CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LOS ANGELES REGION

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ORDER NO. R4-2015-XXXX
NPDES NO. CA0001309

WASTE DISCHARGE REQUIREMENTS FOR THE BOEING COMPANY, SANTA SUSANA FIELD LABORATORY

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1.Discharger Information

Discharger	The Boeing Company
Name of Facility	Santa Susana Field Laboratory
Facility Address	5800 Woolsey Canyon Road
	Canoga Park, CA 91304-1148
	Ventura County

Table 2.Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Stormwater runoff and treated groundwater	34.214º	118.685º	Bell Creek
002	Stormwater runoff and treated groundwater	34.214º	118.704º	Bell Creek
003	Stormwater runoff	34.234º	118.706º	Bell Creek/Arroyo Simi
004	Stormwater runoff	34.236º	118.234º	Bell Creek/Arroyo Simi
005	Stormwater runoff	34.230º	118.718º	Bell Creek/Arroyo Simi
006	Stormwater runoff	34.231º	118.716º"	Bell Creek/Arroyo Simi
007	Stormwater runoff	34.231º	118.714º	Bell Creek/Arroyo Simi
008	Stormwater runoff	34.228º	118.674º	Dayton Canyon Creek
009	Stormwater runoff	34.239º	118.694º	Arroyo Simi
010	Stormwater runoff	34.238º	118.699º	Bell Creek/Arroyo Simi
011	Stormwater runoff	34.224º	118.688º	Bell Creek
012	No longer used			
013	No longer used			
014	No longer used			
015	Former Sewage Treatment Plant–STP-1 - No longer used			
016	Former Sewage Treatment Plant–STP-2 - No longer used			
017	Former Sewage Treatment Plant–STP-3 - No longer used			

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Tentative dated November 14, 2014

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
018	Stormwater runoff	34.226º	118.705º	Bell Creek
019	Treated groundwater (downstream of Outfall 001)	34.216º	118.696º	Bell Creek
020	Treated groundwater (downstream of Outfall 002)	34.217º	118.704º	Bell Creek

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board, Los Angeles Region on:	February 12, 2015
This Order shall become effective on:	April 1, 2015
This Order shall expire on:	March 31, 2020
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	180 days prior to the Order expiration date
The U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	Major Discharge

I, Samuel Unger, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on February 12, 2015.

Samuel Unger, P.E.
Executive Officer

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I. FACILITY INFORMATION

Information describing the Santa Susana Field Laboratory (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, Los Angeles Region (hereinafter Regional Water Board), finds:

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

B. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E and G through J are also incorporated into this Order.

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

D. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED that Order No. R4-2010-0090 is terminated upon the effective date of this Order 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 is authorized to discharge from the identified facility and outfalls into waters of the United States and shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for past violations of the previous Order.

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III. DISCHARGE PROHIBITIONS

A. Wastes discharged shall be limited to 187 mgd of stormwater runoff and 0.144 mgd of treated groundwater, as proposed by the Discharger. The discharge of wastes from accidental spills or other sources is prohibited.

B. Discharges of water, materials, radiological wastes, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, Bell Creek, Dayton Canyon Creek, the Arroyo Simi, or other waters of the United States or State of California, are prohibited.

C. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or a nuisance as defined by section 13050 of the Water Code.

D. Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.

E. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board as required by the federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the federal CWA, and amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

F. The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

G. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.

H. There shall be no discharge of polychlorinated biphenyls (PCB) compounds, such as those once commonly used for transformer fluid.

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IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

1. Final Effluent Limitations – Outfalls 011 and 018, Benchmarks* – Outfalls 001 and 002.

a. The discharge of stormwater runoff only from Outfalls 018 and 011 with constituents in excess of the effluent limitations listed below is prohibited. Benchmarks* are provided for Outfalls 001 and 002.

Table 4a. Effluent Limitations – Outfalls 011 and 018, Benchmarks* – Outfalls 001 and 002.

Parameter	Units	Effluent Limitations	
		Maximum Daily	Instantaneous Minimum/Maximum
Conventional Pollutants			
Biochemical Oxygen Demand (BOD)(5-day @20 Deg. C)	mg/L	30	--
	lbs/day[2]	29,481	--
Oil and Grease	mg/L	15	--
	lbs/day[2]	14,741	--
pH	s.u.	--	6.5/8.5
Total Suspended Solids (TSS)[1]	mg/L	45	--
	lbs/day[2]	44,222	--
Priority Pollutants			
Antimony, Total Recoverable[5]	µg/L	6.0	--
	lbs/day[2]	5.9	--
Arsenic, Total Recoverable[5]	µg/L	10.0	--
	lbs/day[2]	9.83	--
Beryllium, Total Recoverable[5]	µg/L	4.0	--
	lbs/day[2]	3.93	--
Cadmium, Total Recoverable[5]	µg/L	4.0/3.1[7]	--
	lbs/day[2]	3.93/3.05[7]	--
Chromium VI, Total Recoverable[5,6]	µg/L	16	--
	lbs/day[2]	15.72	--
Copper, Total Recoverable[5]	µg/L	14	--
	lbs/day[2]	13.76	--
Lead, Total Recoverable[5]	µg/L	5.2	--
	lbs/day[2]	5.11	--
Mercury, Total Recoverable[5]	µg/L	0.1	--
	lbs/day[2]	0.1	--
Nickel, Total Recoverable[5]	µg/L	94	--
	lbs/day[2]	92.4	--
Selenium, Total Recoverable[5]	µg/L	8.2/5[8]	--
	lbs/day[2]	8.06/4.91[8]	--
Silver, Total Recoverable[5]	µg/L	4.1	--
	lbs/day[2]	4.03	--

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Parameter	Units	Effluent Limitations	
		Maximum Daily	Instantaneous Minimum/Maximum
Thallium, Total Recoverable[5]	µg/L	2.0	--
	lbs/day[2]	1.97	--
Zinc, Total Recoverable[5]	µg/L	119	--
	lbs/day[2]	117	--
Cyanide	µg/L	8.5	--
	lbs/day[2]	8.35	--
1,2-Dichloroethane	µg/L	0.5	--
	lbs/day[2]	0.49	--
1,1-Dichloroethylene	µg/L	6.0	--
	lbs/day[2]	5.9	--
Trichloroethylene	µg/L	5.0	--
	lbs/day[2]	4.91	--
TCDD (TEQ)	µg/L	2.8E-08	--
	lbs/day[2]	2.75E-08	--
2,4,6-Trichlorophenol	µg/L	13	--
	lbs/day[2]	12.8	--
2,4-Dinitrotoluene	µg/L	18	--
	lbs/day[2]	17.7	--
Alpha BHC	µg/L	0.03	--
	lbs/day[2]	0.03	--
N-Nitrosodimethylamine	µg/L	16	--
	lbs/day[2]	15.72	--
Pentachlorophenol	µg/L	16.5	--
	lbs/day[2]	16.22	--
Bis(2-ethylhexyl) phthalate	µg/L	4.0	--
	lbs/day	3.93	--
Non-Conventional Pollutants			
Chloride	mg/L	150	--
	lbs/day	147,405	--
Chronic toxicity	Pass or Fail and % Effect	Pass or % Effect <50[9]	--
Chlorine, Total Residual	mg/L	0.1	--
	lbs/day	98.3	--

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Parameter	Units	Effluent Limitations	
		Maximum Daily	Instantaneous Minimum/Maximum
Ammonia – N	mg/L	10.1[4]	--
	lbs/day[2]	9,925.3	--
Nitrate - N	mg/L	8 [10]	--
	lbs/day[2]	7,862	--
Nitrite - N	mg/L	1 [10]	--
	lbs/day[2]	983	--
Nitrate +Nitrite - N	mg/L	8 [10]	--
	lbs/day[2]	7,862	--
Settleable Solids[1]	ml/L	0.3	--
Sulfate	mg/L	300	--
	lbs/day[2]	294,810	--
Barium	mg/L	1.0	--
	lbs/day[2]	983	--
Fluoride	mg/L	1.6	--
	lbs/day[2]	1,572.3	--
Iron	mg/L	0.3	--
	lbs/day[2]	295	--
Detergents (as MBAS)	mg/L	0.5	--
	lbs/day[2]	491.4	--
Temperature	°F	--	86
Total Dissolved Solids	mg/L	950	--
	lbs/day[2]	933,567	--
Perchlorate	µg/L	6.0	--
	lbs/day[2]	5.9	--
Manganese	µg/L	50	--
	lbs/day[2]	49.1	--
Radioactivity Gross Alpha Gross Beta	 pCi/L pCi/L	 15 50	 -- --
Combined Radium -226 & Radium-228	pCi/L	5.0	--
Tritium	pCi/L	20,000	--
Strontium- 90	pCi/L	8.0	--

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2. Final Effluent Limitations – Outfalls 019 and 020.

a. The discharge of treated groundwater from Outfalls 019 and 020 are permitted only after the appropriate approvals are secured from California Department of Fish and Wildlife. Discharges of treated groundwater only

from Outfalls 019 and 020 with constituents in excess of the effluent limitations listed below are prohibited.

Table 4b. Effluent Limitations – Outfalls 019 and 020.

Parameter	Units	Effluent Limitations		
		Average Monthly	Maximum Daily	Instantaneous Minimum/Maximum
Conventional Pollutants				
Biochemical Oxygen Demand (BOD)(5-day @20 Deg. C)	mg/L	20	30	--
	lbs/day[2]	24	36	--
Oil and Grease	mg/L	10	15	--
	lbs/day[2]	12	18	--
pH	s.u.	--	--	6.5/8.5
Total Suspended Solids (TSS)[1]	mg/L	15	45	--
	lbs/day[2]	18	54	--
Priority Pollutants				
Antimony, Total Recoverable[5]	µg/L	--	6.0	--
	lbs/day[2]	--	0.0072	--
Arsenic, Total Recoverable[5]	µg/L	--	10.0	--
	lbs/day[2]	--	0.012	--
Beryllium, Total Recoverable[5]	µg/L	--	4.0	--
	lbs/day[2]	--	0.005	--
Cadmium, Total Recoverable[5]	µg/L	2.0	4.0/3.1[7]	--
	lbs/day[2]	0.0024	0.005/0.004[7]	--
Chromium VI, Total Recoverable[5,6]	µg/L	8.0	16	--
	lbs/day[2]	0.01	0.02	--
Copper, Total Recoverable[5]	µg/L	5.8	14	--
	lbs/day[2]	0.007	0.017	--
Lead, Total Recoverable[5]	µg/L	2.6	5.2	--
	lbs/day[2]	0.003	0.006	--
Mercury, Total Recoverable[5]	µg/L	0.05	0.1	--
	lbs/day[2]	6E-05	1.2E-04	--
Nickel, Total Recoverable[5]	µg/L	35	86	--
	lbs/day[2]	0.04	0.1	--
Selenium, Total Recoverable[5]	µg/L	4.1	8.2/5[8]	--
	lbs/day[2]	0.005	0.01/0.006[8]	--

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Parameter	Units	Effluent Limitations		
		Average Monthly	Maximum Daily	Instantaneous Minimum/Maximum
Silver, Total Recoverable[5]	µg/L	2.0	4.1	--
	lbs/day[2]	0.0024	0.005	--
Thallium, Total Recoverable[5]	µg/L	--	2.0	--
	lbs/day[2]	--	0.0024	--
Zinc, Total Recoverable[5]	µg/L	43	119	--
	lbs/day[2]	0.052	0.14	--
Cyanide, Total Recoverable[5]	µg/L	4.3	8.5	--
	lbs/day[2]	0.0052	0.01	--
1,1-Dichloroethylene	µg/L	3.2	6.0	--
	lbs/day[2]	0.004	0.007	--
Trichloroethylene	µg/L	--	5.0	--
	lbs/day[2]	--	0.006	--
TCDD (TEQ)	µg/L	1.4E-08	2.8E-08	--
	lbs/day[2]	1.6E-11	3.4E-11	--
2,4,6-Trichloephenol	µg/L	6.5	13	--
	lbs/day[2]	0.008	0.016	--
2,4-Dinitrotoluene	µg/L	9.1	18	--
	lbs/day[2]	0.011	0.022	--
Alpha BHC	µg/L	0.01	0.03	--
	lbs/day[2]	1.25E-5	4E-5	--
N-Nitrosodimethylamine	µg/L	8.1	16	--
	lbs/day[2]	0.01	0.02	--
Pentachlorophenol	µg/L	8.2	16.5	--
	lbs/day[2]	0.01	0.02	--
Bis(2-ethylhexyl) phthalate	µg/L	--	4.0	--
	lbs/day		0.005	--
Non-Conventional Pollutants				
Chloride	mg/L	--	150	--
	lbs/day	--	180	--
Chronic toxicity	Pass or Fail and % Effect	Pass or Fail[11]	Pass or % Effect <50[9]	--
Chlorine, Total Residual	mg/L	--	0.1	--
	lbs/day	--	0.12	--

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Parameter	Units	Effluent Limitations		
		Average Monthly	Maximum Daily	Instantaneous Minimum/Maximum
Ammonia – N	mg/L	1.96[3]	10.1[4]	--
	lbs/day[2]	2.35	12.12	--
Nitrate - N	mg/L	--	8 [10]	--
	lbs/day[2]	--	9.62	--
Nitrite - N	mg/L	--	1 [10]	--
	lbs/day[2]	--	1.2	--
Nitrate +Nitrite - N	mg/L	--	8 [10]	--
	lbs/day[2]	--	9.6	--
Settleable Solids[1]	ml/L	0.1	0.3	--
Sulfate	mg/L	--	300	--
	lbs/day[2]	--	360	--
Barium	mg/L	--	1	--
	lbs/day[2]	--	1.2	--
Fluoride	mg/L	--	1.6	--
	lbs/day[2]	--	1.92	--
Iron	mg/L	--	0.3	--
	lbs/day[2]	--	0.4	--
Detergents (as MBAS)	mg/L	--	0.5	--
	lbs/day[2]	--	0.6	--
Temperature	°F	--	--	86
Total Dissolved Solids	mg/L	--	950	--
	lbs/day[2]	--	1,140	--
Perchlorate	µg/L	--	6.0	--
	lbs/day[2]	--	0.0072	--
Manganese	µg/L	--	50	--
	lbs/day[2]	--	0.06	--
Radioactivity				
Gross Alpha	pCi/L	--	15	--
Gross Beta	pCi/L	--	50	--
Combined Radium -226 & Radium-228	pCi/L	--	5.0	--
Tritium	pCi/L	--	20,000	--
Strontium- 90	pCi/L	--	8.0	--

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3. Final Effluent Limitations – Outfalls 003, 004, 005, 006, 007, 009, and 010.

a. The discharge of stormwater runoff only from Outfalls 003, 004, 005, 006, 007, 009, and 010 with constituents in excess of the following effluent limitations is prohibited.

Table 4c. Effluent Limitations – Outfalls 003, 004, 005, 006, 007, 009, and 010

Parameter	Units	Effluent Limitations	
		Maximum Daily	Instantaneous Minimum/ Maximum
Conventional Pollutants			
Oil and Grease	mg/L	15	--
	lbs/day[2]	8,048	--
pH	s.u.	--	6.5/8.5
Priority Pollutants			
Antimony, Total Recoverable[5]	µg/L	6.0	--
	lbs/day[2]	3.22	--
Cadmium, Total Recoverable	µg/L	4.0	--
	lbs/day[2]	2.15	--
Copper, Total Recoverable	µg/L	13	--
	lbs/day[2]	7	--
Lead, Total Recoverable[5]	µg/L	5.2	--
	lbs/day[2]	2.8	--
Mercury, Total Recoverable[5]	µg/L	0.13	--
	lbs/day[2]	0.07	--
Nickel, Total Recoverable[5]	µg/L	86	--
	lbs/day[2]	46.14	--
Thallium, Total Recoverable[5]	µg/L	2.0	--
	lbs/day[2]	1.1	--
Zinc, Total Recoverable[5]	µg/L	120	--
	lbs/day[2]	64	--
Cyanide, Total Recoverable	µg/L	9.5	--
	lbs/day[2]	5.1	--
TCDD	µg/L	2.8E-08	--
	lbs/day[2]	1.5E-08	--
Non-Conventional Pollutants			
Chronic toxicity	Pass or Fail, % Effect	Pass or % Effect <50[9]	--
Chloride	mg/L	150	--
	lbs/day	80,477	--

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Parameter	Units	Effluent Limitations	
		Maximum Daily	Instantaneous Minimum/ Maximum
Boron	mg/L	1.0	--
	lbs/day	537	--
Nitrate +Nitrite - N	mg/L	10	--
	lbs/day[2]	5,365	--
Sulfate	mg/L	250	--
	lbs/day[2]	134,128	--
Fluoride	mg/L	1.6	--
	lbs/day[2]	858	--
Perchlorate	µg/L	6.0	--
	lbs/day[2]	3.22	--
Temperature	°F	--	86
Total Dissolved Solids	mg/L	850[9]	--
	lbs/day[2]	456,034	--
Radioactivity			
Gross Alpha	pCi/L	15	--
Gross Beta	pCi/L	50	--
Combined Radium -226 & Radium-228	pCi/L	5.0	--
Tritium	pCi/L	20,000	--
Strontium-90	pCi/L	8.0	--

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4. Final Effluent Limitations – Outfall 008.

a. The discharge of stormwater runoff only from Outfall 008 with constituents in excess of the effluent limitations listed below is prohibited.

Table 4d. Effluent Limitations – Outfall 008.

Parameter	Units	Effluent Limitations	
		Maximum Daily	Instantaneous Minimum/ Maximum
Conventional Pollutants			
Oil and Grease	mg/L	15	--
	lbs/day[2]	902	--
pH	s.u.	--	6.5/8.5
Priority Pollutants			
Antimony, Total Recoverable[5]	µg/L	6.0	--
	lbs/day[2]	0.36	--
Cadmium, Total Recoverable[5]	µg/L	4.0/3.1[7]	--
	lbs/day[2]	0.24/0.19[1]	--

Parameter	Units	Effluent Limitations	
		Maximum Daily	Instantaneous Minimum/ Maximum
Copper, Total Recoverable	µg/L	14	--
	lbs/day[2]	0.84	--
Lead, Total Recoverable[5]	µg/L	5.2	--
	lbs/day[2]	0.31	--
Mercury, Total Recoverable[5]	µg/L	0.13	--
	lbs/day[2]	0.008	--
Nickel, Total Recoverable[5]	µg/L	86	--
	lbs/day[2]	5.2	--
Selenium, Total Recoverable[5]	µg/L	5	--
	lbs/day[2]	0.3	--
Thallium, Total Recoverable[5]	µg/L	2.0	--
	lbs/day[2]	0.12	--
Zinc, Total Recoverable[5]	µg/L	120	--
	lbs/day[2]	7.22	--
Cyanide, Total Recoverable	µg/L	9.5	--
	lbs/day[2]	0.57	--
TCDD	µg/L	2.8E-08	--
	lbs/day[2]	1.7E-09	--
Non-Conventional Pollutants			
Chronic toxicity	Pass or Fail, % Effect	Pass or % Effect <50[9]	--
Chloride	mg/L	150	--
	lbs/day	9,020	--
Boron	mg/L	1.0	--
	lbs/day	60	--
Ammonia – N	mg/L	10.1	--
	lbs/day[2]	607.3	--
Nitrate – N	mg/L	8	--
	lbs/day[2]	481	--
Nitrite - N	mg/L	1	--
	lbs/day[2]	60	--
Nitrate +Nitrite - N	mg/L	8	--
	lbs/day[2]	481	--

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Parameter	Units	Effluent Limitations	
		Maximum Daily	Instantaneous Minimum/ Maximum
Sulfate	mg/L	300	--
	lbs/day[2]	18,039	--
Fluoride	mg/L	1.6	--
	lbs/day[2]	96.2	--
Perchlorate	µg/L	6.0	--
	lbs/day[2]	0.36	--
Temperature	°F	--	86
Total Dissolved Solids	mg/L	950	--
	lbs/day[2]	57,124	--
Radioactivity			
Gross Alpha	pCi/L	15	--
Gross Beta	pCi/L	50	--
Combined Radium -226 & Radium-228	pCi/L	5	--
Tritium	pCi/L	20,000	--
Strontium-90	pCi/L	8	--

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* A "benchmark" is a water quality based effluent limit or a performance based limit that is used to evaluate the performance of best management practices (BMPs) with regard to the removal of pollutants present in the discharge. In this Order, the benchmarks are established based on water quality based effluent limitations. Exceedance of a benchmark triggers an evaluation of the BMPs implemented at the site. The evaluation may determine that the BMPs require augmentation, upgrading, or replacement. If so, the Discharger must develop a plan to implement the required upgrades and report to the Regional Water Board within 60 days of the reported exceedance. The Discharger shall continue monitoring as directed in the Monitoring and Reporting Program during plan development and implementation.

[1] The effluent limitations for total suspended solids and settleable solids are not applicable for discharges during wet weather. During wet weather flow, a discharge event is greater than 0.1 inch of rainfall in a 24-hour period. No more than one sample per week need be obtained during extended periods of rainfall or the discharge of collected stormwater. A storm event must be preceded by at least 72 hours of dry weather.

[2] The mass-based effluent limitations are calculated using the maximum flow of 117.83 million gallons per day (mgd) for Outfalls 001, 002, 011, and 018. The flow used for Outfalls 019 and 020 is 0.144 mgd. The flow used to calculate the mass for Outfalls 003, 004, 005, 006, 007, 009, and 010 is 64.33 mgd. For Outfall 008, the flow rate of 7.21 mgd was used. If the recorded flow is different, the mass should be recalculated using the equation: Mass (lbs/day) = Flow (mgd) * 8.34 * concentration (mg/L).

[3] Thirty day average at pH = 7.9 and 20°C, when hourly samples are collected and composited or only one grab sample is collected. Analysis for the temperature and pH of the receiving water at the same time as the discharge would provide data for a site specific determination of the ammonia limit. If there is no receiving water present, the pH and temperature of the effluent at the monitoring location shall be sampled and reported.

[4] One hour average WLA at 7.9 pH and 20°C applies if hourly samples are taken throughout the storm event and each is analyzed. No single sample may exceed the 10.1 mg/L limit. Analysis for the temperature and pH of the receiving water at the same time as the discharge would provide data for a site specific determination of the ammonia. If there is no receiving water present, the pH and temperature of the effluent at the end of pipe shall be sampled and reported.

[5] Concentrations correspond to a total hardness of 100 mg/L.

[6] The Discharger has the option to meet the hexavalent chromium limitations with a total chromium analysis. However, if the total chromium level exceeds the hexavalent chromium limitation, it will be considered a violation unless an analysis has been made for hexavalent chromium in replicate sample and the result reported is within the hexavalent chromium limits.

[7] Effluent limit applies only during wet weather discharges. The wet-weather targets apply to days when the maximum daily flow in the LA River is equal to or greater than 500 cubic feet per second (cfs).

[8] Effluent limit applies only during dry weather discharges. The dry-weather targets apply to days when the maximum daily flow in the LA River is less than 500 cfs.

[9] "Pass" or "Fail" and "% Effect" for Maximum Daily Effluent Limitations (MDEL). The Discharger shall conduct chronic toxicity monitoring as specified in the MRP. The Discharger demonstrates compliance with the chronic toxicity MDELs if the chronic toxicity testing result meets one of the following:

i. The chronic toxicity testing result is "Pass"; or
ii. The percent effect is less than 50 if the chronic toxicity result is "Fail".

[10] Average monthly effluent limit from LA River Nitrogen Compounds and Related Effects TMDL. Since no daily maximum effluent limit is provided, the average monthly waste load allocation becomes the daily maximum effluent limit.

[11] This is a Median Monthly Effluent Limitation (MMEL) of "Pass" or "Fail".

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C. Land Discharge Specifications

Not Applicable

D. Reclamation Specifications

Not applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in Arroyo Simi or in Bell Creek:

1. The normal ambient pH to fall below 6.5 nor exceed 8.5 units nor vary from normal ambient pH levels by more than 0.5 units.

2. Surface water temperature to rise greater than 5°F above the natural temperature of the receiving waters at any time or place.

3. Water Contact Standards

   In fresh water designated for water contact recreation (REC-I), the waste discharged shall not cause the following bacterial standards to be exceeded in the receiving water:

   a. Geometric Mean Limits

      E. coli density shall not exceed 126/100 ml.

Fecal coliform density shall not exceed 200/100 ml.

b. Single Sample Maximum (SSM)

E. coli density shall not exceed 235/100 ml.

Fecal coliform density shall not exceed 400/100 ml.

4. Depress the concentration of dissolved oxygen to fall below 5.0 mg/L anytime, and the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation.

5. Exceed total ammonia (as N) concentrations as specified in Regional Water Board Resolution No. 2005-014, *Amendment to the Water Quality Plan for the Los Angeles Region with respect to the Early Life Stage Implementation Provision of Inland Surface Water Ammonia Objectives for Freshwaters.* The ammonia Basin Plan amendment became effective on April 5, 2007.

6. The presence of visible, floating, suspended or deposited macroscopic particulate matter or foam.

7. Oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the receiving water or on objects in the water.

8. Toxic or other deleterious substances in concentrations or quantities which cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

9. Accumulation of bottom deposits or aquatic growths.

10. Damage, discolor, nor cause formation of sludge deposits on flood control structures or facilities nor overload the design capacity..

11. Dissolved sulfide concentration to exceed 0.1 mg/L

12. Violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or State Water Board. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board will revise or modify this Order in accordance with such standards.

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B. Receiving Water Limitations for Pesticides and PCBs for Arroyo Simi - as per the TMDL for Organochlorine (OC) Pesticides and Polychorinated Biphenyls (PCBs) and Siltation in Calleguas Creek, Its Tributaries and Mugu Lagoon (Resolution No. R4-2005-010)

The discharge shall not cause the concentration of constituents in Arroyo Simi in the vicinity of the discharges, from Outfalls 003 through 007, 009, and 010, to exceed the following limits:

Constituents	Units	Limitations
		Daily Maximum
Chlorpyrifos	µg/L	0.02
Diazinon	µg/L	0.16
Chlordane	µg/L	0.001
4,4-DDD	µg/L	0.0014
4,4-DDE	µg/L	0.001
4,4-DDT	µg/L	0.001
Dieldrin	µg/L	0.0002
PCBs	µg/L	0.0003
Toxaphene	µg/L	0.0003

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C. Final Receiving Water Sediment Limitations for Arroyo Simi - as per the TMDL for OC Pesticides, PCB, and Siltation in Calleguas Creek, it's Tributaries, and Malibu Lagoon for Stormwater permitees (Resolution No. R4-2005-010)

The Discharger shall comply with the final receiving water sediment limitations below on the efeective date of this Order. Compliance with the final limitations is determined by evaluating the in-stream annual averages of the constituents below near Frontier Park, a tributary to Arroyo Simi. The Discharger is required to use analytical methods with detection values below the specified limits, if possible, to demonstrate compliance.

Constituents	Units	Limitations
		Daily Maximum
Chlordane	µg/g	0.0033

Constituents	Units	Limitations
		Daily Maximum
4,4-DDD	µg/g	0.002
4,4-DDE	µg/g	0.0014
4,4-DDT	µg/g	0.0003
Dieldrin	µg/g	0.0002
PCBs	µg/g	0.12
Toxaphene	µg/g	0.0006

D. Groundwater Limitations

Not applicable

VI. PROVISIONS

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A. Standard Provisions

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

2. The Discharge shall comply with the following Regional Water Board Standard 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. With the exception of Outfalls 001 and 002 or 011 and 018, in the event that an effluent limitation set forth above for a pollutant other than a radioactive material is exceeded and the Discharger presents within 30 days of the date of discovery documentation that (i) discharges from a solid waste management unit (unit) regulated by DTSC are causing or contributing to the violation, and (ii) the Discharger was in compliance with all applicable requirements of DTSC permits and corrective action requirements for the unit, and (iii) modifications to DTSC's permit or corrective action requirements are necessary to consistently comply with this Order, then the Discharger, DTSC, and Regional Water Board will work cooperatively to develop a schedule that is as short as possible to take appropriate actions under the RCRA corrective action requirements or permits, as appropriate, to ensure compliance with this Order. This Order may be reopened and modified, in accordance with applicable laws and regulations, or a Time Schedule Order issued to incorporate appropriate interim limits while the appropriate actions are being taken under the RCRA corrective action requirements or permits.

   b. This Order may be modified, revoked, reissued, or terminated in accordance with the provisions of 40 C.F.R. sections 122.44, 122.62, 122.63, 122.64, 125.62, and/or 125.64. Causes for taking such actions include, but are not

limited to: failure to comply with any condition of this Order; endangerment to human health or the environment resulting from the permitted activity; or acquisition of newly-obtained information that would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the Discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

c. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of stormwater to municipal separate storm sewer systems (MS4s) or other water courses under their jurisdiction; including applicable requirements in municipal stormwater management program developed to comply with NPDES permits issued by the Regional Water Board to local agencies.

d. Discharges of wastes to any point other than specifically described in this Order is prohibited and constitutes a violation thereof.

e. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to sections 301, 302, 303(d), 304, 306, 307, 316, 318, 405, and 423 of the federal CWA and amendments thereto.

f. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances that may be applicable; they do not legalize this waste disposal facility, and they leave unaffected any further restraints on the disposal of wastes at this site that may be contained in other statutes or required by other agencies.

g. Oil or oily material, chemicals, refuse, or other pollutionable materials shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.

h. A copy of these waste discharge specifications shall be maintained at the facility so as to be available at all times to operating personnel.

i. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

    i. Violation of any term or condition contained in this Order;

    ii. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;

    iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

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j. If there is any storage of hazardous or toxic materials or hydrocarbons at this facility and if the facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

k. The Discharger shall notify the Regional Water Board not later than 120 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing or processing facility by more than ten percent. Such notification shall include estimates of proposed production rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge appropriate filing fee.

l. The Discharger shall file with the Regional Water Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.

m. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.

n. In the event of any change in name, ownership, or control of these waste disposal facilities, the Discharger shall notify this Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Regional Water Board.

o. The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream that may ultimately be released to waters of the United States is prohibited unless specifically authorized elsewhere in this Order or another NPDES permit. This requirement is not applicable to products used for lawn and agricultural purposes.

p. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this Order.

q. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to the planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

    i. Name and general composition of the chemical,

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ii. Frequency of use,

iii. Quantities to be used,

iv. Proposed discharge concentrations, and

v. USEPA registration number, if applicable.

r. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

s. The Water Code provides that any person who violates a waste discharge requirement or a provision of the Water Code is subject to civil penalties of up to $5,000 per day, $10,000 per day, or $25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to $10 per gallon per day or $25 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.

t. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, monthly average effluent limitation, instantaneous minimum, instantaneous maximum, or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board by telephone at (213) 576-6600 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

u. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Water Code § 1211)

B. Monitoring and Reporting Program (MRP) Requirements

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

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C. Special Provisions

1. Reopener Provisions

   a. In accordance with State Implementation Policy (SIP) section 2.2.2.A, this Order may be reopened and modified to incorporate new or modified limits based on future reasonable potential analysis to be conducted, upon completion of the collection of additional data by the Discharger. Notwithstanding the foregoing, in the event that reasonable potential analyses indicate that a pollutant has reasonable potential, the Regional Water Board staff shall bring an appropriate proposed modification to the Regional Water Board for its consideration at the next practicable Board Meeting.

   b. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the federal CWA, and amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

   c. This Order may be reopened and modified, in accordance with the provisions set forth in 40 C.F.R. Parts 122 and 124, to include requirements for the implementation of the watershed management approach or to include new minimum levels (MLs).

   d. This Order may be reopened and modified to revise effluent limitations as a result of future amendments to the Basin Plan, such as an update of an objective or the adoption of a TMDL for the Los Angeles River and tributaries thereto or to Arroyo Simi, a tributary to Calleguas Creek.

   e. This Order may be reopened and modified to consider incorporation of a site specific or regional design storm (based on the evaluation of the results of the Design Storm Project) and subsequent policy considerations.

   f. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data, special studies, technical reports and additional monitoring requirements.

   g. This Order may be reopened and modified to revise requirements pertaining to toxicity when the State Water Board adopts standardized requirements.

   h. In accordance with Section VI.A.2.a, this Order may be reopened and modified, in accordance with applicable laws and regulations, while appropriate actions are being taken under the RCRA corrective action requirements or permits, to ensure compliance with this Order.

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i. This Order may also be reopened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 C.F.R. sections 122.44, 122.62 to 122.64, 125.62, and/or 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order and endangerment to human health or the environment resulting from the permitted activity.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan. The Discharger shall submit to the Regional Water Board an Initial Investigation Toxicity Reduction Evaluation (TRE) updated workplan (1-2 pages) within 90 days of the effective date of this Order. This plan shall describe the steps the Discharger intends to follow in the event that toxicity is detected, including but not limited to the procedures for identifying the source(s) of and reducing or eliminating effluent toxicity. See section V of the Monitoring and Reporting Program (Attachment E) for an overview of accelerated monitoring and TRE requirements.

3. Stormwater Pollution Prevention, Best Management Practices, and Spill Contingency Plan

a. The Discharger shall submit within 90 days of the effective date of this Order:

i. An updated Stormwater Pollution Prevention Plan (SWPPP) that describes site-specific management practices for minimizing contamination of stormwater runoff and for preventing contaminated stormwater runoff from being discharged directly to waters of the State. The SWPPP shall be developed in accordance with the requirements in Attachment G.

ii. An updated Best Management Practices (BMPs) Plan that includes site-specific plans and procedures implemented to prevent hazardous waste/material from being discharged to waters of the State. The BMPs shall be consistent with the general guidance contained in the USEPA Guidance Manual for Developing Best Management Practices (BMPs) (EPA 833-B-93-004) and any applicable advanced technologies. If the Regional Water Board does not provide specific comments on the plans within 30 days of submittal, they are to be implemented as proposed.

iii. A Spill Contingency Plan (or substituted with an updated version of the Dischargers Spill Prevention Control and Countermeasure Plan).

Each plan shall cover all areas of the Facility and shall include an updated drainage map of the Facility. The Discharger shall identify on a map of appropriate scale the areas that contribute runoff to the permitted discharge point; describe the activities in each area and the potential for contamination of stormwater runoff from historical contamination and the discharge of hazardous waste/material; and address the feasibility of containment and/or treatment of storm. The plans must be reviewed and updated annually at

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the same time. Updated information shall be submitted within 30 days of revision.

D. Construction, Operation and Maintenance Specifications

The Discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this Order.

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

F. Other Special Provisions
Not Applicable

VII. COMPLIANCE DETERMINATION

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

A. Single Constituent Effluent Limitation.

If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (see Reporting Requirement I.G. of the MRP), then the Discharger is out of compliance.

B. Effluent Limitations Expressed as a Sum of Several Constituents.

If the sum of the individual pollutant concentrations is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, consider constituents reported as ND or DNQ to have concentrations equal to zero, provided that the applicable ML is used.

C. Multiple Sample Data.

When determining compliance with an AMEL 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:

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

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two middle

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values 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.

D. Average Monthly Effluent Limitation (AMEL).

If the average (or when applicable, the median determined by subsection D above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is 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.

In determining compliance with the AMEL, the following provisions shall also apply to all constituents:

1. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for that constituent, the Discharger has demonstrated compliance with the AMEL for that month;

2. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any constituent, the Discharger shall collect four additional samples at approximately equal intervals during the month. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later.

   When all sample results are greater than or equal to the reported Minimum Level (see Reporting Requirement I.G. of the MRP), the numerical average of the analytical results of these five samples will be used for compliance determination.

   When one or more sample results are reported as “Not-Detected (ND)” or “Detected, but Not Quantified (DNQ)” (see Reporting Requirement I.G. of the MRP), the median value of these four samples shall be used for compliance determination. If one or both of the middle values is ND or DNQ, the median shall be the lower of the two middle values.

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

4. If only one sample was obtained for the month or more than a monthly period and the result exceeds the AMEL, then the Discharger is in violation of the AMEL.

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E. Maximum Daily Effluent Limitations (MDEL).

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 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

F. Instantaneous Minimum Effluent Limitation.

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a 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 non-compliance with the instantaneous minimum effluent limitation).

G. Instantaneous Maximum Effluent Limitation.

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a 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 non-compliance with the instantaneous maximum effluent limitation).

H. Compliance with the pH Limitation.

If the receiving water pH, exceeds 8.5 pH units as a result of

a. high pH in the off-site stormwater, or
b. elevated pH in the receiving water upstream of the discharge

then the exceedance shall not be considered a violation.

I. Chronic Toxicity.

The discharge is subject to determination of “Pass” or “Fail” and “Percent Effect” from a single-effluent concentration chronic toxicity test at the discharge in-stream waste concentration (IWC) using the Test of Significant Toxicity (TST) approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis (Ho) for the TST approach is: Mean discharge IWC response ≤0.75 × Mean control response. A test result that rejects this null hypothesis is reported as “Pass”. A test result that does not reject this null hypothesis is reported as “Fail”. The relative “Percent Effect” at the discharge IWC is defined and reported as: ((Mean control response – Mean discharge IWC response) ÷ Mean control response)) × 100.

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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 approach, results in “Fail” and the “Percent Effect” is ≥0.50.

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

J. Compliance with the Temperature Limitation.

If the receiving water temperature downstream of the discharge exceeds 86°F as a result of:

a. high temperature in the ambient air, or
b. elevated temperature in the receiving water upstream of the discharge,

then the exceedance shall not be considered a violation.

K. Bacterial Standards and Analyses

The geometric mean used for determining compliance with bacterial standards is calculated using 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 or CFU/100 mL) found on each day of sampling.

For bacterial analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 mL for total and fecal coliform, at a minimum, and 1 to 1000 per 100 mL for *Enterococcus*). The detection method used for each analysis shall be reported with the results of the analysis.

Detection methods used for coliforms (total and fecal) and *Enterococcus* shall be those presented in Table 1A of 40 C.F.R. Part 136 (revised May 18, 2012), unless alternate methods have been approved by USEPA pursuant to 40 C.F.R. Part 136, or improved methods have been determined by the Executive Officer and/or USEPA.

L. Benchmarks and Receiving Water Limitations.

A “benchmark” is a water quality based effluent limit or a performance based limit that is used to evaluate the performance of best management practices (BMPs) with regard to the removal of pollutants present in the discharge. In this Order, the benchmarks are established based on water quality based effluent limitations. Exceedance of a benchmark triggers an evaluation of the BMPs implemented at the

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site. The evaluation may determine that the BMPs require augmentation, upgrading, or replacement. If so, the Discharger must develop a plan to implement the required upgrades and report to the Regional Water Board within 60 days of the reported exceedance. The Discharger will continue monitoring as directed in the Monitoring and Reporting Program and the Best Management Practices Plan during the evaluation and implementation of BMPs.

The Discharger shall comply with benchmarks and receiving water limitations through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the BMP plan and its components and other requirements of this Order including any modifications. The BMP plan and its components shall be designed to achieve compliance with receiving water limitations. If exceedances of Water Quality Objectives or Water Quality Standards (collectively, Water Quality Standards) persist, not withstanding implementation of the BMP and its components and other requirements of this Order, the Discharger shall assure compliance with benchmarks and receiving water limitations by complying with the following procedure:

1. Upon a determination by either the Discharger or the Regional Water Board that discharges are causing or contributing to an exceedance of an applicable Water Quality Standard, the Discharger shall within 24 hours notify and thereafter submit a revised BMP Compliance Report (as described in the Monitoring and Reporting Program) to the Regional Water Board that describes the BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of Water Quality Standards. This BMP Compliance Report is due to the Regional Water Board 60 days after the reported exceedance of a benchmark. The BMP Compliance Report shall include an implementation schedule along with descriptions and proposed installation locations of the upgrades or new BMPs. The Executive Officer at the Regional Water Board may require modifications to the BMP Report.

2. Submit any modifications to the BMP Report required by the Regional Water Board within 30 days of notification.

3. Within 30 days following the approval of the BMP Report, the Discharger shall revise the BMP Compliance Plan and its component and monitoring program to incorporate the approved modifications that have been and will be implemented; and implementation schedule, and any additional monitoring required.

4. Implement the revised BMP Plan and its components and monitoring program according to the approved schedule.

5. So long as the Discharger has complied with the procedures set forth above and is implementing the revised BMP Plan and its component, the Discharger does not have to repeat the same procedure for continuing or recurring exceedances

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of the same effluent limitations or receiving water limitations unless directed by the Regional Water Board to develop additional BMPs.

M. Mass Emission Rates

In calculating mass emission rates from the monthly average concentrations, use one half of the method detection limit for "not Detected" (ND) and the estimated concentration for "Detected, but Not Quantified" (DNQ) for the calculation of the monthly average concentration. To be consistent, if all pollutants belonging to the same group are reported as ND or DNQ, the sum of the individual pollutant concentrations should be considered as zero for the calculation of the monthly average concentrations.

N. Compliance with Sediment Limitations - as per the TMDL for Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation in Calleguas Creek, It's Tributaries, and Malibu Lagoon (Resolution No. R4-2005-010)

Compliance with sediment limitations in the receiving water for the constituents listed in section V.C above.will be determined by calculating the in-stream annual average at the base of the subwatershed where the discharges are located. The Facility's discharge from Outfalls 003, 004, 005, 006, 007, 009, and 010 is located in Arroyo Simi. Since the Facility is located near the top of the watershed, the Discharger collects samples closer to the facility, adjacent to Frontier Park. The data collected in this area will provide information regarding the pollutant concentrations in sediment in the upper watershed, and in the area that may be impacted by discharges from the Facility.

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ATTACHMENT A – DEFINITIONS

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

Arithmetic mean = $= \Sigma x / n$

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.

Benchmark
A "benchmark" is a water quality based effluent limit or a performance based limit that is used to evaluate the performance of best management practices (BMPs) with regard to the removal of pollutants present in the discharge. In this Order, the benchmarks are established based on water quality based effluent limitations. Exceedance of a benchmark triggers an evaluation of the BMPs implemented at the site. The evaluation may determine that the BMPs require augmentation, upgrading, or replacement. If so, the Discharger must develop a plan to implement the required upgrades and report to the Regional Water Board within 60 days of the reported exceedance. The Discharger will continue monitoring as directed in the Monitoring and Reporting Program during plan development and implementation.

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

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

Chronic Toxicity

A measurement of the sub-lethal effects of a discharge or ambient water sample (e.g. reduced growth or reproduction). Certain chronic toxicity tests include an additional measurement of lethality.

The discharge is subject to determination of "Pass" or "Fail" and "Percent Effect" from a single-effluent concentration chronic toxicity test at the discharge in-stream waste concentration (IWC) using the Test of Significant Toxicity (TST) approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA

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833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis (Ho) for the TST approach is: Mean discharge IWC response ≤0.75 × Mean control response. A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". The relative "Percent Effect" at the discharge IWC is defined and reported as: ((Mean control response – Mean discharge IWC response) ÷ Mean control response)) × 100.

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 approach, results in "Fail" and the "Percent Effect" is ≥0.50.

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.

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).

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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 $n/2+1$).

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Median Monthly Effluent Limitation (MMEL)

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

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 title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

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

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

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

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

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

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

Pollution Prevention
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 or Regional Water Board.

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

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

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

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

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

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

Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity

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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.)

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ACRONYMS AND ABBREVIATIONS

AMEL	Average Monthly Effluent Limitation
B	Background Concentration
BAT	Best Available Technology Economically Achievable
Basin Plan	*Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BMPPP	Best Management Practices Plan
BPJ	Best Professional Judgment
BOD	Biochemical Oxygen Demand 5-day @ 20 °C
BPT	Best Practicable Treatment Control Technology
C	Water Quality Objective
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
C.F.R.	Code of Federal Regulations
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
CWC	California Water Code
Discharger	The Boeing Company
DMR	Discharge Monitoring Report
DNQ	Detected But Not Quantified
ELAP	California Department of Health Services Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines and Standards
Facility	Santa Susana Field Laboratory
gpd	gallons per day
IC	Inhibition Coefficient
IC_{15}	Concentration at which the organism is 15% inhibited
IC_{25}	Concentration at which the organism is 25% inhibited
IC_{40}	Concentration at which the organism is 40% inhibited
IC_{50}	Concentration at which the organism is 50% inhibited
LA	Load Allocations
LOEC	Lowest Observed Effect Concentration
µg/L	micrograms per Liter
mg/L	milligrams per Liter
MDEL	Maximum Daily Effluent Limitation
MEC	Maximum Effluent Concentration
MGD	Million Gallons Per Day
ML	Minimum Level
MRP	Monitoring and Reporting Program
ND	Not Detected
NOEC	No Observable Effect Concentration
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NTR	National Toxics Rule

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OAL	Office of Administrative Law
PMEL	Proposed Maximum Daily Effluent Limitation
PMP	Pollutant Minimization Plan
POTW	Publicly Owned Treatment Works
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
Ocean Plan	*Water Quality Control Plan for Ocean Waters of California*
Regional Water Board	California Regional Water Quality Control Board, Los Angeles Region
RPA	Reasonable Potential Analysis
SCP	Spill Contingency Plan
SIP	State Implementation Policy (*Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California)*
SMR	Self Monitoring Reports
State Water Board	California State Water Resources Control Board
SWPPP	Stormwater Pollution Prevention Plan
TAC	Test Acceptability Criteria
Thermal Plan	*Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California*
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TRE	Toxicity Reduction Evaluation
TSD	Technical Support Document
TSS	Total Suspended Solid
TU_c	Chronic Toxicity Unit
USEPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WLA	Waste Load Allocations
WQBELs	Water Quality-Based Effluent Limitations
WQS	Water Quality Standards
%	Percent

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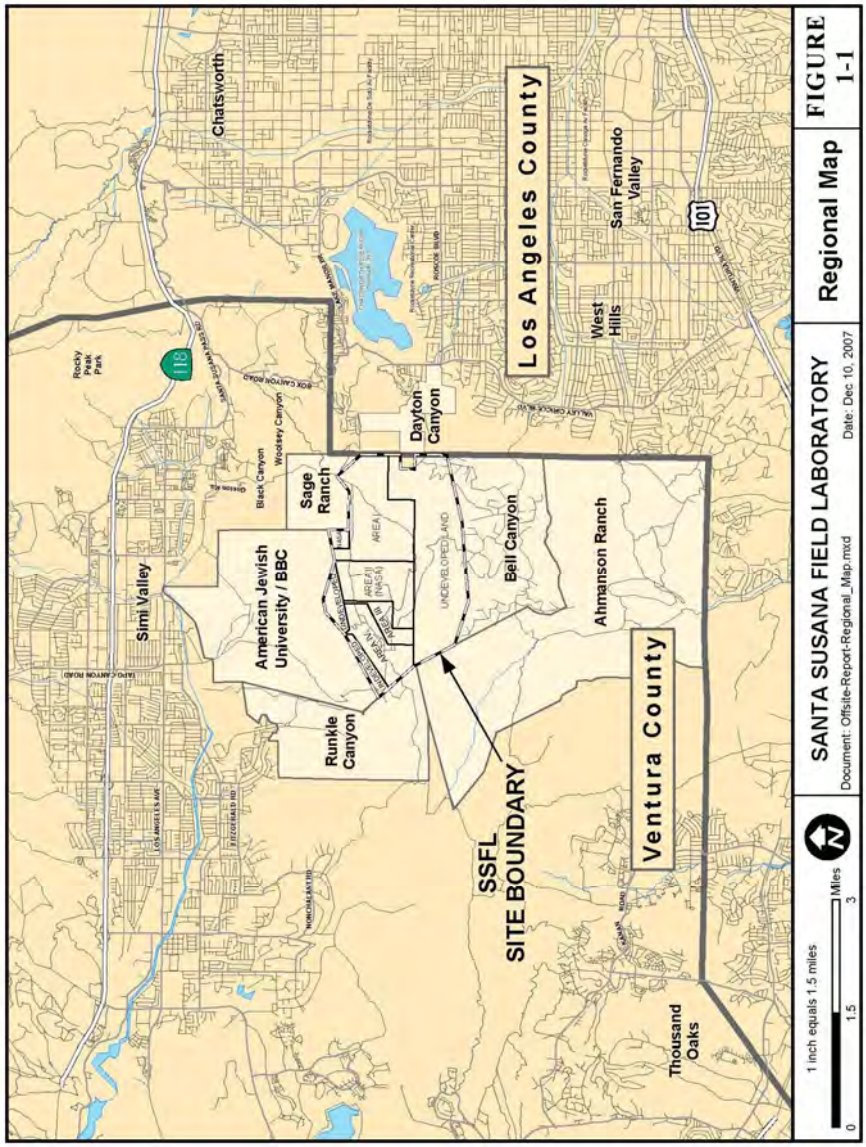
ATTACHMENT B – SSFL Location Map



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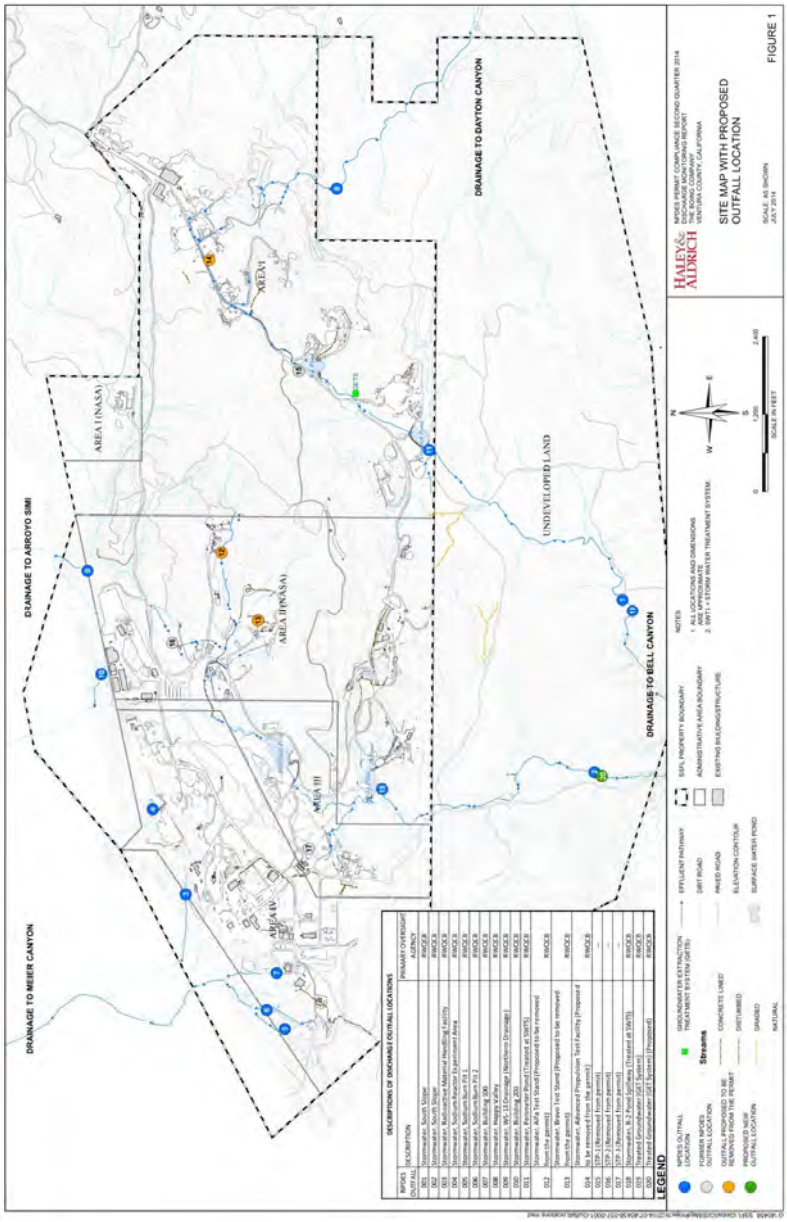
ATTACHMENT C-1 – SITE MAP WITH OUTFALL LOCATIONS



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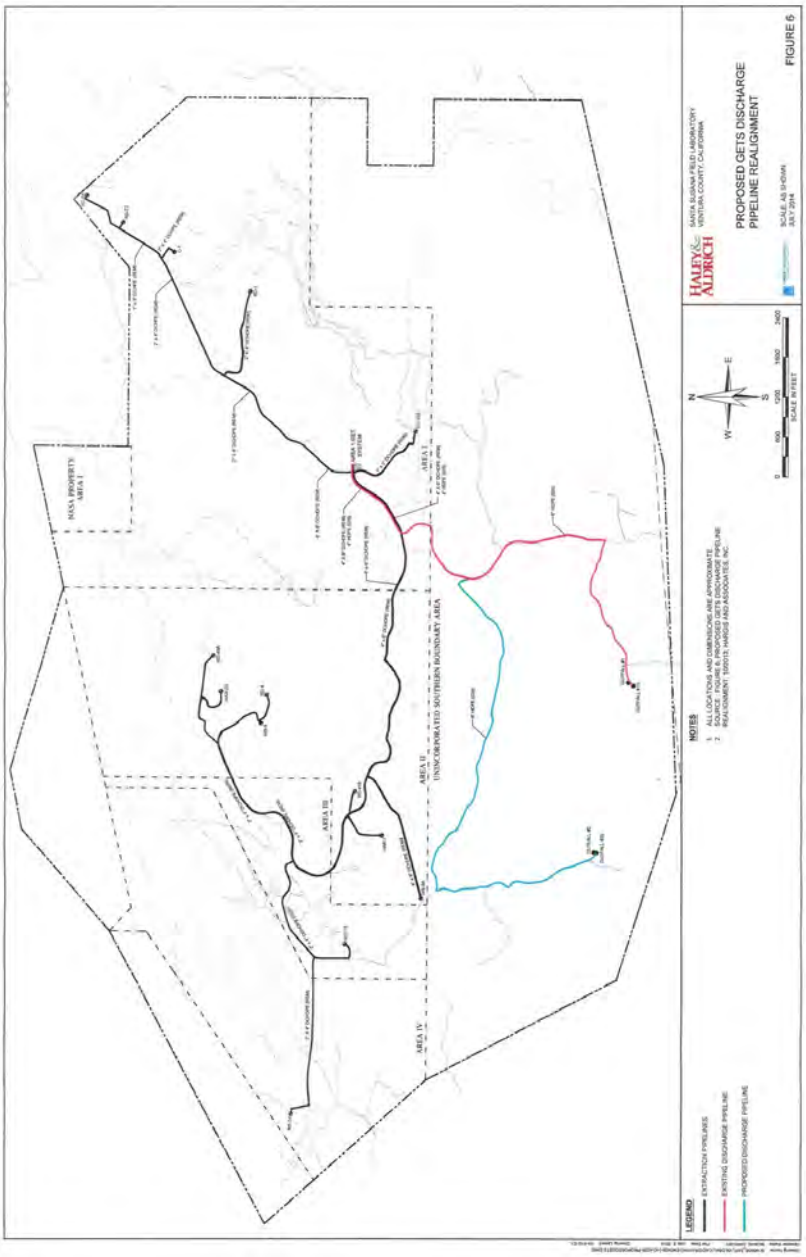
ATTACHMENT C-2 – GETS DISCHARGE PIPELINE REALIGNMENT



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ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.).

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement [40 C.F.R. § 122.41(a)(1)].

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [40 C.F.R. § 122.41(g)].

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2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations [40 C.F.R. § 122.5(c)].

F. Inspection and Entry

The Discharger shall allow the Los Angeles Regional Water Quality Control Board (Regional Water Board), State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order ([33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.).

G. Bypass

1. Definitions

   a. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility [40 C.F.R. § 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 C.F.R. § 122.41(m)(1)(ii)].

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

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3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless [40 C.F.R. § 122.41(m)(4)(i)]:

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [40 C.F.R. § 122.41(m)(4)(i)(A)];

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

   c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below [40 C.F.R. § 122.41(m)(4)(i)(C)].

   4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above [40 C.F.R. § 122.41(m)(4)(ii)].

   5. Notice

      1. 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 C.F.R. § 122.41(m)(3)(i)].

      2. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice) [40 C.F.R. § 122.41(m)(3)(ii)].

H. Upset

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

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [40 C.F.R. § 122.41(n)(2)].

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2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [40 C.F.R. § 122.41(n)(3)]:

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset [40 C.F.R. § 122.41(n)(3)(i)];

   b. The permitted facility was, at the time, being properly operated [40 C.F.R. § 122.41(n)(3)(ii)];

   c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) [40 C.F.R. § 122.41(n)(3)(iii)]; and

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [40 C.F.R. § 122.41(n)(3)(iv)].

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [section 122.41(n)(4)].

II. STANDARD PROVISIONS – PERMIT ACTION

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A. General

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

B. Duty to Reapply

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

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code [40 C.F.R. §§ 122.41(l)(3), 122.61.].

III. STANDARD PROVISIONS – MONITORING

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

B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order [40 C.F.R. §§ 122.41(j)(4), 122.44(i)(1)(iv).)].

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [40 C.F.R. § 122.41(j)(2)].

B. Records of monitoring information shall include:

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance

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with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order [40 C.F.R. § 122.41(h)] [Water Code section 13267].

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below [40 C.F.R. § 122.41(k)].

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

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above [40 C.F.R. § 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 C.F.R. § 122.22(b)(2)]; and

   c. The written authorization is submitted to the Regional Water Board and State Water Board [40 C.F.R. § 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

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Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 C.F.R. § 122.22(c)].

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

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

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order [40 C.F.R. § 122.22(l)(4)].

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices [40 C.F.R. § 122.41(l)(4)(i)].

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [40 C.F.R. § 122.41(l)(4)(ii)].

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance 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

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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 C.F.R. § 122.41(l)(6)(i)].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [40 C.F.R. § 122.41(l)(6)(ii)]:

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order [40 C.F.R. § 122.41(l) (6)(ii)(A)].

   b. Any upset that exceeds any effluent limitation in this Order [40 C.F.R. § 122.41(l)(6)(ii)(B)].

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [40 C.F.R. § 122.41(l)(6)(iii)].

F. Planned Changes

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

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) [40 C.F.R. § 122.41(l)(1)(i)]; or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are 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 C.F.R. § section 122.41(l)(1)(ii)].

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

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [40 C.F.R. § 122.41(l)(2)].

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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 C.F.R. § 122.41(l)(7)].

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

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

B. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger

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provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions [*section 122.41(a)(2)*] [*Water Code sections 13385 and 13387*].

C. Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000 [40 C.F.R. **§** *n 122.41(a)(3)*].

D. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both [40 C.F.R. **§** *122.41(j)(5)*].

E. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both [40 C.F.R. § *section 122.41(k)(2)*].

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VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [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 C.F.R. § 122.42(a)(1)]:

   a. 100 micrograms per liter (µg/L) [40 C.F.R. § 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 C.F.R. § 122.42(a)(1)(ii)];

   c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 C.F.R. § 122.42(a)(1)(iii)]; or

d. The level established by the Regional Water Board in accordance with section 122.44(f) [40 C.F.R. § 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 C.F.R. § 122.42(a)(2)]:

   a. 500 micrograms per liter (µg/L) [40 C.F.R. § 122.42(a)(2)(i)];

   b. 1 milligram per liter (mg/L) for antimony [40 C.F.R. § 122.42(a)(2)(ii)];

   c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 C.F.R. § 122.42(a)(2)(iii)]; or

   d. The level established by the Regional Water Board in accordance with section 122.44(f) [40 C.F.R. § 122.42(a)(2)(iv)].

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP NO. 6027)

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) NO. 6027

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

I. GENERAL MONITORING PROVISIONS

A. All effluent sampling stations shall be established for the point of discharge as defined in Table E-1 and shall be located where representative samples of that effluent can be obtained.

B. The Regional Water Board shall be notified in writing of any change in the sampling stations once established or in the methods for determining the quantities of pollutants in the individual waste streams.

C. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.

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

a. A list of the pollutant(s) that triggered reasonable potential;
b. The Basin Plan water quality objective or CTR criteria that was exceeded for each given pollutant;
c. The concentration of the pollutant(s);
d. The test method used to analyze the sample; and
e. The data and time of sample collection.

D. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. sections 136.3, 136.4, and 136.5 (revised May 18, 2012); or, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. Laboratories analyzing effluent samples and receiving water samples shall be certified by the State Water Resources Control Board Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer and must include quality assurance/quality control (QA/QC) data in their reports. A copy of

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the laboratory certification shall be provided each time a new certification and/or renewal of the certification is obtained from ELAP. For purposes of monitoring pH, dissolved oxygen, residual chlorine, and temperature, tests may be conducted at the field sampling location provided that all the requirements of the approved analytical methods for NPDES use in 40 C.F.R. Part 136 are met.

E. For any analyses performed for which no procedure is specified in the USEPA guidelines or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.

F. Each monitoring report must affirm in writing that "all analyses were conducted at a laboratory certified for such analyses by the State Water Resources Control Board or approved by the Executive Officer and in accordance with current USEPA guideline procedures or as specified in this MRP".

G. The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), and the Minimum Level (ML) for each pollutant. For the purpose of reporting compliance with numerical limitations, benchmarks, and receiving water limitations, analytical data shall be reported by one of the following methods, as appropriate:

1. An actual numerical value for sample results greater than or equal to the ML; or

2. "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML; or,

3. "Not-Detected (ND)" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used.

Analytical data reported as "less than" for the purpose of reporting compliance with permit limitations shall be the same or lower than the permit limit(s) established for the given parameter.

Current MLs (Attachment H) are those published by the State Water Board in the Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, February 24, 2005.

H. Where possible, the MLs employed for effluent analyses shall be lower than the permit limitations established for a given parameter. If the ML value is not below the effluent limitation, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory QA/QC procedures.

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I. Where possible, the ML's employed for effluent analyses not associated with determining compliance with effluent limitations in this order shall be lower than the lowest applicable water quality objective, for a given parameter. Water quality objectives for parameters may be found in the Basin Plan Chapter 3 and California Toxics Rule (40 CFR 131.38)**.** If the ML value is not below the water quality objective, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test, the associated laboratory QA/QC procedures, reporting levels (RL's), and method detection limits (MDL's).

The Regional Water Board, in consultation with the State Water Board Quality Assurance Program, shall establish a ML that is not contained in Attachment H to be included in the Discharger's permit in any of the following situations:

1. When the pollutant under consideration is not included in Attachment H;

2. When the Discharger and Regional Water Board agree to include in the permit a test method that is more sensitive than that specified in 40 C.F.R. Part 136 (revised May 18, 2012);

3. When the Discharger agrees to use an ML that is lower than that listed in Attachment H;

4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment H, and proposes an appropriate ML for their matrix; or,

5. When the Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the USEPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Regional Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

I. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 C.F.R. section 136.3. All QA/QC items must be run on the same dates the samples were actually analyzed, and the results shall be reported in the Regional Water Board format, when it becomes available, and submitted with the laboratory reports. Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the report.

J. All analyses shall be accompanied by the chain of custody, including but not limited to data and time of sampling, sample identification, and name of person who performed sampling, date of analysis, name of person who performed analysis, QA/QC data,

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method detection limits, analytical methods, copy of laboratory certification, and a perjury statement executed by the person responsible for the laboratory.

K. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to insure accuracy of measurements, or shall insure that both equipment activities will be conducted.

L. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Unless otherwise specified in the analytical method, duplicate samples must be analyzed at a frequency of 5% (1 in 20 samples) with at least one if there is fewer than 20 samples in a batch. A batch is defined as a single analytical run encompassing no more than 24 hours from start to finish. A similar frequency shall be maintained for analyzing spiked samples.

M. When requested by the Regional Water Board or USEPA, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger must have a success rate equal to or greater than 80%.

N. For parameters that both average monthly and daily maximum limits are specified and the monitoring frequency is less than four times a month, the following shall apply. If an analytical result is greater than the average monthly limit, the Discharger shall collect four additional samples at approximately equal intervals during the month, until compliance with the average monthly limit has been demonstrated. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later. In the event of noncompliance with an average monthly effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the average monthly effluent limitation has been demonstrated. The Discharger shall provide for the approval of the Executive Officer a program to ensure future compliance with the average monthly limit.

O. In the event wastes are transported to a different disposal site during the report period, the following shall be reported in the monitoring report:

1. Types of wastes and quantity of each type;

2. Name and address for each hauler of wastes (or method of transport if other than by hauling); and

3. Location of the final point(s) of disposal for each type of waste.

If no wastes are transported off-site during the reporting period, a statement to that effect shall be submitted.

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P. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.

Q. Laboratories analyzing monitoring samples shall be certified by the Department of Public Health, in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports.

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

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

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:

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Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	Effluent shall be sampled at the point of discharge into the unnamed canyon tributary to Bell Creek
002	EFF-002	Effluent shall be sampled at the point of discharge into the unnamed canyon tributary to Bell Creek
003	EFF-003	Effluent shall be sampled at the point of discharge into the unnamed canyon tributary to Arroyo Simi (if discharged to Arroyo Simi)
004	EFF-004	Effluent shall be sampled at the point of discharge into the unnamed canyon tributary to Arroyo Simi (if discharged to Arroyo Simi)
005	EFF-005	Effluent shall be sampled at the point of discharge into the unnamed canyon tributary to Arroyo Simi (if discharged to Arroyo Simi)
006	EFF-006	Effluent shall be sampled at the point of discharge into the unnamed canyon tributary to Arroyo Simi (if discharged to Arroyo Simi)
007	EFF-007	Effluent shall be sampled at the point of discharge into the unnamed canyon tributary to Arroyo Simi (if discharged to Arroyo Simi)

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
008	EFF-008	Effluent shall be sampled at the point of discharge into the unnamed canyon tributary to Bell Creek
009	EFF-009	Effluent shall be sampled at the point of discharge into the unnamed canyon tributary to Arroyo Simi
010	EFF-010	Effluent shall be sampled at the point of discharge into the unnamed canyon tributary to Arroyo Simi (if discharged to Arroyo Simi)
011	EFF-011	Effluent shall be sampled at the point of discharge into the unnamed canyon tributary to Bell Creek
012	No longer used	
013	No longer used	
014	No longer used	
015	No longer used	
016	No longer used	
017	No longer used	
018	EFF-018	Effluent shall be sampled at the point of discharge into the unnamed canyon tributary to Bell Creek
019	EFF-019	Effluent shall be sampled at the discharge point of the groundwater extraction and treatment system, i.e., at a sampling port located after the final treatment process.
020	EFF-020	
	RSW-001	Receiving water sampling requirements are satisfied by sampling of priority pollutants on the discharge, from EFF-001, EFF-002, EFF-011, or EFF-018.
	RSW-002	A sampling station has been established in Frontier Park downstream of the discharge point into Arroyo Simi, the receiving water.

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III. INFLUENT MONITORING REQUIREMENTS

Not applicable

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001, EFF-002, EFF-011, EFF-018

The Discharger shall monitor stormwater runoff as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-2a. Effluent Monitoring - EFF-001, EFF-002, EFF-011, EFF-018

Parameter	Units	Sample Type	Minimum Sampling Frequency[1]	Required Analytical Test Method
Flow	gpd (gallons per day)	Measure	1/Discharge	--
Rainfall	Inches	Continuous	Continuous	--
Biochemical Oxygen Demand (BOD)(5-day @20 Deg. C)	mg/L	Composite	1/Discharge	[2]
Temperature	°F	Grab	1/Discharge	[2]
Oil and Grease	mg/L	Grab	1/Discharge	[2]
Conductivity at 25 °C	µmhos/cm	Grab	1/Discharge	
pH	s.u.	Grab	1/Discharge	[2]
Total Suspended Solids (TSS)	mg/L	Composite	1/Discharge	[2]
Total organic carbon	mg/L	Composite	1/Year	[2]
Hardness (as mg/L $CaCO_3$)	mg/L	Composite	1/Year	[2]
Detergents (as MBAS)	mg/L	Composite	1/Discharge	[2]
Cyanide	µg/L	Grab	1/Discharge	[2]
Copper, Total Recoverable	µg/L	Composite	1/Discharge	[2]
Lead, Total Recoverable	µg/L	Composite	1/Discharge	[2]
Mercury, Total Recoverable	µg/L	Composite	1/Discharge	[2]
1,1-Dichloroethylene	µg/L	Grab	1/Discharge	[2]
1,2-Dichloroethane	µg/L	Grab	1/Discharge	[2]
Perchlorate	µg/L	Composite	1/Discharge	[2]
2,4,6-Trichlorophenol	µg/L	Composite	1/Discharge	[2]
2,4-Dinitrotoluene	µg/L	Composite	1/Discharge	[2]
Alpha-BHC	µg/L	Composite	1/Discharge	[2]
Bis(2-ethylhexyl)phthalate	µg/L	Composite	1/Discharge	[2]
N-Nitrosodimethylamine	µg/L	Composite	1/Discharge	[2]
Pentachlorophenol	µg/L	Composite	1/Discharge	[2]
Trichloroethylene	µg/L	Grab	1/Discharge	[2]
TCDD [10]	µg/L	Composite	1/Discharge	[2]
Volatile organic compounds	µg/L	Grab	1/Quarter	[2]
Boron	mg/L	Composite	1/Year	[2]
Fluoride	mg/L	Composite	1/Year	[2]
Barium	mg/L	Composite	1/Year	[2]
Iron	mg/L	Composite	1/Year	[2]
Manganese	µg/L	Composite	1/Year	[2]
Antimony, Total Recoverable	µg/L	Composite	1/Year	[2]
Total Arsenic	µg/L	Composite	1Year	[2]
Total Beryllium	µg/L	Composite	1/Year	[2]
Cadmium, Total Recoverable	µg/L	Composite	1/Discharge	[2]
Total Chromium VI[8]	µg/L	Composite	1/Year	[2]

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Parameter	Units	Sample Type	Minimum Sampling Frequency[1]	Required Analytical Test Method
Nickel, Total Recoverable	µg/L	Composite	1/Year	[2]
Selenium, Total Recoverable	µg/L	Composite	1/Discharge	[2]
Silver, Total Recoverable	µg/L	Composite	1/Year	[2]
Thallium, Total Recoverable	µg/L	Composite	1/Year	[2]
Zinc, Total Recoverable	µg/L	Composite	1/Discharge	[2]
Cobalt	µg/L	Composite	1/Year	[2]
Vanadium	µg/L	Composite	1/Year	[2]
Ammonia – N	mg/L	Composite	1/Discharge	[2,3]
Nitrate + Nitrite-N	mg/L	Composite	1/Discharge	[2]
Nitrate – N	mg/L	Composite	1/Discharge	[2]
Nitrite – N	mg/L	Composite	1/Discharge	[2]
Chloride	mg/L	Composite	1/Discharge	[2]
Chlorine, Total Residual	mg/L	Grab	1/Year	[2]
Dissolved Oxygen	mg/L	Grab	1/Discharge	[2]
Settleable Solids	ml/L	Grab	1/Discharge	[2]
Sulfate	mg/L	Composite	1/Discharge	[2]
Total Dissolved Solids	mg/L	Composite	1/Discharge	[2]
Fecal coliform	(MPN per 100 mL)	Grab	1/Year	[2]
E. coli	(MPN per 100 mL)	Grab	1/Year	[2]
Chronic Toxicity [5]	pass or fail, % effect	Composite	1st & 2nd Rain Events of each Year	[2]
Turbidity	NTU	Grab	1/Discharge	[2]
Radioactivity-				
Gross Alpha	pCi/L	Composite	1/Discharge	[2, 6, 7]
Gross Beta	pCi/L	Composite	1/Discharge	[2, 6, 7]
Combined Radium 226 & Radium 228	pCi/L	Composite	1/Discharge	[2, 6, 7]
Tritium (H-3)	pCi/L	Composite	1/Discharge	[2, 6, 7]
Strontium-90	pCi/L	Composite	1/Discharge	[2, 6, 7]
K-40 (Potassium-40)	pCi/L	Composite	1/Discharge	[2, 6, 7]
CS-137	pCi/L	Composite	1/Discharge	[2, 6, 7]
Uranium	pCi/L	Composite	1/Discharge	[2, 6, 7]
Polychlorinated Biphenyls (PCBs)	µg/L	Composite	1/Year	[2]
TPH[9]	µg/L	Grab	1/Year	[2]
Monomethyl hydrazine	µg/L	Composite	1/Year	[2]
cis-1,2-Dichloroethene	µg/L	Grab	1/Year	[2]
1,4-Dioxane	µg/L	Composite	1/Year	[2]
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	Composite	1/Quarter	[2]
1,2-Dichloro-1,1,2-trifluroethane	µg/L	Composite	1/Year	[2]

TENTATIVE

Parameter	Units	Sample Type	Minimum Sampling Frequency[1]	Required Analytical Test Method
Cyclohexane	µg/L	Grab	1/Year	[2]
Remaining Priority Pollutants[4]	µg/L	Composite or Grab as appropriate	1/Year	[2]

B. Monitoring Location EFF-003 to EFF-010

The Discharger shall monitor stormwater runoff as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-2b. Effluent Monitoring - EFF-003, EFF- 004[16], Eff – 005, EFF – 006, EFF – 007, EFF – 008, EFF – 009, and EFF-010

Parameter	Units	Sample Type	Minimum Sampling Frequency[1]	Required Analytical Test Method
Flow	gpd (gallons per day)	Measure	1/Discharge	--
Rainfall	Inches	Continuous	Continuous	--
Oil and Grease	mg/L	Grab	1/Discharge	[2]
pH	s.u.	Grab	1/Discharge	[2]
Total Suspended Solids (TSS)	mg/L	Composite	1/Year	[2]
Hardness (as mg/L $CaCO_3$)	mg/L	Composite	1/Year	[2]
Copper, Total Recoverable	µg/L	Composite	1/Discharge	[2]
Lead, Total Recoverable	µg/L	Composite	1/Discharge	[2]
Mercury, Total Recoverable	µg/L	Composite	1/Discharge	[2]
Nickel, Total Recoverable	µg/L	Composite	1/Discharge	[2]
Silver, Total Recoverable	µg/L	Composite	1/Discharge	[2]
Perchlorate	µg/L	Composite	1/Discharge[11]	[2]
TCDD [10]	µg/L	Composite	1/Discharge	[2]
Boron	mg/L	Composite	1/Year [13]	[2]
Fluoride	mg/L	Composite	1/Year	[2]
Iron	mg/L	Composite	1/Year	[2]
Antimony, Total Recoverable	µg/L	Composite	1/Discharge	[2]
Total Cadmium	µg/L	Composite	1/Discharge	[2]
Selenium ,Total Recoverable	µg/L	Composite	1/Discharge	[2]
Thallium, Total Recoverable	µg/L	Composite	1/Discharge	[2]
Zinc, Total Recoverable	µg/L	Composite	1/Discharge	[2]
Total Cyanide	µg/L	Composite	1/Discharge	[2]
Total Vanadium	µg/L	Composite	1/Year	[2]
Aluminum, Total Recoverable	µg/L	Composite	1/Year	[2]
Chlorpyrifos	µg/L	Composite	1/Year	[2]
Diazinon	µg/L	Composite	1/Year	[2]

TENTATIVE

Parameter	Units	Sample Type	Minimum Sampling Frequency[1]	Required Analytical Test Method
Ammonia – N [3,12]	mg/L	Composite	1/Discharge	[2]
Nitrate + Nitrite-N	mg/L	Composite	1/Discharge	[2]
Nitrate – N [12]	mg/L	Composite	1/Discharge	[2]
Nitrite – N [12]	mg/L	Composite	1/Discharge	[2]
Chloride	mg/L	Composite	1/Discharge	[2]
Sulfate	mg/L	Composite	1/Discharge	[2]
Temperature	ºF	Grab	1/Discharge	[2]
Total Dissolved Solids	mg/L	Composite	1/Discharge	[2]
Radioactivity- Gross Alpha Gross Beta	 pCi/L pCi/L	 Composite Composite	 1/Discharge 1/Discharge	 [2, 6, 7] [2, 6, 7]
Combined Radium 226 & Radium 228	pCi/L	Composite	1/Discharge	[2, 6, 7]
Tritium (H-3)	pCi/L	Composite	1/Discharge	[2,6,7]
Strontium-90	pCi/L	Composite	1/Discharge	[2, 6, 7]
K-40 (Potassium-40)	pCi/L	Composite	1/Discharge	[2, 6, 7]
Cs-137	pCi/L	Composite	1/Discharge	[2, 6, 7]
Uranium	pCi/L	Composite	1/Discharge	[2, 6, 7]
Chronic Toxicity [5]	pass or fail, % effect	Composite	1st & 2nd Rain Events of each Year	[2]
Fecal coliform	(MPN per 100 mL)	Grab	1/Year	[2]
E. coli	(MPN per 100 mL)	Grab	1/Year	[2]
Remaining Priority Pollutants[4]	µg/L	Composite or Grab as appropriate	1/Year	[2]

TENTATIVE

C. Monitoring Location EFF-019 and EFF-020 – The Groundwater Treatment System

The Discharger shall monitor treated groundwater as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-2c Effluent Monitoring - EFF-019 and EFF-020[15]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	gpd (gallons per day)	Measure	Continuous	--
Biochemical Oxygen Demand	mg/L	Composite	1/Month	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
(BOD)(5-day @20 Deg. C)				
Temperature	°F	Grab	1/Month	[2]
Oil and Grease	mg/L	Grab	1/Month	[2]
Conductivity at 25 °C	µmhos/cm	Grab	1/Quarter	
pH	s.u.	Grab	1/Month	[2]
Total Suspended Solids (TSS)	mg/L	Composite	1/Month	[2]
Total organic carbon	mg/L	Composite	1/Month	[2]
Hardness (as mg/L $CaCO_3$)	mg/L	Composite	1/Quarter	[2]
Detergents (as MBAS)	mg/L	Composite	1/Month	[2]
Cyanide Total Recoverable	µg/L	Composite	1/Month	[2]
Cadmium, Total Recoverable	µg/L	Composite	1/Month	[2]
Copper, Total Recoverable	µg/L	Composite	1/Month	[2]
Lead, Total Recoverable	µg/L	Composite	1/Month	[2]
Mercury, Total Recoverable	µg/L	Composite	1/Month	[2]
Zinc, Total Recoverable	µg/L	Composite	1/Month	[2]
1,1-Dichloroethylene	µg/L	Grab	1/Month	[2]
Perchlorate	µg/L	Composite	1/Month	[2]
2,4,6-Trichlorophenol	µg/L	Composite	1/Month	[2]
2,4-Dinitrotoluene	µg/L	Composite	1/Month	[2]
Alpha-BHC	µg/L	Composite	1/Month	[2]
Bis(2-ethylhexyl)phthalate	µg/L	Composite	1/Month	[2]
N-Nitrosodimethylamine	µg/L	Composite	1/Month	[2]
Pentachlorophenol	µg/L	Composite	1/Month	[2]
Trichloroethylene	µg/L	Grab	1/Month	[2]
TCDD [10]	µg/L	Composite	1/Month	[2]
Volatile organic compounds	µg/L	Grab	1/Month	[2]
Boron	mg/L	Composite	1/Year [13]	[2]
Fluoride	mg/L	Composite	1/Year [13]	[2]
Barium	mg/L	Composite	1/Year [13]	[2]
Iron	mg/L	Composite	1/Year [13]	[2]
Manganese, Total Recoverable	µg/L	Composite	1/Year [13]	[2]
Antimony, Total Recoverable	µg/L	Composite	1/Year [13]	[2]
Arsenic, Total Recoverable	µg/L	Composite	1/Year [14]	[2]
Beryllium, Total Recoverable	µg/L	Composite	1/Year [13]	[2]
Chromium VI [8], Total Recoverable	µg/L	Composite	1/Year [13]	[2]
Nickel, Total Recoverable	µg/L	Composite	1/Year [13]	[2]
Selenium, Total Recoverable	µg/L	Composite	1/Month	[2]
Silver, Total Recoverable	µg/L	Composite	1/Year [13]	[2]
Thallium, Total Recoverable	µg/L	Composite	1/Year [13]	[2]
Cobalt	µg/L	Composite	1/Year	[2]
Vanadium	µg/L	Composite	1/Year	[2]
Chlorpyrifos	µg/L	Composite	1/Year [13]	
Diazinon	µg/L	Composite	1/Year [13]	

TENTATIVE

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Ammonia – N [3]	mg/L	Composite	1/Month	[2]
Nitrate + Nitrite-N	mg/L	Composite	1/Month	[2]
Nitrate – N	mg/L	Composite	1/Month	[2]
Nitrite – N	mg/L	Composite	1/Month	[2]
Chloride	mg/L	Composite	1/Month	[2]
Chlorine, Total Residual	mg/L	Grab	1/Year	[2]
Dissolved Oxygen	mg/L	Grab	1/Month	[2]
Settleable Solids	ml/L	Grab	1/Month	[2]
Sulfate	mg/L	Composite	1/Month	[2]
Total Dissolved Solids	mg/L	Composite	1/Month	[2]
Fecal coliform	(MPN per 100 mL)	Grab	1/Year	[2]
E. coli	(MPN per 100 mL)	Grab	1/Year	[2]
Chronic Toxicity [14]	pass or fail, % effect	Composite	2/Year	[2]
Turbidity	NTU	Composite	1/Month	[2]
Radioactivity- Gross Alpha Gross Beta	 pCi/L pCi/L	 Composite Composite	 1/Month 1/Month	 [2,6,7] [2,6,7]
Combined Radium 226 & Radium 228 [7]	pCi/L	Composite	1/Month	[2,6,7]
Tritium	pCi/L	Composite	1/Month	[2,6,7]
Strontium-90	pCi/L	Composite	1/Month	[2,6,7]
K-40 (Potassium-40)	pCi/L	Composite	1/Month	[2,6,7]
CS-137	pCi/L	Composite	1/Month	[2,6,7]
Uranium	pCi/L	Composite	1/Month	[2,6,7]
Polychlorinated Biphenyls (PCBs)	µg/L	Grab	1/Year	[2]
TPH[9]	µg/L	Grab	1/Year [14]	[2]
Monomethyl hydrazine	µg/L	Grab	1/Year	[2]
cis-1,2-Dichloroethene	µg/L	Grab	1/Month	[2]
1,4-Dioxane	µg/L	Composite	1/Year [13]	[2]
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	Composite	1/Quarter	[2]
1,2-Dichloro-1,1,2-trifluroethane	µg/L	Composite	1/Year	[2]
Cyclohexane	µg/L	Grab	1/Year	[2]
Remaining Priority Pollutants[4] excluding asbestos	µg/L	Composite or Grab as appropriate	1/Year	[2]

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[1] During wet weather flow, a discharge event is greater than 0.1 inch of rainfall in a 24-hour period. No more than one sample per week need be obtained during extended periods of rainfall and a storm event must be preceded by at least 72 hours of dry weather. Sampling shall be during the first hour of

discharge or at the first safe opportunity. The reason for delay shall be included in the report. If the rain event is not sufficient to produce flow from the area, the observation must be documented with date, time condition and rainfall amount. During dry weather flow, whenever Outfalls 001, 002, 011, 018, 019, or 020 is discharging, minimum sampling frequency during operations generating discharges shall be once per month.

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

3 The thirty day average at pH = 7.9 and 20°C, when hourly samples are collected and composited or only one grab sample is collected. The one hour average WLA at 7.9 pH and 20°C, applies if hourly samples are taken throughout the storm and each is analyzed. No single sample may exceed the 10.1 mg/L limit. Analysis for the temperature and pH of the receiving water at the same time as the discharge would provide data for a site-specific determination of the ammonia limit. If there is no receiving water present, the pH and temperature of the effluent at the monitoring location shall be determined and reported.

4 Priority Pollutants as defined by the CTR defined in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment I. Analysis shall include xylenes and trichlorofluoromethane. Analysis at Outfalls 008 and 009 shall include asbestos.

5 Refer to Section V. of this MRP, Whole Effluent Toxicity Testing Requirements. The Maximum Daily Single Result shall be reported as “Pass or Fail” with a “% Effect”.

6 Analyze these radiochemicals by the following USEPA testing methods: method 900.0 for gross alpha and gross beta, method 903.0 or 903.1 for radium-226, method 904.0 for radium-228, method 906.0 for tritium, method 908.0 for uranium, method 901.0 or 901.1 for Cesium, and method 905.0 for strontium-90.

7 Gross alpha and gross beta analysis must be performed. Gross alpha analysis must be ⩽15 pCi/L. If gross alpha is >15 pCi/L, uranium analysis must be performed and must be less than 30 µg/L (20 pCi/L). Compliance with this Order shall then be based on comparing gross alpha minus total uranium to the gross alpha limit of 15 pCi/L.. Radium-226 and radium-228 analysis must be performed, and combined Radium-226 and Ra-228 activity must be ≤ 5pCi/L. If gross alpha is <5 pCi/L, one can assume Ra-226 activity = gross alpha activity for purposes of meeting the 5 pCi/L limit. Gross Beta, H-3, K-40, and Sr-90 analyses must be performed. Gross beta analysis must be ≤50 pCi/L. However, if gross beta is >50 pCi/L, compliance with this Order shall be based on comparing gross beta minus K-40 to the ≤50 pCi/L gross beta limitation. The gross beta limit is 50 pCi/L, after subtraction of K-40 activity. The K-40 is assumed to be all natural. The H-3 limit is 20,000 pCi/L, and the Sr-90 limit is 8 pCi/L. If gross beta >50 pCi/L (after subtracting K-40 activity) gamma isotopic analysis must be performed for Cs-137 (the most likely emitter associated with the site). The sum of the fractions technique must be used to demonstrate that the gamma emitters don’t exceed 4 mrem/year (200 pCi/L for Cs-137). The sum of the fractions must include H-3 and Sr-90. If the limit is exceeded, which is an annual average, the frequency of the sampling is increased to once per discharge event until the annual average is below the specified limit. If the analyses of these constituents demonstrates exceedances, of the annual average effluent limitations (determined at each sampling point) the monitoring frequency is increased to once per discharge until four consecutive analyses demonstrates compliance with the effluent limitations.

8 The Discharger has the option to meet the hexavalent chromium limitations with a total chromium analysis. However, if the total chromium level exceeds the hexavalent chromium limitation it will be considered a violation unless an analysis has been made for hexavalent chromium in a replicate sample and the result is reported within the hexavalent chromium limits.

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[9] Total petroleum hydrocarbons include all fuels, gasoline, diesel, and jet fuel. Analysis should be completed using EPA 8015 (modified) methods. If the results exceed the criteria, then the monitoring frequency must be increased from monthly to weekly at Outfall 019 or as directed by Regional Water Board Executive Officer for outfalls that are not currently monitored once per discharge event.

[10] The Discharger must monitor the effluent for the presence of the 17 congeners of 2,3,7,8-TCDD listed below. To determining compliance with effluent limits or for conduction of Reasonable Potential Analysis, this Order requires the Discharger to calculate and report dioxin-toxicity equivalencies (TEQs) using the following formula, where the toxicity equivalency factors (TEFs) and bioaccumulation equivalency factor (BEF). BEFs are as listed in Table below:

$$\text{Dioxin-TEQ} = \sum(C_x \times TEF_x \times BEF_X)$$

where:

C_X = concentration of dioxin or furan congener x
TEF_X = TEF for congener x
BEF_X = BEF for congener x

Table: Toxicity Equivalency Factors and Bioaccumulation Equivalency Factors

Dioxin or Furan Congener	Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-tetra CDD	1.0	1.0
1,2,3,7,8-penta CDD	1.0	0.9
1,2,3,4,7,8-hexa CDD	0.1	0.3
1,2,3,6,7,8-hexa CDD	0.1	0.1
1,2,3,7,8,9-hexa CDD	0.1	0.1
1,2,3,4,6,7,8-hepta CDD	0.01	0.05
Octa CDD	0.0001	0.01
2,3,7,8-tetra CDF	0.1	0.8
1,2,3,7,8-penta CDF	0.05	0.2
2,3,4,7,8-penta CDF	0.5	1.6
1,2,3,4,7,8-hexa CDF	0.1	0.08
1,2,3,6,7,8-hexa CDF	0.1	0.2
1,2,3,7,8,9-hexa CDF	0.1	0.6
2,3,4,6,7,8-hexa CDF	0.1	0.7
1,2,3,4,6,7,8-hepta CDF	0.01	0.01
1,2,3,4,7,8,9-hepta CDF	0.01	0.4
Octa CDF	0.0001	0.02

[11] Once per discharge event at Outfall 008 only. Semiannually at all other stormwater only outfalls. If the results are non-detect for two years, the Discharger may submit a request for the monitoring frequency to be decreased to annually with Executive Officer approval.

[12] Analyzed for Outfall 008 only.

TENTATIVE

[13] If the detected concentration exceeds the criteria, the frequency of analysis must be increased to once per discharge (once per month at Outfall 019/020). After four consecutive samplings demonstrate compliance, then the frequency reverts back to annual sampling.

[14] The Discharger shall conduct whole effluent toxicity monitoring as outlined in Section V of this MRP. The median monthly summary result shall be reported as "Pass" or "Fail". The Maximum Daily Single Result shall be reported as "Pass or Fail" with a "% Effect." Exactly three independent toxicity tests are required when one toxicity test results in "Fail". The median of three testing results (Fail or Pass) will be used for the determination of compliance with the Median Monthly Effluent Limitation. Please refer to section V.A.6. of this MRP for the accelerated monitoring schedule.

[15] Discharges from Outfalls 019 and 020 may begin only after the appropriate approvals from California Department of Fish and Wildlife have been secured. Hence, the discharges will occur primarily during the rainy season, from October to May. Discharges that occur during the summer months must be intermittent and the flow must not result in the tributaries to Bell Creek, which are current ephemeral streams, becoming perennial streams.

[16] EFF-004 will be modified to include flow exiting the concrete channel that collects water from an adjacent area in the same watershed. The concrete channel collects rainfall runoff from the former support area of Sodium Reactor Experiment (SRE), where historical activities may have resulted in elevated contaminent levels.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Chronic Toxicity Testing

TENTATIVE

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

   The chronic toxicity IWC for this discharge is 100 percent effluent.

2. Sample Volume and Holding Time

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

3. Chronic Freshwater Species and Test Methods

   If effluent samples are collected from outfalls discharging to receiving waters with salinity <1 ppt, the Discharger shall conduct the following chronic toxicity tests on effluent samples at the in-stream waste concentration for the discharge in accordance with species and test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002; Table IA, 40 C.F.R. Part 136). In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

   a. A static renewal toxicity test with the fathead minnow, *Pimephales promelas*

(Larval Survival and Growth Test Method 1000.0).

b. A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.01).

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

4. *Species Sensitivity Screening*

Species sensitivity screening shall be conducted during this Order's first required sample collection. The Discharger shall collect a single effluent sample 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 for the discharge. The species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit cycle.

Species sensitivity rescreening is required every 24 months. The Discharger shall rescreen with the fish, an invertebrate, and the alga species previously referenced and continue to monitor with the most sensitive species. If the first suite of rescreening tests demonstrates that the same species is the most sensitive then the rescreening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is ambiguity, then the Discharger shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites.

5. Quality Assurance and Additional Requirements

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

a. The discharge is subject to determination of “Pass” or “Fail” and “Percent Effect” from a single-effluent concentration chronic toxicity test at the discharge IWC using the Test of Significant Toxicity (TST) approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis (H_o) for the TST approach is: Mean discharge IWC response ≤0.75 × Mean control response. A test result that rejects this null hypothesis is reported as “Pass”. A test result that does not reject this null hypothesis is reported as “Fail”. The relative “Percent Effect” at the discharge IWC is defined and reported as: ((Mean control response –Mean discharge IWC response) ÷ Mean control response)) × 100.

b. The Median Monthly Effluent Limit (MMEL) for chronic toxicity only applies when there is a discharge more than one day in a calendar month period. During such calendar months, exactly three independent toxicity tests are required when one

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toxicity test results in "Fail". This requirement is not applicable to the industrial stormwater discharge.

c. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method, then the Discharger must re-sample and re-test within 14 days. For the industrial stormwater discharge, the Discharger must re-sample and re-test as soon as possible.

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

e. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.). Monthly reference toxicant testing is sufficient.

f. All reference toxicant test results should be reviewed and reported according to EPA guidance on the evaluation of concentration-response relationships found in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 C.F.R. Part 136) (EPA 821-B-00-004, 2000).

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

6. Accelerated Monitoring Schedule for Median Monthly Summary Result: "Fail" (or Maximum Daily Single Result: "Fail and % Effect ≥50". Applicable at Outfalls 019 and 020 only.

   The summary result shall be used when there is discharge more than one day in a calendar month. The single result shall be used when there is discharge of only one day in a calendar month.

   Within 24 hours of the time the Discharger becomes aware of this result, the Discharger shall implement an accelerated monitoring schedule consisting of four, five-concentration toxicity tests (including the discharge IWC), conducted at approximately two week intervals, over an eight week period. If each of the accelerated toxicity tests result in "Pass", the Discharger shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests result in "Fail", the Discharger shall immediately implement the Toxicity Reduction Evaluation (TRE) Process conditions set forth below.

7. Preparation of Initial Investigation TRE Work Plan

   The Discharger shall prepare/update and submit a generic Initial Investigation TRE Work Plan within 90 days of the effective date of this Order, to be ready to respond

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to toxicity events. The Discharger shall review and update this work plan as necessary so it remains current and applicable to the discharge. At a minimum, the work plan shall include:

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

b. A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the facility.

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

8. Toxicity Identification Evaluation and Toxicity Reduction Evaluation Process

a. Preparation and Implementation of Detailed TRE Work Plan. The Discharger shall immediately initiate a TRE using—according to the type of treatment facility—EPA manual Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants (EPA/833/B-99/002, 1999) or EPA manual Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (EPA/600/2-88/070, 1989). Within 90 days of the effective date of this Order, the Discharger shall submit to the Regional Water Board Executive Officer a Detailed TRE Work Plan, which shall follow the generic Initial Investigation TRE Work Plan revised as appropriate for this toxicity event. It shall include the following information, and comply with additional requirements established and/or approved by the Executive Officer:

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

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

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

b. TIE Implementation. The Discharger 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, EPA 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,

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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 stormwater 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 conduct routine effluent monitoring for the duration of the TRE process. Additional accelerated monitoring and TRE work plans are not required once a TRE is begun

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

9. Reporting

The Self-Monitoring Report (SMR) should 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 Prepararion, including:

a. The toxicity test results for the TST approach, reported as “Pass” or “Fail” and “Percent Effect” at the chronic toxicity IWC for the discharge.

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

c. TRE/TIE results. The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses.

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

e. Any additional QA/QC documentation or any additional chronic toxicity related information upon request of Regional Water Board staff.

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VI. LAND DISCHARGE MONITORING REQUIREMENTS

Not applicable

VII. RECLAMATION MONITORING REQUIREMENTS

Not applicable

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

A. Monitoring Locations RSW-001 (Bell Creek) and RSW-002 (Arroyo Simi).

Table E-3a. Receiving Water Monitoring Requirements – RSW-001 and RSW-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Water velocity	Ft/second	Recorder	1/Quarter	[1]
pH	s.u.	grab	1/Quarter	[1,2]
Hardness (as mg/L $CaCO_3$)	mg/L	grab	1/Quarter	[1,2]
TSS	mg/L	grab	I/Year	[1,2]
Fecal coliform [5]	(MPN per 100 mL)	grab	1/Year	[1]
E. coli [5]	(MPN per 100 mL)	grab	1/Year	[1]
Temperature	ºF	grab	1/Quarter [3]	[1]
TCDD – Equivalents[4]	µg/L	grab	1/Year	[1]
Chlorpyrifos	µg/L	grab	1/Quarter [3]	[1]
Diazinon	µg/L	grab	1/Quarter [3]	[1]
Chlordane	µg/L	grab	1/Quarter [3]	[1]
4,4-DDD	µg/L	grab	1/Quarter [3]	[1]
4,4-DDE	µg/L	grab	1/Quarter [3]	[1]
4,4-DDT	µg/L	grab	1/Quarter [3]	[1]
Dieldrin	µg/L	grab	1/Quarter [3]	[1]
PCBs	µg/L	grab	1/Quarter [3]	[1]
Toxaphene	µg/L	grab	1/Quarter [3]	[1]
Priority Pollutants	µg/L	grab	Once every five years	[1,2]

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

[2] Receiving water samples for pH, hardness, and priority pollutants must be collected at the same time as effluent samples.

[3] Samples are collected quarterly. The final concentration is the average of the samples collected over one year. Compliance is determined by comparing the final concentration limits listed in Section V of this Order.

[4] The Discharger must monitor the receiving water for the presence of the 17 congeners of 2,3,7,8-TCDD listed below. To determine compliance with effluent limits or for conduction of Reasonable Potential Analysis, this Order requires the Discharger to calculate and report dioxin-toxicity equivalencies (TEQs) using the following formula, where the toxicity equivalency factors (TEFs) and bioaccumulation equivalency factor (BEF). BEFs are as listed in Table below:

$$\text{Dioxin-TEQ} = (C_x \times TEF_x \times BEF_X)$$

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where:

C_X = concentration of dioxin or furan congener x
TEF_X = TEF for congener x
BEF_X = BEF for congener x

Table: Toxicity Equivalency Factors and Bioaccumulation Equivalency Factors

Dioxin or Furan Congener	Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-tetra CDD	1.0	1.0
1,2,3,7,8-penta CDD	1.0	0.9
1,2,3,4,7,8-hexa CDD	0.1	0.3
1,2,3,6,7,8-hexa CDD	0.1	0.1
1,2,3,7,8,9-hexa CDD	0.1	0.1
1,2,3,4,6,7,8-hepta CDD	0.01	0.05
Octa CDD	0.0001	0.01
2,3,7,8-tetra CDF	0.1	0.8
1,2,3,7,8-penta CDF	0.05	0.2
2,3,4,7,8-penta CDF	0.5	1.6
1,2,3,4,7,8-hexa CDF	0.1	0.08
1,2,3,6,7,8-hexa CDF	0.1	0.2
1,2,3,7,8,9-hexa CDF	0.1	0.6
2,3,4,6,7,8-hexa CDF	0.1	0.7
1,2,3,4,6,7,8-hepta CDF	0.01	0.01
1,2,3,4,7,8,9-hepta CDF	0.01	0.4
Octa CDF	0.0001	0.02

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5 Bacterial Limitations

1. Geometric Mean Limits:
   a. E. coli density shall not exceed 126/100 ml.
   b. Fecal coliform density shall not exceed 200/100 ml
2. Single Sample Maximum Limits:
   a. E. coli density shall not exceed 235/100 ml.
   b. Fecal coliform density shall not exceed 400/100 ml.

The geometric mean values should be calculated based on a statistically sufficient number of samples (generally not less than 5 samples equally spaced over a 30-day period, if possible).

If any of the single sample limits are exceeded, the Regional Water Board requires repeat sampling on a daily basis until the sample falls below the single sample limit in order to determine the persistence of the exceedance.

When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

B. Receiving Water Surveys

The receiving water monitoring program shall include periodic surveys of Bell Creek, Dayton Canyon Creek and the Arroyo Simi and shall include studies of those physical-chemical characteristics of the receiving water that may be impacted by the discharge.

Receiving Water Observations. General observations of the receiving water shall be made at each discharge point on a monthly basis (only during discharge from any of the respective Outfalls) and shall be reported in the quarterly monitoring report.

Observations shall be descriptive where applicable, such that colors, approximate amounts, or types of materials that are apparent are enumerated. The following observations shall be made.

- Tidal stage, time, and date of monitoring
- Weather conditions
- Color of water
- Appearance of oil films or grease, or floatable materials
- Extent of visible turbidity or color patches
- Direction of tidal flow
- Description of odor, if any, or the receiving water
- Presence and/or activity of California Least Tern or California Brown Pelican.

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IX. SEDIMENT SAMPLING

The Calleguas Creek OC Pesticides and PCBs TMDL includes requirements for the concentrations of several pesticides and PCBs in sediment. Therefore, this Order includes requirements to monitor sediment for these constituents. The Discharger may choose to join the Calleguas Creek Watershed TMDL Monitoring Program (CCWTMP) and collect the required sediment samples along with a host of other stakeholders in the watershed. This facility is located in Arroyo Simi and the Compliance Sampling Site locations identified in the TMDL documentation are Arroyo Simi East of Hitch Boulevard (07_HITCH) or Simi Valley Water Quality Control Plant (07D_SIMI). As an alternative, the Discharger may choose to collect the sediment samples at the base of the subwatershed where the discharge occurs, adjacent to Frontier Park. This is the option that the Discharger used during the tenure of Order R4-2010-0090. The exact location of the sampling point chosen for this Order must be identified in the initial self-monitoring report.

The in–stream sediment sampling shall be conducted according to methods developed by the USGS and outlined in *Guidelines for Collecting and Processing Samples of Stream Bed Sediment for Analysis of Trace Elements and Organic Contaminants for the National Water Quality Assessment Program* (1994). A brief description of the protocol also appears in the *Draft Calleguas Creek Watershed Management Plan Quality Assurance Project Plan (QAPP) Monitoring and Reporting Program Plan for Nitrogen, OC and PCBs, and Toxicity Total Maximum Daily Loads* dated September 26, 2006, beginning on page 38. Discussions include field measurements and observations, sample handling and custody, sample handling and shipping, and analytical methods.

Table E-3b. Receiving Water Sediment Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Sediment toxicity (chronic 10-day eohaustorius estuarius toxicity)	NA	Grab	1/Year
48-hour Bivalve Embryo toxicity (Mytilus edulis or Crassostrea gigas	NA	Grab	1/Year
Total ammonia	Mg/wet kg	Grab	1/Year
% Moisture	%	Grab	1/Year
Particle Size Distribution	um	Grab	1/Year
Total Organic Carbon	% dry weight	Grab	1/Year
Water velocity	ft/sec	Grab	1/Year
pH	pH units	Grab	1/Year
Temperature	°C	Grab	1/Year
Dissolved Oxygen	mg/L	Grab	1/Year
Conductivity	µmhos/cm	Grab	1/Year
Chlordane	µg/g	Grab	1/Year
4,4-DDD	µg/g	Grab	1/Year
4,4-DDE	µg/g	Grab	1/Year
4,4-DDT	µg/g	Grab	1/Year
Dieldrin	µg/g	Grab	1/Year
PCBs	µg/g	Grab	1/Year
Toxaphene	µg/g	Grab	1/Year

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X. BIOASSESSMENT MONITORING

1. The goals of the bioassessment monitoring for the Arroyo Simi and Los Angeles River are to:

    - Determine compliance with receiving water limits;

- Monitor trends in surface water quality;
- Ensure protection of beneficial uses;
- Provide data for modeling contaminants of concern;
- Characterize water quality including seasonal variation of surface waters within the watershed;
- Assess the health of the biological community; and
- Determine mixing dynamics of effluent and receiving waters in the estuary.

2. In coordination with interested stakeholders in the Calleguas Creek Watershed and within the Los Angeles River Watershed, the Discharger shall conduct instream bioassessment monitoring once a year, during the spring/summer period (unless an alternate sampling period is approved by the Executive Officer). Over time, bioassessment monitoring will provide a measure of the physical condition of the waterbody and the integrity of its biological communities.

   a. The bioassessment program shall include an analysis of the community structure of the instream macroinvertebrate assemblages and physical habitat assessment at the monitoring stations RSW-001U and RSW-002D. This program shall be implemented by appropriately trained staff. Alternatively, a professional subcontractor qualified to conduct bioassessments may be selected to perform the bioassessment work for the Discharger. Analyses of the results of the bioassessment monitoring program, along with photographs of the monitoring site locations taken during sample collection, shall be submitted in the corresponding annual report. If another stakeholder, or interested party in the watershed subcontracts a qualified professional to conduct bioassessment monitoring during the same season and at the same location as specified in the MRP, then the Discharger may, in lieu of duplicative sampling, submit the data, a report interpreting the data, photographs of the site, and related QA/QC documentation in the corresponding annual report.

   b. The Discharger must provide a copy of their Standard Operation Procedures (SOPs) for the Bioassessment Monitoring Program to the Regional Water Board upon request. The document must contain step-by-step field, laboratory and data entry procedures, as well as, related QA/QC procedures. The SOP must also include specific information about each bioassessment program including: assessment program description, its organization and the responsibilities of all its personnel; assessment project description and objectives; qualifications of all personnel; and the type of training each member has received.

   c. Field sampling must conform to the SOP established for the California Stream Bioassessment Procedure (CSBP) or more recently established sampling protocols, such as used by the Surface Water Ambient Monitoring Program (SWAMP). Field crews shall be trained on aspects of the protocol and appropriate safety issues. All field data and sample Chain of Custody (COC) forms must be examined for completion and gross errors. Field inspections shall be planned with random visits

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and shall be performed by the Discharger or an independent auditor. These visits shall report on all aspects of the field procedure with corrective action occurring immediately.

d. A taxonomic identification laboratory shall process the biological samples that usually consist of subsampling organisms, enumerating and identifying taxonomic groups and entering the information into an electronic format. The Regional Water Board may require QA/QC documents from the taxonomic laboratories and examine their records regularly. Intra-laboratory QA/QC for subsampling, taxonomic validation and corrective actions shall be conducted and documented. Biological laboratories shall also maintain reference collections, vouchered specimens (the Discharger may request the return of their sample voucher collections) and remnant collections. The laboratory should participate in an (external) laboratory taxonomic validation program at a recommended level of 10% or 20%. External QA/QC may be arranged through the California Department of Fish and Game's Aquatic Bioassessment Laboratory located in Rancho Cordova, California.

e. The Executive Officer of the Regional Water Board may modify the Monitoring and Reporting Program to accommodate the watershed-wide monitoring

XI. OTHER MONITORING REQUIREMENTS

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A. Stormwater Monitoring

1. Rainfall Monitoring. The Discharger shall measure and record the rainfall (in inches per day) on each day of the month. This information shall be included in the monitoring report for that quarter. In lieu of measuring rainfall, the Discharger may report rainfall data collected from the nearest city/county operated rain gauge monitoring station.

2. Visual Observation. The Discharger shall make visual observations of all stormwater discharge locations on at least one storm event per month that produces a significant stormwater discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor. A "significant stormwater discharge" is a continuous discharge of stormwater for a minimum of one hour, or the intermittent discharge of stormwater for a minimum of 3 hours in a 12-hour period.

B. SWPPP, BMPP, and Spill Contingency Plan Status and Effectiveness Report

1. As required under Special Provision VI.C.3 of this Order, the Discharger shall submit an updated SWPPP, BMPP, and Spill Contingency Plan to the Executive Officer of the Regional Water Board for approval within 90 days of the effective date of this Order.

2. Annually, the Discharger shall report the status of the implementation and the effectiveness of the SWPPP, BMPP, and Spill Contingency Plan required under Special Provision VI.C.3 of this Order. The SWPPP, BMPP, and Spill Contingency Plan status shall be reviewed at a minimum once per year and updated as needed to ensure all actual or potential sources of pollutants in wastewater and stormwater discharged from the facility are addressed. All changes or revisions to the SWPPP, BMPP, and Spill Contingency Plan status will be summarized in the first quarterly report of the year required under Attachment E of this Order, Monitoring and Reporting, Section X.B.3.

XII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

2. If there is no discharge during any reporting period, the report shall so state.

3. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance," which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.

4. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.

5. The Discharger shall report the results of chronic toxicity testing, TRE and TIE as required in the Attachment E of this Order, Monitoring and Reporting, Section V.G.

B. Self Monitoring Reports (SMRs)

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (**http://www.waterboards.ca.gov/ciwqs/index.html**). The CIWQS Web site will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under Sections III through IX. The Discharger shall submit quarterly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

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3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-4. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
1/Discharge Event, 1/Month, and/or 1/Quarter	December 1, 2014	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 15 August 15 November 15 February 15
1/Year	January 1, 2015	January 1 through December 31	February 15

4. Reporting Protocols. The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in Part 136.

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

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

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

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

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

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

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

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

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

   c. SMRs must be submitted to the Regional Water Board electronically as specified in Section XII.B.1, above, signed and certified as required by the Standard Provisions (Attachment D). Other reports should be converted to a Portable Document Format (PDF). Documents that are less than 10 megabytes (MB) should be emailed to losangeles@waterboards.ca.gov. Documents that are 10 MB or larger should be transferred to a disk and mailed to the address listed below:

California Regional Water Quality Control Board
Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, CA 90013

C. Discharge Monitoring Reports (DMRs)

1. The State Water Board Board has notified the Permittee to electronically submit DMRs. The permittee shall submit DMRs electronically via CIWQS and will discontinue submitting paper DMRs.

2. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1) or on self-generated forms that follow the exact same format of EPA Form 3320-1.

D. Other Reports

1. The Discharger shall report the results of any chronic toxicity testing and TRE/TIE required by Special Provisions VI.C.2 of this Order. The Discharger shall submit

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reports in compliance with SMR reporting requirements described in Section X above.

2. Within 90 days of the effective date of this Order, the Discharger is required to submit the following to the Regional Water Board:

   a. Initial Investigation TRE workplan
   b. Updated SWPPP
   c. Updated BMPP
   d. Updated SPCC Plan

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	4A562013002
Discharger	The Boeing Company
Name of Facility	Santa Susana Field Laboratory
Facility Address	5800 Woolsey Canyon Road
	Canoga Park, CA 91304-1148
	Ventura County
Facility Contact, Title and Phone	Paul Costa, Environmental Manager SSFL – Environmental Health and Safety (818) 466-8778
Authorized Person to Sign and Submit Reports	Paul Costa, Environmental Manager (818) 466-8778
Mailing Address	5800 Woolsey Canyon Road Canoga Park, CA 91304-1148
Billing Address	SAME
Type of Facility	Research and development
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	B
Pretreatment Program	Not Applicable
Reclamation Requirements	Not Applicable
Facility Permitted Flow	187 million gallons per day (mgd)
Facility Design Flow	Not applicable
Watershed	Los Angeles River Watershed, Calleguas Creek Watershed
Receiving Water	Bell Creek, Arroyo Simi
Receiving Water Type	Inland Surface Water

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A. The Boeing Company (hereinafter Boeing or Discharger), an industrial discharger, is an owner and operator of a portion of the Santa Susana Field Laboratory (hereinafter SSFL or Facility).

B. 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.

C. The Facility discharges stormwater runoff and treated groundwater to Bell Creek and Arroyo Simi, waters of the United States, tributaries to the Los Angeles River and Arroyo Simi tributary to Calleguas Creek, within the Los Angeles River and Calleguas Creek watersheds. The Discharger was previously regulated by Order No. R4-2010-0090 and NPDES Permit No. CA0001309 adopted by this Regional Water Board on June 3, 2010 and expired on April 10, 2014. The terms and conditions of the previous permit were administratively extended pursuant to 40 Code of Federal Regulations (C.F.R.) section 122.6 and remained in effect until new Waste Discharge Requirements and an NPDES permit were adopted pursuant to this Order. Attachment B provides a map of the area around the Facility. Attachment C-1 provides a site map with outfall locations.

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

D. The Discharger filed a report of waste discharge (ROWD) and submitted an application for reissuance of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on October 17, 2013. The application was deemed complete on November 14, 2013.

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II. FACILITY DESCRIPTION

The SSFL occupies approximately 2,850 acres and is located at the top of Woolsey Canyon Road in the Simi Hills, Ventura County, California. The Facility is jointly owned by Boeing and the United States of America. The National Aeronautics and Space Administration (NASA) administers the portion of the property owned by the federal government. The site is divided into four administrative areas (Areas I, II, III, and IV) and undeveloped land areas to both the north and south. The NASA property includes a portion of Area I and all of Area II. The United States Department of Energy (DOE) also owns several buildings that were constructed on land owned by Boeing in the northwest portion in Area IV.

The developed portion of the site comprises approximately 1,500 acres. Boeing and its predecessors' operations at the SSFL since 1950 included research, development, assembly, disassembly, and testing of small scale nuclear reactors, rocket engines, and chemical lasers. During the 1950s to the mid-1970s, volatile organic compounds were

utilized for the cleaning of hardware and rocket engine thrust chambers, and for the cleaning of other equipment. These solvents migrated into the subsurface, contaminating groundwater primarily with trichloroethylene (TCE) and 1,2-dichloroethylene (1,2-DCE).

NASA operations included rocket engine assembly and testing, and propellant and fuel storage and loading. Rocket engine testing began at the SSFL in the 1950s. An engine test consisted of a cycle of one to three engine runs lasting one to three minutes each. A test cycle may take one to two weeks to complete. Each engine run resulted in the use of 50,000 to 200,000 gallons of deluge/cooling water that contacted fuels such as liquid oxygen (LOX) or kerosene and associated combustion products. The frequency of testing historically varied depending on production requirements. In July 2004, the frequency of testing was one test cycle every one or two months. In late 2006, the rocket engine and component testing operations at the facility were terminated. These tests generated fuel related pollutants and heavy metals. Three of the test stands and the associated spillways remain onsite.

DOE's past operations include research and development of energy related programs, and seismic testing experiments. The activities included developing and operating reactors, and fabricating and disassembling nuclear fuel. The DOE began to phase out the program in the 1960s. The last reactor was shut down in 1980, and nuclear research was terminated in 1989. The research and the associated activities resulted in residual soil and groundwater contamination.

A. Description of Discharge

The discharge from the SSFL regulated by this Order is composed primarily of stormwater runoff that traverses the site. The stormwater runoff picks up pollutants present on site as a result of past activities. Treated groundwater is also discharged from the SSFL and is regulated by this Order.

B. Discharge Points and Receiving Waters

The SSFL has the potential (based on a 24-hour duration, 10 year return storm event) to discharge approximately 187 million gallons per day (MGD) of stormwater runoff that may contain pollutants from the facility. Approximately 60% of the discharge exits the property via two southerly discharge points (Outfalls 001 and 002) to Bell Creek, a tributary to the Los Angeles River, a water of the United States, with its confluence located near the intersection of Bassett Street and Owensmouth Avenue in Canoga Park. Upstream outfalls that contribute to the discharge at Outfalls 001 and 002 include Outfalls 011 and 018. Outfalls 019 and 020 discharge treated groundwater downstream of Outfalls 001 and 002, respectively. Outfalls 015, 016, and 017 are the locations of the three package type sewage treatment plants, which are no longer used. Wastewater generated onsite is collected in the collection basins of the plants and periodically trucked off site for disposal at one of Los Angeles County Sanitation District's Public Owned Treatment Work (POTW) facilities. Outfalls 012, 013, and 014 were originally included to monitor discharges from engine testing activities and later stormwater runoff from these areas was monitored and evaluated using benchmarks in Order No. R4-2010-0090. The

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benchmarks were used since the stormwater was collected, conveyed to Silvernale Pond, and treated in the Stormwater Treatment System (SWTS) prior to being discharged via Outfall 018, which has numeric effluent limits. All engine testing has been terminated and the test stand and supporting structures associated with Outfall 014 have been removed. Outfalls 012, 013, and 014 have been removed from the permit and no additional monitoring is required at these locations.

The stormwater from the northern boundary of the site is discharged via Outfalls 003 through 007 and 010 or it is transferred to Silvernale Pond for treatment prior to discharge at Outfall 018. Outfall 004, which targets stormwater runoff from the Sodium Reactor Experiment (SRE) area, will be modified to include the flow exiting the concrete channel that collects water from the support area of the SRE within the same watershed. Monitoring of the discharges from the area per Order Pursuant to Water Code § 13383 letter issued by the Regional Water Board on October 18, 2012, yielded detects for lead that may be present as a result of historical operations. Since future sampling of Outfall 004 will include the stormwater runoff from the support area, no further monitoring or reporting is required pursuant to the Water Code § 13383 letter dated October 18, 2012. Stormwater from Outfalls 003 through 007 and 010 that is not pumped to Silvernale Pond is discharged to the Arroyo Simi. Because of the size and terrain of the watershed and the amount of stormwater runoff routinely generated, Outfall 009 always discharges to Arroyo Simi. The stormwater runoff from Happy Valley (Outfall 008) flows via Dayton Canyon Creek to Chatsworth Creek. Chatsworth Creek flows south to Bell Creek southwest of the intersection of Shoup Avenue and Sherman Way. Bell Creek subsequently flows southeast to the Los Angeles River.

Treated Groundwater

All extracted groundwater is pumped to the Area I Groundwater Extraction and Treatment System (GETS). The treatment process at the GETS includes particulate filters, ion exchange vessels, an air stripper, liquid and vapor phase granular activated carbon, an ultraviolet/hydrogen peroxide system, and chemical dosing for pH and hardness adjustment (as needed). The GETS is designed to discharge up to 0.144 million gallons per day (mgd) of treated groundwater. Well purge water and groundwater generated during well installations or pumping tests may be transported to the GETs for treatment.

Extracted groundwater after treatment is conveyed to its current discharge location, Outfall 019 (located immediately downstream from Outfall 001). A new 6-inch above grade HDPE pipeline will be attached to the existing pipeline and will follow the road that transverses the site in the southern undeveloped land area to Outfall 002. Outfall 020 will be located 25 feet downstream and down gradient from Outfall 002. The new pipeline will run approximately 8,300 feet. Water from this outfall will flow into the drainage that leads to Bell Creek. The amount of treated groundwater discharge from Outfall 020 will depend upon the direction and advice from California Department of Fish and Wildlife with the goal of protecting the natural resources and preventing the growth of invasive species that may have a negative impact on the waterways and native plants and animals.

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The location of the discharge from the groundwater treatment system to the receiving water downstream of Outfalls 001 and 002 segregates the discharge of the treated groundwater from the discharge of stormwater. Discharges from Outfalls 019 and 020 may begin only after the appropriate approvals from California Department of Fish and Wildlife have been secured.

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

Effluent limitations contained in the previous permit for discharges from Discharge Point 001 (Monitoring Location EFF-001) , 002, 011, 018, and 019 and monitoring data representing the quality of effluent discharged during the previous permit term are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data from Outfalls 001, 002, 011, 018, and 019

Parameter	Units	Effluent Limitation			Monitoring Data – Max. Eff Conc. (MEC) (1/1/2010 – 3/31/2014)
		Instantaneous Maximum / Minimum	Average Monthly	Maximum Daily	
Flow	gpd	--	--		
Biochemical Oxygen Demand (BOD)(5-day @20 Deg. C)	mg/L	--	20 --	30	4.1
Oil and Grease	mg/L	--	10	15	ND [1]
pH	s.u.	6.5/8.5	--	--	--
Total Suspended Solids (TSS)	mg/L	--	15	45	450
Barium	mg/L	--	--	1	0.11
Fluoride	mg/L	--	--	1.6	0.39
Iron	mg/L	--	--	0.3	23
Detergents (as MBAS)	mg/L	--	--	0.5	0.2
Nitrite-N	mg/L	--	--	1.0	ND
Ammonia-N	mg/L	--	1.96	10.1	0.84
Nitrate-N	mg/L	--	--	8.0	1.2
Total Manganese	µg/L	--	--	50	400
Total Cyanide	µg/L	--	4.3	8.5	ND [1]
Total Antimony	µg/L	--	--	6.0	1
Total Arsenic	µg/L	--	--	10	8.9
Total Beryllium	µg/L	--	--	4.0	0.31
Total Cadmium	µg/L	--	2.0	4.0/3.1	0.3
Total Chromium VI	µg/L	--	8	16	1.1
Total Copper	µg/L	--	7.1	14	14.3
Total Lead	µg/L	--	2.6	5.2	13
Total Mercury	µg/L	--	0.05	0.10	0.12
Total Nickel	µg/L	--	35	96	12

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Parameter	Units	Instantaneous Maximum / Minimum	Effluent Limitation		Monitoring Data – Max. Eff Conc. (MEC) (1/1/2010 – 3/31/2014)
			Average Monthly	Maximum Daily	
Total Selenium	µg/L	--	4.1	8.2/5	1.3
Total Silver	µg/L	--	2.0	4.1	0.12
Total Thallium	µg/L	--	--	2.0	0.2
Total Zinc	µg/L	--	54	119	76
1,1-Dichloroethylene	µg/L	--	3.2	6.0	ND [1]
Trichloroethylene	µg/L	--	--	5.0	1.8
Perchlorate	µg/L	--	--	6.0	2.2
TCDD	µg/L	--	1.4E-08	2.8E-08	1.33E-06 [1]
2,4,6-Trichlorophenol	µg/L	--	6.5	13	ND [1]
2,4-Dinitrotoluene	µg/L	--	9.1	18	ND [1]
Alpha BHC	µg/L	--	0.01	0.03	0.0025
Bis(2-ethylhexyl)phthalate	µg/L	--	--	4.0	3.29
N-nitrosodimethylamine	µg/L	--	8.1	16	ND [1]
Pentachlorophenol	µg/L	--	8.2	16	ND [1]
Radioactivity Gross Alpha Gross Beta	 pCi/L pCi/L	--	--	 15 50	 17.1 16.2
Combined Radium-226 & Radium-228	pCi/L	--	--	5.0	1.33
Tritium	pCi/L	--	--	20,000	ND [1]
Strontium-90	pCi/L	--	--	8.0	0.61
Acute Toxicity	% survival	--	--	[2]	95
Chloride		--	--	150	250
Chlorine, Total Residual	mg/L	--	--	0.1	0.06
Dissolved Oxygen	mg/L	--	--	--	50
Nitrate + Nitrite (as N)	mg/L	--	--	8	1.2
Settleable solids	ml/L	--	0.1	0.3	0.3
Sulfate	mg/L	--	--	300	250
Sulfides	mg/L	--	--	1.0	--
Temperature	°F	--	--	86	42/77
Total Dissolved Solids (TDS)	mg/L	--	--	950	1100

[1] ND = Not detected; results reported as below detection limits.

[2] Average survival in undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90% and no single test producing less than 70% survival.

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Table F-2a. Historic Effluent Limitations and Monitoring Data from Outfalls 003 to 010

Parameter	Units	Instantaneous Maximum / Minimum	Effluent Limitation	Monitoring Data - Max. Eff Conc. (MEC) (1/1/2010 – 3/31/2014)
			Maximum Daily	
Flow	gpd	--	--	--
Oil and Grease	mg/L	--	15	ND
pH	s.u.	6.5/8.5	--	5.5/8
Total Suspended Solids (TSS)	mg/L	--	--	780
Fluoride	mg/L	--	1.6	0.35
Nitrite-N	mg/L	--	1.0	ND
Ammonia-N	mg/L	--	10.1	ND
Nitrate-N	mg/L	--	8.0	0.93
Total Cyanide	µg/L	--	9.5	ND
Total Antimony	µg/L	--	6.0	2.3
Total Cadmium	µg/L	--	4.0/3.1	0.46
Total Copper	µg/L	--	14	18
Total Lead	µg/L	--	5.2	11
Total Mercury	µg/L	--	0.13	0.13
Total Nickel	µg/L	--	100	20
Total Selenium	µg/L	--	5	1.3
Total Thallium	µg/L	--	2.0	0.43
Total Zinc	µg/L	--	159	161
Perchlorate	µg/L	--	6.0	2.4
TCDD	µg/L	--	2.8E-08	3.4E-06
Radioactivity Gross Alpha Gross Beta	 pCi/L pCi/L	--	 15 50	 25.8 25.4
Combined Radium-226 & Radium-228	pCi/L	--	5.0	2.03
Tritium	pCi/L	--	20,000	1060
Strontium-90	pCi/L	--	8.0	0.66
Acute Toxicity	% survival	--	[3]	100
Chloride		--	150	83
Nitrate + Nitrite (as N)	mg/L	--	10	3.4
Sulfate	mg/L	--	250	65
Temperature	°F	--	86	63
Total Dissolved Solids (TDS)	mg/L	--	950	330

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D. Compliance Summary

Monitoring data collected from First Quarter 2010 through First Quarter 2014 yielded the following violations of the NPDES permit.

Outfall	Date	Monitoring Period	Violation Type	Parameter	Reported Value	Permit Limit	Units
006	01/19/2010	1st Quarter 2010	Daily	TCDD	1.69E-06	2.8E-08	ug/L
010	01/19/2010	1st Quarter 2010	Daily	TCDD	8.76E-07	2.8E-08	ug/L
018	01/19/2010	1st Quarter 2010	Daily	Fe	1.6	0.3	mg/L
018	01/19/2010	1st Quarter 2010	Daily	Mn	140	50	ug/L
018	01/19/2010	1st Quarter 2010	Daily	TCDD	8.96E-07	2.8E-08	ug/L
011	01/21/2010	1st Quarter 2010	Daily	Fe	9.7	0.3	mg/L
011	01/21/2010	1st Quarter 2010	Daily	Pb	5.7	5.2	ug/L
011	01/21/2010	1st Quarter 2010	Daily	Mn	140	50	ug/L
011	01/21/2010	1st Quarter 2010	Daily	TCDD	5.63E-07	2.8E-08	ug/L
010	02/06/2010	1st Quarter 2010	Daily	TCDD	1.58E-06	2.8E-08	ug/L
011	02/07/2010	1st Quarter 2010	Daily	Fe	2	0.3	mg/L
011	02/07/2010	1st Quarter 2010	Daily	Mn	120	50	ug/L
018	02/07/2010	1st Quarter 2010	Daily	Mn	210	50	ug/L
010	02/28/2010	1st Quarter 2010	Daily	TCDD	1.02E-06	2.8E-08	ug/L
009	10/06/2010	4th Quarter 2010	Daily	Pb	11	5.2	ug/L
009	10/06/2010	4th Quarter 2010	Daily	TCDD	3.9E-08	2.8E-08	ug/L
008	12/19/2010	4th Quarter 2010	Daily	Pb	6.7	5.2	ug/L
018	12/20/2010	4th Quarter 2010	Daily	Fe	2.3	0.3	mg/L
011	12/22/2010	4th Quarter 2010	Daily	Fe	6.4	0.3	mg/L
011	12/22/2010	4th Quarter 2010	Daily	Mn	62	50	ug/L
018	02/27/2011	1st Quarter 2011	Daily	Fe	0.74	0.3	mg/L
009	03/20/2011	1st Quarter 2011	Daily	TCDD	8.26E-08	2.8E-08	ug/L
009	03/20/2011	1st Quarter 2011	Daily	TCDD	8.02E-09	4.2E-09	lb/day
011	03/20/2011	1st Quarter 2011	Daily	Fe	3.6	0.3	mg/L
011	03/20/2011	1st Quarter 2011	Daily	Mn	55	50	ug/L
018	03/20/2011	1st Quarter 2011	Daily	Fe	1.1	0.3	mg/L
019	09/08/2011	3rd Quarter 2011	Daily	Chloride	170	150	mg/L
019	10/20/2011	4th Quarter 2011	Daily	Chloride	250	150	mg/L
019	10/20/2011	4th Quarter 2011	Daily	TDS	1100	950	mg/L
009	03/18/2012	1st Quarter 2012	Daily	TCDD	1.61E-07	2.8E-08	ug/L
009	03/25/2012	1st Quarter 2012	Daily	Pb	7.2	5.2	ug/L
009	03/25/2012	1st Quarter 2012	Daily	TCDD	5.62E-08	2.8E-08	ug/L
009	04/11/2012	2nd Quarter 2012	Daily	TCDD	3.72E-05	2.8E-08	ug/L
008	04/13/2012	2nd Quarter 2012	Daily	Cu	18	14	ug/L
008	04/13/2012	2nd Quarter 2012	Daily	Pb	10	5.2	ug/L
009	02/28/2014	1st Quarter 2014	Instantaneous	pH	5.5	6.5-8.5	pH Units
010	02/28/2014	1st Quarter 2014	Daily	Pb	5.6	5.2	ug/L
010	02/28/2014	1st Quarter 2014	Daily	TCDD	3.67E-08	2.8E-08	ug/L
009	03/01/2014	1st Quarter 2014	Daily	Pb	9.6	5.2	ug/L
009	03/01/2014	1st Quarter 2014	Daily	TCDD	1.32E-07	2.8E-08	ug/L

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In 2010, the Regional Water Board sought judicial civil penalties from Boeing for its failure to comply with the terms of its NPDES permit at the SSFL. The Regional Water Board and Boeing agreed to settle the matter pursuant to the terms of a Stipulated Consent Judgment and Final Order. Pursuant to the Consent Judgment, Boeing paid $500,000 in civil penalties. Of that amount $300,000 was used to fund a Supplemental Environmental Project to the Southern California Coastal Water Research Project Authority to conduct design storm development work. Boeing also agreed to the imposition of stipulated penalties for any future violations of Boeing's NPDES permit from the period of January 1, 2010 through December 31, 2014. The amounts of the stipulated penalties vary depending on the type and the number of violations. As of September 2014, Boeing has paid $197,000 in stipulated penalties for effluent limit violations under this penalty structure.

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.

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A. Legal Authorities

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

B. California Environmental Quality Act (CEQA)

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

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Quality Control Board (Regional Water Board) adopted a Water Quality Control Plan for the Los Angeles Region (hereinafter Basin Plan) on June 13, 1994, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (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.

A number of the outfalls at the SSFL discharge to the Los Angeles River via either Bell Creek or Dayton Canyon Creek. The beneficial uses applicable to Dayton Canyon Creek, Bell Creek, and the Los Angeles River are as follows:

Table F-3. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
008	Dayton Canyon Creek	Existing: wildlife habitat Intermittent: groundwater recharge, contact and non contact recreation: warm freshwater habitat. Potential: MUN*[1]
001, 002, 011, 018, 019, 020	Bell Creek – Hydro Unit 405.21	Existing: wildlife habitat Intermittent: groundwater recharge, contact and non contact recreation: warm freshwater habitat. Potential: MUN*[1]
001, 002, 011, 008, 018, 019, 020	Los Angeles River above Balboa Blvd.	Existing: groundwater recharge; contact and non-contact water recreation; warm freshwater habitat; wildlife habitat; and wetland habitat. Potential: industrial service supply, MUN*[1]

[1] MUN* designation are designated under State Water Board Resolution No. 88-63 and Regional Board Resolution No. 89-03. Some designations may be considered for exemption at a later date.

Dayton Canyon Creek, Bell Creek, and all of the reaches of the Los Angeles River listed except for the estuary also have municipal and domestic supply (MUN) listed in the Basin Plan as a potential beneficial use with an asterisk. This is consistent with Regional Water Board Resolution 89-03; however, the Regional Water Board has only conditionally designated the MUN beneficial uses and at this time cannot establish effluent limitations designed to protect the conditional designation.

Stormwater runoff, from Outfalls 003 to 007, 009, and 010, flows to the northwest and down Meir and Runkle Canyons toward Arroyo Simi. Arroyo Simi is a tributary to the Callegaus Creek. The beneficial uses for the receiving water are listed below.

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Table F-3a. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
003 to 007, 009, 010	Arroyo Simi – Hydro Unit 403.62	Existing: wildlife habitat; rare, threatened, or endangered species habitat; Intermittent: industrial process supply, groundwater recharge, freshwater replenishment, contact and non-contact water recreation, warm freshwater habitat, MUN*[1]

[1] MUN* designation are designated under State Water Board Resolution No. 88-63 and Regional Water Board Resolution No. 89-03. Some designations may be considered for exemption at a later date.

Requirements of this Order implement the Basin Plan.

2. **Thermal Plan.** The State Water Board adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. Requirements of this Order implement the Thermal Plan and a white paper developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region.* The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. The temperature effluent limitation of 86°F that is included in this Order is reflective of the information included in the white paper.

3. **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 water quality criteria for priority pollutants.

4. **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 Regional 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

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criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

5. **Antidegradation Policy.** Federal regulation 40 C.F.R. 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 No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16.

6. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) prohibit 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. All limits in this Order are as stringent as the previous permit.

D. Watershed Management Approach

The Regional Water Board has implemented a Watershed Management Approach, in accordance with *Watershed Protection: A Project Focus* (EPA841-R-95-003, August 1995), to address water quality protection in the Los Angeles Region. Programs covered under the Watershed Management Approach include regulatory (e.g., NPDES), monitoring and assessment, basin planning and water quality standards, watershed management, wetlands, TMDLs, 401 certifications, groundwater (as appropriate), and nonpoint source management activities. The Watershed Management Approach integrates the Regional Water Board's many diverse programs, particularly, permitting, planning, and other surface-water oriented programs. It emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with the resources available. This approach facilitates a more accurate assessment of cumulative impacts of pollutants from both point and nonpoint sources.

The Los Angeles River watershed is one of the largest in the Region. The headwaters of the Los Angeles River originate in the Santa Monica, Santa Susana, and San Gabriel Mountains. The river flows through industrial and commercial areas and is bordered by rail yards, freeways, and major commercial and government buildings. The Los Angeles River tidal prism/estuary begins in Long Beach at Willow Street and runs approximately three miles before joining with Queensway Bay located between the Port of Long Beach and the City of Long Beach.

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The area where SSFL is located is largely undeveloped. The majority of the Los Angeles River Watershed downstream of the site is considered impaired due to a variety of point and nonpoint sources. Discharges from Outfalls 001, 002, 011, 018, 019, and 020 enter Bell Creek, a tributary to the Los Angeles River. Stormwater from Happy Valley, Outfall 008 exits the site toward Dayton Canyon Creek, which flows into Chatsworth Creek. Chatsworth Creek flows southward to Bell Creek, near the intersection of Sherman Way and Shop Avenue, and subsequently to the Los Angeles River.

The Calleguas Creek Watershed extends from the Santa Monica Mountains and Simi Hills in the south, to the Santa Susana Mountains, South Mountain, and Oak Ridge in the north. Land uses vary throughout the watershed. Urban developments are generally restricted to the city limits of Simi Valley, Moorpark, Thousand Oaks, and Camarillo. Agricultural activities are spread out along valleys and on the Oxnard Plain. Stormwater runoff exiting the SSFL site to the north does so near the northwest site boundary from Outfalls 003 to 007, 009 and 010. The receiving water for the stormwater runoff from these locations is the Arroyo Simi, a tributary of Calleguas Creek.

The stormwater discharge exits the site and travels down Meier and Runkle Canyons toward the Arroyo Simi. Most of the land use around the facility is open area. Overall the Calleguas Creek Watershed is considered an impaired watershed. It appears that the sources of many of these pollutants are agricultural activities. Approximately fifty percent of the watershed is still open space, although there is a severe lack of benthic and riparian habitat present. Discharges from Outfalls 003 to 007, 009, and 010, when it is sufficient to reach the Arroyo Simi, enters it in Reach 1 – Hydrological Unit 403.62.

Recently, the Discharger has been collecting stormwater runoff from the northwest site boundary outfalls (Outfalls 003 to 007 and 010) and diverting the collected stormwater runoff to Silvernale Pond. There it is treated in the stormwater treatment system and discharged via Outfall 018 to Bell Creek.

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E. Impaired Water Bodies on CWA Section 303(d) List

Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For CWA section 303(d)-listed water bodies and pollutants, the Regional Water Board has established, or plans to establish, TMDLs that will specify waste load allocations (WLAs) for point sources and load allocations (LAs) for non-point sources, as appropriate.

The USEPA approved the State's 2010 CWA section 303(d) list of impaired water bodies on November 12, 2010. Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 2010 CWA section 303(d) list and have been scheduled for TMDL development. The 2010 State Water Board's California CWA section 303(d) List classifies Bell Creek as impaired. The pollutants/stressors listed include coliform bacteria. The TMDL adopted for the Los Angeles River and its

tributaries applies to discharges from the SSFL Outfalls 001, 002, 008, 011, 018, 019, and 020.

Arroyo Simi, the receiving water for stormwater discharges from the northern boundary of the SSFL, is in the Calleguas Creek Watershed. The Arroyo Simi is in Calleguas Creek Reach 7, which appears on the State's 2010 CWA section 303(d) list. The stressors listed include: ammonia, chlorpyrifos, diazinon, indicator bacteria, pesticides, sediment/siltation, boron, chloride, fecal coliform, sulfates, total dissolved solids, toxicity, and trash. The TMDLs adopted for Calleguas Creek are applicable for Arroyo Simi and for the discharges from SSFL Outfalls 003 to 007, 009, and 010.

F. Total Maximum Daily Loads (TMDLs)

The following are summaries of the applicable TMDLs for the Los Angeles River and Calleguas Creek watersheds to this Facility.

Los Angeles River Nitrogen Compounds and Related Effects (Nutrients) TMDL: The TMDL for Nitrogen Compounds and Related Effects (nutrients) in the Los Angeles River was adopted by the Regional Water Board on July 10, 2003 (Resolution No. 03-009). The TMDL became effective on March 23, 2004, and it includes numeric targets for ammonia as nitrogen (NH3-N), Nitrate-nitrogen and nitrite-Nitrogen for the Los Angeles River and its tributaries. The WLAs included for point source discharges to the tributaries of the Los Angeles River have been implemented in this Order.

Los Angeles River Watershed Bacteria TMDL:
The Regional Water Board adopted the Los Angeles River Bacteria TMDL on July 9, 2010 (Resolution No. R10-007). It became effective on March 23, 2012.

Elevated bacteria indicator densities are causing impairment of the water contact recreation (REC-1) beneficial use. Consistent with the WLAs assigned to individual NPDES permits in the TMDL, this Order provides for zero days of allowable exceedances of a single sample target for both dry and wet weather and no exceedances of the geometric mean target. This Order requires compliance with the TMDL numeric targets in the receiving water.

The numeric targets for this TMDL are;
Geometric Mean target – E. coli density shall not exceed 126/100 mL
Single Sample Target - E. coli density shall not exceed 235/100 mL

Los Angeles River Metals TMDL:
The Regional Water Board adopted the Los Angeles River and Tributaries Metals TMDL on June 2, 2005 (Resolution No. 2005-006). The Regional Water Board amended the TMDL on September 6, 2007. The Amended TMDL became effective on October 29, 2008

The TMDL includes numeric targets that are based on the CTR. Targets for copper, lead, zinc, and/or selenium (total recoverable) are established for designated reaches of the Los Angeles River. Separate water quality targets are established for dry and wet weather discharges. Effluent limits for cadmium, copper, lead, zinc, and selenium

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in discharges to Bell Creek, Dayton Canyon Creek, or any tributaries of the Los Angeles River are based on WLAs established by the TMDL or existing permit limits, whichever are more protective.

Calleguas Creek Toxicity TMDL:
The TMDL for toxicity, chlorpyrifos, and diazinon in the Calleguas Creek, its tributaries and Mugu Lagoon (Calleguas Creek Toxicity TMDL) (Resolution No. R4-2005-009) was adopted by the Regional Water Board on July 7, 2005. The TMDL became effective on March 14, 2006. The TMDL addresses impairment to water quality due to elevated levels of chlorpyrifos, diazinon, other pesticides and/or other toxicants. The TMDL includes numeric targets, WLAs and load allocations for toxicity, chlorpyrifos and diazinon. The toxicity wasteload allocation of 1.0 TUc included in the TMDL is an interpretation of the narrative limit from the Basin Plan. The TST approach recommended by the Environmental Protection Agency has been used to interpret the narrative in this permit. This approach is consistent with the TMDL. The appropriate WLAs have been translated into permit limits and included in this Order.

Calleguas Creek OC Pesticides & PCBs TMDL (Resolution No. R4-2005-0010):
The Regional Water Board adopted the Calleguas Creek TMDL for Organochlorine (OC) Pesticides and Polychlorinated Biphenyls (PCBs) and Siltation on July 7, 2005. The TMDL became effective on March 14, 2006. The TMDL establishes water column targets, fish tissue targets, and sediment targets to ensure the protection of beneficial uses. The WLAs for OC pesticides and PCBs in sediment have been translated directly into ambient contaminant concentrations in the sediment of Arroyo Simi. The Discharger samples the OC pesticides and PCBs in sediment and in the receiving water in a tributary of Arroyo Simi.

Calleguas Creek Watershed Metals TMDL (Resolution No. R4-2006-012):
The Regional Water Board adopted the Calleguas Creek Watershed Metals TMDL on June 8, 2006. The TMDL became effective on March 26, 2007. The TMDL includes final WLAs for wet weather total recoverable copper and nickel. A concentration-based WLA applied during both wet and dry weather is also included for mercury.

Discharges from the SSFL site (Outfalls 003 to 007, 009, and 010) enter Calleguas Creek in Reach 7, which was noted as Arroyo Simi Reaches 1 and 2 in the 1998 CWA Act section 303(d) List. Discharges from these outfalls only occur during rain events. Therefore, no dry weather WLAs have been developed for this reach as it is not on the CWA section 303(d) list.

The final WLA developed for mercury was 0.051 µg/L. That WLA is based on the CTR criteria. The mercury WLA included in the TMDL was used to develop a daily maximum effluent limit, which has been implemented at Outfalls 003 to 007, 009, and 010. Only the daily maximum effluent limit is included since discharges only occur during rain events. Rain events in southern California are infrequent and seasonal.

Final WLAs for wet weather daily maximum concentrations of copper and nickel are established as 31.0 and 958 µg/L, respectively. The daily maximum effluent limit for

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copper is included in this Order. The TMDL-based daily maximum effluent limit for nickel (958 µg/L), which was developed to protect aquatic life in the lower Calleguas Creek and Mugu Lagoon, is greater than the Title 22-based MCL limit of 100 µg/L. Since the groundwater basin below the Arroyo Simi has municipal and domestic supply as an existing beneficial use and Arroyo Simi has groundwater recharge as an intermittent beneficial use, the effluent limitation implemented must be protective of both groundwater recharge and of the downstream aquatic life beneficial uses. Therefore, the 100 µg/L effluent limitation, which is protective of the beneficial uses of Arroyo Simi and the groundwater basin below it, has been implemented for nickel.

A number of TMDLs developed for Calleguas Creek and a TMDL for the Los Angeles River watershed are not applicable to discharges from the Santa Susana Field Laboratory. Those TMDLs include:

1. Calleguas Creek Salts TMDL (Resolution No. R4-2007-016)
2. Calleguas Creek Nitrogen Compounds and Related Effects TMDL (Resolution No 2002-017);
3. Revolon Slough & Beardsley Wash Trash TMDL (Resolution No. 2007-007);
4. Los Angeles River Nitrogen Compounds and Related Effects (Nutrients) TMDL (Resolution No. 2003-016) ; and
5. Revision of the Los Angeles River and Tributaries MetalsTMDL (R10-003)

G. Title 22 of the California Code of Regulations.

The California Department of Public Health established primary and secondary maximum contaminant levels (MCLs) for a number of chemical and radioactive contaminants. The MCLs can be found in Title 22, California Code of Regulations (Title 22). Chapter 3 of the Basin Plan incorporates portions of Title 22 by reference. Narrative objectives require the ground waters shall not contain taste or odor-producing substances in concentrations that affect beneficial uses. The secondary MCLs in Title 22 are designed to ensure that the water's taste and odor does not affect its suitability as a drinking water source. Title 22 MCLs have been incorporated into NPDES permits and Non-Chapter 15 WDRs to protect the municipal and domestic supply (MUN) and groundwater recharge (GWR), where the underlying groundwater has a designated MUN beneficial use.

Groundwater Recharge. Sections of Bell Creek and Arroyo Simi, near the SSFL discharge points, are designated as GWR indicating that groundwater recharge is a beneficial use. Surface water from Bell Creek enters the Los Angeles River Watershed. The headwaters of the Los Angeles River originate in the Santa Monica, Santa Susana, and San Gabriel Mountains. Four basins in the San Fernando Valley area contain substantial deep groundwater reserves and are recharged mainly through runoff and infiltration.

Surface water discharges from the northwest edge of SSFL are directed to Arroyo Simi, a tributary located in the Calleguas Creek Watershed. Supplies of groundwater are critical to agricultural operations and industry (sand and gravel mining) in the watershed.

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Moreover, much of the population in the watershed relies upon groundwater for drinking. Since groundwater from these basins is used to provide drinking water to a large portion of the population, Title-22-based limits are needed to protect that drinking water supply. By limiting the pollutants in SSFL discharges, the amount of pollutants entering the surface waters and groundwater basins are correspondingly reduced. Once groundwater basins are contaminated, it may take years to clean them up depending on the pollutants. Compared to surface water pollution, investigation and remediation of groundwater are often more difficult, costly, and extremely slow. For these reasons, Title 22-based limits will remain in the NPDES permit where there is reasonable potential.

H. Perchlorate.

Perchlorate and its salts are used in, but not limited to, solid propellant for rockets, missiles, and fireworks. The defense and aerospace industries purchase more than 90 percent of all the perchlorate manufactured. Perchlorate has historically been used at SSFL and thus is considered a chemical of concern at the site. Monitoring data collected during the tenure of the previous permit indicates that perchlorate was present in the stormwater runoff in Happy Valley and it has been detected in some of the groundwater wells utilized in the cleanup operations ongoing with DTSC oversight.

Perchlorate can interfere with iodide uptake by the thyroid gland; this can result in a decrease in the production of thyroid hormones, which are needed for prenatal and postnatal growth and development, as well as for normal body metabolism. Neither the CTR, NTR, or the Basin Plan has requirements identified for perchlorate. Section 64431 of Title 22 of the California Code of Regulations was amended in 2007 to include a primary MCL for perchlorate of 6 µg/L. That MCL has been included as an effluent limit for perchlorate in this Order.

I. Other Plans, Polices and Regulations

Not applicable

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 Code of Federal Regulations: section 122.44(a) requires that permits include applicable technology-based limitations and standards; and section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

The previous permit established effluent limitations for pH, temperature, TSS, BOD, oil and grease, turbidity, settleable solids, sulfides, and residual chlorine, due to the fact that these are the typical pollutants of concern in drainage from settling basins. Effluent limitations for TDS, chloride, nitrate plus nitrite (as Nitrogen), sulfate, and residual chlorine, are based on water quality objectives contained in the Basin Plan. Effluent limitations for some priority

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pollutants are based on an analysis of effluent monitoring data and the applicable water quality criteria.

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. Section 122.45(f)(1) requires that all permit limitations, standards, or prohibitions be expressed in terms of mass units except under the following conditions: (1) for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if in establishing technology-based permit limitation on a case-by-case basis limitation based on mass are infeasible because the mass or pollutant cannot be related to a measure of production. The effluent limitations, however, must ensure that dilution will not be used as a substitute for treatment.

A. Discharge Prohibitions

The discharge prohibitions are based on the requirements of the Basin Plan, State Water Board's plans and policies, the Water Code, and previous permit provisions. They are also consistent with the requirements set for other discharges to the Los Angeles River and Calleguas Creek watersheds that are regulated by NPDES permits.

B. Technology-Based Effluent Limitations

1. Scope and Authority

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

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

e. 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.

f. 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.

g. 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

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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.

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

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

2. Applicable Technology-Based Effluent Limitations

No ELGs are available for this facility. Therefore, this Order includes technology-based effluent limitations based on BPJ in accordance with 40 C.F.R. section 125.3. Effluent limitations for TSS, BOD, oil and grease, settleable solids, and sulfides have been included consistent with the limits from the previous permit (Order No. R4-2010-0090), since they continue to be appropriate for the discharge.

Order No. R4-2010-0090 required the Discharger to develop and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP currently outlines site-specific management processes for minimizing stormwater runoff contamination and for preventing contaminated stormwater runoff from being discharged to the receiving water. This Order continues to require that the Discharger update and continue to implement the site specific SWPPP (see Attachment G).

The Regional Water Board requires the Discharger to update their Best Management Practices. The purpose of BMPs is to establish site-specific procedures that will ensure proper operation and maintenance of equipment and storage areas, to ensure that unauthorized non-stormwater discharges (i.e., spills) do not occur at the Facility.

The combination of the SWPPP and BMPs, and the Order limitations based on past performance and reflecting BPJ, will serve as the equivalent of technology-based effluent limitations, in the absence of established ELGs, in order to carry out the purposes and intent of the CWA.

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Table F-4. Summary of Technology-based Effluent Limitations/Benchmarks*
Outfalls 001, 002, 011, 018, 019, 020

Parameter	Units	Effluent Limitations	
		Average Monthly [1]	Maximum Daily
BOD_5 @ 20°C	mg/L	20	30
Oil and Grease	mg/L	10	15
Total Suspended Solids	mg/L	15	45
Settleable Solids	ml/L	0.1	0.3

* A "benchmark" is a water quality based effluent limit or a performance based limit that is used to evaluate the performance of best management practices (BMPs) with regard to the removal of pollutants present in the discharge. Benchmarks are applicable at Outfalls 001 and 002. They were established to address concerns included in the State Board Order WQ 2006-0008, which provided direction regarding addressing the issue of potential double counting of violations in both upstream and downstream compliance locations along the same drainage. In this Order, the benchmarks are established based on water quality based effluent limitations. Exceedance of a benchmark triggers an evaluation of the BMPs implemented at the site. The evaluation may determine that the BMPs require augmentation, upgrading, or replacement. If so, the Discharger must develop a plan to implement the required upgrades and report to the Regional Water Board within 60 days of the reported exceedance. The Discharger will continue monitoring as directed in the Monitoring and Reporting Program during plan development and implementation.

1. Outfalls 019, 020 only

Table F-4a.Summary of Technology-based Effluent Limitations Outfalls 003 to 010

Parameter	Units	Effluent Limitations Maximum Daily
Oil and Grease	mg/L	15
Settleable Solids	ml/L	0.3

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and 40 C.F.R. 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.

40 C.F.R. section 122.44(d)(1)(i) mandates 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, water quality-based effluent limitations (WQBELs) must

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be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

As noted in Section III of the Fact Sheet, the Regional Water Board adopted a Basin Plan that 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 Bell Creek, Dayton Canyon Creek and the Los Angeles River are summarized in Section IV.C of this Fact Sheet. The beneficial uses applicable to Arroyo Simi and subsequent tributaries to Calleguas Creek are also summarized in Section IV.C. The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving water.

Priority pollutant water quality criteria in the CTR are applicable to the receiving waters (Bell Creek, Dayton Canyon Creek, and Arroyo Simi). The CTR contains both saltwater and freshwater criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, the following apply, in accordance with 40 C.F.R. section 131.38(c)(3), freshwater criteria apply at salinities of 1 part per thousand (ppt) and below at locations where this occurs 95 percent or more of the time. The CTR criteria for fresh water or human health for consumption of water and organisms, whichever is more stringent, are used to prescribe the effluent limitations in this Order to protect the beneficial uses of Bell Creek and Dayton Canyon Creek, tributaries to the Los Angeles River, and to Arroyo Simi, waters of the United States in the vicinity of the discharge.

Some water quality criteria are hardness dependent. The Discharger provided hardness data for the receiving water during the term of the previous permit. The data indicates that the 100 mg/L as $CaCO_3$ for hardness continues to be representative of the discharge from the Facility. The 100 mg/L hardness has been used to develop the total recoverable water quality criteria.

Table F-5a and F-5b summarize the applicable numeric water quality criteria/objective for priority pollutants and non-priority pollutants reported in detectable concentrations in the effluent or receiving water. These criteria were used in conducting the RPA for this Order.

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Table F-5a. Applicable Water Quality Criteria

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria					
			Freshwater		Saltwater		Human Health for Consumption of:	
			Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms only
		g/L	g/L	g/L	g/L	g/L	g/L	g/L
1	Antimony	6[1]	--	--	N/A		N/A	4,300
2	Arsenic	10[2]	340	150				--
3	Beryllium	4[1]	--	--				--
4	Cadmium	2.5	4.5	2.5				--
5a	Chromium (III)	207	1737	207				--
5b	Chromium (VI)	11	16	11				--
6	Copper	9.3	14	9.3				--
7	Lead	3.2	82	3.2				--
8	Mercury	0.051	--	--				0.051
9	Nickel	52	469	52				4,600
10	Selenium	5.0		5				--
11	Silver	4.1	4.1	--				--
12	Thallium	6.3	--	--				6.3
13	Zinc	2.0[1]	120	120				--
14	Cyanide	5.2	22	5.2				220,000
16	2,3,7,8-TCDD	1.4E-08	--	--				1.4E-08
30	1,1-Dichloroethylene	3.2	--	--				3.2
43	Trichloroethylene	5[1]	--	--				81
53	Pentachlorophenol	8.2	19	15				8.2
55	2,4,6-Trichlorophenol	6.5	--	--				6.5
68	Bis(2-ethylhexyl)phthalate	5.9	--	--				5.9
82	2,4-Dinitrotoluene	9.1	--	--				9.1
96	N-Nitrosodimethylamine	8.1	--	--				8.1
103	Alpha-BHC	0.013	--	--				0.013
	Perchlorate	6[3]	--	--				--
	Radioactivity Gross Alpha (pCi/L) Gross Beta (pCi/L)	 15[1] 50[1]	 -- --	 -- --				 -- --
	Combined Radium-226 & Radium-228 (pCi/L)	5[1]	--	--				--
	Tritium (pCi/L)	20,000[1]	--	--				--
	Strontium-90 (pCi/L)	8[1]	--	--				--

"N/A" indicates the receiving water body is not characterized as saltwater, nor are the water quality criteria for the protection of human health for the consumption of organisms (only) applicable.
[1] Basin Plan-Title 22 criteria.
[2] USEPA MCL
[3] CA MCL

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For the purpose of determining compliance with effluent limits, this Order requires the Dischargers to calculate and report dioxin-TEQ using the following formula, where the TEFs and BEFs are as listed in Table F-5b:

$$\text{Dioxin-TEQ} = \Sigma\ (C_x \times TEF_x \times BEF_x)$$

where:

C_x = concentration of dioxin or furan congener x
TEF_x = TEF for congener x
BEF_x = BEF for congener x

Table F-5b. Toxicity Equivalency Factors and Bioaccumulation Equivalency Factors

Dioxin or Furan Congener	Minimum Level (pg/L)	Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-TCDD	10	1.0	1.0
1,2,3,7,8-PeCDD	50	1.0	0.9
1,2,3,4,7,8-HxCDD	50	0.1	0.3
1,2,3,6,7,8-HxCDD	50	0.1	0.1
1,2,3,7,8,9-HxCDD	50	0.1	0.1
1,2,3,4,6,7,8-HpCDD	50	0.01	0.05
OCDD	100	0.0001	0.01
2,3,7,8-TCDF	10	0.1	0.8
1,2,3,7,8-PeCDF	50	0.05	0.2
2,3,4,7,8-PeCDF	50	0.5	1.6
1,2,3,4,7,8-HxCDF	50	0.1	0.08
1,2,3,6,7,8-HxCDF	50	0.1	0.2
1,2,3,7,8,9-HxCDF	50	0.1	0.6
2,3,4,6,7,8-HxCDF	50	0.1	0.7
1,2,3,4,6,7,8-HpCDF	50	0.01	0.01
1,2,3,4,7,8,9-HpCDF	50	0.01	0.4
OCDF	100	0.0001	0.02

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Applicable Basin Plan Criteria

For a number of constituents, the Basin Plan Water Quality Objectives were used to develop the limitations in this Order. The following Table summarizes the Basin Plan numeric and narrative Water Quality Objectives utilized in this Order.

Table F-5c. Applicable Basin Plan Numeric Water Quality Objectives

Constituent	Units	Water Quality Criteria
pH	s.u.	Between 6.5 and 8.5 at all times, ambient pH shall not be changed more than 0.2 units from natural conditions
Ammonia	mg/L	1.96 mg/L of ammonia for the monthly average and 10.1 mg/L of ammonia for daily maximum at pH=7.9 and temperature of 20 °C as per Resolutions 2002-011 and 2005-014.
Temperature	ºF	Receiving water shall not be altered by more than 5 ºF above the natural temperature.
Turbidity	NTU	Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU increases shall not exceed 10%.
Total suspended solids or settleable materials	mg/L mL/L	Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses.
$BOD_5$20°C	mg/L	Waters shall be free of substances that result in increases in the BOD which adversely affect beneficial uses.
Oil and grease	mg/L	Waters shall not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.
Total residual chlorine	mg/L	Chlorine residual shall not be present in surface water discharges at concentrations that exceed 0.1 mg/L or shall not persist in the receiving waters at any concentration that causes impairment of beneficial uses.
Total dissolved solids	mg/L	Numerical mineral quality objectives for individual surface waters as designated in Table 3-8 of the Basin Plan.
Chloride	mg/L	
Sulfate	mg/L	
Detergents (as MBAS)	mg/L	Waters shall not have MBAS concentrations greater than 0.5 mg/L in waters designated MUN.
Nitrate + Nitrite –N	mg/L	Waters shall not exceed 10 mg/L nitrogen as nitrate-nitrogen plus nitrite-nitrogen (NO_3-N +NO_2-N), 45 mg/L as nitrate (NO_3), 10 mg/L as nitrate-nitrogen (NO_3-N), or 1 mg/L as nitrite-nitrogen (NO_3-N) or as otherwise designated in Table 3-8.
Nitrate-N	mg/L	
Nitrite-N	mg/L	

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Constituent	Units	Water Quality Criteria
Chemical Constituents		Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use. Water designated for use as Domestic or Municipal Supply (MUN) shall not contain concentrations of chemical constituents in excess of the limits specified in the provisions of Title 22 of the California Code of Regulations.
Barium	mg/L	
Fluoride	mg/L	
Manganese	mg/L	
Antimony	µg/L	
Arsenic	µg/L	
Beryllium	µg/L	
Cyanide	µg/L	
Thallium	µg/L	
Perchlorate	µg/L	
Trichloroethylene	µg/L	
Bis(2-ethylhexyl)phthalate	µg/L	
Radioactivity Gross Alpha Gross Beta	 pCi/L pCi/L	Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or 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.
Combined Radium 226 & Radium 228	pCi/L	
Tritium	pCi/L	
Strontium-90	pCi/L	

3. Determining the Need for WQBELs

In accordance with Section 1.3 of the SIP, the Regional Water Board conducts a reasonable potential analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Water Board analyzes effluent and receiving water data and identifies the maximum observed effluent concentration (MEC) and maximum background concentration (B) in the receiving water for each constituent. To determine reasonable potential, the MEC and the B are then compared with the applicable water quality objectives (C) outlined in the CTR, NTR, as well as the Basin Plan. For all pollutants that have a reasonable potential to cause or contribute to an excursion above a state water quality standard, numeric WQBELs are required. The RPA considers water quality criteria from the CTR and NTR, and when applicable, water quality objectives specified in the Basin Plan. To conduct the RPA, the Regional Water Board identifies the MEC and maximum background concentration in the receiving water for each constituent, based on data provided by the Discharger.

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Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete a RPA:

1) Trigger 1 – If the MEC ≥ C, a limit is needed.

2) Trigger 2 – If the background concentration (B) > C and the pollutant is detected in the effluent, a limit is needed.

3) Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates that a WQBEL is required.

Sufficient effluent and receiving water data are needed to conduct a complete RPA. If data are not sufficient, the Discharger will be required to gather the appropriate data for the Regional Water Board to conduct the RPA. Upon review of the data, and if the Regional Water Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

There is a robust data set available for the SSFL from NPDES permit sampling, the Interim Source Removal Action (ISRA), and from the RCRA assessment and cleanup that is progressing with DTSC oversight. The data available from the RCRA assessment and cleanup and ISRA activity was used to make a best professional judgment decision regarding the retention of limits for pollutants that have not been detected recently but have been onsite or detected in the soils or sediment on the site at elevated concentrations. The statistical RPA was completed for all priority pollutants detected from January 2010 to March 2014. Refer to Attachment J for a summary of the RPA and associated effluent limitation calculations. Following are summary tables of the RPA completed for each group of outfalls evaluated.

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Table F-6a. Summary of Reasonable Potential Analysis for Outfalls 001, 002, 011, and 018.

CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
		g/L	g/L	g/L		
1	Antimony	6[3]	1	--	Yes	Limit based on BPJ
2	Arsenic	10[3]	8.9	--	Yes	Limit based on BPJ
3	Beryllium	4[3]	0.9	--	Yes	Limit based on BPJ
4	Cadmium	2.5 [1,2]	0.3	--	Yes – Limit based on TMDL	303(d) listed pollutant

CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
		g/L	g/L	g/L		
5a	Chromium III	207	15	--	No	Analysis used to meet Chromium VI requirement
5b.	Chromium VI	8.1	ND	--	Yes	Limit based on BPJ
6	Copper	9.3	14.3	--	Yes – Limit based on TMDL [1]	303(d) listed pollutant
7	Lead	3.2	13	--	Yes	MEC>C
8	Mercury	0.05	0.12	--	Yes	MEC>C
9	Nickel	52	12	--	Yes	Limit based on BPJ
10	Selenium	5	1.3	--	Yes	Limit based on BPJ
11	Silver	4.1	0.12	--	Yes	Limit based on BPJ
12	Thallium	2[3]	0.2	--	Yes	Limit based on BPJ
13	Zinc	120	76	--	Yes	303(d) listed pollutant
14	Cyanide	5.2	18		Yes	MEC>C
29	1,2-Dichloroethane	0.5	ND	--	Yes	Limit based on BPJ
30	1,1-Dichloroethylene	3.2	ND		Yes	Limit based on BPJ
43	Trichloroethylene	5[3]	1.8	--	Yes	Limit based on BPJ
16	TCDD (TEQ)	2.8E-08	2E-06		Yes	MEC>C
55	2,4,6-Trichloephenol	6.5	ND		Yes	Limit based on BPJ
82	2,4-Dinitrotoluene	9.1	ND		Yes	Limit based on BPJ
103	Alpha BHC	0.013	ND		Yes	Limit based on BPJ
98	N-Nitrosodimethylamine	16	ND	--	Yes	Limit based on BPJ
53	Pentachlorophenol	16.5	ND		Yes	Limit based on BPJ
68	Bis(2-ethylhexyl) phthalate	5.9	ND		Yes	Limit based on BPJ
	Perchlorate	6[4]	2.2	--	Yes	Limit based on BPJ
	Radioactivity Gross Alpha (pCi/L) Gross Beta (pCi/L)	 15[3] 50[3]	 17.1 16.2	 -- --	Yes	Limit based on BPJ; MEC>C

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CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
		g/L	g/L	g/L		
	Combined Radium-226 & Radium 228 (pCi/L)	5[3]	1.33	--	Yes	Limit based on BPJ
	Tritium (pCi/L)	20,000[3]	100	--	Yes	Limit based on BPJ
	Strontium-90 (pCi/L)	8[3]	0.4	--	Yes	Limit based on BPJ

[1] Based on dry weather TMDL limit for LA River
[2] Based on wet weather TMDL limit for LA River
[3] Based on Basin Plan
[4] Based on California MCL

Table F-6b. Summary of Reasonable Potential Analysis for Outfalls 019 and 020.

CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)[5]	RPA Result - Need Limit?	Reason
		g/L	g/L	g/L		
1	Antimony	6[3]	ND	--	Yes	Limit based on BPJ
2	Arsenic	10[3]	ND	--	Yes	Limit based on BPJ
3	Beryllium	4[3]	ND	--	Yes	Limit based on BPJ
4	Cadmium	2.5[1,2]	0.18	0.27	Yes – Limit based on TMDL	303(d) listed pollutant
5a	Chromium III	207	2.3	15	No	Analysis used to meet Chromium VI requirement
5b.	Chromium VI	8.1	1.1	--	Yes	Limit based on BPJ
6	Copper	9.3	2.6	14	Yes – Limit based on TMDL [1]	303(d) listed pollutant
7	Lead	3.2	0.37	13	Yes	MEC>C
	Mercury	0.05	ND		Yes	Limit based on BPJ
9	Nickel	52	2.9	12	Yes	Limit based on RPA
10	Selenium	5	0.96	1.3	Yes	Limit based on BPJ

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CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)[5]	RPA Result - Need Limit?	Reason
		g/L	g/L	g/L		
11	Silver	4.1	ND	--	Yes	Limit based on BPJ
12	Thallium	2[3]	ND	--	Yes	Limit based on BPJ
13	Zinc	120	50	76	Yes	303(d) listed pollutant
68	Bis(2-ethylhexyl)phthalate	5.9	3.3	--	Yes	Limit based on BPJ
103	Alpha BHC	0.013	0.0025	--	Yes	Limit based on BPJ
14	Cyanide	4.3	ND	--	Yes	Limit based on BPJ
98	N-Nitrosodimethylamine	8.1	ND	--	Yes	Limit based on BPJ
53	Pentachlorophenol	8.2	ND	--	Yes	Limit based on BPJ
	Perchlorate	6[4]	0.96	2.2	Yes	Limit based on BPJ
30	1,1-Dichloroethylene	3.2	ND	--	Yes	Limit based on BPJ
43	Trichloroethylene	5[3]	ND	--	Yes	Limit based on BPJ
16	TCDD (TEQ)	2.8E-08	ND	--	Yes	Limit based on BPJ
55	2,4,6-Trichlorophenol	6.5	ND	--	Yes	Limit based on BPJ
82	2,4-Dinitrotoluene	9.1	ND	--	Yes	Limit based on BPJ
	Radioactivity Gross Alpha (pCi/L) Gross Beta (pCi/L)	 15[3] 50[3]	 2 11.8	 17.1 16.2	Yes	Limit based on BPJ
	Combined Radium-226 & Radium 228 (pCi/L)	5[3]	0.7	1.33	Yes	MEC>C
	Tritium (pCi/L)	20,000[3]	60	100	Yes	Limit based on BPJ
	Strontium-90 (pCi/L)	8[3]	0.4	0.4	Yes	Limit based on BPJ

[1] Based on dry weather TMDL limit for LA River
[2] Based on wet weather TMDL limit for LA River
[3] Based on Basin Plan
[4] Based on California MCL
[5] Background (B) = MEC of Outfalls 1 and 2

TENTATIVE

Table F-6c. Summary of Reasonable Potential Analysis for Outfalls 003, 004, 005, 006, 007, 009, 010.

CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
		g/L	g/L	g/L		
1	Antimony	6[3]	2.3	0.87	Yes	BPJ
4	Cadmium	2.5	0.43	0.68	Yes	CTR, BPJ
6	Copper	9.3	9.6	15	Yes	MEC>C, B>C
14	Cyanide	8.5	ND	--	Yes	Limit based on BPJ
7	Lead	3.2	11	4.9	Yes	MEC>C, B>C
8	Mercury	0.051	ND	0.10	Yes	B>C
9	Nickel	52	3.3	14	Yes	Limit based on BPJ
12	Thallium	2.0[3]	0.43	0.4	Yes	Limit based on BPJ
13	Zinc [5]	120	161	52	Yes	MEC>C
16	TCDD	2.8E-08	3.4E-06	2.7E-06	Yes	MEC>C
	Perchlorate	6[4]	ND	--	Yes	Limit based on BPJ
	Radioactivity Gross Alpha (pCi/L) Gross Beta (pCi/L)	 15[3] 50[3]	 3.7 10.9	 -- --	 Yes Yes	Limit based on BPJ
	Combined Radium-226 & Radium 228 (pCi/L)	5[3]	0.67	--	Yes	Limit based on BPJ
	Tritium (pCi/L)	20,000[3]	1060	--	Yes	Limit based on BPJ
	Strontium-90 (pCi/L)	8[3]	0.6	--	Yes	Limit based on BPJ

[1] Based on dry weather TMDL limit for LA River
[2] Based on wet weather TMDL limit for LA River
[3] Based on Basin Plan
[4] Based on California MCL

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Table F-6d. Summary of Reasonable Potential Analysis for Outfall 008.

CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
		g/L	g/L	g/L		
1	Antimony	6[3]	0.5	0.6	Yes	Limit based on BPJ
4	Cadmium	2.5	0.46	0.3	Yes	Limit based on BPJ

CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
		g/L	g/L	g/L		
6	Copper	9.3	18	14.3	Yes	MEC>C, B>C
7	Lead	3.2	10	13	Yes	MEC>C, B>C
	Mercury	0.05	ND		Yes	Limit based on BPJ
9	Nickel	52	20	12	Yes	Limit based on BPJ
10	Selenium	5	1.3	1.3	Yes	TMDL
	Thallium	2[3]	ND		Yes	Limit based on BPJ
13	Zinc	120	64	76	Yes	BPJ
16	TCDD	1.4E-08	9.1E-04	3.3E-06	Yes	MEC>C, B>C
	Perchlorate	6[4]	2.4	2.2	Yes	Limit based on BPJ
	Radioactivity Gross Alpha (pCi/L) Gross Beta (pCi/L)	 15[3] 50[3]	 25.8 25.4	 17.1 16.2	 Yes Yes	Limit based on BPJ
	Combined Radium-226 & Radium 228 (pCi/L)	5[3]	2.03	1.33	Yes	Limit based on BPJ

[1] Based on dry weather TMDL limit for LA River
[2] Based on wet weather TMDL limit for LA River
[3] Based on Basin Plan
[4] Based on California MCL

TENTATIVE

4. 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:

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

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

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

b. Water quality based effluent limits (final) for a number of priority pollutants are based on monitoring results and following the procedure based on the steady-state model, available in Section 1.4 of the SIP.

c. Since many of the streams in the Region have minimal upstream flows, mixing zones and dilution credits are usually not appropriate. Therefore, in this Order, no dilution credit is being allowed. However, in accordance with the reopener provision in Section VI.C.1.e of this Order, this Order may be reopened upon the submission by the Discharger of adequate information to establish appropriate dilution credits or a mixing zone, as determined by the Regional Water Board.

d. WQBELs Calculation Example

Using copper as an example, the following demonstrates how WQBELs were established for this Order. The tables in Attachment J summarize the development and calculation of all WQBELs for this Order using the process described below.

Concentration-Based Effluent Limitations

A set of AMEL and MDEL values are calculated separately, one set for the protection of aquatic life and the other for the protection of human health. The AMEL and MDEL limitations for aquatic life and human health are compared, and the most restrictive AMEL and the most restrictive MDEL are selected as the WQBEL.

T E N T A T I V E

Calculation of aquatic life AMEL and MDEL:

Step 1: For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective. For each criteria 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. In this Order a pH of 7.9 was used for pH-dependent criteria and 100 mg/L as $CaCO_3$ was the hardness value used for hardness-dependent criteria.
D = The dilution credit, and
B = The ambient background concentration

As discussed above, for this Order, dilution was not allowed; therefore:

$ECA = C$

For copper, the applicable water quality criteria is given in Table F-5a. After adjustment of hardness value, the total recoverable metals water quality criteria (as shown in Attachment Table R2) are:

ECA_{acute}= 14.0 µg/L
$ECA_{chronic}$= 9.33 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.

$$LTA_{acute} = ECA_{acute} \times Multiplier_{acute\ 99}$$

$$LTA_{chronic} = ECA_{chronic} \times Multiplier_{chronic\ 99}$$

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.

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For copper, the following data was used to develop the acute and chronic LTA 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):

No. of Samples	CV	ECA $Multiplier_{acute\ 99}$	ECA $Multiplier_{chronic\ 99}$
4	0.581	0.33	0.53

LTA_{acute} = 14.0 µg/L × 0.37 = 4.6 µg/L

$LTA_{chronic}$ = 9.33 µg/L × 0.54 = 5.0 µg/L

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

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

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

LTA = 4.6 µg/L

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

Maximum Daily Effluent Limitation (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 coefficient of variation (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.

$AMEL_{aquatic\ life} = LTA \times AMEL_{multiplier\ 95}$

$MDEL_{aquatic\ life} = LTA \times MDEL_{multiplier\ 99}$

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 (4), the default number of samples to be used is four (4).

For copper, the following data was used to develop the AMEL and MDEL for aquatic life using equations provided in Section 1.4, Step 5 of the SIP (Table 2 of the SIP also provides this data up to two decimals):

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$
4	0.58	3.0	1.5

$AMEL_{aquatic\ life} = 4.48 \times 1.55 = 7.1\ \mu g/L$

$MDEL_{aquatic\ life} = 4.48 \times 3.11 = 14.0\ \mu g/L$

Calculation of human health AMEL and MDEL:

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

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

However, for copper:

$ECA_{human\ health}$ = Not Available. The CTR does not contain a numeric copper criterion protective of human health for organisms only; therefore, it was not possible to develop a copper AMEL based on human health criteria.

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Step 6: Calculate the MDEL for human health by multiplying the AMEL by the ratio of the $Multiplier_{MDEL}$ 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.

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

A copper $MDEL_{human\ health}$ could not be calculated because a copper $AMEL_{human\ health}$ was not available. There are no human health criteria for copper; therefore, none of the limitations for copper are based on human health criteria.

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health as the water-quality based effluent limit for the Order.

For copper:

$AMEL_{aquatic\ life}$	$MDEL_{aquatic\ life}$	$AMEL_{human\ health}$	$MDEL_{human\ health}$
7.1 µg/L	14 µg/L	N/A	N/A

the lowest (most restrictive) effluent limits are based on aquatic toxicity and were incorporated into this Order.

5. WQBELS based on Basin Plan Objectives

The Basin Plan states that the pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharge. Based on the requirements of the Basin Plan, an instantaneous minimum limitation of 6.5 and an instantaneous maximum limitation of 8.5 for pH are included in this Order. The Basin Plan provides narrative criteria for temperature for both WARM and COLD water beneficial uses and requirements for the receiving waters. It also references the Thermal Plan. Based on the requirements of the Thermal Plan and a white paper developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*, a maximum effluent temperature limitation of 86 °F is included in this Order. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel.

The Basin Plan includes water quality objectives for TDS, sulfate, chloride, and nitrogen for the Los Angeles River Watershed and the Calleguas Creek Watershed. The objectives listed for these pollutants are included in the Order. The objectives are established to protect designated beneficial uses of the receiving waters. Further, the Basin Plan objectives are applied to the discharge end of pipe, because the receiving water has no dilution capabilities. As indicated previously, the receiving water; both tributaries to Bell Creek and Arroyo Simi, flow intermittently.

TENTATIVE

6. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “no toxics in toxic amounts” criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses by aquatic organisms. Detrimental response includes, but is not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. In accordance with the Basin Plan, the acute toxicity objective for discharges dictates that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival. Order No. R4-2010-0090 contains acute toxicity limitations based on the acute toxicity objective in the Basin Plan.

Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects. This Order establishes a chronic toxicity effluent limitation using USEPA’s 2010 TST hypothesis testing approach. Chronic toxicity limitations are expressed as “Pass” or “Fail” and “% Effect” for maximum daily single result. Since the discharge is intermittent, no average monthly effluent limitation for the chronic toxicity is prescribed for storm water only discharges. However, treated groundwater from Outfalls 019 and 020 are expected to discharge intermittently. Hence, at these locations, an average monthly limit is included for chronic toxicity. The chronic toxicity effluent limitations in this Order are as stringent as necessary to protect the Basin Plan Water Quality Objective for chronic toxicity.

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7. Final WQBELs

A summary of the final WQBELs in this Order is provided below.

Table F-7a. Summary of Water Quality-based Effluent Limitations for Outfalls 001, 002, 011 and 018.

Parameter	Units	Effluent Limitations
		Maximum Daily
Antimony	µg/L	6.0
Arsenic	µg/L	10.0
Beryllium	µg/L	4.0
Cadmium	µg/L	4.0/3.1[4]
Chromium VI	µg/L	16
Copper	µg/L	14
Lead, Total Recoverable	µg/L	5.2
Mercury	µg/L	0.10
Nickel	µg/L	94
Selenium	µg/L	8.2/5[5]
Silver	µg/L	4.1
Thallium	µg/L	2.0
Zinc	µg/L	119
Cyanide	µg/L	8.5
1,1-Dichloroethylene	µg/L	6.0
1,2-Dichloroethane	µg/L	0.5
Trichloroethylene	µg/L	5.0
Perchlorate	µg/L	6
2,4,6-Trichlorophenol	µg/L	13
2,4-Dinitrotoluene	µg/L	18
Alpha-BHC	µg/L	0.03
Bis(2-ethylhexyl)phthalate	µg/L	4.0
N-Nitrosodimethylamine	µg/L	16
Pentachlorophenol	µg/L	16.5
2,3,7,8-TCDD [3]	µg/L	2.8E-08
Radioactivity		
Gross Alpha	pCi/L	15
Gross Beta	pCi/L	50
Combined Radium-226 & Radium-228	pCi/L	5.0
Tritium	pCi/L	20,000

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Parameter	Units	Effluent Limitations
		Maximum Daily
Strontium-90	pCi/L	8.0
Chronic Toxicity[2]	Pass or Fail, % Effect	Pass or % Effect <50

1 Applicable to discharges from Outfall 019 only.

2 The "Pass" or "Fail" and "% Effect" for Maximum Daily Effluent Limitations (MDEL). The Discharger shall conduct chronic toxicity monitoring as specified in the MRP. The Discharger demonstrates compliance with the chronic toxicity MDELs if the chronic toxicity testing result meets one of the following:

i. The chronic toxicity testing result is "Pass"; or

ii. The percent effect is less than 50 if the chronic toxicity result is "Fail"

3 The limit for 2,3,7,8-TCDD is evaluated in TCDD equivalents.

4 Effluent limit applies only during wet weather discharges. The wet-weather targets apply to days when the maximum daily flow in the LA River is equal to or greater than 500 cubic feet per second (cfs).

5 Effluent limit applies only during dry weather discharges. The dry-weather targets apply to days when the maximum daily flow in the LA River Wardlow Gage Station is less than 500 cfs.

Table F-7b. Summary of Water Quality-based Effluent Limitations for Outfalls 019 and 020.

Parameter	Units	Effluent Limitations	
		Average Monthly [1]	Maximum Daily
Antimony	µg/L	--	6.0
Arsenic	µg/L	--	10.0
Beryllium	µg/L	--	4.0
Cadmium	µg/L	2.0	4.0/3.1[4]
Chromium VI	µg/L	8.0	16
Copper	µg/L	5.8	14
Lead, Total Recoverable	µg/L	2.6	5.2
Mercury	µg/L	0.05	0.1
Nickel	µg/L	35	86
Selenium	µg/L	4.1	8.2/5[5]
Silver	µg/L	2.0	4.1
Thallium	µg/L	--	2.0
Zinc	µg/L	43	119
Cyanide	µg/L	4.3	8.5
1,1-Dichloroethylene	µg/L	3.2	6.0
1,2-Dichloroethane	µg/L	--	0.5
Trichloroethylene	µg/L	--	5.0
Perchlorate	µg/L	--	6.0
2,4,6-Trichlorophenol	µg/L	6.5	13
2,4-Dinitrotoluene	µg/L	9.1	18

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Parameter	Units	Effluent Limitations	
		Average Monthly [1]	Maximum Daily
Alpha-BHC	µg/L	0.01	0.03
Bis(2-ethylhexyl)phthalate	µg/L	--	4.0
N-Nitrosodimethylamine	µg/L	8.1	16
Pentachlorophenol	µg/L	8.2	16.5
2,3,7,8-TCDD [3]	µg/L	1.4E-08	2.8E-08
Radioactivity Gross Alpha Gross Beta	 pCi/L pCi/L	 -- --	 15 50
Combined Radium-226 & Radium-228	pCi/L	--	5.0
Tritium	pCi/L	--	20,000
Strontium-90	pCi/L	--	8.0
Chronic toxicity	Pass or Fail, % Effect	Pass or Fail	Pass or % Effect <50

Comment [KRM1]: Missing from table

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1 Applicable to discharges from Outfalls 019 and 020 only.

2 "Pass" or "Fail" and "% Effect" for Maximum Daily Effluent Limitations (MDEL). The Discharger shall conduct chronic toxicity monitoring as specified in the MRP. The Discharger demonstrates compliance with the chronic toxicity MDELs if the chronic toxicity testing result meets one of the following:

i. The chronic toxicity testing result is "Pass"; or

ii. The percent effect is less than 50 if the chronic toxicity result is "Fail"

3 The limit for 2,3,7,8-TCDD is evaluated in TCDD equivalents. See full description on Page F-31.

4 Effluent limit applies only during wet weather discharges. The wet-weather targets apply to days when the maximum daily flow in the LA River is equal to or greater than 500 cubic feet per second (cfs).

5 Effluent limit applies only during dry weather discharges. The dry-weather targets apply to days when the maximum daily flow in the LA River is less than 500 cfs.

Table F-7c. Summary of Water Quality-based Effluent Limitations for Outfalls 003, 004, 005, 006, 007, 009 and 010.

Parameter	Units	Effluent Limitations
		Maximum Daily
Antimony	µg/L	6.0
Cadmium	µg/L	4.0
Copper	µg/L	13
Cyanide	µg/L	9.5
Lead, Total Recoverable	µg/L	5.2
Mercury	µg/L	0.13
Nickel	µg/L	86
Thallium	µg/L	2.0

Parameter	Units	Effluent Limitations
		Maximum Daily
Zinc (Outfall 008 only)	µg/L	120
2,3,7,8-TCDD -TEQs	µg/L	2.8E-08
Perchlorate	µg/L	6.0
Radioactivity Gross Alpha Gross Beta	 pCi/L pCi/L	 15 50
Combined Radium-226 & Radium-228	pCi/L	5.0
Tritium	pCi/L	20,000
Strontium-90	pCi/L	8.0
Chronic toxicity[1]	Pass or Fail, % Effect	Pass or % Effect <50

[1] "Pass" or "Fail" and "% Effect" for Maximum Daily Effluent Limitations (MDEL). The Discharger shall conduct chronic toxicity monitoring as specified in the MRP. The Discharger demonstrates compliance with the chronic toxicity MDELs if the chronic toxicity testing result meets one of the following:

i. The chronic toxicity testing result is "Pass"; or

ii. The percent effect is less than 50 if the chronic toxicity result is "Fail"

[2] Effluent limit applies only during wet weather discharges. The wet-weather targets apply to days when the maximum daily flow in the Receiving water is equal to or greater than 500 cubic feet per second (cfs).

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Table F-7d. Summary of Water Quality-based Effluent Limitations for Outfall 008.

Parameter	Units	Effluent Limitations
		Maximum Daily
Antimony	µg/L	6.0
Cadmium	µg/L	4.0/3.1[2]
Copper	µg/L	14
Cyanide	µg/L	9.5
Lead, Total Recoverable	µg/L	5.2
Mercury	µg/L	0.13
Nickel	µg/L	86
Selenium	µg/L	5
Thallium	µg/L	2.0
Zinc	µg/L	120
2,3,7,8-TCDD -TEQs	µg/L	2.8E-08
Perchlorate	µg/L	6.0
Radioactivity Gross Alpha Gross Beta	 pCi/L pCi/L	 15 50
Combined Radium-226 & Radium-228	pCi/L	5.0

Parameter	Units	Effluent Limitations
		Maximum Daily
Tritium	pCi/L	20,000
Strontium-90	pCi/L	8.0
Chronic toxicity[1]	Pass or Fail, % Effect	Pass or % Effect <50

[1] "Pass" or "Fail" and "% Effect" for Maximum Daily Effluent Limitations (MDEL). The Discharger shall conduct chronic toxicity monitoring as specified in the MRP. The Discharger demonstrates compliance with the chronic toxicity MDELs if the chronic toxicity testing result meets one of the following:

i. The chronic toxicity testing result is "Pass"; or

ii. The percent effect is less than 50 if the chronic toxicity result is "Fail"

[2] Effluent limit applies only during wet weather discharges. The wet-weather targets apply to days when the maximum daily flow in the LA River is equal to or greater than 500 cubic feet per second (cfs).

D. Final Effluent Limitation Considerations

1. Anti-Backsliding Requirements

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

2. Antidegradation Policies

40 C.F.R. section 131.12 requires that the state water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies.

The discharge is not a new discharge and many of the operations that historically contributed pollutants to the discharge have been terminated. Currently, there are only two components to the effluent discharge: treated groundwater and stormwater runoff. The treated groundwater is monitored for chemicals of concern at the facility and must meet the effluent limits prior to discharge to tributaries to surface waters onsite. The stormwater runoff from the site has historically had elevated concentrations of pollutants associated with historical operations. This Order includes effluent limits developed to protect the beneficial uses of the receiving waters. The effluent limits ensure that the discharge does not adversely impact the beneficial uses or degrade water quality of Bell Creek, Dayton Canyon Creek, or Arroyo Simi. This Order also includes prohibitions to ensure that the discharge does

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not adversely affect the beneficial uses of the receiving water. The inclusion of the effluent limits and prohibitions in this Order ensure that any discharge will not result in the lowering of water quality. The requirements support the conclusion that no degradation will arise as a result of issuing this Order. The issuance of this Order, therefore, is consistent with the federal and state antidegradation policies.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The combination of the SWPPP and BMPs serve as the equivalent of technology-based effluent limitations, in the absence of established ELGs, in order to carry out the purposes and intent of the CWA.

The technology-based effluent limitations consist of restrictions on TSS, BOD, oil and grease, and settleable solids. Restrictions on these pollutants are discussed in Section IV.B. of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. These limitations are not more stringent than required by the CWA.

Water quality-based effluent limitations 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 water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR implemented by the SIP, which was approved by U.S. EPA on May 18, 2000. All 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 section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

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4. Mass-based Effluent Limitations

Mass-based effluent limitations are established using the following formula:

Mass (lbs/day) = flow rate (mgd) x 8.34 x effluent limitation (mg/L)

where: Mass = mass limitation for a pollutant (lbs/day)
Effluent limitation = concentration limit for a pollutant (mg/L)
Flow rate = discharge flow rate (MGD)

Table F-8a. Summary of Final Effluent Limitations for Outfalls 001, 002, 011, and 018.

Parameter	Units	Effluent Limitations *		
		Maximum Daily	Instantaneous Minimum/ Maximum	Basis for Limitation [1]
Conventional Pollutants				
Biochemical Oxygen Demand (BOD)(5-day @20 Deg. C)	mg/L	30	--	E , BPJ
	lbs/day[2]	29,481	--	
Oil and Grease	mg/L	15	--	E, BPJ
	lbs/day[2]	14,741	--	
pH	s.u.	--	6.5/8.5	E, BP
Total Suspended Solids (TSS)	mg/L	45	--	E, BP, BPJ
	lbs/day[2]	44,222	--	
Priority Pollutants				
Antimony, Total Recoverable	µg/L	6.0	--	E, BP, BPJ
	lbs/day[2]	5.9	--	
Arsenic, Total Recoverable	µg/L	10.0	--	E, USEPA MCL
	lbs/day[2]	9.83	--	
Beryllium, Total Recoverable	µg/L	4.0	--	E, BP-Title 22
	lbs/day[2]	3.93	--	
Cadmium, Total Recoverable	µg/L	4.0/3.1[4]	--	E, CTR/LA River Metals TMDL
	lbs/day[2]	3.93/3.05	--	
Chromium VI, Total Recoverable	µg/L	16	--	E, BPJ
	lbs/day[2]	15.72	--	
Copper, Total Recoverable	µg/L	14	--	E, CTR
	lbs/day[2]	13.76	--	
Lead, Total Recoverable	µg/L	5.2	--	CTR
	lbs/day[2]	5.11	--	
Mercury, Total Recoverable	µg/L	0.10	--	E, CTR
	lbs/day[2]	0.1	--	
Nickel, Total Recoverable	µg/L	94	--	CTR
	lbs/day[2]	92.4	--	

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Parameter	Units	Effluent Limitations *		
		Maximum Daily	Instantaneous Minimum/ Maximum	Basis for Limitation [1]
Selenium, Total Recoverable	µg/L	8.2/5[5]	--	E, CTR/LA River Metals TMDL
	lbs/day[2]	8.06/4.91	--	
Silver, Total Recoverable	µg/L	4.1	--	E, BPJ
	lbs/day[2]	4.03	--	
Thallium, Total Recoverable	µg/L	2.0	--	E, BPJ
	lbs/day[2]	1.97	--	
Zinc, Total Recoverable	µg/L	119	--	E, CTR
	lbs/day[2]	117	--	
Cyanide	µg/L	8.5		E, BPJ
	lbs/day[2]	8.35		
1,2-dichloroethane	µg/L	0.5	--	E, BPJ
	lbs/day[2]	0.49	--	
1,1-Dichloroethylene	µg/L	6.0	--	E, CTR/BPJ-Title 22
	lbs/day[2]	5.9	--	
Trichloroethylene	µg/L	5.0	--	E, BPJ
	lbs/day[2]	4.91	--	
TCDD (TEQ)	µg/L	2.8E-08	--	E, CTR
	lbs/day[2]	2.75E-08	--	
2,4,6-Trichloephenol	µg/L	13	--	E, BPJ
	lbs/day[2]	12.8	--	
2,4-Dinitrotoluene	µg/L	18	--	E, BPJ
	lbs/day[2]	17.7	--	
Alpha BHC	µg/L	0.03	--	E, BPJ
	lbs/day[2]	0.03	--	
N-Nitrosodimethylamine	µg/L	16	--	E, BPJ
	lbs/day[2]	15.72	--	
Pentachlorophenol	µg/L	16.5	--	E, BPJ
	lbs/day[2]	16.22	--	
Bis(2-ethylhexyl) phthalate	µg/L	4.0	--	E, CTR, BPJ
	lbs/day	3.92	--	
Non-Conventional Pollutants				

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Parameter	Units	Effluent Limitations *		
		Maximum Daily	Instantaneous Minimum/ Maximum	Basis for Limitation [1]
Chloride	mg/L	150	--	E, BP
	lbs/day	147,405	--	
Chronic toxicity[3]	Pass or Fail, % Effect	Pass or % Effect <50	--	TST
Chlorine, Total Residual	mg/L	0.1	--	E, BP
	lbs/day	98.3	--	
Ammonia – N	mg/L	10.1	--	E, TMDL
	lbs/day[2]	9,925.3	--	
Nitrate - N	mg/L	8	--	E, TMDL
	lbs/day[2]	7,862	--	
Nitrite - N	mg/L	1	--	E, TMDL
	lbs/day[2]	983	--	
Nitrate +Nitrite - N	mg/L	8	--	E, BP, TMDL
	lbs/day[2]	7,862	--	
Settleable Solids	ml/L	0.3	--	E, BPJ
Sulfate	mg/L	300	--	E, BP
	lbs/day[2]	294,810	--	
Barium	mg/L	1.0	--	E, BPJ
	lbs/day[2]	983	--	
Fluoride	mg/L	1.6	--	E, BP, BPJ
	lbs/day[2]	1,572.3	--	
Iron	mg/L	0.3	--	E, BPJ
	lbs/day[2]	295	--	
Detergents (as MBAS)	mg/L	0.5	--	E, BP, BPJ
	lbs/day[2]	491.4	--	
Temperature	°F	--	86	BP, TP
Total Dissolved Solids	mg/L	950	--	E, BP
	lbs/day[2]	933,565	--	
Perchlorate	µg/L	6.0	--	E, BPJ
	lbs/day[2]	5.9	--	
Manganese	µg/L	50	--	E, BPJ
	lbs/day[2]	49.1	--	
Radioactivity				
Gross Alpha	pCi/L	15	--	E, BPJ, BP
Gross Beta	pCi/L	50	--	E, BPJ, BP
Combined Radium -226 & Radium-228	pCi/L	5.0	--	E, BPJ, BP
Tritium	pCi/L	20,000	--	E, BPJ, BP

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Parameter	Units	Effluent Limitations *		
		Maximum Daily	Instantaneous Minimum/ Maximum	Basis for Limitation [1]
Strontium-90	pCi/L	8.0	--	E, BPJ, BP

* Benchmarks at Outfalls 001 and 002

A "benchmark" is a water quality based effluent limit or a performance based limit that is used to evaluate the performance of best management practices (BMPs) with regard to the removal of pollutants present in the discharge. In this Order, the benchmarks are established based on water quality based effluent limitations. Exceedance of a benchmark triggers an evaluation of the BMPs implemented at the site. The evaluation may determine that the BMPs require augmentation, upgrading, or replacement. If so, the Discharger must develop a plan to implement the required upgrades and report to the Regional Water Board within 60 days of the reported exceedance. The Discharger will continue monitoring as directed in the Monitoring and Reporting Program during plan development and implementation.

1 E = Existing Requirement (Order No. R4-2010-0090); BP = Basin Plan; CTR = California Toxics Rule; TP = Thermal Plan; TMDL = Total Maximum Daily Load; LA = Los Angeles; BPJ = Best Professional Judgment

2 Mass-based effluent limitations are based on a maximum discharge flow rate of 117.83 MGD.

3 "Pass" or "Fail" and "% Effect" for Maximum Daily Effluent Limitations (MDEL). The Discharger shall conduct chronic toxicity monitoring as specified in the MRP. The Discharger demonstrates compliance with the chronic toxicity MDELs if the chronic toxicity testing result meets one of the following:

i. The chronic toxicity testing result is "Pass"; or

ii. The percent effect is less than 50 if the chronic toxicity result is "Fail"

4 Effluent limit applies only during wet weather discharges. The wet-weather targets apply to days when the maximum daily flow in the LA River is equal to or greater than 500 cubic feet per second (cfs).

5 Effluent limit applies only during dry weather discharges. The dry-weather targets apply to days when the maximum daily flow in the LA River is less than 500 cfs.

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Table F-8b. Summary of Final Effluent Limitations for Outfalls 019 and 020.

Parameter	Units	Effluent Limitations			
		Average Monthly [4]	Maximum Daily	Instantaneous Minimum/ Maximum	Basis for Limitation [1]
Conventional Pollutants					
Biochemical Oxygen Demand (BOD)(5-day @20 Deg. C)	mg/L	20	30	--	E , BPJ
	lbs/day[2]	24	36	--	
Oil and Grease	mg/L	10	15	--	E, BPJ
	lbs/day[2]	12	18	--	
pH	s.u.	--	--	6.5/8.5	E, BP
Total Suspended Solids (TSS)	mg/L	15	45	--	E, BP, BPJ
	lbs/day[2]	18	54	--	
Priority Pollutants					
Antimony, Total Recoverable	µg/L	--	6.0	--	E, BP, BPJ
	lbs/day[2]	--	0.0072	--	

Parameter	Units	Effluent Limitations			
		Average Monthly [4]	Maximum Daily	Instantaneous Minimum/ Maximum	Basis for Limitation [1]
Arsenic, Total Recoverable	µg/L	--	10.0	--	E, BPJ, USEPA MCL
	lbs/day[2]	--	0.012	--	
Beryllium, Total Recoverable	µg/L	--	4.0	--	E, BP-Title 22
	lbs/day[2]	--	0.005	--	
Cadmium, Total Recoverable	µg/L	2.0	4.0/3.1[5]	--	E, CTR/LA River Metals TMDL
	lbs/day[2]	0.0024	0.005/0.004	--	
Chromium VI, Total Recoverable	µg/L	8.0	16	--	E, BPJ
	lbs/day[2]	0.01	0.02	--	
Copper, Total Recoverable	µg/L	5.8	14	--	CTR
	lbs/day[2]	0.007	0.017	--	
Lead, Total Recoverable	µg/L	2.6	5.2	--	CTR
	lbs/day[2]	0.003	0.006	--	
Mercury, Total Recoverable	µg/L	0.05	0.10	--	E, CTR
	lbs/day[2]	6E-05	1.2E-04	--	
Nickel, Total Recoverable	µg/L	35	86	--	E, CTR
	lbs/day[2]	0.04	0.1	--	
Selenium, Total Recoverable	µg/L	4.1	8.2/5[6]	--	E, CTR/LA River Metals TMDL
	lbs/day[2]	0.005	0.01/0.006	--	
Silver, Total Recoverable	µg/L	2.0	4.1	--	E, BPJ, CTR
	lbs/day[2]	0.0024	0.005	--	
Thallium, Total Recoverable	µg/L	--	2.0	--	E, BPJ
	lbs/day[2]	--	0.0024	--	
Zinc, Total Recoverable	µg/L	43	119	--	E, CTR
	lbs/day[2]	0.052	0.14	--	
Cyanide, Total Recoverable	µg/L	4.3	8.5		E, BPJ
	lbs/day[2]	0.0052	0.01		
1,1-Dichloroethylene	µg/L	3.2	6.0	--	E, CTR/BPJ-Title 22
	lbs/day[2]	0.004	0.007	--	
Trichloroethylene	µg/L	--	5.0	--	E, BPJ
	lbs/day[2]		0.006	--	
TCDD (TEQ)	µg/L	1.4E-08	2.8E-08	--	E, BPJ
	lbs/day[2]	1.6E-11	3.4E-11	--	

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Parameter	Units	Effluent Limitations			
		Average Monthly [4]	Maximum Daily	Instantaneous Minimum/ Maximum	Basis for Limitation [1]
2,4,6-Trichloephenol	µg/L	6.5	13	--	E, BPJ
	lbs/day[2]	0.008	0.016	--	
2,4-Dinitrotoluene	µg/L	9.1	18	--	E, BPJ
	lbs/day[2]	0.011	0.022	--	
Alpha BHC	µg/L	0.01	0.03	--	E, PBJ
	lbs/day[2]	1.25E-05	4E-05	--	
N-Nitrosodimethylamine	µg/L	8.1	16	--	E, BPJ
	lbs/day[2]	0.01	0.02	--	
Pentachlorophenol	µg/L	8.2	16.5	--	E, BPJ
	lbs/day[2]	0.01	0.02	--	
Bis(2-ethylhexyl) phthalate	µg/L		4.0	--	E, BP, BPJ
	lbs/day		0.005	--	
Non-Conventional Pollutants					
Chloride	mg/L	--	150	--	E, BP
	lbs/day	--	180	--	
Chronic toxicity [3]	Pass or Fail, % Effect	Pass[7]	Pass or % Effect <50	--	TST
Chlorine, Total Residual	mg/L	--	0.1	--	E, BP
	lbs/day	--	0.12	--	
Ammonia – N	mg/L	1.96	10.1	--	E, TMDL
	lbs/day[2]	2.35	12.12	--	
Nitrate - N	mg/L	--	8	--	E, TMDL
	lbs/day[2]	--	9.62	--	
Nitrite - N	mg/L	--	1	--	E, TMDL
	lbs/day[2]	--	1.2	--	
Nitrate +Nitrite - N	mg/L	--	8	--	E, BP, TMDL
	lbs/day[2]	--	9.6	--	
Settleable Solids	ml/L	0.1	0.3	--	E, BPJ
Sulfate	mg/L	--	300	--	E, BP
	lbs/day[2]		360	--	
Barium	mg/L	--	1.0	--	E, BPJ
	lbs/day[2]		1.2	--	
Fluoride	mg/L	--	1.6	--	E, BP, BPJ
	lbs/day[2]		1.92	--	
Iron	mg/L	--	0.3	--	E, BPJ

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Parameter	Units	Effluent Limitations			
		Average Monthly [4]	Maximum Daily	Instantaneous Minimum/ Maximum	Basis for Limitation [1]
	lbs/day[2]		0.4	--	
Detergents (as MBAS)	mg/L	--	0.5	--	E, BP, BPJ
	lbs/day[2]		0.6	--	
Temperature	°F	--	--	86	E, BP, TP
Total Dissolved Solids	mg/L	--	950	--	E, BP
	lbs/day[2]		1,140	--	
Perchlorate	µg/L	--	6.0	--	E, BPJ
	lbs/day[2]		0.0072	--	
Manganese	µg/L	--	50	--	E, BPJ
	lbs/day[2]		0.06	--	
Radioactivity					
Gross Alpha	pCi/L	--	15	--	E, BPJ, BP
Gross Beta	pCi/L	--	50	--	E, BPJ, BP
Combined Radium -226 & Radium-228	pCi/L	--	5.0	--	E, BPJ, BP
Tritium	pCi/L	--	20,000	--	E, BPJ, BP
Strontium-90	pCi/L	--	8.0	--	E, BPJ, BP

1 E = Existing Requirement; BP = Basin Plan; CTR = California Toxics Rule; TP = Thermal Plan; TMDL = Total Maximum Daily Load; LA = Los Angeles; BPJ = Best Professional Judgment

2 Mass-based effluent limitations are based on a maximum discharge flow rate of 0.144 MGD.

3 "Pass" or "Fail" and "% Effect" for Maximum Daily Effluent Limitations (MDEL). The Discharger shall conduct chronic toxicity monitoring as specified in the MRP. The Discharger demonstrates compliance with the chronic toxicity MDELs if the chronic toxicity testing result meets one of the following:

i. The chronic toxicity testing result is "Pass"; or

ii. The percent effect is less than 50 if the chronic toxicity result is "Fail"

4 The average monthly effluent limitations are applicable to Outfall 019 and 020.

5 Effluent limit applies only during wet weather discharges. The wet-weather targets apply to days when the maximum daily flow in the LA River is equal to or greater than 500 cubic feet per second (cfs).

6 Effluent limit applies only during dry weather discharges. The dry-weather targets apply to days when the maximum daily flow in the LA River is less than 500 cfs.

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

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Table F-8c. Summary of Final Effluent Limitations for Outfalls 003, 004, 005, 006, 007, 009, and 010.

Parameter	Units	Effluent Limitations		
		Maximum Daily	Instantaneous Minimum/ Maximum	Basis for Limitation
Conventional Pollutants				
Oil and Grease	mg/L	15	--	E, BPJ
	lbs/day[2]	8,048	--	
pH	s.u.	--	6.5/8.5	E, BP
Priority Pollutants				
Antimony, Total Recoverable	µg/L	6.0	--	E, BP, BPJ
	lbs/day[2]	3.22	--	
Cadmium, Total Recoverable	µg/L	4.0	--	E, CTR
	lbs/day[2]	2.15	--	
Copper, Total Recoverable	µg/L	13	--	CTR
	lbs/day[2]	7	--	
Cyanide, Total Recoverable	µg/L	9.5	--	E, BPJ
	lbs/day[2]	5.1	--	
Lead, Total Recoverable	µg/L	5.2	--	E, BPJ, CTR
	lbs/day[2]	2.8	--	
Mercury, Total Recoverable	µg/L	0.13	--	E, BPJ
	lbs/day[2]	0.07	--	
Nickel, Total Recoverable	µg/L	86	--	CTR
	lbs/day[2]	46.14	--	
Thallium, Total Recoverable	µg/L	2.0	--	E, BPJ
	lbs/day[2]	1.1	--	
Zinc, Total Recoverable	µg/L	120	--	CTR
	lbs/day[2]	64.4	--	
TCDD	µg/L	2.8E-08	--	E, CTR, BPJ
	lbs/day[2]	1.5E-08	--	
Non-Conventional Pollutants				
Chronic toxicity[3]	Pass or Fail, % Effect	Pass or % Effect <50	--	TST
Chloride	mg/L	150	--	E, BP
	lbs/day	80,477	--	

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Parameter	Units	Effluent Limitations		
		Maximum Daily	Instantaneous Minimum/ Maximum	Basis for Limitation
Boron	mg/L	1	--	E, BP
	lbs/day	537	--	
Nitrate +Nitrite - N	mg/L	10	--	E, BP, BPJ
	lbs/day[2]	5,365	--	
Sulfate	mg/L	250	--	E, BP
	lbs/day[2]	134,128	--	
Fluoride	mg/L	1.6	--	E, BPJ
	lbs/day[2]	858	--	
Perchlorate	µg/L	6.0	--	E, BPJ, MCL
	lbs/day[2]	3.22	--	
Temperature	°F	--	86	E, BP, TP
Total Dissolved Solids	mg/L	850	--	E,BP
	lbs/day	456,034	--	
Radioactivity Gross Alpha Gross Beta	 pCi/L pCi/L	 15 50	 -- --	E, BP, BPJ
Combined Radium -226 & Radium-228	pCi/L	5.0	--	E, BP, BPJ
Tritium	pCi/L	20,000	--	E, BP, BPJ
Strontium-90	pCi/L	8.0	--	E, BP, BPJ

[1] E = Existing Requirement; BP = Basin Plan; CTR = California Toxics Rule; TP = Thermal Plan; TMDL = Total Maximum Daily Load; LA = Los Angeles; BPJ = Best Professional Judgment, CC= Calleguas Creek

[2] . The flow used to calculate the mass for Outfalls 003, 004, 005, 006, 007, 009, and 010 is 64.33 mgd.

[3] "Pass" or "Fail" and "% Effect" for Maximum Daily Effluent Limitations (MDEL). The Discharger shall conduct chronic toxicity monitoring as specified in the MRP. The Discharger demonstrates compliance with the chronic toxicity MDELs if the chronic toxicity testing result meets one of the following:

i. The chronic toxicity testing result is "Pass"; or

ii. The percent effect is less than 50 if the chronic toxicity result is "Fail"

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Table F-8d. Summary of Final Effluent Limitations for Outfall 008.

Parameter	Units	Effluent Limitations		
		Maximum Daily	Instantaneous Minimum/ Maximum	Basis for Limitation
Conventional Pollutants				
Oil and Grease	mg/L	15	--	E, BPJ
	lbs/day[2]	902	--	
pH	s.u.	--	6.5/8.5	BP
Priority Pollutants				
Antimony, Total Recoverable	µg/L	6.0	--	E, BP, BPJ
	lbs/day[2]	0.36	--	
Cadmium, Total Recoverable	µg/L	4.0/3.1[3]	--	E, CTR/LA River Metals TMDL
	lbs/day[2]	0.24/0.19	--	
Copper, Total Recoverable	µg/L	14	--	E, BPJ
	lbs/day[2]	0.84	--	
Cyanide, Total Recoverable	µg/L	9.5	--	E, BPJ
	lbs/day[2]	0.57	--	
Lead, Total Recoverable	µg/L	5.2	--	E, BPJ
	lbs/day[2]	0.31	--	
Mercury, Total Recoverable	µg/L	0.13	--	E, BPJ
	lbs/day[2]	0.008	--	
Nickel, Total Recoverable	µg/L	86	--	CTR
	lbs/day[2]	5.2	--	
Selenium, Total Recoverable	µg/L	5	--	E, LA River Metals TMDL /BPJ
	lbs/day[2]	0.3	--	
Thallium, Total Recoverable	µg/L	2.0	--	E, BP
	lbs/day[2]	0.12	--	
Zinc, Total Recoverable	µg/L	120	--	CTR
	lbs/day[2]	7.22	--	
TCDD	µg/L	2.8E-08	--	E, CTR, BPJ
	lbs/day[2]	1.7E-09	--	
Non-Conventional Pollutants				
Chronic toxicity [4]	Pass or Fail, % Effect	Pass or % Effect <50	--	TST
Chloride	mg/L	150	--	E, BP
	lbs/day	9,020	--	

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Parameter	Units	Effluent Limitations		
		Maximum Daily	Instantaneous Minimum/ Maximum	Basis for Limitation
Boron	mg/L	1.0	--	E, BP
	lbs/day	60	--	
Ammonia – N	mg/L	10.1	--	E, LA River Nutrient TMDL, E
	lbs/day[2]	607.3	--	
Nitrate – N	mg/L	8	--	E, LA River Nutrient TMDL, E
	lbs/day[2]	481	--	
Nitrite – N	mg/L	1	--	E, LA River Nutrient TMDL, E
	lbs/day[2]	60.	--	
Nitrate +Nitrite - N	mg/L	8	--	E, BP
	lbs/day[2]	481	--	
Sulfate	mg/L	300	--	E, BP
	lbs/day[2]	18,039	--	
Fluoride	mg/L	1.6	--	E, BPJ
	lbs/day[2]	96.2	--	
Perchlorate	µg/L	6.0	--	E, BPJ, MCL
	lbs/day[2]	0.36	--	
Temperature	°F	--	86	E, BP, TP
Total Dissolved Solids	mg/L	950	--	E, BP
	lbs/day	57,124	--	
Radioactivity Gross Alpha Gross Beta	 pCi/L pCi/L	 15 50	 -- --	E, BP, BPJ
Combined Radium -226 & Radium-228	pCi/L	5.0	--	E,BP, BPJ
Tritium	pCi/L	20,000	--	E, BP, BPJ
Strontium-90	pCi/L	8.0	--	E, BP, BPJ

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[1] E = Existing Requirement; BP = Basin Plan; CTR = California Toxics Rule; TP = Thermal Plan; TMDL = Total Maximum Daily Load; LA = Los Angeles; BPJ = Best Professional Judgment, CC= Calleguas Creek

[2] The flow used to calculate the mass for 008 is 7.21 mgd.

[3] Effluent limit applies only during wet weather discharges. The wet-weather targets apply to days when the maximum daily flow in the LA River is equal to or greater than 500 cubic feet per second (cfs).

[4] "Pass" or "Fail" and "% Effect" for Maximum Daily Effluent Limitations (MDEL). The Discharger shall conduct chronic toxicity monitoring as specified in the MRP. The Discharger demonstrates compliance with the chronic toxicity MDELs if the chronic toxicity testing result meets one of the following:

i. The chronic toxicity testing result is "Pass"; or

ii. The percent effect is less than 50 if the chronic toxicity result is "Fail"

E. Land Discharge Specifications
Not applicable

F. Reclamation Specifications
Not applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (40 C.F.R. section 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water and are based on the water quality objectives contained in the Basin Plan.

As per the TMDL for Organochlorine Pesticides, Polychlorinated Biphenyls and Siltation in Calleguas Creek, Its Tributaries, and Mugu Lagoon (R4-2004-010), the discharge shall not cause the concentration of constituents in Arroyo Simi, a tributary of Calleguas Creek, in excess of the following receiving water limitations.

Table F-9. Summary of Receiving Water Limitations for Pesticides and PCBs for Arroyo Simi

Constituents	Units	Limitations	
		Daily Maximum	Basis for Limitation
Chlorpyrifos	µg/L	0.02	Toxicity TMDL
Diazinon	µg/L	0.16	Toxicity TMDL
Chlordane	µg/L	0.001	OC Pest & PCBs TMDL
4,4-DDD	µg/L	0.0014	OC Pest & PCBs TMDL
4,4-DDE	µg/L	0.001	OC Pest & PCBs TMDL
4,4-DDT	µg/L	0.001	OC Pest & PCBs TMDL
Dieldrin	µg/L	0.0002	OC Pest & PCBs TMDL
PCBs	µg/L	0.0003	OC Pest & PCBs TMDL
Toxaphene	µg/L	0.0003	OC Pest & PCBs TMDL

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B. Groundwater

Not applicable

C. Sediment

The Discharger shall comply with the final receiving water sediment limitations below on the effective date of this permit.

As per Resolution No. R4-2005-010, compliance with the final limitations is determined by evaluating the in-stream annual averages of the constituents below in a tributary to

Arroyo Simi. The Discharger is required to use analytical methods with detection values below the specified limits, if possible.

Table F-10. Summary of Final Receiving Water Sediment Limitations for Arroyo Simi

Constituents	Units	Limitation[1]	
		Daily Maximum	Basis for Limitation
Chlordane	µg/g	0.0033	OC Pest & PCBs TMDL
4,4-DDD	µg/g	0.002	OC Pest & PCBs TMDL
4,4-DDE	µg/g	0.0014	OC Pest & PCBs TMDL
4,4-DDT	µg/g	0.0003	OC Pest & PCBs TMDL
Dieldrin	µg/g	0.0002	OC Pest & PCBs TMDL
PCBs	µg/g	0.12	OC Pest & PCBs TMDL
Toxaphene	µg/g	0.0006	OC Pest & PCBs TMDL

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

A. Influent Monitoring

Not applicable

B. Effluent Monitoring

Monitoring for those pollutants expected to be present in the effluent are required as identified in the MRP. The data will be used to determine compliance with this Order, assess the impact of the discharge on water quality standards and to the beneficial uses of the receiving waters, and determine reasonable potential.

C. Stormwater Monitoring

Stormwater runoff discharges from the SSFL are subject to requirements identified in this Order and the Discharger is required to comply with all applicable provisions of the Stormwater Pollution Prevention Plan (SWPPP). This Order includes requirements to develop, implement, and, when appropriate, update the SWPPP along with the BMPs with the goal of preventing all pollutants from moving into receiving waters.

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D. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. This Order includes a chronic toxicity limit and requirements to monitor using EPA's TST approach at all of the outfalls.

E. Receiving Water Monitoring

1. Surface Water

   The Regional Water Board is requiring that the Discharger conduct receiving water monitoring of the CTR priority pollutants at Monitoring Locations RSW-001 and RSW-002. RSW-002 is located in Frontier Park approximately 50 feet upstream from the discharge point of the unnamed tributary into Arroyo Simi. The discharge from Outfalls 011 and 018, which subsequently exits Outfalls 001 and 002, respectively, from the headwaters of Bell Creek. The Discharger may use data collected from these outfalls as receiving water data for Bell Creek. Thus, data for RSW-001 may be collected at EFF-001, EFF-002, EFF-011, or EFF-018. Priority pollutant monitoring is required for both the Arroyo Simi and Bell Creek (as identified previously, the Discharger may use data from EFF-001, 002, 011, or 018) once during the five year permit term.

   The Calleguas Creek Toxicity TMDL and the Calleguas Creek OC Pesticides & PCBs TMDL include receiving water concentrations that are to be accomplished utilizing BMPs. This Order includes requirements to monitor the receiving water for the specified constituents.

2. Groundwater

   Not applicable

F. Sediment Monitoring and Reporting

The Calleguas Creek OC Pesticides & PCBs TMDL includes sediment contaminant concentrations for tributaries of Calleguas Creek as well. This Order includes monitoring requirements to determine compliance with effluent limits.

G. Bioassessment Monitoring

The goals of the bioassessment monitoring for the Arroyo Simi and Los Angeles River are to:

- Determine compliance with receiving water limits;
- Monitor trends in surface water quality;
- Ensure protection of beneficial uses;

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- Provide data for modeling contaminants of concern;
- Characterize water quality including seasonal variation of surface waters within the watershed;
- Assess the health of the biological community; and
- Determine mixing dynamics of effluent and receiving waters in the estuary.

A requirement for bioassessment monitoring is included in this Order.

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

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

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VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. 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 40 C.F.R. section 122.42.

40 C.F.R. section 122.41(a)(1) and (b) through (n) 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. 40 C.F.R. section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. 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

   These provisions are based on 40 C.F.R. Part 123 and the previous permit. The Regional Water Board may reopen this Order to modify permit conditions and requirements. Causes for modifications include the promulgation of new federal regulations, modification in toxicity requirements, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

   Initial Investigation Toxicity Reduction Evaluation Workplan. This provision is based on section 4 of the SIP, Toxicity Control Provisions, which establishes minimum toxicity control requirements for implementing the narrative toxicity objective for aquatic life protection established in the basin plans of the State of California.

3. Best Management Practices and Pollution Prevention

   This provision is based on 40 C.F.R. section 122.44(k) and includes the requirement to develop a SWPPP and BMPs.

   a. Stormwater Pollution Prevention Plan (SWPPP). The Discharger is required to update and continue to implement a SWPPP in accordance with Attachment G of this Order. The SWPPP will outline site-specific management processes for minimizing stormwater runoff contamination and for preventing contaminated stormwater runoff from being discharged directly into the receiving water.

   b. Spill Contingency Plan (SCP). Since spill or overflow may occur in the facility, this Order requires the Discharger to prepare a SCP for the Facility. The Discharger shall review and update, if necessary, the SCP after each incident and make it available for the facility personnel at all times.

4. Construction, Operation, and Maintenance Specifications

   Not applicable

5. Special Provisions for Municipal Facilities (POTWs Only**)**

   Not applicable

6. Other Special Provisions

   Not applicable

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VIII. PUBLIC PARTICIPATION

The Regional Water Board has considered the issuance of waste discharge requirements (WDRs) that will serve as a NPDES permit for the SSFL. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit their written comments and recommendations. Notification was provided through the newspaper that serves the Canoga Park and Simi Valley area and emails were sent to the list of interested stakeholders.

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

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 5:00 p.m. on January 9, 2015.

C. Public Hearing

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

Date:	February 12, 2015
Time:	9:00 A.M.
Location:	Metropolitan Water District of Southern California - Board Room, 700 North Alameda Street, Los Angeles, California.

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

D. Reconsideration of Waste Discharge Requirements

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

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

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

E. Information and Copying

The Report of Waste Discharge (ROWD), the tentative Order, other supporting documents, and comments received, are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (213) 576 – 6600.

F. Register of Interested Persons

Any person interested in being placed on the electronic mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name and email address.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Mazhar Ali at mazhar.ali@waterboards.ca.gov [Tel: (213) 576-6652].

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ATTACHMENT G – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

I. Implementation Schedule

A stormwater pollution prevention plan (SWPPP) shall be developed and submitted to the Regional Water Board within 90 days following the adoption of this Order. The SWPPP shall be implemented for each facility covered by this Order within 10 days of approval from the Regional Water Board, or 6-months from the date of the submittal of the SWPPP to the Regional Water Board (whichever comes first).

II. Objectives

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of stormwater discharges and authorized non-stormwater discharges from the facility; and (b) to identify and implement site- specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in stormwater discharges and authorized non-stormwater discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, over-head coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

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III. Planning and Organization

A. Pollution Prevention Team

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a stormwater pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Attachment E of this Order. The SWPPP shall clearly identify the Permit related responsibilities, duties, and activities of each team member. For small facilities, stormwater pollution prevention teams may consist of one individual where appropriate.

B. Review Other Requirements and Existing Facility Plans

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this General Permit. Facility operators should identify any existing facility plans that contain stormwater pollutant control measures or relate to the requirements of this Order. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

IV. Site Map

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

TABLE A
FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORMWATER POLLUTION PREVENTION PLANS

PLANNING AND ORGANIZATION

Form Pollution Prevention Team
Review other plans

ASSESSMENT PHASE

Develop a site map
Identify potential pollutant sources
Inventory of materials and chemicals
List significant spills and leaks
Identify non-stormwater discharges
Assess pollutant risks

BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE

Non-structural BMPs
Structural BMPs
Select activity and site-specific BMPs

IMPLEMENTATION PHASE

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Train employees Implement BMPs Conduct recordkeeping and reporting

EVALUATION / MONITORING Conduct annual site evaluation Review monitoring information Evaluate BMPs Review and revise SWPPP

The following information shall be included on the site map:

A. The facility boundaries; the outline of all stormwater drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's stormwater discharges and authorized non-stormwater discharges may be received.

B. The location of the stormwater collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect stormwater discharges, authorized non-stormwater discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

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

D. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in Section A.6.a.iv. below have occurred.

E. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

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V. List of Significant Materials

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

VI. Description of Potential Pollutant Sources

A. The SWPPP shall include a narrative description of the facility's industrial activities, as identified in Section A.4.e above, associated potential pollutant sources, and potential pollutants that could be discharged in stormwater discharges or authorized non-stormwater discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

1. **Industrial Processes.** Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

2. **Material Handling and Storage Areas.** Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

3. **Dust and Particulate Generating Activities.** Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

4. **Significant Spills and Leaks.** Describe materials that have spilled or leaked in significant quantities in storm water discharges or non-stormwater discharges since April 17, 1994. Include toxic chemicals (listed in 40 C.F.R., Part 302) that have been discharged to stormwater as reported on U.S. Environmental Protection Agency (USEPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 Code of Federal Regulations [C.F.R.], Parts 110, 117, and 302).

   The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to stormwater or non-stormwater discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this Order.

5. **Non-Stormwater Discharges.** Facility operators shall investigate the facility to identify all non-stormwater discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

   All non-stormwater discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-stormwater discharges and associated drainage area.

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Non-stormwater discharges (other boiler blowdown and boiler condensate permitted under the Order) that contain significant quantities of pollutants or that do not meet the conditions provided in Special Conditions D of the stormwater general permit are prohibited by this Order (Examples of prohibited non-stormwater discharges are contact and non-contact cooling water, rinse water, wash water, etc.). Non-stormwater discharges that meet the conditions provided in Special Condition D of the general stormwater permit are authorized by this Order. The SWPPP must include BMPs to prevent or reduce contact of non-stormwater discharges with significant materials or equipment.

6. **Soil Erosion.** Describe the facility locations where soil erosion may occur as a result of industrial activity, stormwater discharges associated with industrial activity, or authorized non-stormwater discharges.

B. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similar to Table B. The last column of Table B, "Control Practices", should be completed in accordance with Section A.8. below.

VII. Assessment of Potential Pollutant Sources

A. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in A.6. above to determine:

1. Which areas of the facility are likely sources of pollutants in stormwater discharges and authorized non-stormwater discharges, and

2. Which pollutants are likely to be present in stormwater discharges and authorized non-stormwater discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current stormwater BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to stormwater or authorized non-stormwater discharges; history of spill or leaks; and run-on from outside sources.

B. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in stormwater discharges and authorized non-stormwater discharges.

Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in Section 8 below.

VIII. Stormwater Best Management Practices

The SWPPP shall include a narrative description of the stormwater BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (Sections A.6. and 7. above). The BMPs shall be developed and implemented to reduce or prevent pollutants in stormwater discharges and authorized non-

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stormwater discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

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TABLE B

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

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

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

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

A. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with stormwater discharges and authorized non-stormwater discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs (see Section A.8.b. below). Below is a list of non-structural BMPs that should be considered:

1. **Good Housekeeping.** Good housekeeping generally consist of practical procedures to maintain a clean and orderly facility.

2. **Preventive Maintenance.** Preventive maintenance includes the regular inspection and maintenance of structural stormwater controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

3. **Spill Response.** This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

4. **Material Handling and Storage.** This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to stormwater and authorized non-stormwater discharges.

5. **Employee Training.** This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing stormwater. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

6. **Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

7. **Recordkeeping and Internal Reporting.** This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

8. **Erosion Control and Site Stabilization.** This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

9. **Inspections.** This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.

10. **Quality Assurance.** This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

B. Structural BMPs.

Where non-structural BMPs as identified in Section A.8.a. above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in stormwater discharges and authorized

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non-stormwater discharges. Below is a list of structural BMPs that should be considered:

1. **Overhead Coverage.** This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with stormwater and authorized non-stormwater discharges.

2. **Retention Ponds.** This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow stormwater to discharge from the facility.

3. **Control Devices.** This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

4. **Secondary Containment Structures.** This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

5. **Treatment.** This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in stormwater discharges and authorized non-stormwater discharges.

IX. Annual Comprehensive Site Compliance Evaluation

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The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

A. A review of all visual observation records, inspection records, and sampling and analysis results.

B. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.

C. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.

D. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in Section A.10.e, for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this Order. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this General Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions V.D.5 of Attachment D.

X. SWPPP General Requirements

A. The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local stormwater management agency (local agency) which receives the stormwater discharges.

B. The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this Section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.

C. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in stormwater discharge, (ii) cause a new area of industrial activity at the facility to be exposed to stormwater, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

D. The SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this Order.

E. When any part of the SWPPP is infeasible to implement due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in stormwater discharges and authorized non-stormwater discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

F. The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under Section 308(b) of the Clean Water Act.

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ATTACHMENT H – STATE WATER BOARD MINIMUM LEVELS

The Minimum Levels (MLs) in ppb (g/L) in this appendix are for use in reporting and compliance determination purposes in accordance with section 2.4 of the State Implementation Policy. These MLs were derived from data for priority pollutants provided by State certified analytical laboratories in 1997 and 1998. These MLs shall be used until new values are adopted by the State Water Board and become effective. The following tables (Tables 2a - 2d) present MLs for four major chemical groupings: volatile substances, semi-volatile substances, inorganics, and pesticides and PCBs.

Table 2a - VOLATILE SUBSTANCES*	GC	GCMS
1,1 Dichloroethane	0.5	1
1,1 Dichloroethylene	0.5	2
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
1,2 Dichlorobenzene (volatile)	0.5	2
1,2 Dichloroethane	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichlorobenzene (volatile)	0.5	2
1,3 Dichloropropene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Methyl Bromide	1.0	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromo-methane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Chloromethane	0.5	2
Dichlorobromo-methane	0.5	2
Dichloromethane	0.5	2
Ethylbenzene	0.5	2
Tetrachloroethylene	0.5	2
Toluene	0.5	2
Trans-1,2 Dichloroethylene	0.5	1
Trichloroethene	0.5	2
Vinyl Chloride	0.5	2

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*The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Benzo (a) Anthracene	10	5		
1,2 Dichlorobenzene (semivolatile)	2	2		
1,2 Diphenylhydrazine		1		
1,2,4 Trichlorobenzene	1	5		
1,3 Dichlorobenzene (semivolatile)	2	1		
1,4 Dichlorobenzene (semivolatile)	2	1		

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
2 Chlorophenol	2	5		
2,4 Dichlorophenol	1	5		
2,4 Dimethylphenol	1	2		
2,4 Dinitrophenol	5	5		
2,4 Dinitrotoluene	10	5		
2,4,6 Trichlorophenol	10	10		
2,6 Dinitrotoluene		5		
2- Nitrophenol		10		
2-Chloroethyl vinyl ether	1	1		
2-Chloronaphthalene		10		
3,3' Dichlorobenzidine		5		
Benzo (b) Fluoranthene		10	10	
3-Methyl-Chlorophenol	5	1		
4,6 Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl phenyl ether	10	5		
4-Chlorophenyl phenyl ether		5		
Acenaphthene	1	1	0.5	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo(a) pyrene		10	2	
Benzo(g,h,i)perylene		5	0.1	
Benzo(k)fluoranthene		10	2	
bis 2-(1-Chloroethoxyl) methane		5		
bis(2-chloroethyl) ether	10	1		
bis(2-Chloroisopropyl) ether	10	2		
bis(2-Ethylhexyl) phthalate	10	5		
Butyl benzyl phthalate	10	10		
Chrysene		10	5	
di-n-Butyl phthalate		10		
di-n-Octyl phthalate		10		
Dibenzo(a,h)-anthracene		10	0.1	
Diethyl phthalate	10	2		
Dimethyl phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachloro-cyclopentadiene	5	5		
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol **	1	1		50
Pyrene		10	0.05	

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* With the exception of phenol by colorimetric technique, the normal method-specific factor

for these substances is 1,000; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1,000.

** Phenol by colorimetric technique has a factor of 1.

Table 2c – INORGANICS*	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1,000
Arsenic		2	10	2	2	1		20	1,000
Beryllium	20	0.5	2	0.5	1				1,000
Cadmium	10	0.5	10	0.25	0.5				1,000
Chromium (total)	50	2	10	0.5	1				1,000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1,000
Cyanide								5	
Lead	20	5	5	0.5	2				10,000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1,000
Selenium		5	10	2	5	1			1,000
Silver	10	1	10	0.25	2				1,000
Thallium	10	2	10	1	5				1,000
Zinc	20		20	1	10				1,000

* The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2d – PESTICIDES – PCBs*	GC
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
a-Endosulfan	0.02
alpha-BHC	0.01
Aldrin	0.005
b-Endosulfan	0.01
Beta-BHC	0.005
Chlordane	0.1
Delta-BHC	0.005
Dieldrin	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Gamma-BHC (Lindane)	0.02
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

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* The normal method-specific factor for these substances is 100; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.

Techniques:
GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR – Colorimetric

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ATTACHMENT I – LIST OF PRIORITY POLLUTANTS

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
1	Antimony	7440360	[1]
2	Arsenic	7440382	[1]
3	Beryllium	7440417	[1]
4	Cadmium	7440439	[1]
5a	Chromium (III)	16065831	[1]
5a	Chromium (VI)	18540299	[1]
6	Copper	7440508	[1]
7	Lead	7439921	[1]
8	Mercury	7439976	[1]
9	Nickel	7440020	[1]
10	Selenium	7782492	[1]
11	Silver	7440224	[1]
12	Thallium	7440280	[1]
13	Zinc	7440666	[1]
14	Cyanide	57125	[1]
15	Asbestos	1332214	[1]
16	2,3,7,8-TCDD	1746016	[1]
17	Acrolein	107028	[1]
18	Acrylonitrile	107131	[1]
19	Benzene	71432	[1]
20	Bromoform	75252	[1]
21	Carbon Tetrachloride	56235	[1]
22	Chlorobenzene	108907	[1]
23	Chlorodibromomethane	124481	[1]
24	Chloroethane	75003	[1]
25	2-Chloroethylvinyl Ether	110758	[1]
26	Chloroform	67663	[1]
27	Dichlorobromomethane	75274	[1]
28	1,1-Dichloroethane	75343	[1]
29	1,2-Dichloroethane	107062	[1]
30	1,1-Dichloroethylene	75354	[1]
31	1,2-Dichloropropane	78875	[1]
32	1,3-Dichloropropylene	542756	[1]
33	Ethylbenzene	100414	[1]
34	Methyl Bromide	74839	[1]
35	Methyl Chloride	74873	[1]
36	Methylene Chloride	75092	[1]
37	1,1,2,2-Tetrachloroethane	79345	[1]
38	Tetrachloroethylene	127184	[1]
39	Toluene	108883	[1]
40	1,2-Trans-Dichloroethylene	156605	[1]

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CTR Number	Parameter	CAS Number	Suggested Analytical Methods
41	1,1,1-Trichloroethane	71556	[1]
42	1,12-Trichloroethane	79005	[1]
43	Trichloroethylene	79016	[1]
44	Vinyl Chloride	75014	[1]
45	2-Chlorophenol	95578	[1]
46	2,4-Dichlorophenol	120832	[1]
47	2,4-Dimethylphenol	105679	[1]
48	2-Methyl-4,6-Dinitrophenol	534521	[1]
49	2,4-Dinitrophenol	51285	[1]
50	2-Nitrophenol	88755	[1]
51	4-Nitrophenol	100027	[1]
52	3-Methyl-4-Chlorophenol	59507	[1]
53	Pentachlorophenol	87865	[1]
54	Phenol	108952	[1]
55	2,4,6-Trichlorophenol	88062	[1]
56	Acenaphthene	83329	[1]
57	Acenaphthylene	208968	[1]
58	Anthracene	120127	[1]
59	Benzidine	92875	[1]
60	Benzo(a)Anthracene	56553	[1]
61	Benzo(a)Pyrene	50328	[1]
62	Benzo(b)Fluoranthene	205992	[1]
63	Benzo(ghi)Perylene	191242	[1]
64	Benzo(k)Fluoranthene	207089	[1]
65	Bis(2-Chloroethoxy)Methane	111911	[1]
66	Bis(2-Chloroethyl)Ether	111444	[1]
67	Bis(2-Chloroisopropyl)Ether	108601	[1]
68	Bis(2-Ethylhexyl)Phthalate	117817	[1]
69	4-Bromophenyl Phenyl Ether	101553	[1]
70	Butylbenzyl Phthalate	85687	[1]
71	2-Chloronaphthalene	91587	[1]
72	4-Chlorophenyl Phenyl Ether	7005723	[1]
73	Chrysene	218019	[1]
74	Dibenzo(a,h)Anthracene	53703	[1]
75	1,2-Dichlorobenzene	95501	[1]
76	1,3-Dichlorobenzene	541731	[1]
77	1,4-Dichlorobenzene	106467	[1]
78	3,3'-Dichlorobenzidine	91941	[1]
79	Diethyl Phthalate	84662	[1]
80	Dimethyl Phthalate	131113	[1]
81	Di-n-Butyl Phthalate	84742	[1]
82	2,4-Dinitrotoluene	121142	[1]
83	2,6-Dinitrotoluene	606202	[1]
84	Di-n-Octyl Phthalate	117840	[1]
85	1,2-Diphenylhydrazine	122667	[1]

TENTATIVE

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
86	Fluoranthene	206440	[1]
87	Fluorene	86737	[1]
88	Hexachlorobenzene	118741	[1]
89	Hexachlorobutadiene	87863	[1]
90	Hexachlorocyclopentadiene	77474	[1]
91	Hexachloroethane	67721	[1]
92	Indeno(1,2,3-cd)Pyrene	193395	[1]
93	Isophorone	78591	[1]
94	Naphthalene	91203	[1]
95	Nitrobenzene	98953	[1]
96	N-Nitrosodimethylamine	62759	[1]
97	N-Nitrosodi-n-Propylamine	621647	[1]
98	N-Nitrosodiphenylamine	86306	[1]
99	Phenanthrene	85018	[1]
100	Pyrene	129000	[1]
101	1,2,4-Trichlorobenzene	120821	[1]
102	Aldrin	309002	[1]
103	alpha-BHC	319846	[1]
104	beta-BHC	319857	[1]
105	gamma-BHC	58899	[1]
106	delta-BHC	319868	[1]
107	Chlordane	57749	[1]
108	4,4'-DDT	50293	[1]
109	4,4'-DDE	72559	[1]
110	4,4'-DDD	72548	[1]
111	Dieldrin	60571	[1]
112	alpha-Endosulfan	959988	[1]
113	beta-Endosulfan	33213659	[1]
114	Endosulfan Sulfate	1031078	[1]
115	Endrin	72208	[1]
116	Endrin Aldehyde	7421934	[1]
117	Heptachlor	76448	[1]
118	Heptachlor Epoxide	1024573	[1]
119	PCB-1016	12674112	[1]
120	PCB-1221	11104282	[1]
121	PCB-1232	11141165	[1]
122	PCB-1242	53469219	[1]
123	PCB-1248	12672296	[1]
124	PCB-1254	11097691	[1]
125	PCB-1260	11096825	[1]
126	Toxaphene	8001352	[1]

TENTATIVE

1. Pollutants shall be analyzed using the methods described in 40 C.F.R. Part 136

ATTACHMENT J – SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Final RPA Output - Boeing SSFL (Outfall 1,2,11, 18)
(CA0001309, CI-6027)

					CTR CRITERIA				Basin Plan
					Freshwater		Human Health		
CTR#	Pollutant	Units	CV	MEC	C acute = CMC tot	C chronic = CCC tot	Not applicable C hh W&O	C hh O	Title 22 GWR
1	Antimony	µg/L	0.76	1	None	None	14	4300	6
2	Arsenic	µg/L	0.65	8.9	340	150	None	None	10
3	Beryllium	µg/L	0.6	0.31	None	None	Narrative	Narrative	4
4	Cadmium*	µg/L	0.80	0.3	4.5	2.5	Narrative	Narrative	5
5a	Chromium III*	µg/L	1.3	15	1737	207	Narrative	Narrative	
6	Copper*	µg/L	0.82	14.3	14	9.3	1300	None	
7	Lead*	µg/L	1.5	13	81.6	3.2	Narrative	Narrative	
8	Mercury	µg/L	0.6	0.12	Reserved	Reserved	0.05	0.05	2
9	Nickel*	µg/L	0.90	12	469	52	610	4600	100
10	Selenium	µg/L	0.6	1.3	Reserved	5	Narrative	Narrative	50
11	Silver*	µg/L	0.6	0.12	4.1	None	None	None	
12	Thallium	µg/L	0.6	0.2	None	None	1.7	6.3	2
13	Zinc*	µg/L	1.1	76	120	120	None	None	
36	Methylene chloride	µg/L	0.6	0.97	None	None	4.7	1600	
43	Trichloroethylene	µg/L	0.6	1.8	None	None	2.7	81	5
79	Diethyl Phthalate	µg/L	0.56	0.302	None	None	23000	120000	
81	Di-n-Butyl Phthalate	µg/L	0.70	0.396	None	None	2700	12000	
93	Isophorone	µg/L	0.6	0.257	None	None	8.4	600	

FOOTNOTE:

Proposed limits are benchmarks at Outfalls 001 and 002.

*These metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

Final RPA Output - Boeing SSFL (Outfall 1,2,11, 18)
(CA0001309, CI-6027)

			REASONABLE POTENTIAL ANALYSIS (RPA)							
CTR#	Pollutant	Units	Lowest C	MEC >= Lowest C	Tier 1 - Need limit?	B (RD-1)	B>C	Tier 2 - Need limit?	Tier 3 - other info. ?	Tier 3 - need limit?
1	Antimony	µg/L	6	No	No	1	No	No	No	No
2	Arsenic	µg/L	10	No	No	8.9	No	No	No	No
3	Beryllium	µg/L	4	No	No	0.3	No	No	No	No
4	Cadmium*	µg/L	2.5	No	No	0.3	No	No	No	No
5a	Chromium III*	µg/L	207	No	No	15	No	No	No	No
6	Copper*	µg/L	9.3	Yes	Yes	14	Yes	Yes	No	No
7	Lead*	µg/L	3.2	Yes	Yes	13	Yes	Yes	No	No
8	Mercury	µg/L	0.05	Yes	Yes	0.12	Yes	Yes	No	No
9	Nickel*	µg/L	52	No	No	12	No	No	No	No
10	Selenium	µg/L	5	No	No	1.3	No	No	No	No
11	Silver*	µg/L	4.1	No	No	0.12	No	No	No	No
12	Thallium	µg/L	2	No	No	0.2	No	No	No	No
13	Zinc*	µg/L	120	No	No	76	No	No	Yes	Yes
36	Methylene chloride	µg/L	1600	No	No	0.97	No	No	No	No
43	Trichloroethylene	µg/L	5	No	No	1.8	No	No	No	No
79	Diethyl Phthalate	µg/L	120000	No	No	0.3	No	No	No	No
81	Di-n-Butyl Phthalate	µg/L	12000	No	No	0.4	No	No	No	No
93	Isophorone	µg/L	600	No	No	0.26	No	No	No	No

FOOTNOTE:

Proposed limits are benchmarks at Outfalls 001 and 002.

*These metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

Final RPA Output - Boeing SSFL (Outfall 1,2,11, 18)
(CA0001309, CI-6027)

			HUMAN HEALTH CALCULATIONS			AQUATIC LIFE CALCULATIONS				
			Organisms Only			Freshwater				
CTR#	Pollutant	Units	AMELhh = ECA = C hh O	MDEL/ AMEL multiplier	MDEL hh	ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA
1	Antimony	µg/L	4300	2.2	9649	0.26		0.45		
2	Arsenic	µg/L	None	2.1		0.30	102	0.5	76	76
3	Beryllium	µg/L	Narrative	2.0		0.32		0.53		
4	Cadmium*	µg/L	Narrative	2.3		0.25	1.1	0.44	1.1	1.1
5a	Chromium III*	µg/L	Narrative	2.8		0.16	279	0.30	61	61
6	Copper*	µg/L	None	2.3		0.24	3.4	0.43	4	3.4
7	Lead*	µg/L	Narrative	2.9		0.14	12	0.26	0.84	0.84
8	Mercury	µg/L	0.05	2.0	0.1	0.32		0.26		
9	Nickel*	µg/L	4600	2.4	11095	0.22	105	0.40	21	21
10	Selenium	µg/L	Narrative	2.0		0.32		0.53	2.6	2.6
11	Silver*	µg/L	None	2.0		0.32	1.3	0.53		1.3
12	Thallium	µg/L	6.3	2.0	13	0.32		0.53		
13	Zinc*	µg/L	None	2.6		0.19	23	0.36	43	23
36	Methylene chloride	µg/L	1600	2.0	3210	0.32		0.53		
43	Trichloroethylene	µg/L	81	2.0	163	0.32		0.53		
79	Diethyl Phthalate	µg/L	120000	1.9	233917	0.34		0.55		
81	Di-n-Butyl Phthalate	µg/L	12000	2.2	25904	0.28		0.48		
93	Isophorone	µg/L	600	2.0	1204	0.32		0.53		

FOOTNOTE:

Proposed limits are benchmarks at Outfalls 001 and 002.

*These metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

Final RPA Output - Boeing SSFL (Outfall 1,2,11, 18)
(CA0001309, CI-6027)

			AQUATIC LIFE CALCULATIONS				PROPOSED LIMITS		
			Freshwater						
CTR#	Pollutant	Units	AMEL multiplier (n=4)	AMEL aq.life	MDEL multiplier (n=4)	MDEL aqlife	Lowest AMEL	Lowest MDEL	Recommendation
1	Antimony	µg/L	1.7		3.8			6	Use existing limitation.
2	Arsenic	µg/L	1.6	121	3.3	252		10	Use existing limitation.
3	Beryllium	µg/L	1.6		3.1			4	Use existing limitation.
4	Cadmium*	µg/L	1.7	1.9	4.0	4.3		4.3	Use existing limitation of 4.0.
5a	Chromium III*	µg/L	2.2	138	6.2	383		383	Chromium III analysis is used to meet the limit for Chromium VI.
6	Copper*	µg/L	1.8	6.1	4.1	14		14	Use existing limitation.
7	Lead*	µg/L	2.4	2.0	7.0	5.8		5.8	Use new limitation of 5.2.
8	Mercury	µg/L	1.6		3.1			0.1	Use existing limitation.
9	Nickel*	µg/L	1.8	39	4.5	94		94	New limitation.
10	Selenium	µg/L	1.6	4.1	3.1	8.2		8.2	Use existing limitation.
11	Silver*	µg/L	1.6	2.0	3.1	4.1		4.1	Use existing limitation.
12	Thallium	µg/L	1.6		5.2			2	Use existing limitation.
13	Zinc*	µg/L	2.0	46	5.2	120		120	Use existing limitation of 119.
36	Methylene chloride	µg/L	1.6		3.1			3210	No limit needed.
43	Trichloroethylene	µg/L	1.6		3.1			5	Use existing limitation.
79	Diethyl Phthalate	µg/L	1.5		3.0			233917	No limit needed.
81	Di-n-Butyl Phthalate	µg/L	1.7		3.6			25904	No limit needed.
93	Isophorone	µg/L	1.6		3.1			1204	No limit needed.

FOOTNOTE:

Proposed limits are benchmarks at Outfalls 001 and 002.

*These metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

Final RPA Output - Boeing SSFL (Outfall 19)
(CA0001309, CI-6027)

					CTR CRITERIA				Basin Plan
					Freshwater		Human Health		
CTR#	Pollutant	Units	CV	MEC	C acute = CMC tot	C chronic = CCC tot	Not applicable C hh W&O	C hh O	Title 22 GWR
4	Cadmium*	µg/L	0.6	0.18	4.5	2.5	Narrative	Narrative	5
5a	Chromium III*	µg/L	0.6	2.3	1737	207	Narrative	Narrative	
5b	Chromium VI	µg/L	0.6	1.1	16.0	11.0	Narrative	Narrative	50
6	Copper*	µg/L	0.9	2.6	14	9.3	1300	None	
7	Lead*	µg/L	0.6	0.37	82	3.2	Narrative	Narrative	
9	Nickel*	µg/L	0.6	2.9	469	52	610	4600	100
10	Selenium	µg/L	0.6	0.96	Reserved	5	Narrative	Narrative	50
13	Zinc*	µg/L	1.4	50	120	120	None	None	
68	Bis(2-Ethylhexyl) Phthalate	µg/L	0.6	3.3	None	None	1.8	5.9	
79	Diethyl Phthalate	µg/L	0.6	0.23	None	None	23000	120000	
94	Napthalene	µg/L	0.6	0.15	None	None	None	None	
103	alpha-BHC	µg/L	0.6	0.0025	None	None	0.0039	0.013	

FOOTNOTE:

*These metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

Background concentration (B) equals to the MEC of Outfall 1 and 2

[1]The Lowest AMEL is applicable only at Outfall 019, the treated groundwater discharge.

Final RPA Output - Boeing SSFL (Outfall 19)
(CA0001309, CI-6027)

			REASONABLE POTENTIAL ANALYSIS (RPA)								
CTR#	Pollutant	Units	Lowest C		MEC >= Lowest C	Tier 1 - Need limit?	B (RD-1)	B>C	Tier 2 - Need limit?	Tier 3 - other info. ?	Tier 3 - need limit?
4	Cadmium*	µg/L	2.5		No	No	0.27	No	No	No	No
5a	Chromium III*	µg/L	207		No	No	15	No	No	No	No
5b	Chromium VI	µg/L	11		No	No	0	No	No	No	No
6	Copper*	µg/L	9.3		No	No	14	Yes	Yes	No	No
7	Lead*	µg/L	3.2		No	No	13	Yes	Yes	No	No
9	Nickel*	µg/L	52		No	No	12	No	No	No	No
10	Selenium	µg/L	5		No	No	1.3	No	No	No	No
13	Zinc*	µg/L	120		No	No	76	No	No	No	No
68	Bis(2-Ethylhexyl) Phthalate	µg/L	5.9		No	No	0	No	No	No	No
79	Diethyl Phthalate	µg/L	120000		No	No	0.25	No	No	No	No
94	Napthalene	µg/L	0		Yes	Yes	0	No	No	No	No
103	alpha-BHC	µg/L	0.013		No	No	0	No	No	No	No

FOOTNOTE:

*These metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

Background concentration (B) equals to the MEC of Outfall 1 and 2

[1]The Lowest AMEL is applicable only at Outfall 019, the treated groundwater discharge.

Final RPA Output - Boeing SSFL (Outfall 19)
(CA0001309, CI-6027)

			HUMAN HEALTH CALCULATIONS			AQUATIC LIFE CALCULATIONS				
			Organisms Only			Freshwater				
CTR#	Pollutant	Units	AMELhh = ECA = C hh O	MDEL/ AMEL multiplier	MDEL hh	ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA
4	Cadmium*	µg/L	Narrative	2.01		0.32	1.5	0.53	1.3	1.3
5a	Chromium III*	µg/L	Narrative	2.01		0.32	558	0.53	109	109
5b	Chromium VI	µg/L	Narrative	2.01		0.32	5.1	0.53	5.8	5.1
6	Copper*	µg/L	None	2.4		0.22	3.1	0.40	3.7	3.1
7	Lead*	µg/L	Narrative	2.04		0.31	25	0.52	1.6	1.6
9	Nickel*	µg/L	4600	2.01	9228	0.32	151	0.53	28	28
10	Selenium	µg/L	Narrative	2.0		0.33		0.53	2.7	2.7
13	Zinc*	µg/L	None	2.8		0.16	19	0.29	35	19
68	Bis(2-Ethylhexyl) Phthalate	µg/L	5.9	2.01	12	0.32		0.53		
79	Diethyl Phthalate	µg/L	120000	2.01	240743	0.32		0.53		
94	Napthalene	µg/L	None	2.01		0.32		0.53		
103	alpha-BHC	µg/L	0.0	2.01	0	0.32		0.53		

FOOTNOTE:

*These metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

Background concentration (B) equals to the MEC of Outfall 1 and 2

[1]The Lowest AMEL is applicable only at Outfall 019, the treated groundwater discharge.

Final RPA Output - Boeing SSFL (Outfall 19)
(CA0001309, CI-6027)

CTR#	Pollutant	Units	AQUATIC LIFE CALCULATIONS Freshwater				PROPOSED LIMITS		Recommendation
			AMEL multiplier (n=4)	AMEL aq.life	MDEL multiplier (n=4)	MDEL aqlife	Lowest AMEL[1]	Lowest MDEL	
4	Cadmium*	µg/L	1.6	2.02	3.1	4.04	2.02	4.0	Use existing limitation.
5a	Chromium III*	µg/L	1.6	169	3.1	340	169	340	No limit needed.
5b	Chromium VI	µg/L	1.6	8.0	3.1	16	8.0	16	Use existing limitation.
6	Copper*	µg/L	1.9	5.8	4.5	14	5.8	14	Use existing limitation.
7	Lead*	µg/L	1.6	2.6	3.2	5.3	2.6	5.3	Use existing limitation of 5.2.
9	Nickel*	µg/L	1.6	43	3.1	86	43	86	New limitation.
10	Selenium	µg/L	1.5	4.1	3.1	8.2	4.1	8.2	Use existing limitation.
13	Zinc*	µg/L	2.3	43	6.4	120	43	120	Use existing limitation of 119.
68	Bis(2-Ethylhexyl) Phthalate	µg/L	1.6		3.1		5.9	12	Use existing limitaiton of 4.0.
79	Diethyl Phthalate	µg/L	1.6		3.1		120000	240743	No limit needed.
94	Napthalene	µg/L	1.6		3.1		0	0	No limit needed.
103	alpha-BHC	µg/L	1.6		3.1		0.013	0.03	Use existing limitation.

FOOTNOTE:

*These metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

Background concentration (B) equals to the MEC of Outfall 1 and 2

[1]The Lowest AMEL is applicable only at Outfall 019, the treated groundwater discharge.

Final RPA Output - Boeing SSFL (Outfall 3-7, 9, 10)
CA0001309 CI-6027

					CTR CRITERIA				Basin Plan
					Freshwater		Human Health		
CTR#	Pollutant	Units	CV	MEC	C acute = CMC tot	C chronic = CCC tot	Not applicable C hh W&O	C hh O	Title 22 GWR
1	Antimony	µg/L	0.76	2.3			14	4300	6
4	Cadmium*	µg/L	0.82	0.43	4.5	2.5	Narrative	Narrative	5
6	Copper*	µg/L	0.38	9.6	14	9.3	1300		
7	Lead*	µg/L	0.95	11	82	3.2	Narrative	Narrative	
8	Mercury	µg/L	0.60	0.13	Reserved	Reserved	0.05	0.051	2
9	Nickel*	µg/L	0.60	3.3	469	52	610	4600	100
12	Thallium	µg/L	0.60	0.43			1.7	6.3	2
13	Zinc*	µg/L	0.60	161.0	120	120			
16	2,3,7,8-TCDD (Dioxin)	µg/L	2.20	3.4E-06			1.3E-08	1.4E-08	0.00003

FOOTNOTE: *These metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

Final RPA Output - Boeing SSFL (Outfall 3-7, 9, 10)
CA0001309 CI-6027

CTR#	Pollutant	REASONABLE POTENTIAL ANALYSIS (RPA)							
		Lowest C	MEC >= Lowest C	Tier 1 - Need limit?	B (RD-1)	B>C	Tier 2 - Need limit?	Tier 3 - other info. ?	Tier 3 - need limit?
1	Antimony	6.0	No	No	0.87	No	No	No	No
4	Cadmium*	2.5	No	No	0.68	No	No	No	No
6	Copper*	9.3	Yes	Yes	15	YES	Yes	No	No
7	Lead*	3.2	Yes	Yes	4.9	YES	Yes	No	No
8	Mercury	0.051	Yes	Yes	0.10	YES	Yes	Yes	Yes
9	Nickel*	52	No	No	14	No	No	No	No
12	Thallium	2.0	No	No	0.4	No	No	No	No
13	Zinc*	120	Yes	Yes	52	No	No	No	No
16	2,3,7,8-TCDD (Dioxin)	1.4E-08	Yes	Yes	0.0000027	YES	No	Yes	Yes

FOOTNOTE: *These metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

Final RPA Output - Boeing SSFL (Outfall 3-7, 9, 10)
CA0001309 CI-6027

		HUMAN HEALTH CALCULATIONS			AQUATIC LIFE CALCULATIONS				
		Organisns Only			Freshwater				
CTR#	Pollutant	AMELhh = ECA = C hh O	MDEL/ AMEL multiplier	MDEL hh	ECA acute multiplier (p.7)	LTA acute		LTA chronic	Lowest LTA
1	Antimony	4300	2.2	9605	0.26		0.46		
4	Cadmium*		2.3		0.24	1.1	0.43	1.1	1.1
6	Copper*		1.6		0.45	6.4	0.66	6.1	6.1
7	Lead*		2.5		0.21	18	0.39	1.2	1.2
8	Mercury	0.051	2.0	0.10	0.32		0.53		
9	Nickel*		2.0		0.32	151	0.53	28	28
12	Thallium		2.0		0.32		0.53		
13	Zinc*		2.0		0.32	38	0.5	63	38
16	2,3,7,8-TCDD (Dioxin)	1.4E-08	3.1	4.4E-08	0.11		0.2		

FOOTNOTE: *These metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

Final RPA Output - Boeing SSFL (Outfall 3-7, 9, 10)
CA0001309 CI-6027

		AQUATIC LIFE CALCULATIONS				PROPOSED LIMITS		
		Freshwater						
CTR#	Pollutant	AMEL multiplier (n=4)	AMEL aq.life	MDEL multiplier (n=4)	MDEL aqlife	Lowest AMEL[1]	Lowest MDEL	Recommendation
1	Antimony	1.7		3.8			6.0	Use existing limitation.
4	Cadmium*	1.8	1.9	4.1	4.4		4.4	Use existing limitation of 4.0.
6	Copper*	1.3	8.2	2.2	13		13	New limitation.
7	Lead*	1.9	2.3	4.7	5.8		5.8	Use existing limitation of 5.2.
8	Mercury	1.6		3.1			0.10	New limitation.
9	Nickel*	1.6	43	3.1	86		86	New limitation.
12	Thallium	1.6		3.1			2.0	Use existing limitation.
13	Zinc*	1.6	60	3.1	120		120	New limitation.
16	2,3,7,8-TCDD (Dioxin)	2.9		9.1			4.4E-08	Use existing limitation of 2.8E-08

FOOTNOTE: *These metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

Final RPA Output - Boeing SSFL (Outfall 8)
CA0001309 CI-6027

CTR#	Pollutant	Units	CV	MEC	CTR CRITERIA				Basin Plan
					Freshwater		Human Health		
					C acute = CMC tot	C chronic = CCC tot	Not applicable C hh W&O	C hh O	Title 22 GWR
1	Antimony	µg/L	0.62	0.5			14	4300	6
4	Cadmium*	µg/L	0.98	0.46	4.5	2.5	Narrative	Narrative	5
6	Copper*	µg/L	0.69	18.0	14	9.3	1300		
7	Lead*	µg/L	0.85	10	82	3.2	Narrative	Narrative	
9	Nickel*	µg/L	0.60	20.0	469	52	610	4600	100
10	Selenium	µg/L	0.72	1.30	20	5.0	Narrative	Narrative	50
13	Zinc*	µg/L	0.64	64.0	120	120			
16	2,3,7,8-TCDD (Dioxin)	µg/L	3.42	2.4E-06			1.3E-08	1.4E-08	0.00003

FOOTNOTE: *These Metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

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CTR#	Pollutant	REASONABLE POTENTIAL ANALYSIS (RPA)							
		Lowest C	MEC >= Lowest C	Tier 1 - Need limit?	B (RD-1)	B>C	Tier 2 - Need limit?	Tier 3 - other info. ?	Tier 3 - need limit?
1	Antimony	6.0	No	No	0.6	No	No	No	No
4	Cadmium*	2.5	No	No	0.3	No	No	No	No
6	Copper*	9.3	Yes	Yes	14.3	YES	Yes	No	No
7	Lead*	3.2	Yes	Yes	13	YES	Yes	No	No
9	Nickel*	52	No	No	12	No	No	No	No
10	Selenium	5.0	No	No	1.3	No	No	No	No
13	Zinc*	120	No	No	76	No	No	No	No
16	2,3,7,8-TCDD (Dioxin)	1.4E-08	Yes	Yes	3.3E-06	YES	Yes	No	No

FOOTNOTE: *These Metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

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		HUMAN HEALTH CALCULATIONS			AQUATIC LIFE CALCULATIONS				
		Organisns Only			Freshwater				
CTR#	Pollutant	AMELhh = ECA = C hh O	MDEL/ AMEL multiplier	MDEL hh	ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA
1	Antimony	4300	2.0	8782	0.31		0.52		
4	Cadmium*		2.5		0.21	0.9	0.38	0.9	0.9
6	Copper*		2.1		0.29	4.0	0.49	4.5	4.0
7	Lead*		2.4		0.24	19	0.42	1.3	1.3
9	Nickel*	4600	2.0	9228	0.32	151	0.53	28	28
10	Selenium		2.2		0.27	5.5	0.47	2.4	2.4
13	Zinc*		2.1		0.31	37	0.51	61	37
16	2,3,7,8-TCDD (Dioxin)	0.000000014	3.3	4.6E-08	0.087		0.13		

FOOTNOTE: *These Metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.

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CTR#	Pollutant	AQUATIC LIFE CALCULATIONS Freshwater				PROPOSED LIMITS		Recommendation
		AMEL multiplier (n=4)	AMEL aq.life	MDEL multiplier (n=4)	MDEL aqlife	Lowest AMEL[1]	Lowest MDEL	
1	Antimony	1.6		3.2			6	Use existing limitation.
4	Cadmium*	1.9	1.8	4.8	4		4	Use existing limitation of 3.1.
6	Copper*	1.6	6.5	3.5	14		14	Use existing limitation.
7	Lead*	1.8	2.4	4.3	5.7		5.7	Use existing limitation of 5.2.
9	Nickel*	1.6	43	3.1	86		86	New limitation.
10	Selenium	1.7	3.9	3.6	9		9	Use existing limitation of 5.0.
13	Zinc*	1.6	58	3.3	120		120	New limitation.
16	2,3,7,8-TCDD (Dioxin)	3.5		11			4.6E-08	Use existing limitationof 2.8E-08.

FOOTNOTE: *These Metals are hardness dependent. CTR criteria was calculated using an average receiving water hardness of 100 mg/L.