood Control Channel, a concrete lined conveyance that delivers upstream, ephemeral flow as well as the plant wastewaters to the Lower Sweetwater River Estuary. Therefore, the salinity in the Lower Sweetwater River at Monitoring Locations RSW-001a, RSW-001b, RSW-002a, and RSW-2b, was used to represent ambient salinity to determine whether marine or freshwater criteria apply for Discharge Point No. 001a, and 001b. A total of 34 samples were collected from July 17, 2012 through July 12, 2016. The results demonstrated salinity varied from 3.6 ppt to 32.5 ppt. The salinity concentration at which 95 percent of the results were greater than was 8.4 ppt. The salinity concentration at which 95 percent of the data were below was 32.3 ppt. Since 95 percent of the receiving water salinity results were neither at or below 1 ppt nor at or above 10 ppt, the more stringent of the saltwater or freshwater criteria apply to Discharge Point Nos. 001a, and 001b.

c. Hardness. As described in the CTR, most of the data for which hardness dependent criteria equations were developed were based on hardness data between 25 mg/L calcium carbonate (CaCO3) and 400 mg/L CaCO3. Further, as stated in the CTR, USEPA recommends that where actual ambient hardness is greater than 400 mg/L CaCO3, a value of 400 mg/L CaCO3 may be used to develop protective criteria. At two sampling stations, located upstream of Discharge Point Nos. 001a and 001b, within the Lower Sweetwater River, hardness was analyzed eight times between February 2013 and November 2013. The minimum hardness value measured was 2,155 mg/L CaCO3. The freshwater criteria used in this Order were developed based on a capped hardness of 400 mg/L CaCO3.

d. Applicable criteria for Discharge Point Nos. 001a, and 001b are summarized below for the parameters detected in the effluent.

Table F-7. Summary of Applicable CTR/NTR Criteria at Discharge Point Nos. 001a and 001b: The More Stringent of the Saltwater or Freshwater Criteria

Parameter	Selected Criteria (µg/L)	CTR/NTR Water Quality Criteria (µg/L)				
		Freshwater		Saltwater		Human Health For Consumption of Organisms only
		Acute	Chronic	Acute	Chronic	
Antimony, Total Recoverable	4,300	--	--	--	--	4,300
Arsenic, Total Recoverable	36	340	150	69	36	NA
Cadmium, Total Recoverable	7.31	21.58	7.31	42.25	9.36	NA
Chromium IV, Total Recoverable	11	16	11	1107.75	50.35	NA
Cyanide, Total	1.00	22	5.2	1.00	1.00	220,000

Parameter	Selected Criteria (µg/L)	CTR/NTR Water Quality Criteria (µg/L)				
		Freshwater		Saltwater		Human Health For Consumption of Organisms only
		Acute	Chronic	Acute	Chronic	
Copper, Total Recoverable	3.73	51.68	30.50	5.78	3.73	NA
Lead, Total Recoverable	8.52	477	18.58	220.82	8.52	NA
Mercury, Total Recoverable	0.051	Reserved	Reserved	Reserved	Reserved	0.051
Nickel, Total Recoverable	8.28	1516	168.54	74.75	8.28	4,600
Selenium, Total Recoverable	5	20	5	290.58	71.14	NA
Silver, Total Recoverable	2.24	44.05	--	2.24	--	NA
Thallium, Total Recoverable	6.3	--	--	--	--	6.3
Zinc, Total Recoverable	85.62	387.83	387.83	95.14	85.62	NA
TCDD Equivalents	1.4E-08	--	--	--	--	1.4E-08
2,4-Dichlorophenol	790	--	--	--	--	790
3-Methyl-4-Chlorophenol	--	--	--	--	--	34
Pentachlorophenol	0.01	0.01	0.01	13	7.9	8.2
Benzo(a)Anthracene	0.049	--	--	--	--	0.049
Benzo(a)Pyrene	0.049	--	--	--	--	0.049
Benzo(b)Fluoranthene	0.049	--	--	--	--	0.049
Benzo(g,h,i)Perylene	0.049	--	--	--	--	0.049
Benzo(k)Fluoranthene	0.049	--	--	--	--	0.049
Bis(2-Ethylhexyl)Phthalate	5.9	--	--	--	--	5.9
Butylbenzyl Phthalate	5,200	--	--	--	--	5,200
Chrysene	0.049	--	--	--	--	0.049
Dibenzo(a,h)Anthracene	0.049	--	--	--	--	0.049
Diethyl Phthalate	120,000	--	--	--	--	120,000
Dimethyl Phthalate	2,900,000	--	--	--	--	2,900,000
Di-n-Butyl Phthalate	12,000	--	--	--	--	12,000
Fluoranthene	370	--	--	--	--	370
Indeno(1,2,3-cd)Pyrene	0.049	--	--	--	--	0.049

NA = Criteria for this parameter is not applicable.

3. Determining the Need for WQBELs

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

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

Therefore, in this Order the RPA procedures from the SIP were used to evaluate reasonable potential for both CTR and non-CTR constituents. Monitoring results from July 2012 through August 2016 for the effluent were used. Effluent data was not divided between wet weather and dry weather for the RPA because data is expected to be consistent between wet and dry weather conditions. For the RPA, the highest detected receiving water concentration was selected for use on a pollutant by pollutant basis in order to be fully protective of beneficial uses.

Effluent data from Discharge Point Nos. 001a and 001b were used as a combined data set to evaluate discharges of demineralization brine. Effluent data for Well Nos. 003 through 005 were used for evaluating reasonable potential for Well Nos. 003 through 010, as data was not available for Well No. 006, and Well Nos. 007 through 010 are not yet operational.

A summary of the RPA results is provided below. Parameters that were not detected in the effluent are shown with less than the method detection limit.

Table F-8. RPA for CTR/NTR Criteria at Discharge Point Nos. 001a and 001b

Parameter	Selected Criteria (µg/L) (c)	Maximum Effluent Concentration (MEC)	Receiving Water Concentration (B)	Reasonable Potential?
Antimony, Total Recoverable	4300	0.1	0.24	No
Arsenic, Total Recoverable	36	1.9	1.7	No
Beryllium, Total Recoverable	No Criteria	<0.039	<0.39	No
Cadmium, Total Recoverable	7.31	0.16	0.095	No
Chromium III, Total Recoverable	644.2	<0.5	<0.5	No
Chromium IV, Total Recoverable	11	0.074	<0.0048	No
Cyanide, Total	1.0	0.48	1.4	Yes, B>C and MEC is detected
Copper, Total Recoverable	3.73	2.8	7.3	Yes, B>C and MEC is detected
Lead, Total Recoverable	8.52	0.0028	0.73	No
Mercury, Total Recoverable	0.051	0.009	0.016	No
Nickel, Total Recoverable	8.28	8.12	1.78	No
Selenium, Total Recoverable	5.0	0.3	3.2	Yes, 303(d)
Silver, Total Recoverable	2.24	<0.018	0.024	No
Thallium, Total Recoverable	6.3	0.014	<0.011	No
Zinc, Total Recoverable	85.62	0.45	11	No
Asbestos	No Criteria	<0.2	<0.5	No
2,3,7,8-TCDD (Dioxin)	1.4E-08	<1E-06	<1.1E-06	No
TCDD Equivalents	1.4E-08	2.8E-09	1.8E-07	No
Acrolein	780	<2.2	<2.2	No
Acrylonitrile	0.66	<1.8	<1.8	No

Parameter	Selected Criteria (µg/L) (c)	Maximum Effluent Concentration (MEC)	Receiving Water Concentration (B)	Reasonable Potential?
Benzene	71	<0.23	<0.23	No
Bromoform	360	<0.32	<0.32	No
Carbon Tetrachloride	4.4	<0.33	<0.33	No
Chlorobenzene	21000	<0.21	<0.21	No
Chlorodibromomethane	34	<0.38	<0.38	No
Chloroethane	No Criteria	<0.23	<0.23	No
2-Chloroethylvinyl Ether	No Criteria	<0.28	<0.28	No
Chloroform	No Criteria	<0.25	<0.25	No
Dichlorobromomethane	46	<0.28	<0.28	No
1,1-Dichloroethane	No Criteria	<0.21	<0.21	No
1,2-Dichloroethane	99	<0.24	<0.24	No
1,1-Dichloroethylene	3.2	<0.39	<0.39	No
1,2-Dichloropropane	39	<0.18	<0.18	No
1,3-Dichloropropylene	1700	<0.22	<0.22	No
Ethylbenzene	29000	<0.17	<0.17	No
Methyl Bromide	4000	<0.47	<0.47	No
Methyl Chloride	No Criteria	<0.26	<0.26	No
Methylene Chloride (Dichloromethane)	1600	<0.25	<0.25	No
1,1,2,2-Tetrachloroethane	11	<0.18	<0.18	No
Tetrachloroethylene	8.9	<0.27	<0.27	No
Toluene	200000	<0.22	<0.22	No
1,2-Trans-Dichloroethylene	140000	<0.23	<0.23	No
1,1,1-Trichloroethane	No Criteria	<0.38	<0.38	No
1,1,2-Trichloroethane	42	<0.25	<0.25	No
Trichloroethylene	81	<0.37	<0.37	No
Vinyl Chloride	525	<0.33	<0.33	No
Chlorophenol	400	<0.28	<0.28	No
2,4-Dichlorophenol	790	0.4	<0.26	No
2,4-Dimethylphenol	2300	<0.3	<0.3	No
2-Methyl-4,6-Dinitrophenol	765	<1.7	<1.7	No
2,4-Dinitrophenol	14000	<1.6	<1.6	No
2-Nitrophenol	No Criteria	<0.26	<0.26	No
4-Nitrophenol	No Criteria	<0.45	<0.45	No
3-Methyl-4-Chlorophenol	No Criteria	0.49	<0.23	No
Pentachlorophenol	4.05	0.58	<0.19	No
Phenol	4600000	<0.16	<0.16	No
2,4,6-Trichlorophenol	6.5	<0.22	<0.22	No
Acenaphthene	2700	<0.38	<0.38	No
Acenaphthylene	No Criteria	<0.4	<0.4	No
Anthracene	110000	<0.34	<0.34	No
Benzidine	0.00054	<3.7	<3.7	No
Benzo(a)Anthracene	0.049	0.41	<0.19	No
Benzo(a)Pyrene	0.049	0.69	<0.13	No
Benzo(b)Fluoranthene	0.049	0.64	<0.14	No
Benzo(ghi)Perylene	No Criteria	0.36	<0.1	No
Benzo(k)Fluoranthene	0.049	0.47	<0.22	No
Bis(2-Chloroethoxy)Methane	No Criteria	<0.25	<0.25	No
Bis(2-Chloroethyl)Ether	1.4	<0.27	<0.27	No

Parameter	Selected Criteria (µg/L) (c)	Maximum Effluent Concentration (MEC)	Receiving Water Concentration (B)	Reasonable Potential?
Bis(2-Chloroisopropyl)Ether	170000	<0.38	<0.38	No
Bis(2-Ethylhexyl)Phthalate	5.9	22	<2.3	No
4-Bromophenyl Phenyl Ether	No Criteria	<0.36	<0.36	No
Butylbenzyl Phthalate	5200	1.2	0.43	No
2-Chloronaphthalene	4300	<0.45	<0.45	No
4-Chlorophenyl Phenyl Ether	No Criteria	<0.41	<0.41	No
Chrysene	0.049	0.33	<0.19	No
Dibenzo(a,h)Anthracene	0.049	0.41	<0.08	No
1,2-Dichlorobenzene	17000	<0.57	<0.57	No
1,3-Dichlorobenzene	2600	<0.53	<0.53	No
1,4-Dichlorobenzene	2600	<0.55	<0.55	No
3,3-Dichlorobenzidine	0.08	<1.2	<1.2	No
Diethyl Phthalate	120000	0.16	<0.15	No
Dimethyl Phthalate	2900000	<0.18	<0.18	No
Di-n-Butyl Phthalate	12000	0.51	0.3	No
2,4-Dinitrotoluene	9.1	<0.18	<0.18	No
2,6-Dinitrotoluene	No Criteria	<0.27	<0.27	No
Di-n-Octyl Phthalate	No Criteria	1.1	<0.19	No
1,2-Diphenylhydrazine	0.54	<0.25	<0.25	No
Fluoranthene	370	0.38	<0.22	No
Fluorene	14000	<0.35	<0.35	No
Hexachlorobenzene	0.00077	<0.49	<0.49	No
Hexachlorobutadiene	50	<0.47	<0.47	No
Hexachlorocyclopentadiene	17000	<1.5	<1.5	No
Hexachloroethane	8.9	<0.52	<0.52	No
Indeno(1,2,3-cd)Pyrene	0.049	0.48	<0.12	No
Isophorone	600	<0.21	<0.21	No
Naphthalene	No Criteria	<0.49	<0.49	No
Nitrobenzene	1900	<0.36	<0.36	No
N-Nitrosodimethylamine	8.1	<0.14	<0.14	No
N-Nitrosodi-n-Propylamine	1.4	<0.26	<0.26	No
N-Nitrosodiphenylamine	16	<0.19	<0.19	No
Phenanthrene	No Criteria	<0.32	<0.32	No
Pyrene	11000	<0.25	<0.25	No
1,2,4-Trichlorobenzene	No Criteria	<0.55	<0.55	No
Aldrin	0.00014	<0.0015	<0.0015	No
alpha-BHC	0.013	<0.0018	<0.0018	No
beta-BHC	0.046	<0.0031	<0.0031	No
gamma-BHC (Lindane)	0.063	<0.0021	<0.0021	No
delta-BHC	No Criteria	<0.0025	<0.0025	No
Chlordane	0.00059	<0.08	<0.08	No
4,4-DDT	0.00059	<0.0031	<0.0031	No
4,4-DDE	0.00059	<0.0025	<0.0025	No
4,4-DDD	0.00084	<0.003	<0.003	No
Dieldrin	0.00014	<0.0021	<0.0021	No
alpha-Endosulfan	0.0087	<0.0017	<0.0017	No
beta-Endosulfan	0.0087	<0.0019	<0.0019	No
Endosulfan Sulfate	240	<0.008	<0.008	No
Endrin	0.0023	<0.0028	<0.0028	No

Parameter	Selected Criteria (µg/L) (c)	Maximum Effluent Concentration (MEC)	Receiving Water Concentration (B)	Reasonable Potential?
Endrin Aldehyde	0.81	<0.003	<0.003	No
Heptachlor	0.00021	<0.0017	<0.0017	No
Heptachlor Epoxide	0.00011	<0.0019	<0.0019	No
PCBs sum	0.00017	<0.04	<0.04	No
Toxaphene	0.0002	<0.12	<0.12	No

NA = Not available.

Final RPA results for Discharge Point Nos. 001a and 001b demonstrate that WQBELs are required for cyanide, copper, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, bis(2-ethylhexyl)phthalate, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. The Lower Sweetwater River is 303(d) listed for selenium, and selenium was detected in the effluent. Thus, reasonable potential was determined to exist and WQBELs for selenium are required. Nickel no longer exhibits reasonable potential, and WQBELs have not been established based on this analysis and consistent with State and federal Anti-backsliding requirements.

Table F-9. RPA for Basin Plan Criteria for Discharge Point No. 001b

Parameter	Units	Criteria	Maximum Effluent Concentration (MEC)	Receiving Water Concentration (B)	Reasonable Potential?
pH	s.u.	7.0-9.0	7.54-7.85	6.5-7.9	Yes
Ammonia, Un-ionized as N	mg/L	0.025	0.025	0.00327	No
Salinity	ppt	7-11	7.8-9.4	3.6 -32.1	Yes[1]
Temperature	ºF	Δ20ºF [2]	14.8	NA	Yes
Total Nitrogen, Total (as N)	mg/L	1	1.06	0.94	Yes[4]
Phosphorous, Total (as P)	mg/L	0.1	0.151[5]	0.454[5]	Yes
Turbidity	NTU	20	0.264	NA	No

NA = Not available or Not applicable.
1 Basin Plan – Toxicity Narrative Objective.
2 Thermal Plan – The maximum temperature shall not exceed the natural receiving water temperature by more than 20 ºF.
3 Maximum Daily Effluent Limitation (MDEL).
4 Basin Plan Objective – Bays and Estuaries – threshold value to prevent plant nuisance.
5 Water criteria goal exceeded in < 10% of samples.

The Lower Sweetwater River is 303(d) listed for phosphorous and total nitrogen, and these pollutants were detected in the effluent. Thus, reasonable potential was determined to exist and WQBELs have been established for phosphorous and total nitrogen. The WQBELs for phosphorous and total nitrogen from the previous Order have been carried over. Additionally, pH and salinity exhibit variability over time and may impact water quality. Thus, WQBELs for pH of 6.0 to 9.0 s.u. and salinity of 7 to 11 ppt have been retained from the previous Order.

4. CTR/NTR WQBEL Calculations

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

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

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

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

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

c. Dilution is not provided for this discharge and has not been considered in the calculations of applicable effluent limitations.

d. WQBELs Calculation Example

Using total recoverable cyanide as an example, the following demonstrates how WQBELs and performance goals were established for CTR/NTR parameters in 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, 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.

D = The dilution credit.

B = The ambient background concentration.

As discussed above, this Order does not allow for dilution; therefore, for cyanide:

$ECA_{acute} = 1.0$ µg/L

$ECA_{chronic} = 1.0$ µg/L

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor

(multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the 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 and will not be repeated here.

$LTA = ECA \times Multiplier_{99}$

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% 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, and at least 20 percent of the samples in the data set are reported as detected, the CV shall be equal to the standard deviation of the data set divided by the average of the data set.

Cyanide has fewer than 10 samples in the data set. Thus, the CV shall be set equal to 0.6.

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

Table F-10a. SIP Effluent Concentration Allowance (ECA) Multipliers for Calculating Long–Term Averages (LTAs) from Table 1 of the SIP

No. of Samples	CV	ECA $Multiplier_{acute}$	ECA $Multiplier_{chronic}$
4	0.6	0.321	0.527

$LTA_{acute} = 1.0\ \mu g/L \times 0.321 = 0.321\ \mu g/L$

$LTA_{chronic} = 1.0\ \mu g/L \times 0.527 = 0.527\ \mu g/L$

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

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

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

$LTA_{cyanide} = LTA_{acute} = 0.321\ \mu g/L$

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 and will not be repeated here.

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

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

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the

number of samples is less than four, the default number of samples to be used is four.

For cyanide, the following data from Table 2 of the SIP were used to develop the AMEL and MDEL for effluent limitations using equations provided in section 1.4, Step 5 of the SIP:

Table F-10b. SIP Long-Tern Average (LTA) Multipliers for Calculating Effluent Limitations from Table 2 of the SIP

No. of Samples Per Month	CV	$Multiplier_{MDEL99}$	$Multiplier_{AMEL95}$
4	0.6	3.11	1.55

For cyanide:

$AMEL_{aquatic\ life}$ = 0.321 µg/L x 1.55 = 0.498 µg/L

$MDEL_{aquatic\ life}$ = 0.321 µg/L x 3.11 = 0.998 µg/L

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

For cyanide:

$AMEL_{human\ health} = ECA_{human\ health}$

$AMEL_{human\ health}$ = 220,000 µg/L

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

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

For the CV of 0.6:

Table F-10c. SIP MDEL/AMEL Multiplier (Ratio) from Table 2 of the SIP

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$	Ratio
4	0.6	3.11	1.55	2.01

For cyanide:

$MDEL_{human\ health}$ = 220,000µg/L x 2.01 = 442,200 mg/L

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

Table F-10d. SIP Comparison of Aquatic Life and Human Health AMEL and MDEL

$AMEL_{aq.\ life}$	$MDEL_{aq.\ life}$	$AMEL_{HH}$	$MDEL_{HH}$
0.498	0.998	220,000	442,200

The aquatic life-based effluent limitations are more stringent than the human health-based effluent limitations for cyanide, thus the aquatic life-based effluent limitations have been established in the Order.

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

Table F-11. CTR-based Effluent Limitations at Discharge Point Nos. 001a[1] and 001b

Parameter	Unit	Effluent Limitations	
		Average Monthly	Maximum Daily
Cyanide, Total	µg/L	0.50	1.0
	lbs/day[2]	0.0033	0.0067
	lbs/day[3]	0.0042	0.0083
	lbs/day[4]	0.010	0.021
Copper, Total Recoverable	µg/L	2.1	5.8
	lbs/day[2]	0.014	0.039
	lbs/day[3]	0.018	0.048
	lbs/day[4]	0.044	0.12
Selenium, Total Recoverable	µg/L	4.1	8.2
	lbs/day[2]	0.027	0.055
	lbs/day[3]	0.034	0.068
	lbs/day[4]	0.085	0.17

1 Effluent limitations will apply for EFF-001a when being utilized as an emergency outfall.
2 The Mass Emission Rate (MER) limits were calculated using a flow rate of 0.8 MGD and the indicated concentration values Discharge Point No. 001a between June 1st through November30th.
3 The Mass Emission Rate (MER) limits were calculated using a flow rate of 1.0 MGD and the indicated concentration values for Discharge Point No. 001a between December 1st through May31st.
4 The Mass Emission Rate (MER) limits were calculated using a flow rate of 2.5 MGD and the indicated concentration values Discharge Point No. 001b.

A summary of CTR/NTR based performance goals is provided in section IV.E of this Fact Sheet.

5. Basin Plan Objective Effluent Limitations

This Order establishes effluent limitations for Basin Plan water quality objectives as monthly averages, with the exception of pH, which is applied as instantaneous limitations.

Table F-12. Basin Plan-based Effluent Limitations for Demineralization Brine at Discharge Point Nos. 001a[1] and 001b

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	s.u.	--	--	6.0	9.0
Temperature	ºC, ºF	The maximum temperature shall not exceed the natural receiving water temperature by more than 20 oF.			
Salinity	ppt	7-11	--	--	--
Phosphorous, Total (as P)	mg/L	--	0.1	--	--
Nitrogen, Total (as N)	mg/L	--	1	--	--

1 Effluent limitations will apply for EFF-001a when being utilized as an emergency outfall.

6. Whole Effluent Toxicity (WET)

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

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

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

Order No. R9-2010-0012 established acute and chronic toxicity performance goals for the discharge of treated effluent at Discharge Point Nos. 001a and 001b. The most recent acute and chronic toxicity monitoring data reported exceedances in toxicity goals during the monitoring period of the previous Order. Chronic toxicity goals (1.6 TUc) were exceeded in April 2011 for the brine mussel development test (4.0 TUc), and in July 2012 for the brine mussel development test (4.0 TUc) and the giant kelp growth test (4.0 TUc). Also in July 2012, acute toxicity was observed for the mysid survival test, resulting in a "Fail". In all three instances, TIE testing was unable to identify the causative agent responsible for the toxicity. Chronic toxicity goals (1.6 TUc) were exceeded in July 2016 for the brine mussel development test (4.0 TUc). Accelerated monitoring and a Toxicity Reduction Evaluation / Toxicity Identification Evaluation (TRE/TIE) were not conducted due to the closure of the Facility for expansion in August 2016. Regular toxicity monitoring will be resumed when the Facility reopens in the Spring of 2017. Due to the previous exceedance of limitations, and to ensure the aggregated impacts of pollutants present within the Discharger's effluent does not result in the presence of toxicity within the receiving water, this Order establishes effluent limitations for chronic toxicity.

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

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

Compliance with this chronic toxicity effluent limitation (i.e., determination of "Pass" or "Fail") shall be evaluated using the TST statistical approach at the discharge "in-stream" waste concentration (IWC), as described in section VII.L of this Order and section III.B of the MRP (Attachment E). The TST statistical approach is described in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (USEPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1. The TST null hypothesis shall be "mean discharge IWC response ≤ 0.75 × mean control response." A test that rejects this null hypothesis shall be reported as "Pass." A test that does not reject this null hypothesis shall be reported as "Fail." Discharger shall also report the "Percent Effect" as part of chronic toxicity result.

For acute toxicity, the previous Order established performance goals and monitoring. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a short or a longer exposure period of time and may measure mortality, reproduction, and growth. A chemical at a low concentration could have chronic

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

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

In June 2010, USEPA published a guidance document titled, *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (USEPA 833-R-10-003, June 2010), in which the following was recommended: "Permitting authorities should consider adding the TST approach to their implementation procedures for analyzing valid WET data for their current NPDES WET Program." The TST approach is another statistical option for analyzing valid WET test data. Use of the TST approach does not result in any changes to USEPA's WET test methods. Section 9.4.1.2 of USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002), recognizes that, "the statistical methods in this manual are not the only possible methods of statistical analysis." The TST approach can be applied to acute (survival) and chronic (sublethal) endpoints and is appropriate to use for both freshwater and marine USEPA WET test methods.

The USEPA's WET testing program and acute and chronic WET methods rely on the measurement result for a specific test endpoint, not upon achievement of specified concentration-response patterns to determine toxicity. USEPA's WET methods do not require achievement of specified effluent or ambient concentration-response patterns prior to determining that toxicity is present.[1] Nevertheless, USEPA's acute and chronic WET 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. (USEPA-821-R-02-012, section 12.2.6.2; USEPA-821-R-02-013, section 10.2.6.2). In 2000, USEPA provided guidance for such reviews to ensure that test endpoints for determining toxicity based on the statistical approaches utilized at the time the guidance was written (no-observed-effect-concentration (NOEC), percent waste giving 50 percent survival of test organisms (lethal concentration 50, LC 50), effects concentration at 25 percent (EC25) were calculated appropriately (USEPA 821-B-00-004).

USEPA designed its 2000 guidance as a standardized step-by step review process that investigates the causes for ten commonly observed concentration-response patterns and provides for the proper interpretation of the test endpoints derived from these patterns for NOECs, LC 50, and EC25, thereby reducing the number of misclassified test results. The

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

guidance provides one of three determinations based on the review steps: that calculated effect concentrations are reliable and should be reported, that calculated effect concentrations are anomalous and should be explained, or that the test was inconclusive and should be repeated with a newly collected sample. The standardized review of the effluent and receiving water concentration-response patterns provided by USEPA's 2000 guidance decreased discrepancies in data interpretation for NOEC, LC 50, and EC25 test results, thereby lowering the chance that a truly non-toxic sample would be misclassified and reported as toxic.

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

Any Data Quality Objectives or Standard Operating Procedure used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent or receiving water toxicity test measurement results from the TST statistical approach which include a consideration of concentration-response patterns and/or Percent Minimum Significant Differences (PMSDs) must be submitted for review by the San Diego Water Board, in consultation with the State Water Board's Quality Assurance Officer and ELAP (40 CFR section 122.44(h)). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the PMSD criteria only apply to compliance for NOEC and the sublethal endpoints of the NOEC, and therefore are not used to interpret TST results.

D. Final Effluent Limitation Considerations

1. Satisfaction of Anti-Backsliding Requirements

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

The effluent limitations for nickel at Discharge Point Nos. 001a and 001b have not been retained in this Order. Effluent data over the previous permit term indicate that discharges

from Discharge Point Nos. 001a and 001b no longer have reasonable potential to cause or contribute to an exceedance of water quality criteria for nickel. Based on this new information, effluent limitations for nickel have not been established in this Order, consistent with State and federal anti-backsliding requirements. (CWA section 402(o)(2)(B)(i).)

The effluent limitations for nitrate as nitrogen at Discharge Point No. 001a and 001b have not been retained in this Order because effluent limitations for total nitrogen are protective of this standard.

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

Previous iterations of this NPDES permit have regulated other intermittent discharges, including groundwater well purges, plant feedwater dumps, and chlorine contact tank overflow. However, these intermittent discharges are now regulated separately under the State Water Resources Control Board's Order WQ 2014-0194-DWQ General Order No. CAG140001 *Statewide National Pollutant Discharge Elimination System (NPDES) Permit for Drinking Water System Discharges to Waters of the United States*.

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*.

This Order retains the pollutant loading and flow of the previous order, and does not provide for modified operational or discharge conditions that are anticipated to result in the degradation of the receiving water. The Discharger is using the best practicable treatment of control. The discharge is not expected to cause a significant lowering of water quality. Any minor lowering of water quality caused by the discharge will maintain water quality objectives and is to the maximum benefit to the people of California by providing a source of drinking water.

3. Stringency of Requirements for Individual Pollutants

This Order contains both TBELs and WQBELs for individual pollutants. The TBELs consist of restrictions on oil and grease, TSS, settleable solids, turbidity, and pH based on State and federal Anti-backsliding requirements. This Order's technology-based pollutant restrictions implement minimum, applicable federal technology-based requirements. The San Diego Water Board has considered the factors listed in Water Code section 13241.1 in establishing these requirements. These limitations remain unchanged from those established in the previous Order and are discussed in section IV.B.2 of this Fact Sheet. The Discharger has demonstrated the ability to consistently comply with the limitations. No Facility upgrades are necessary to comply with the TBELs established within this Order.

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved

pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The procedures for calculating the individual WQBELs for priority pollutants are based on the CTR implemented by the SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order were approved by USEPA and are applicable water quality standards pursuant to 40 CFR section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

E. Performance Goals

Constituents that do not have reasonable potential to cause or contribute to an exceedance of water quality standards have been assigned performance goals in this Order. Performance goals serve to maintain existing treatment levels and effluent quality and support State and federal antidegradation policies. Additionally, performance goals provide all interested parties with information regarding the expected level of pollutants in the discharge that should not be exceeded in order to maintain the water quality objectives established in the Basin Plan. 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.

A summary of applicable performance goals is provided in the following table:

Table F-13. Performance Goals (Discharge Point No. 001b)

Parameter	Performance Goals			Basis[2]
	Units[1]	Average Monthly	Maximum Daily	
Antimony, Total Recoverable	µg/L	4.30E+03	8.64E+03	HH
	lbs/day	8.97E+01	1.80E+02	
Arsenic, Total Recoverable	µg/L	2.94E+01	5.90E+01	CAL
	lbs/day	6.13E-01	1.23E+00	
Cadmium, Total Recoverable	µg/L	5.97E+00	1.20E+01	CAL
	lbs/day	1.24E-01	2.50E-01	
Chromium (III) , Total Recoverable	µg/L	5.26E+02	1.06E+03	CAL
	lbs/day	1.10E+01	2.20E+01	
Chromium (VI) , Total Recoverable	µg/L	7.96E+00	1.60E+01	AAL
	lbs/day	1.66E-01	3.33E-01	
Lead, Total Recoverable	µg/L	6.96E+00	1.40E+01	CAL
	lbs/day	1.45E-01	2.91E-01	
Mercury, Total Recoverable	µg/L	5.10E-02	1.03E-01	HH
	lbs/day	1.06E-03	2.14E-03	
Nickel, Total Recoverable	µg/L	5.00E+00	1.30E+01	CAL
	lbs/day	1.04E-01	2.10E-01	
Silver, Total Recoverable	µg/L	1.11E+00	2.23E+00	AAL
	lbs/day	2.32E-02	4.66E-02	

Parameter	Performance Goals			Basis[2]
	Units[1]	Average Monthly	Maximum Daily	
Thallium, Total Recoverable	µg/L	6.30E+00	1.27E+01	HH
	lbs/day	1.31E-01	2.64E-01	
Zinc, Total Recoverable	µg/L	4.73E+01	9.50E+01	AAL
	lbs/day	9.87E-01	1.98E+00	
Acrolein	µg/L	7.80E+02	1.57E+03	HH
	lbs/day	1.63E+01	3.27E+01	
Acrylonitrile	µg/L	6.60E-01	1.33E+00	HH
	lbs/day	1.38E-02	2.77E-02	
Benzene	µg/L	7.10E+01	1.43E+02	HH
	lbs/day	1.48E+00	2.98E+00	
Bromoform	µg/L	3.60E+02	7.24E+02	HH
	lbs/day	7.51E+00	1.51E+01	
Carbon Tetrachloride	µg/L	4.40E+00	8.84E+00	HH
	lbs/day	9.17E-02	1.84E-01	
Chlorobenzene	µg/L	2.10E+04	4.22E+04	HH
	lbs/day	4.38E+02	8.80E+02	
Chlorodibromomethane	µg/L	3.40E+01	6.83E+01	HH
	lbs/day	7.09E-01	1.42E+00	
Dichlorobromomethane	µg/L	4.60E+02	9.25E+01	HH
	lbs/day	9.59E-01	1.93E+00	
1,2-Dichloroethane	µg/L	9.90E+01	1.99E+02	HH
	lbs/day	2.06E+00	4.15E+00	
1,1-Dichloroethylene	µg/L	3.20E+00	6.43E+00	HH
	lbs/day	6.67E-02	1.34E-01	
1,2-Dichloropropane	µg/L	3.90E+01	7.84E+01	HH
	lbs/day	8.13E-01	1.63E+00	
1,3-Dichloropropylene	µg/L	1.70E+03	3.42E+03	HH
	lbs/day	3.54E+01	7.12E+01	
Ethylbenzene	µg/L	2.90E+04	5.83E+04	HH
	lbs/day	6.05E+02	1.22E+03	
Methyl Bromide	µg/L	4.00E+03	8.04E+03	HH
	lbs/day	8.34E+01	1.68E+02	
Methylene Chloride	µg/L	1.60E+03	3.22E+03	HH
	lbs/day	3.34E+01	6.71E+01	
1,1,2,2-Tetrachloroethane	µg/L	1.10E+01	2.21E+01	HH
	lbs/day	2.29E-01	4.61E-01	
Tetrachloroethylene	µg/L	8.85E+00	1.78E+01	HH
	lbs/day	1.85E-01	3.71E-01	
Toluene	µg/L	2.00E+05	4.01E+05	HH
	lbs/day	4.17E+03	8.38E+03	
1,2-Trans-Dichloroethylene	µg/L	1.40E+05	2.81E+05	HH
	lbs/day	2.92E+03	5.87E+03	
1,1,2-Trichloroethane	µg/L	4.20E+01	8.44E+01	HH
	lbs/day	8.76E-01	1.76E+00	
Trichloroethylene	µg/L	8.10E+01	1.63E+02	HH
	lbs/day	1.69E+00	3.39E+00	
Vinyl Chloride	µg/L	5.25E+02	1.06E+03	HH
	lbs/day	1.09E+01	2.20E+01	
Chlorophenol	µg/L	4.00E+02	8.04E+02	HH
	lbs/day	8.34E+00	1.68E+01	
2,4-Dichlorophenol	µg/L	7.90E+02	1.59E+03	HH
	lbs/day	1.65E+01	3.31E+01	

Parameter	Performance Goals			Basis[2]
	Units[1]	Average Monthly	Maximum Daily	
2,4-Dimethylphenol	µg/L	2.30E+03	4.62E+03	HH
	lbs/day	4.80E+01	9.64E+01	
2-Methyl-4,6-Dinitrophenol	µg/L	7.65E+02	1.54E+03	HH
	lbs/day	1.60E+01	3.21E+01	
2,4-Dinitrophenol	µg/L	1.40E+04	2.81E+04	HH
	lbs/day	2.92E+02	5.87E+02	
Pentachlorophenol	µg/L	3.32E+00	6.65E+00	CAL
	lbs/day	6.92E-02	1.39E-01	
Phenol	µg/L	4.60E+06	9.25E+06	HH
	lbs/day	9.59E+04	1.93E+05	
2,4,6-Trichlorophenol	µg/L	6.50E+00	1.31E+01	HH
	lbs/day	1.36E-01	2.72E-01	
Acenaphthene	µg/L	2.70E+03	5.43E+03	HH
	lbs/day	5.63E+01	1.13E+02	
Anthracene	µg/L	1.10E+05	2.21E+05	HH
	lbs/day	2.29E+03	4.61E+03	
Benzidine	µg/L	5.40E-04	1.09E-03	HH
	lbs/day	1.13E-05	2.26E-05	
Bis(2-Chloroethyl)Ether	µg/L	1.40E+00	2.81E+00	HH
	lbs/day	2.92E-02	5.87E-02	
Bis(2-Chloroisopropyl)Ether	µg/L	1.70E+05	3.42E+05	HH
	lbs/day	3.54E+03	7.12E+03	
Butylbenzyl Phthalate	µg/L	5.20E+03	1.05E+04	HH
	lbs/day	1.08E+02	2.18E+02	
2-Chloronaphthalene	µg/L	4.30E+03	8.64E+03	HH
	lbs/day	8.97E+01	1.80E+02	
1,2-Dichlorobenzene	µg/L	1.70E+04	3.42E+04	HH
	lbs/day	3.54E+02	7.11E+02	
1,3-Dichlorobenzene	µg/L	2.60E+03	5.23E+03	HH
	lbs/day	5.42E+01	1.09E+02	
1,4-Dichlorobenzene	µg/L	2.60E+03	5.23E+03	HH
	lbs/day	5.42E+01	1.09E+02	
3,3'-Dichlorobenzidine	µg/L	7.70E-02	1.55E-01	HH
	lbs/day	1.61E-03	3.23E-03	
Diethyl Phthalate	µg/L	1.20E+05	2.41E+05	HH
	lbs/day	2.50E+03	5.03E+03	
Dimethyl Phthalate	µg/L	2.90E+06	5.83E+06	HH
	lbs/day	6.05E+04	1.22E+05	
Di-n-Butyl Phthalate	µg/L	1.20E+04	2.41E+04	HH
	lbs/day	2.50E+02	5.03E+02	
2,4-Dinitrotoluene	µg/L	9.10E+00	1.83E+01	HH
	lbs/day	1.90E-01	3.81E-01	
1,2-Diphenylhydrazine	µg/L	5.40E-01	1.09E+00	HH
	lbs/day	1.13E-02	2.26E-02	
Fluoranthene	µg/L	3.70E+02	7.44E+02	HH
	lbs/day	7.71E+00	1.55E+01	
Fluorene	µg/L	1.40E+04	2.81E+04	HH
	lbs/day	2.92E+02	5.87E+02	
Hexachlorobenzene	µg/L	7.70E-04	1.55E-03	HH
	lbs/day	1.61E-05	3.23E-05	
Hexachlorobutadiene	µg/L	5.00E+01	1.01E+02	HH
	lbs/day	1.04E+00	2.10E+00	

Parameter	Performance Goals			Basis[2]
	Units[1]	Average Monthly	Maximum Daily	
Hexachlorocyclopentadiene	µg/L	1.70E+04	3.42E+04	HH
	lbs/day	3.54E+02	7.12E+02	
Hexachloroethane	µg/L	8.90E+00	1.79E+01	HH
	lbs/day	1.86E-01	3.73E-01	
Isophorone	µg/L	6.00E+02	1.21E+03	HH
	lbs/day	1.25E+01	2.51E+01	
Nitrobenzene	µg/L	1.90E+03	3.82E+03	HH
	lbs/day	3.96E+01	7.96E+01	
N-Nitrosodimethylamine	µg/L	8.10E+00	1.63E+01	HH
	lbs/day	1.69E-01	3.39E-01	
N-Nitrosodi-n-Propylamine	µg/L	1.40E+00	2.81E+00	HH
	lbs/day	2.92E-02	5.87E-02	
N-Nitrosodiphenylamine	µg/L	1.60E+01	3.22E+01	HH
	lbs/day	3.34E-01	6.71E-01	
Pyrene	µg/L	1.10E+04	2.21E+04	HH
	lbs/day	2.29E+02	4.61E+02	
Aldrin	µg/L	1.40E-04	2.81E-04	HH
	lbs/day	2.92E-06	5.87E-06	
alpha-BHC	µg/L	1.30E-02	2.61E-02	HH
	lbs/day	2.71E-04	5.45E-04	
beta-BHC	µg/L	4.60E-02	9.25E-02	HH
	lbs/day	9.59E-04	1.93E-03	
gamma-BHC (Lindane)	µg/L	6.30E-02	1.27E-01	HH
	lbs/day	1.31E-03	2.64E-03	
Chlordane	µg/L	5.90E-04	1.19E-03	HH
	lbs/day	1.23E-05	2.47E-05	
4,4-DDT	µg/L	5.90E-04	1.19E-03	HH
	lbs/day	1.23E-05	2.47E-05	
4,4-DDE	µg/L	5.90E-04	1.19E-03	HH
	lbs/day	1.23E-05	2.47E-05	
4,4-DDD	µg/L	8.40E-04	1.69E-03	HH
	lbs/day	1.75E-05	3.52E-05	
Dieldrin	µg/L	1.40E-04	2.80E-04	HH
	lbs/day	2.92E-06	5.87E-06	
alpha-Endosulfan	µg/L	7.11E-03	1.43E-02	CAL
	lbs/day	1.48E-04	2.97E-04	
beta-Endosulfan	µg/L	7.11E-03	1.43E-02	CAL
	lbs/day	1.48E-04	2.97E-04	
Endosulfan Sulfate	µg/L	2.40E+02	4.82E+02	HH
	lbs/day	5.00E+00	1.00E+01	
Endrin	µg/L	1.88E-03	3.77E-03	CAL
	lbs/day	3.92E-05	7.86E-05	
Endrin Aldehyde	µg/L	8.10E-01	1.63E+00	HH
	lbs/day	1.69E-02	3.40E-02	
Heptachlor	µg/L	2.10E-04	4.22E-04	HH
	lbs/day	4.38E-06	8.80E-06	
Heptchlor Epoxide	µg/L	1.10E-04	2.21E-04	HH
	lbs/day	2.29E-06	4.61E-06	
PCBs sum	µg/L	1.70E-04	3.42E-04	HH
	lbs/day	3.54E-06	7.12E-06	
Toxaphene	µg/L	1.63E-04	3.28E-04	CAL
	lbs/day	3.41E-06	6.83E-06	

Parameter	Performance Goals			Basis[2]
	Units[1]	Average Monthly	Maximum Daily	
Benzo(a)Anthracene	µg/L	0.049	0.098	HH
	lbs/day	0.001	0.002	
Benzo(a)Pyrene	µg/L	0.049	0.098	HH
	lbs/day	0.001	0.002	
Benzo(b)Fluoranthene	µg/L	0.049	0.098	HH
	lbs/day	0.001	0.002	
Benzo(k)Fluoranthene	µg/L	0.049	0.098	HH
	lbs/day	0.001	0.002	
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	12	HH
	lbs/day	0.12	0.25	
Chrysene	µg/L	0.049	0.098	HH
	lbs/day	0.001	0.002	
Dibenzo(a,h)Anthracene	µg/L	0.049	0.098	HH
	lbs/day	0.001	0.002	
Indeno(1,2,3-cd)Pyrene	µg/L	0.049	0.098	HH
	lbs/day	0.001	0.002	

1 The MER values in this table were calculated using a flow rate of 2.5 MGD and the indicated concentration values. When the discharge flowrate is lower than 2.5 MGD, the MER calculations should be correspondingly lower.

2 HH – CTR Human Health Criteria
CAL – CTR Chronic Aquatic Life Criteria
AAL – CTR Acute Aquatic Life Criteria

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

Additionally, as discussed in section III.C.3 above, the Sediment Quality Plan supersedes other narrative sediment quality objectives, and establishes new sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries, including the tidal prism of San Diego Bay at the Lower Sweetwater River. The sediment-monitoring program contained in this Order is mandated under section VII.D of the Sediment Quality Plan. The Sediment Quality Plan states that if a Water Board determines that discharge of a toxic pollutant to bay or estuarine waters has the reasonable potential to cause or contribute to an exceedance of the sediment quality objectives, the Water Board shall apply the objectives as receiving water limits.

The San Diego Water Board has determined that there is reasonable potential to cause or contribute to an exceedance of the sediment quality objectives based on the CWA section 303(d) impairment and on the toxicity data collected to date from the Facility.

San Diego Bay is listed as impaired for copper, PCBs, sediment toxicity, and benthic community effects in the area near the Facility. On three occasions in 2011 and two occasions in 2012, the Facility exceeded chronic toxicity effluent limitations at Discharge Point No. 001a. A follow up Toxicity Identification Evaluation determined that calcium and other cationic metals were the likely source of the toxicity. Given the likelihood that metals will accumulate in the sediment near the Facility and the existing 303(d) impairment, the San Diego Water Board has determined that there is reasonable potential to cause or contribute to an exceedance of the sediment quality objectives.

Receiving water limitations of this Order are derived from the water quality objectives for Inland Surface Waters established by the Basin Plan and other applicable sediment water quality objectives contained in the State Water Board's Sediment Quality Plan.

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

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

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

B. Special Provisions

1. Reopener Provisions

This Order may be re-opened and modified, revoked and reissued, or terminated in accordance with the provisions of 40 CFR parts 122, 123, 124, and 125. The San Diego Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include, but are not limited to, the promulgation of new regulations, modification in sludge use or disposal practices, or adoption of new regulations by the State Water Board or the San Diego Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements — Not Applicable

3. Best Management Practices and Pollution Prevention

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 water quality-based effluent limitations.

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

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

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 section 13383 authorizes the San Diego Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP, Attachment E), establishes monitoring and reporting requirements that implement federal and State

requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

A. Core Monitoring Requirements

1. Effluent Monitoring

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

2. WET Testing Requirements

The Basin Plan states, “All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the San Diego Water Board.” The Basin Plan further states, “survival of aquatic life in surface waters subjected to a waste discharge, shall not be less than that for the same water body in areas unaffected by the discharge…” and that effluent limitations based upon acute bioassays of effluent will be prescribed where appropriate. This Order incorporates chronic toxicity effluent limitations and monitoring requirements.

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 Detailed Toxicity Reduction Evaluation (TRE) work plan in accordance with USEPA guidance which shall include further steps taken by the Discharger to investigate, identify, and correct the causes of toxicity; actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and a schedule for these actions. The Discharger may initiate the Toxicity Identification Evaluation (TIE) process in accordance with the work plan if the results of toxicity testing exceed the effluent limitation for toxicity.

B. Receiving Water Monitoring

1. Surface Water

This Order establishes monitoring requirements to evaluate compliance with applicable water quality objectives/criteria, and evaluate reasonable potential, if necessary in the future. This Order requires priority pollutant monitoring in the receiving water once during the permit term for the purposes of completing a reasonable potential analysis. This Order establishes sediment monitoring as required by the Sediment Quality Plan.

C. Regional Watershed Monitoring

Regional monitoring provides information about the sources, fates, and effects of anthropogenic contaminants in the watershed environment necessary to make assessments over large areas. The large-scale assessments provided by regional monitoring describe and evaluate cumulative effects of all anthropogenic inputs and enable better decision making regarding protection of beneficial uses of surface waters receiving waste discharges. Regional monitoring data assists in the interpretation of core monitoring studies by providing a more accurate and complete characterization of reference conditions and natural variability. Regional monitoring also leads to methods standardization and improved quality

control through inter-calibration exercises with other monitoring entities. The coalitions implementing regional monitoring enable sharing of technical resources, trained personnel, and associated costs. Focusing these resources on regional issues and developing a broader understanding of pollutant effects in receiving waters enables the development of more rapid and effective response strategies. Based on all of these considerations the San Diego Water Board supports regional approaches to monitoring.

The Discharger's effluent has the potential to impact the lower Sweetwater River and downstream waters in San, Diego Bay. The Discharger is required to participate in regional monitoring activities in the San Diego Bay watershed, including downstream San Diego Bay waters upon written request by the San Diego Water Board. The regional monitoring program shall be developed and implemented so as to answer the following questions:

1. Determine the status and trends of conditions in the San Diego Bay watershed, including downstream San Diego Bay waters, with regard to beneficial uses, e.g.
   a. Are fish and shellfish safe to eat?
   b. Is water quality safe for swimming?
   c. Are ecosystems healthy?
2. Identify the stressors causing / contributing to conditions of concern;
3. Identify the sources of the stressors causing / contributing to conditions of concern; *and*
4. Evaluate the effectiveness (i.e., environmental outcomes) of actions taken to address such stressors and sources.

Development and implementation of regional monitoring and assessment programs will be guided by the following:
1. San Diego Water Board Resolution No. R9-2012-0069, *Resolution in Support of a Regional Monitoring Framework*;
2. San Diego Water Board staff report entitled *A Framework for Monitoring and Assessment in the San Diego Region*; and
3. Other guidance materials, as appropriate.

During these coordinated sampling efforts, the Discharger's receiving water sampling and analytical effort, as defined in section IV of the MRP (Attachment E), may be reallocated to provide a regional assessment of the impact of the discharge to the San Diego Bay watershed and downstream waters of San Diego Bay. 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 the MRP (Attachment E) is suspended for the duration of the reallocation. Anticipated modifications to the monitoring program will be coordinated so as to provide a more comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollution sources. The level of resources in terms of sampling and analytical effort redirected from the receiving water monitoring program required under section IV of the MRP (Attachment E) shall equal the level of resources provided to implement the regional monitoring and assessment program, unless the San Diego Water Board and the Discharger agree otherwise. The specific scope and duration of the receiving water monitoring program reallocation and redirection shall be determined and set by the San Diego Water Board in consultation with the Discharger. If the Discharger declines to participate in regional watershed monitoring efforts, its ongoing sampling and analytical requirements will remain unchanged.

D. Other Monitoring Requirements

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

Under the authority of section 308 of the CWA (33 U.S.C. section 1318), USEPA requires all dischargers under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by USEPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted Semiannually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to USEPA's DMR-QA Coordinator and Quality Assurance Manager.

2. Pollutant Minimization Program

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. The San Diego Water Board may consider cost-effectiveness when establishing the requirements of a PMP. The program 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

e. An annual status report that shall be sent to the RWQCB including:

   i. All PMP monitoring results for the previous year;

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

   iii. A summary of all actions undertaken pursuant to the control strategy; and

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

VIII. PUBLIC PARTICIPATION

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

A. Notification of Interested Parties

The San Diego Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. By electronic mail dated, November 30, 2017, the San Diego Water Board notified the Discharger and interested agencies and persons of its intent to consider adoption of the tentative WDRs and of its intent to conduct a public hearing during a regularly scheduled San Diego Water Board meeting on June 21, 2017. The San Diego Water Board also provided notice that the tentative WDRs were posted on the San Diego Water Board website and provided a period of at least 30 days for public review and comment. On November 30, 2017, notice of the public hearing and public comment period was also published in the San Diego Union Tribune, a daily newspaper within the area affected by the Facility. The public also had access to the Board Meeting agenda and any changes in meeting dates and locations through the San Diego Water Board's website at http://www.waterboards.ca.gov/sandiego/.

B. Written Comments

Interested persons were invited to submit written comments concerning the tentative WDRs as provided through the notification process. Comments were due either in person, by email, or by mail to the Executive Office at the San Diego Water Board at 2375 Northside Drive, Suite 100, San Diego, CA 92108. http://www.waterboards.ca.gov/sandiego/

To be fully responded to by staff and considered by the San Diego Water Board, the written comments were due at the San Diego Water Board office by 5:00 p.m. on May 1, 2017.

C. Public Hearing

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

Date:	June 21, 2017
Time:	9 a.m.
Location:	California 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 and the tentative WDRs. 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 et seq. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the adoption date of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

State Water Resources Control Board

Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

Petitions may be emailed to the State Water Board at
waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a petition for review, see:
http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

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

E. Information and Copying

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

The San Diego Water Board website contains information and instructions on how to request access and obtain copies of these documents at:
http://www.waterboards.ca.gov/sandiego/about_us/contact_us/records.shtml

Before making a request to view public records in the San Diego Water Board office, interested persons may wish to determine if the information is already available on the San Diego Water Board website at http://www.waterboards.ca.gov/sandiego/

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 at the address below, reference this Facility, and provide a name, address, email address (if available), and phone number.
San Diego Regional Water Quality Control Board

2375 Northside Drive, Suite 100
San Diego, CA 92108-2700
Phone (619) 516-1990
Fax (619) 516-1994
rb9_questions@waterboards.ca.gov

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Ben Neill at 619-521-3379 or Ben.Neill@waterboards.ca.gov.

ATTACHMENT G – BASIN PLAN DISCHARGE PROHIBITIONS

1. The discharge of waste to waters of the State in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in 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 United States except as authorized by an 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 Regional Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the Division of Drinking Water 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 (ML) for toxic pollutants that shall be used, unless otherwise specified.

For priority pollutant monitoring, when there is more than one ML value for a give substance, the Discharger may select any of the analytical methods cited in the following table for compliance determination, or any other method described in 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.

Table H-1. List of Monitoring Parameters and Analytical Methods

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

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

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

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

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

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

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

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
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										
90.	Hexachlorocyclopentadiene	625	5	5										
91.	Hexachloroethane	625	5	1										
93.	Isophorone	625	10	1										
94.	Naphthalene	625	10	1	0.2									

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

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
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											