ATTACHMENT F

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
320 West 4th Street, Suite 200, Los Angeles

FACT SHEET

WASTE DISCHARGE REQUIREMENTS FOR COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY (POMONA WATER RECLAMATION PLANT)

NPDES No. CA0053619
Public Notice No. : R4-2004-015

FACILITY ADDRESS	FACILITY MAILING ADDRESS
Pomona Water Reclamation Plant	County Sanitation Districts of Los Angeles County
295 Humane Way	1955 Workman Mill Road
Pomona, CA 91766	Whittier, CA 90601
	Contact: Victoria Conway
	Telephone: (562) 699-7411

I. Public Participation

1. The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the above-referenced facility. As an initial step in the WDR process, the Regional Board staff has developed tentative WDRs. The Regional Board encourages public participation in the WDR adoption process.

A. Public Comment Period

The staff determinations are tentative. Interested persons are invited to submit written comments on the tentative WDRs for the County Sanitation Districts of Los Angeles County (CSDLAC or Discharger), Pomona Water Reclamation Plant (Pomona WRP). Comments should be submitted either in person or by mail to:

Executive Officer
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

To be fully responded to by staff and considered by the Regional Board, written comments regarding the revised tentative Order should be received at the Regional Board offices by 5:00 p.m. on May 26, 2004.

The discharger submitted comments to the RWQCB based on previous tentative permits mailed to them. However, previous tentative permits contained limits been based on the United States Environmental Protection Agency's (USEPA) Technical Support Document. The Regional Board staff has incorporated some of the discharger's suggestions into this tentative.

B. Public Hearing

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

Date: June 10, 2004
Time: 9:00 a.m.
Location: Council Chambers
Metropolitan Water District of Southern California
Board Room
700 N. Alameda Street
Los Angeles, California

Interested persons are invited to attend. At the public hearing, the Regional Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is www.swrcb.ca.gov/rqcb4 where you can access the current agenda for changes in dates and locations.

C. Information and Copying

Copies of the tentative WDRs and NPDES permit, report of waste discharge, Fact Sheet, comments received, and other documents relative to this tentative WDRs and permit are available at the Regional Board office. Inspection and/or copying of these documents are by appointment scheduled between 8:00 a.m. and 4:50 p.m., Monday through Friday, excluding holidays. For appointment, please call the Los Angeles Regional Board at (213) 576-6600.

D. Register of Interested Persons

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

E. Waste Discharge Requirements Appeals

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Board regarding the final

WDRs. The petition must be submitted within 30 days of the Regional Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
ATTN: Elizabeth Miller Jennings
P.O. Box 100
Sacramento, CA 95812

II. PURPOSE OF ORDER

CSDLAC discharges tertiary-treated wastewater, from the Pomona WRP under Order No. 95-078, adopted by this Regional Board on June 12, 1995. That Order served as the permit under the National Pollutant Discharge Elimination System (NPDES No. CA0053619). The Discharger's permit was administratively extended beyond the May 10, 2000, expiration date. CSDLAC filed a Report of Waste Discharge (ROWD) and applied to the Regional Board for renewal of its WDRs and NPDES permit on November 15, 1999. This WDR and NPDES permit will expire on May 10, 2009.

III. FACILITY AND TREATMENT PROCESS DESCRIPTION

1. The Pomona WRP is one of eleven publicly owned treatment works (POTWs) (Saugus, Valencia, Whittier Narrows, Pomona, La Cañada, Long Beach, Los Coyotes, San Jose Creek, Lancaster, Palmdale, and Joint Water Pollution Control Plant) owned and operated by CSDLAC. The Pomona WRP is a tertiary treatment facility located at 295 Humane Way, Pomona, California. The plant has a dry weather average design capacity of 15 million gallons per day (mgd), but only discharges an average of 1.89 mgd (the Year 2002) of tertiary treated municipal wastewater to San Jose Creek, at Pomona, California. The Pomona WRP is a part of CSDLAC's regional system, known as the Joint Outfall System (JOS), which includes seven treatment plants. The upstream treatment plants (Whittier Narrows, Pomona, La Cañada, Long Beach, Los Coyotes, and San Jose Creek) are connected to the Joint Water Pollution Control Plant (JWPCP) located in Carson. This system allows biosolids, solids, and excess flows from the Pomona WRP to be diverted to the JWPCP for treatment and disposal. Figure 1 shows the vicinity map for the Pomona WRP.

2. The Pomona WRP serves a population of approximately 113,100 people. Flow to the plant consists of domestic, commercial and industrial wastewater. According to CSDLAC's *Preliminary Local Limits Evaluation*, prepared on November 8, 1996, industrial wastewater represents approximately 4.7% of the total flow to the plant. Discharges to the collection system from industry include discharges from metal finishers (40 CFR Part 433), pulp, paper, and paper board manufacturers (40 CFR Parts 430 and 431), textile mills (40 CFR Parts 410), aluminum forming (40 CFR Part 467), and electroplaters (40 CFR Part 413).

3. The United States Environmental Protection Agency (USEPA) and the Regional Board have classified Pomona WRP as a major discharger. It has a Threat to Water Quality and Complexity Rating of 1-A, pursuant to Section 2200, Title 23, CCR.

4. Pursuant to 40 CFR, Part 403, the Pomona WRP developed, and has been implementing, an industrial wastewater Pretreatment Program, which has been approved by USEPA and the Regional Board.

5. Treatment at the Pomona WRP consists of primary sedimentation, nitrification/denitrification (NDN) activated sludge biological treatment, secondary sedimentation with coagulation, inert media filtration, chlorination and dechlorination. No facilities are provided for solids processing at the plant. Sewage solids separated from the wastewater are returned to the JOS trunk sewer for conveyance to JWPCP for treatment and disposal. Figure 2 depicts the schematic of the Pomona WRP wastewater flow.

   A. *Primary sedimentation*. The main objective of primary sedimentation is to remove solids from the wastewater by gravity. The heavier solids (settleable solids) precipitate out and are scraped out of the primary sedimentation basin. The lighter solids float to the top and are skimmed off. However, some solids remain in suspension.

   B. *NDN Activated sludge*. The activated sludge process is a treatment system in which the incoming wastewater is mixed with existing biological floc (microorganisms, bugs, or activated sludge) in an aeration basin. Activated sludge converts non-settleable and dissolved organic contaminants into biological floc, which can then be removed from the wastewater with further treatment. The nitrification process converts ammonia nitrogen into nitrate plus nitrite nitrogen (inorganic nitrogen). The denitrification process converts the inorganic nitrogen into gaseous nitrogen, thus removing it from the wastewater.

   C. *Secondary sedimentation with coagulation.* The main objective of secondary sedimentation is to remove biological floc from the wastewater. Chemicals, such as aluminum sulfate (alum), may be added as part of the treatment process to enhance solids removal. Alum causes the biological floc to combine into larger clumps (coagulate). This makes it easier to remove the floc.

   D. *Inert media filtration*. The filtration process is used to remove or reduce suspended or colloidal matter from a liquid stream, by passing the water through a bed of graded granular material. Filters remove the solids that the secondary sedimentation process did not remove, thus, improving the disinfection efficiency and reliability.

   E. *Chlorination*. In the past, gaseous chlorine was used as a disinfectant in the Pomona WRP. However, gaseous chlorine was replaced by liquid sodium hypochlorite. Disinfectant is added to the treated effluent prior to the filters to destroy bacteria, pathogens and viruses, and to minimize algal growth in the filters. Additional disinfectant may be dosed prior to the serpentine chlorine contact chamber.

   F. *Dechlorination*. Prior to discharge, sodium bisulfite is added to the treated

effluent to remove residual chlorine.

G. *Sludge*. No facilities are provided for solids processed at the plant. All sewage solids separated from the wastewater are returned to the trunk sewer for conveyance to CSDLAC's Joint Water Pollution Control Plant (JWPCP), where treatment and disposal occur, under Order No. 97-090 (NPDES No. CA0053813).

In order to achieve compliance with the ammonia Basin Plan objectives, CSDLAC retrofitted the activated sludge treatment units at the Pomona WRP for NDN treatment. The NDN modifications were completed on June 11, 2003.

However, recent scientific investigations have found that the disinfection of the filtered activated sludge NDN effluent and increased polymer dosing generates n-nitrosodimethylamine (NDMA) as a byproduct. To date, ultra violet (UV) oxydation is the only available technology capable of destroying NDMA in wastewater. Currently, CSDLAC is conducting a UV disinfection pilot project at the Whittier Narrows WRP in an effort to eliminate in-plant generation of NDMA. Pending the outcome of this pilot study, the disinfection process at the Pomona WRP, and other CSDLAC WRPs, may be changed from chlorination to UV. The purpose of installing and operating the UV disinfection systems, will be to restore NDMA concentrations to their pre-NDN levels, for the continued protection of local groundwater, and to prevent the formation of other chlorination disinfection byproducts, such as cyanide and trihalomethanes.

6. ***Water Recycling Facility.*** The treated effluent is also regulated under Water Recycling Requirements (WRRs) contained in Order No. 81-34, adopted by this Board on July 27, 1981. The WRRs were re-adopted on May 12, 1997, by Board Order No. 97-072. In 2002, an average of 7.14 mgd of treated effluent was recycled.

Recycled water is used for irrigation of landscapes, impoundments and agricultural crops, for fire protection, livestock watering, dust control, in cooling towers, and in paper manufacturing. The Los Angeles County Department of Public Works uses the recycled water for groundwater recharge at the San Gabriel River Spreading Grounds and the Rio Hondo Spreading Grounds. As described in subsequent findings, the recharge is regulated under a separate permit (Regional Board Order No. 91-100). CSDLAC is promoting additional reuse options for the treated effluent.

7. ***Storm Water Management.*** CSDLAC does not treat storm water runoff at the Pomona WRP, except for stormwater infiltration and inflows in the sewer and stormwater that traverses the treatment tanks. It has developed a Storm Water Pollution Prevention Plan (SWPPP) for storm water that does not enter the treatment system.

IV. DISCHARGE OUTFALL AND RECEIVING WATER DESCRIPTION

1. The Pomona WRP discharges tertiary-treated municipal and industrial wastewater to the South Fork of San Jose Creek, through Discharge Serial No. 001 (approximate coordinates: Latitude 34° 03' 18", Longitude 117° 47' 43"). The South Fork San Jose Creek is tributary to the San Jose Creek and thence to the San Gabriel River, a water of the United States, at a point near the interchange of the Pomona Freeway and the San Gabriel River, above the estuary, within San Gabriel River Watershed.

2. During dry weather (May 1 – October 31), the primary sources of water flow in the receiving waters, downstream of the discharge point, are the Pomona WRP effluent and other NPDES-permitted discharges, including urban runoff conveyed through the municipal separate storm sewer system (MS4). Storm water and urban runoff from MS4 are regulated under an NPDES permit, *Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges Within the County of Los Angeles* (LA Municipal Permit), NPDES Permit No. CAS004001.

3. The Los Angeles County Flood Control District channelized portions of the San Gabriel River and San Jose Creek to convey and control floodwater, and to prevent damage to homes located adjacent to the river. Although not their main purpose, the San Gabriel River and San Jose Creek convey treated wastewater along with floodwater, and urban runoff. The South Fork of San Jose Creek is concrete-lined at the point of discharge, however, further downstream before its confluence with the San Gabriel River, San Jose Creek is unlined (near receiving water station R-D). Groundwater recharge occurs both incidentally and through separate WRRs for groundwater recharge, in these unlined areas of the San Gabriel River where the underlying sediments are highly transmissive to water as well as pollutants. The Water Replenishment District of Southern California recharges the Rio Hondo and San Gabriel Spreading Grounds, located in the Montebello Forebay, with water purchased from CSDLAC's Whittier Narrows, Pomona, and San Jose Creek WRPs, under WRR Order No. 91-100, adopted by the Board on September 9, 1991.

   Notwithstanding that segments located further downstream of the discharge are concrete-lined, the watershed supports a diversity of wildlife, particularly an abundance of avian species such as the *Least Bell's Vireo, Tricolored Blackbird, and California Gnatcatcher*. Aquatic life, such as fish, invertebrates, and algae exist in the San Gabriel River Watershed.

4. As described in the State of the Watershed Report, the San Gabriel River drains a 689 square mile area of eastern Los Angeles County; its headwaters originate in National Forest lands in the San Gabriel Mountains. The San Gabriel River watershed consists of extensive areas of undisturbed riparian and woodland habitats in its upper reaches. The U.S. Congress has set aside a wilderness area in much of the West and East Forks of the San Gabriel River. Towards the middle of the watershed, large spreading grounds are used to recharge groundwater basins. The watershed is hydraulically connected to the San Gabriel River Watershed through the Whittier Narrows Reservoir. Nurseries and small stable areas are located along channelized portions of the river. The lower part of the San Gabriel River Watershed is heavily urbanized.

V. DISCHARGE QUALITY DESCRIPTION

1. From June 1995 to December 2003, the Discharger's discharge monitoring reports showed the following:

   A. treated wastewater average annual flow rate of 2.51 mgd;

   B. average annual removal rate of 97.6% and >99%, of BOD and total suspended solids, respectively; and,

   C. 7-day median and daily maximum coliform values as <1 CFU/100 ml in the treated wastewater.

2. Based on data submitted in the 2002 Annual Summary Report, Table 1 represents the characteristics of the effluent discharged. (The "<" symbol indicates that the pollutant was not detected (ND) at that concentration level.) Attachment D contains more extensive statistical analyses of the effluent priority pollutants data from July 1995 to December 2003.

Table 1
Effluent Characteristics

CTR#	Constituent	Unit	Average or Range	Maximum	Minimum
	Flow	mgd	1.89	4.49	0.2
	pH	pH units	7.3	7.5	7.3
	Temperature- (Nov. – April) (May – Oct.)	°F °F	72 winter 80 summer	75 83	71 75
	BOD_5 20°C	mg/L	4	6	<3
	Suspended solids	mg/L	1	2	<1
	Settleable solids	ml/L	<0.1	<0.1	<0.1
	Total dissolved solids	mg/L	545	573	489
	Chloride	mg/L	139	158	117
	Sulfate	mg/L	69	86	58
	Boron	mg/L	0.47	0.52	0.43
	Total Phosphate	mg/L	1.2	1.4	0.9
	Turbidity	NTU	1.4	1.7	0.9
	Oil and grease	mg/L	<4 -<5	<5	<4
	Fluoride	mg/L	0.37	0.45	0.31
	MBAS	mg/L	0.14	0.3	0.07
	Ammonia-N	mg/L	13.9	19.3	7.35
	Organic-N	mg/L	2.0	4.8	0.7
	Nitrate-N	mg/L	1.15	4.9	0.1
	Nitrite-N	mg/L	1.89	3.75	0.22
	Total Nitrogen	mg/L	19.03	22.03	15.29
	Total residual chlorine	mg/L	<0.52	0.69	<0.07
1	Antimony	µg/L	<0.5 – 1.3	1.3	<0.5
2	Arsenic	µg/L	<1 – 2.4	2.4	<1
3	Beryllium	µg/L	<0.5	<0.5	<0.5
4	Cadmium	µg/L	<0.4	<0.4	<0.4

CTR#	Constituent	Unit	Average or Range	Maximum	Minimum
5a	Chromium III				
5b	Chromium VI				
	Total Chromium	µg/L	<10	<10	<10
6	Copper	µg/L	<8 14	14	<8
	Iron	µg/L	<50	<50	<50
7	Lead	µg/L	<2 - 2	2	<2
8	Mercury	µg/L	<0.04 -<0.1	<0.04	<0.1
9	Nickel	µg/L	<20	<20	<20
10	Selenium	µg/L	<1	<1	<1
11	Silver	µg/L	<0.24 – 0.49	0.49	<0.24
12	Thallium	µg/L	<1	<1	<1
13	Zinc	µg/L	60	80	50
14	Cyanide	µg/L	<5 - <10	<10	<5
16	2,3,7,8-TCDD (Dioxin)	µg/L	<3.8 - <3.9	<3.8	<3.9
17	Acrolein	µg/L	<2 - <10	<10	<2
18	Acrylonitrile	µg/L	<2 - <5	<5	<2
19	Benzene	µg/L	<0.5	<0.5	<0.5
20	Bromoform	µg/L	<0.5 – 0.6	0.6	<0.5
21	Carbon tetrachloride	µg/L	<0.5	<0.5	<0.5
22	Chlorobenzene	µg/L	<0.5	<0.5	<0.5
23	Dibromochloromethane	µg/L	<0.5 – 0.5	0.5	<0.5
24	Chloroethane	µg/L	<0.5	<0.5	<0.5
25	2-Chloroethylvinyl ether	µg/L	<0.5	<0.5	<0.5
26	Chloroform	µg/L	5	10	2.5
27	Bromodichloromethane	µg/L	<0.5 – 1.5	1.5	<0.5
28	1,1-Dichloroethane	µg/L	<0.5	<0.5	<0.5
29	1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5
30	1,1-Dichloroethylene	µg/L	<0.5	<0.5	<0.5
31	1,2-Dichloropropane	µg/L	<0.5	<0.5	<0.5
32	1,3-Dichloropropylene	µg/L	<0.5	<0.5	<0.5
33	Ethylbenzene	µg/L	<0.5	<0.5	<0.5
34	Methyl bromide (Bromomethane)	µg/L	<0.5 - <1	<1	<0.5
35	Methyl chloride (Chloromethane)	µg/L	<0.5	<0.5	<0.5
36	Methylene chloride	µg/L	<1 - <0.5	<1	<0.5
37	1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5
38	Tetrachloroethylene	µg/L	<0.5	<0.5	<0.5
39	Toluene	µg/L	<0.5	<0.5	<0.5
40	1,2-Trans-dichloroethylene	µg/L	<0.5	<0.5	<0.5
41	1,1,1-Trichloroethane	µg/L	<0.5	<0.5	<0.5
42	1,1,2-Trichloroethane	µg/L	<0.5	<0.5	<0.5
43	Trichloroethylene	µg/L	<0.5	<0.5	<0.5
44	Vinyl chloride	µg/L	<0.5	<0.5	<0.5
45	2-Chlorophenol	µg/L	<1 - <5	<5	<1
46	2,4-Dichlorophenol	µg/L	<1 - <5	<5	<1
47	2,4-Dimethylphenol	µg/L	<2	<2	<2
48	2-Methyl-4,6-dinitrophenol	µg/L	<5	<5	<5
49	2,4-Dinitrophenol	µg/L	<5	<5	<5

CTR#	Constituent	Unit	Average or Range	Maximum	Minimum
50	2-Nitrophenol	µg/L	<1 - <10	<10	<1
51	4-Nitrophenol	µg/L	<1 - <10	<10	<1
52	3-Methyl-4-chlorophenol	µg/L	<1	<1	<1
53	Pentachlorophenol	µg/L	<1 - <5	<5	<1
54	Phenol	µg/L	<1	<1	<1
55	2,4,6-Trichlorophenol	µg/L	<1 - <10	<10	<1
56	Acenaphthene	µg/L	<1	<1	<1
57	Acenaphthylene	µg/L	<1 - <10	<10	<1
58	Anthracene	µg/L	<1 - <10	<10	<1
59	Benzidine	µg/L	<5	<5	<5
60	Benzo(a)anthracene	µg/L	<1 - <5	<5	<1
61	Benzo(a)pyrene	µg/L	<0.0031	<0.0031	<0.0031
62	Benzo(b)fluoranthene	µg/L	<0.0031-0.014	<0.014	<0.0031
63	Benzo(g,h,i)perylene	µg/L	<1 - <5	<5	<1
64	Benzo(k)fluoranthene	µg/L	<0.0031- 0.01	0.01	<0.0031
65	Bis(2-chloroethoxy)methane	µg/L	<1 - <5	<5	<1
66	Bis(2-chloroethyl)ether	µg/L	<1	<1	<1
67	Bis(2-chloroisopropyl)ether	µg/L	<1 - <2	<2	<1
68	Bis(2-ethylhexyl)phthalate	µg/L	<1 - <5	<5	<1
69	4-Bromophenyl phenyl ether	µg/L	<1 - <5	<5	<1
70	Butylbenzyl phthalate	µg/L	<1 - <10	<10	<1
71	2-Chloronaphthalene	µg/L	<1 - <10	<10	<1
72	4-Chlorophenyl phenyl ether	µg/L	<1 - <5	<5	<1
73	Chrysene	µg/L	<0.0031 – 0.0049	0.0049	<0.003
74	Dibenzo(a,h)anthracene	µg/L	<0.006 – 0.007	0.007	<0.006
75	1,2-Dichlorobenzene	µg/L	<1 - <2	<2	<1
76	1,3-Dichlorobenzene	µg/L	<1	<1	<1
77	1,4-Dichlorobenzene	µg/L	<1 – 1.1	1.1	<1
78	3,3'-Dichlorobenzidine	µg/L	<5	<5	<5
79	Diethyl phthalate	µg/L	<1 - <2	<2	<1
80	Dimethyl phthalate	µg/L	<1 - <2	<2	<1
81	Di-n-butyl phthalate	µg/L	<1 - <10	<10	<1
82	2,4-Dinitrotoluene	µg/L	<1 - <5	<5	<1
83	2,6-Dinitrotoluene	µg/L	<1 - <5	<5	<1
84	Di-n-octyl phthalate	µg/L	<1 - <10	<10	<1
85	1,2-Diphenylhydrazine	µg/L	<1	<1	<1
86	Fluoranthene	µg/L	<1	<1	<1
87	Fluorene	µg/L	<1 - <10	<10	<1
88	Hexachlorobenzene	µg/L	<1	<1	<1
89	Hexachlorobutadiene	µg/L	<1	<1	<1
90	Hexachlorocyclopentadiene	µg/L	<5	<5	<5
91	Hexachloroethane	µg/L	<1	<1	<1
92	Indeno(1,2,3-cd)pyrene	µg/L	0.006 – 0.014	0.014	0.006
93	Isophrone	µg/L	<1	<1	<1
94	Naphthalene	µg/L	<1	<1	<1
95	Nitrobenzene	µg/L	<1	<1	<1
96	N-Nitrosodimethylamine (NDMA)	µg/L	<1 - <5	<5	<1

CTR#	Constituent	Unit	Average or Range	Maximum	Minimum
97	N-Nitrosodi-n-propylamine	µg/L	<1 - <5	<5	<1
98	N-Nitrosodiphenylamine	µg/L	<1	<1	<1
99	Phenanthrene	µg/L	<1 - <5	<5	<1
100	Pyrene	µg/L	<1 - <10	<10	<1
101	1,2,4-Trichlorobenzene	µg/L	<1 - <5	<5	<1
102	Aldrin	µg/L	<0.01	<0.01	<0.01
103	alpha-BHC	µg/L	<0.01	<0.01	<0.01
104	beta-BHC	µg/L	<0.01	<0.01	<0.01
105	gamma-BHC (Lindane)	µg/L	<0.01 – 0.01	0.01	<0.01
106	delta-BHC	µg/L	<0.01	<0.01	<0.01
107	Chlordane	µg/L	<0.05	<0.05	<0.05
108	4,4'-DDT	µg/L	<0.01	<0.01	<0.01
109	4,4'-DDE	µg/L	<0.01	<0.01	<0.01
110	4,4- DDD	µg/L	<0.01	<0.01	<0.01
111	Dieldrin	µg/L	<0.01	<0.01	<0.01
112	alpha-Endosulfan	µg/L	<0.01	<0.01	<0.01
113	beta-Endosulfan	µg/L	<0.01	<0.01	<0.01
114	Endosulfan sulfate	µg/L	<0.1	<0.1	<0.1
115	Endrin	µg/L	<0.01	<0.01	<0.01
116	Endrin aldehyde	µg/L	<0.04	<0.04	<0.04
117	Heptachlor	µg/L	<0.01	<0.01	<0.01
118	Heptachlor epoxide	µg/L	<0.01	<0.01	<0.01
	Polychlorinated biphenyls (PCBs)				
119	Aroclor 1016	µg/L	<0.1	<0.1	<0.1
120	Aroclor 1221	µg/L	<0.1	<0.1	<0.1
121	Aroclor 1232	µg/L	<0.1	<0.1	<0.1
122	Aroclor 1242	µg/L	<0.1	<0.1	<0.1
123	Aroclor 1248	µg/L	<0.1	<0.1	<0.1
124	Aroclor 1254	µg/L	<0.05	<0.05	<0.05
125	Aroclor 1260	µg/L	<0.1	<0.1	<0.1
126	Toxaphene	µg/L	<0.5	<0.5	<0.5
	MTBE	µg/L	<0.5 – 1.5	1.5	<0.5

3. The Discharger's effluent demonstrated chronic toxicity during the last permit cycle. Based on this information, the Regional Board has determined that there is a reasonable potential that the discharge will cause toxicity in the receiving water. However, the circumstances warranting a numeric chronic toxicity effluent limitation when there is reasonable potential were reviewed by the State Water Resources Control Board (State Board) in SWRCB/OCC Files A-1496 & A-1496(a) [Los Coyotes/Long Beach Petitions]. On September 16, 2003, at a public hearing, the State Board adopted Order No. WQO 2003-0012, deferring the issue of numeric chronic toxicity effluent limitations until Phase II of the SIP is adopted. In the mean time, the State Board replaced the numeric chronic toxicity limit with a narrative effluent limitation and a 1 TUc trigger, in the Long Beach and Los Coyotes WRP NPDES permits. This permit contains a similar chronic toxicity effluent limitation. This Order also contains a reopener to allow the Regional Board to modify the permit, if necessary, consistent with any new policy, law, or regulation.

4. **N-Nitrosodimethylamine (NDMA)**

A. NDMA is a by-product found in the effluent of POTWs, which use chlorination as a primary form of disinfection. There was RPA (Tier 3) for the Pomona WRP effluent to exceed the CTR human health organisms only criteria, therefore a CTR-based effluent limitation was included in this Order. NDMA has been detected every month in the final effluent since July 2000, when DHS directed the Discharger to initiate monthly NDMA sampling. The highest detected concentration of NDMA at the Pomona WRP was 1266 ng/L (on February 11, 2002). This concentration exceed DHS' Action Level of 10 ng/L for drinking water by a factor of up to 120.

B. In addition to the recharge of effluent that occurs in unlined portions of the San Gabriel River and San Jose Creek, the Water Replenishment District recharges the Rio Hondo and San Gabriel Spreading Grounds, located in the Montebello Forebay, with effluent purchased from CSDLAC's Pomona, Whittier Narrows and San Jose Creek WRPs, under WRRs (Order No. 91-100), adopted by the Regional Board on September 9, 1991. Although there were data presented to both the Regional Board and DHS that there is significant attenuation by both soil and sunlight in the spreading basins located approximately 20 miles away from the Pomona WRP, recent data from monitoring wells located at the Rio Hondo Speading Ground have detected increasing NDMA concentrations below the AL. Monitoring wells located at the San Gabriel Spreading Grounds have detected increasing concentrations of NDMA above the AL (up to 460 ng/L, on 10/23/03).

C. There has not been any site-specific groundwater monitoring data (for those areas underlying the reaches of the San Jose Creek and San Gabriel River recharged by the Pomona WRP's effluent) submitted to the Regional Board to determine if an attenuation factor should be applied. Groundwater is thought to occur at approximately 60 feet below ground surface.

D. On April 15, 2004, CSDLAC submitted information to the Regional Board detailing the measures they have taken and plan to take to address NDMA. The following table summarizes the major efforts:

Project	Timeline
Source Control/Pollution Prevention	1980's - ongoing
Study NDMA formation process in POTWs	2000 - ongoing
Divert filter backwash water to the JWPCP Plant	June 2002 - ongoing
Optimize chlorination disinfection chemical usage	March 2004
Obtain laboratory equipment more sensitive analytical detection levels	June 2004
Optimize polymer usage	June 2004
Conduct site specific hydrologic modeling and study attenuation of NDMA in GW basins through Soil Aquifer Treatment	June 2004 – June 2007
Study destruction of NDMA by photolysis at Long Beach WRP	Fall 2004
UV Pilot Project at Whittier Narrows WRP • Preliminary Investigation	 Oct. 2003 – April 2004

Project	Timeline
• Research	Jan. 2004 – Feb. 2005
• UV Equipment procurement	June 2004 – Oct. 2005
• Design of UV facilities	April 2004 – July 2005
• Construction	July 2005 – Aug. 2006
• Full scale evaluation	June 2006 – June 2007
Collaborative Studies	
• Removal/destruction of NDMA and its precursors in WTPs	Jan. 2001 – Sept. 2004
• Low cost analytical methods for measuring NDMA	Nov. 2002 – Aug. 2004
• Fate and transport of NDMA in irrigation reuse water	April 2003 – Oct. 2005

VI. APPLICABLE LAWS, PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities contained in the following:

1. ***Federal Clean Water Act –*** Section 301(a) of the federal Clean Water Act (CWA) requires that point source discharges of pollutants to a water of the United States must be done in conformance with a NPDES permit. NPDES permits establish effluent limitations that incorporate various requirements of the CWA designed to protect water quality. CWA section 402 authorizes the USEPA or States with an approved NPDES program to issue NPDES permits. The State of California has an approved NPDES program.

2. ***Basin Plan –*** The Regional Board adopted a revised *Water Quality Control Plan for the Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) on June 13, 1994, and amended by various Regional Board resolutions. This updated and consolidated plan represents the Board's master quality control planning document and regulations. The State Board and the State of California Office of Administrative Law (OAL) approved the revised Basin Plan on November 17, 1994, and February 23, 1995, respectively. On May 26, 2000, the USEPA approved the revised Basin Plan except for the implementation plan for potential municipal and domestic supply (MUN) designated water bodies, which is not applicable to this discharge.

   Ammonia Water Quality Objective (WQO). The 1994 Basin Plan contained water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Board, with the adoption of Resolution No. 2002-011, Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (including enclosed bays, estuaries and wetlands) with Beneficial Use designations for protection of Aquatic Life. Resolution No. 2002-011 was approved by the State Board, OAL, and USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively, and is now in effect. The final effluent limitations for ammonia prescribed in this Order are based on the revised ammonia criteria (see Attachment H) and apply at the end of pipe.

Chloride WQO. The 1994 Basin Plan contained water quality objectives for chloride in Table 3-8. However, the chloride objectives for some waterbodies were revised on January 27, 1997, by the Regional Board, with the adoption of Resolution No. 97-02, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Incorporate a Policy for Addressing Levels of Chloride in Discharges of Wastewaters*. Resolution No. 97-02 was approved by the State Board, OAL, and USEPA on October 23, 1997, January 9, 1998, and February 5, 1998, respectively, and are now in effect. The chloride WQO was revised from 150 mg/L to 180 mg/L, for the San Gabriel River between Valley Boulevard and Firestone Boulevard (including Whittier Narrows Flood Control Basin, and San Jose Creek downstream of 71 Freeway only).

The Basin Plan (i) designates beneficial uses for surface and groundwater, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated (existing and potential) beneficial uses and conform to the State's antidegradation policy, and (iii) includes implementation provisions, programs, and policies to protect all waters in the Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The 1994 Basin Plan was prepared to be consistent with all State and Regional Board plans and policies adopted in 1994 and earlier. This Order implements the plans, policies, and provisions of the Board's Basin Plan.

3. ***Sources of Drinking Water Policy***. On May 19, 1988, the State Board adopted Resolution No. 88-63, *Sources of Drinking Water (SODW) Policy*, which established a policy that all surface and ground waters, with limited exemptions, are suitable or potentially suitable for municipal and domestic supply. To be consistent with State Board's SODW policy, on March 27, 1989, the Regional Board adopted Resolution No. 89-03, Incorporation of Sources of Drinking Water Policy into *the Water Quality Control Plans (Basin Plans) – Santa Clara River Basin (4A)/ Los Angeles River Basin (4B)*.

4. ***Potential Municipal and Domestic Supply (P* MUN) –*** Consistent with Regional Board Resolution No. 89-03 and State Board Resolution No. 88-63, in 1994 the Regional Board conditionally designated all inland surface waters in Table 2-1 of the 1994 Basin Plan as existing, intermittent, or potential for Municipal and Domestic Supply (P* MUN). However, the conditional designation in the 1994 Basin Plan included the following implementation provision: "no new effluent limitations will be placed in Waste Discharge Requirements as a result of these [potential MUN designations made pursuant to the SODW policy and the Regional Board's enabling resolution] until the Regional Board adopts [a special Basin Plan Amendment that incorporates a detailed review of the waters in the Region that should be exempted from the potential MUN designations arising from SODW policy and partial approval (May 26, 2000) of the 1994 Basin Plan amendments and acknowledged that the conditional designations do not currently have a legal effect, do not reflect new water quality standards subject to USEPA review, and do not support new effluent limitations based on the conditional designations stemming from the SODW Policy until a subsequent review by the Regional Board finalizes the designations for these waters. This permit is designed to be consistent with the existing Basin Plan.

5. ***State Implementation Plan (SIP) and California Toxics Rule (CTR)***. The State Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (also known as the State Implementation Plan or SIP) on March 2, 2000. The SIP was amended by Resolution No. 2000-30, on April 26, 2000, and the Office of Administrative Law approved the SIP on April 28, 2000. The SIP applies to discharges of toxic pollutants in the inland surface waters, enclosed bays and estuaries of California which are subject to regulation under the State's Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) and the Federal Clean Water Act (CWA). This policy also establishes the following:

   A. Implementation provisions for priority pollutant criteria promulgated by USEPA through the CTR and for priority pollutant objectives established by Regional Boards in their Basin Plans;

   B. Monitoring requirements for priority pollutants with insufficient data to determine reasonable potential;

   C. Monitoring requirements for 2, 3, 7, 8 – TCDD equivalents; and,

   D. Chronic toxicity control provisions.

   The CTR became effective on May 18, 2000 (codified as 40 CFR Part 131.38). Toxic pollutant limits are prescribed in this Order to implement the CTR and Basin Plan.

   In the CTR, USEPA promulgated criteria that protects the general population at an incremental cancer risk level of one in a million (10^{-6}), for all priority toxic pollutants regulated as carcinogens. USEPA recognizes that adoption of a different risk factor is outside of the scope of the CTR. However, states have the discretion to adopt water quality criteria that result in a higher risk level, if it can demonstrate that the chosen risk level is adequately protective of the most highly exposed subpopulation, and has completed all necessary public participation. This demonstration has not happened in California. Further, the information that is available on highly exposed subpopulations in California supports the need to protect the general population at the 10^{-6} level. The Discharger may undertake a study, in accordance with the procedures set forth in Chapter 3 of USEPA's Water Quality Standards Handbook: Second Edition (EPA-823-B-005a, August 1994) to demonstrate that a different risk factor is more appropriate. Upon completion of the study, the State Board will review the results and determine if the risk factor needs to be changed. In the mean time, the State will continue using a 10^{-6} risk level, as it has done historically, to protect the population against carcinogenic pollutants.

6. ***Alaska Rule***. On March 30, 2000, USEPA revised its regulation that specifies when new and revised State and Tribal water quality standards (WQS) become effective for CWA purposes (40 CFR 131.21, 65 FR 24641, April 27, 2000). Under USEPA's new regulation (also known as the *Alaska rule*), new and revised standards submitted to USEPA after May 30, 2000, must be approved before

being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by EPA.

7. ***Beneficial Uses***. The designated beneficial uses in the Basin Plan for the San Gabriel River, San Jose Creek and their contiguous waters are:

A. The beneficial uses of the receiving surface water are:

San Jose Creek - Hydrologic Unit 405.41	
Existing:	wildlife habitat.
Intermittent:	groundwater recharge, non-contact water recreation, warm freshwater habitat.
Potential:	water contact[1] recreation and municipal and domestic water supply (MUN[2]).
San Gabriel River - Hydrologic Unit 405.41	
Existing:	wildlife habitat.
Intermittent:	groundwater recharge, water contact recreation[1], non-contact water recreation, warm freshwater habitat.
Potential:	MUN[2].
San Gabriel River: Whittier Narrows to Firestone Boulevard - Hydrologic Unit 405.15	
Existing:	water contact[1] recreation and non-contact water recreation; wildlife habitat; and rare, threatened, or endangered species.
Intermittent:	groundwater recharge and warm freshwater habitat.
Potential:	industrial service supply; industrial process supply; and MUN[2].
San Gabriel River: Firestone Boulevard to the Estuary - Hydrologic Unit 405.15	
Existing:	water contact[1] recreation and non-contact water recreation.
Potential:	MUN[2]; warm freshwater habitat; and wildlife habitat.
San Gabriel River Estuary - Hydrologic Unit 405.15	
Existing:	industrial service supply; navigation; water contact[1] recreation and non-contact water recreation; commercial and sport fishing; estuarine habitat; marine habitat; wildlife habitat; rare, threatened, or endangered species; migration of aquatic organisms; and spawning, reproduction, and/or early development.
Potential:	shellfish harvesting.

B. The beneficial uses of the groundwater are:

[1] Although the Los Angeles County Department of Public Works posted signs prohibiting access to San Jose Creek, San Gabriel River, and its tributaries, the public has been observed fishing and wading across sections of the streams. There is public access to the San Gabriel River and its tributaries through the bike trails that run parallel to the river. Since there is public contact in the receiving water downstream of the discharge, the quality of wastewater discharged to San Jose Creek, San Gabriel River, and its tributaries must be such that no public health hazard is created.

[2] The potential MUN beneficial use for the water body is consistent with Regional Board Resolution 89-03; however the Regional Board has only conditionally designated the MUN beneficial uses and at this time cannot establish effluent limitations designed to protect the conditional designation.

San Gabriel Valley (Puente Basin) - DWR Basin No. 4-13	
Existing:	municipal and domestic supply, industrial service supply; industrial process supply; and, agricultural supply.
Los Angeles Coastal Plain (Central Basin) – DWR Basin No. 4-11	
Existing:	municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply

C. The requirements in this Order are intended to protect designated beneficial uses and enhance the water quality of the watershed. Effluent limits must protect both existing and potential beneficial uses.

D. Consistent with Regional Board Resolution No. 89-003 and State Board Resolution No. 88-63, all inland surface waters in Table 2-1 of the 1994 Basin Plan are designated existing, intermittent, or potential for MUN.

8. ***Title 22 of the California Code of Regulations -*** The California Department of Health Services established primary and secondary maximum contaminant levels (MCLs) for inorganic, organic, and radioactive contaminants in drinking water. These MCLs are codified in Title 22, California Code of Regulations (Title 22). The Basin Plan (Chapter 3) incorporates Title 22 primary MCLs by reference. This incorporation by reference is prospective including future changes to the incorporated provisions as the changes take effect. Title 22 primary MCLs have been used as bases for effluent limitations in WDRs and NPDES permits to protect the groundwater recharge beneficial use when that receiving groundwater is designated as MUN. Also, the Basin Plan specifies that "Ground waters shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses." Therefore the secondary MCL's, which are limits based on aesthetic, organoleptic standards, are also incorporated into this permit to protect groundwater quality.

Action Levels (ALs). DHS also establishes Action levels (ALs), or health-based advisory levels, for chemicals in drinking water that lack MCLs. An AL is the concentration of a chemical in drinking water that is considered not to pose a significant health risk to people ingesting that water on a daily basis. ALs may be established by DHS for non-regulated chemical contaminants when one of the following occurs:

1. A chemical is found in an actual or proposed drinking water source, or
2. A chemical is in proximity to a drinking water source, and guidance is needed, should it reach the source.

An AL is calculated using standard risk assessment methods for non-cancer and cancer endpoints, and typical exposure assumptions, including a 2-liter per day ingestion rate, a 70-kilogram adult body weight, and a 70-year lifetime. For chemicals that are considered carcinogens, the AL is considered to pose *"de minimis*" risk, i.e., a theoretical lifetime risk of up to one excess case of cancer in a population of 1,000,000 people—the 10^{-6} risk level. (In that population, approximately 250,000-300,000 cases of cancer would be anticipated to occur naturally.) On occasion, the chemical may not be detectable as low as the action

level by usual laboratory analytical methods. In this case, detectability prevails, and DHS' approach is to consider a detectable quantity as over the action level until a more sensitive method is available. ALs may be revised from time to time to reflect new risk assessment information. Chemicals for which ALs are established may eventually be regulated by MCLs, depending on the extent of contamination, the levels observed, and the risk to human health. A number of the contaminants for which action levels were originally established now have MCLs.

In April 1998, DHS established an action level of 0.002 µg/L for NDMA, based on a deminimus cancer risk level. The AL was later revised by DHS, once in November 1999 to 0.02 µg/L, and once in March 2002 to 0.01 µg/L or 10 ng/L (the current AL). The AL for NDMA is based on an evaluation conducted by CalEPA's Office of Environmental Health Hazard Assessment. NDMA is classified as a possible human carcinogen on USEPA's Integrated Risk Information System (IRIS), based on the development of tumors, at multiple sites, in both rodent and non-rodent mammals exposed to NDMA by various routes.

The primary routes of potential human exposure to NDMA are ingestion, inhalation, and dermal contact. The general population may be exposed to unknown quantities of NDMA present in foods, beverages, tobacco smoke, herbicides, pesticides, drinking water, and industrial pollution. The National Institute for Occupational Safety and Health (NIOSH) lists the following symptoms experienced depending upon the route of exposure to NDMA:

Route of Exposure	**Symptoms**
Inhalation	Nausea, vomiting, diarrhea
Skin adsorption	Abdominal cramps, headaches
Ingestion	Fever, enlarged liver
Skin and/or eye contact	Jaundice, decreased organ function of the liver, kidney, and lungs

Although DHS only uses ALs as advisory levels, the Regional Board, exercising its best professional judgement, in the review of the best available science, has in the past considered and used ALs when deemed appropriate to establish effluent limitations in WDR and NPDES permits adopted by this Board. The need for a revised limit for NDMA, for the protection of the GWR beneficial use, will be assessed three years after the effective date of this Order, following the conclusion of the studies mentioned in Section V.4 of this Fact Sheet, and in accordance with Section V.H - *Reopeners and Modifications* of the WDR.

Groundwater Recharge. Sections of San Jose Creek, located downstream of the Pomona WRP discharge point, are designated as GWR. Surface water from the San Jose Creek enters the San Gabriel Valley Basin and the Central Los Angeles Coastal Plain Groundwater Basin. Since ground water from these basins is used to provide drinking water to over one million people, Title 22-based limits are needed to protect that drinking water supply where there is reasonable potential for the contaminant to be present in the discharge. By limiting the contaminants in the Pomona WRP 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 up, depending on the pollutant. Compared to surface water pollution, investigations and remediation of groundwater are often more difficult, costly, and extremely slow

9. ***Antidegradation Policy*** **-** On October 28, 1968, the State Board adopted Resolution No. 68-16*, Maintaining High Quality Water*, which established an antidegradation policy for State and Regional Boards. The State Board has, in State Board Order No. 86-17 and an October 7, 1987 guidance memorandum, interpreted Resolution No. 68-16 to be fully consistent with the federal antidegradation policy. Similarly, the CWA (section 304(d)(4)(B)) and USEPA regulations (40 CFR, Section 131.12) require that all permitting actions be consistent with the federal antidegradation policy. Together, the State and Federal policies are designed to ensure that a water body will not be degraded resulting from the permitted discharge. The provisions of this Order are consistent with the antidegradation policies.

10. ***Watershed Approach*** **-** This Regional Board has been implementing a Watershed Management Approach (WMA), to address water quality protection in the Los Angeles Region, as detailed in the Watershed Management Initiative (WMI). The WMI is designed to integrate various surface and ground water regulatory programs while promoting cooperative, collaborative efforts within a watershed. It is also designed to focus limited resources on key issues and use sound science. Information about the San Gabriel River Watershed and other watersheds in the region can be obtained from the Regional Board's web site at *http://www.swrcb.ca.gov/rwqcb4/* and clicking on the word "Watersheds".

Pursuant to this Regional Board's watershed initiative framework, the San Gabriel River Watershed Management Area was the targeted watershed for fiscal year 1999-2000. However, the NPDES permit renewals were originally re-scheduled so that provisions of the CTR and SIP could be incorporated into the permits.

VII. REGULATORY BASIS FOR EFFLUENT AND RECEIVING WATER LIMITS AND OTHER DISCHARGE REQUIREMENTS

1. ***Water Quality Objectives and Effluent Limits*** **-** *Water* Quality Objectives (WQOs) and effluent limitations in this permit are based on:

   A. Applicable State Regulations/Policies/Guidances

      a. The plans, policies and water quality standards (beneficial uses + objectives + antidegradation policy) contained in the 1994 *Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*, as amended, including chemical constituent limitations established by incorporating the California Code of Regulations, Title 22, Maximum Contaminant Levels designed to protect the existing drinking water use of the receiving groundwaters;

      b. California Toxics Rule (40 CFR 131.38);

c. The State Board's "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California" (the State Implementation Plan or SIP); and,

d. Administrative Procedures Manual and Administrative Procedure Updates.

B. Applicable Federal Regulations/Policies/Guidances

a. Federal Clean Water Act;

b. 40 CFR, Parts 122, 131, among others;

c. Best Professional Judgment (pursuant to 40 CFR 122.44);

d. USEPA Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity Programs Final May 31, 1996;

e. USEPA Whole Effluent Toxicity (WET) Control Policy July 1994;

f. Inspectors Guide for Evaluation of Municipal Wastewater Treatment Plants, April 1979 (EPA/430/9-79-010);

g. Fate of Priority Pollutants in Publicly Owned Treatment Works Pilot Study October 1979 (EPA-440/1-79-300);

h. *Technical Support Document for Water Quality Based Toxics Control,* March 1991 (EPA-505/ 2-90-001);

i. *U.S. EPA NPDES Permit Writers' Manual,* December 1996 (EPA-833-B-96-003); and,

j. USEPA's *National Recommended Water Quality Criteria: 2002*, November 2002 (EPA-822-R-02-047).

Where numeric water quality objectives have not been established in the Basin Plan, 40 CFR Part 122.44(d) specifies that water quality based effluent limits may be set based on USEPA criteria and supplemented where necessary by other relevant information to attain and maintain narrative water quality criteria to fully protect designated beneficial uses.

2. ***Mass and Concentration Limits –*** 40 CFR section 122.45(f)(1) requires that, except under certain conditions, all permit limits, standards, or prohibitions be expressed in terms of mass units. 40 CFR section 122.45(f)(2) allows the permit writer, at their discretion, to express limits in additional units (e.g., concentration units). The regulations mandate that, where limits are expressed in more than one unit, the permittee must comply with both.

Generally, mass-based limits ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limits. Concentration-

based effluent limits, on the other hand, discourage the reduction in treatment efficiency during low-flow periods and require proper operation of the treatment units at all times. In the absence of concentration-based effluent limits, a permittee would be able to increase its effluent concentration (i.e., reduce its level of treatment) during low-flow periods and still meet its mass-based limits. To account for this, this permit includes mass and concentration limits for some constituents, except during wet-weather, storm events that cause flows to the treatment plant to exceed the plant's design capacity.

3. ***Maximum Daily Effluent Limitations –*** Pursuant to 40 CFR section 122.45(d)(2), for POTWs continuous discharges, all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall, unless impracticable, be stated as average weekly and average monthly discharge limitations. It is impracticable to only include average weekly and average monthly effluent limitations in the permits, because a single daily discharge of certain pollutants, in excess amounts, can cause violations of water quality objectives. The effects of certain pollutants on aquatic organisms are often rapid. For many pollutants, an average weekly or average monthly effluent limitation alone is not sufficiently protective of beneficial uses. As a result, maximum daily effluent limitations, as referenced in 40 CFR section 122.45(d)(1), are included in the permit for certain constituents as discussed in the Fact Sheet accompanying this Order.

4. ***Pretreatment –*** Pursuant to 40 CFR section 403, the CSDLAC developed and has been implementing an approved industrial wastewater Pretreatment Program. This Order requires implementation of the approved Pretreatment Program.

5. ***Sludge Disposal -*** To implement CWA Section 405(d), on February 19, 1993, the USEPA promulgated 40 CFR, Part 503 to regulate the use and disposal of municipal sewage sludge. This regulation was amended on September 3, 1999. The regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. It is the responsibility of the Discharger to comply with said regulations that are enforceable by USEPA, because California has not been delegated the authority to implement this program.

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

7. ***Clean Water Act Effluent Limitations -*** Numeric and narrative effluent limitations are established pursuant to Section 301 (Effluent Limitations), Section 302 (Water Quality-Related Effluent Limitations), Section 303 (Water Quality Standards and

Implementation Plans), Section 304 (Information and Guidelines [Effluent]), Section 305 (Water Quality Inventory), Section 307 (Toxic and Pretreatment Effluent Standards), and Section 402 (NPDES) of the CWA. The CWA and amendments thereto are applicable to the discharges herein.

8. ***Antibacksliding Policies*** **-** Antibacksliding provisions are contained in Sections 303(d)(4) and 402(o) of the CWA, and in 40 CFR section 122.44(l). Those provisions require a reissued permit to be as stringent as the previous permit with some exceptions. Section 402(o) of the CWA establishes express statutory language prohibiting the backsliding of effluent limitations. It consists of the following three parts:

   A. Section 402(o)(1) prohibits (subject to exceptions in section 303(d)(4) and/or 402(o)(2)) the relaxation of effluent limitations for two situations:

      a. When a permittee seeks to revise a technology-based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent, and

      b. When a permittee seeks relaxation of an effluent limitation which is based upon a changed State treatment standard or water quality standard.

   B. Section 402(o)(2) outlines specific exceptions to the general prohibition against establishment of less stringent effluent limitations. Codified in the NPDES regulations at 40 CFR 122.44(l), Section 402(o)(2) provided that the establishment of less stringent limits may be allowed where:

      a. There have been material and substantial alterations or additions to the permitted facility which justify this relaxation;

      b. New information (other than revised regulations, guidance, or test methods) is available that was not available at the time of permit issuance which would have justified a less stringent effluent limitation;

      c. Technical mistakes or mistaken interpretations of the law were made in issuing the permit under Section 402(a)(1)(b);

      d. Good cause exists due to events beyond the permittee's control (e.g., acts of God) and for which there is no reasonably available remedy;

      e. The permit has been modified under certain specified sections of the CWA; or,

      f. The permittee has installed and properly operated and maintained required treatment facilities, but still has been unable to meet the permit limitations (relaxation may only be allowed to the treatment levels actually achieved).

Although the statute identified six exceptions where effluent limitations may be relaxed, the language specifically stated that exception "c" (as listed above) does not apply to water quality-based effluent limitations. Further, exception "e" as listed above only concerns sections of the CWA governing technology-based limits. Thus, exceptions c & e would only apply to technology-based effluent limitations.

C. Section 402(o)(3) prohibits the relaxation of effluent limitations in all cases if a revised effluent limitation would result in a violation of applicable effluent limitation guidelines or water quality standards, including antidegradation requirements. Thus, even if any of the antibacksliding exceptions outlined in either the statute or regulations are applicable, Section 402(o)(3) acts as a floor and restricts the extent to which effluent limitations may be relaxed. This requirement affirms existing provisions of the CWA that require limits, standards, and conditions to ensure compliance with applicable technology-based limits and water quality standards.

9. ***Applicable Water Quality Objectives -*** 40 CFR, Section 122.44(d)(vi)(A) requires the establishment of numeric effluent limitations to attain and maintain applicable narrative water quality criteria to protect the designated beneficial use.

The Basin Plan includes narrative and numeric WQOs. The CTR promulgates numeric aquatic life criteria for 23 toxic pollutants and numeric human health criteria for 57 toxic pollutants. A compliance schedule provision in the CTR and the SIP authorizes the State to issue schedules of compliance for new or revised NPDES permit limits based on the federal CTR criteria when certain conditions are met. Where numeric water quality objectives have not been established in the Basin Plan, 40 CFR, Section 122.44(d) specifies that WQBELs may be set based on USEPA criteria and supplemented, where necessary, by other relevant information to attain and maintain narrative water quality criteria to fully protect designated beneficial uses.

10. ***Types of Pollutants –*** For CWA regulatory purposes, pollutants are grouped into three general categories under the NPDES program: conventional, toxic, and non-conventional. By definition, there are five conventional pollutants (listed in 40 CFR 401.16) – 5-day biochemical oxygen demand, total suspended solids, fecal coliform, pH, and oil and grease. Toxic or "priority" pollutants are those defined in Section 307(a)(1) of the CWA (and listed in 40 CFR 401.15 and 40 CFR 423, Appendix A) and include heavy metals and organic compounds. Non-conventional pollutants are those which do not fall under either of the two previously described categories and include such parameters as ammonia, phosphorous, chemical oxygen demand, whole effluent toxicity, etc.

11. ***Technology-Based Limits for Municipal Facilities (POTWs) –*** Technology-based effluent limits require a minimum level of treatment for industrial/municipal point sources based on currently available treatment technologies while allowing the Discharger to use any available control techniques to meet the effluent limits.

The 1972 CWA required POTWs to meet performance requirements based on available wastewater treatment technology. Section 301 of the CWA established a required performance level—referred to as "secondary treatment"—that all POTWs were required to meet by July 1, 1977. More specifically, Section 301(b)(1)(B) of the CWA required that USEPA develop secondary treatment standards for POTWs as defined in Section 304(d)(1). Based on this statutory requirement, USEPA developed national secondary treatment regulations, which are specified in 40 CFR 133. These technology-based regulations apply to all POTWs and identify the minimum level of effluent quality to be attained by secondary treatment in terms of five-day biochemical oxygen demand, total suspended solids, and pH.

12. ***Water Quality Based Effluent Limits (WQBELs) -*** Water quality-based effluent limits are designed to protect the quality of the receiving water by ensuring that State water quality standards are met by discharges from an industrial/municipal point source. If, after technology-based effluent limits are applied, a point source discharge will cause, have the reasonable potential to cause, or contribute to an exceedance of an applicable water quality criterion, then 40 CFR 122.44(d)(1) requires that the permit contain a WQBEL. Although the CWA establishes explicit technology-based requirements for POTWs, Congress did not exempt POTWs from additional regulation to protect water quality standards. As a result, POTWs are also subject to WQBELs. This was upheld by the Appellate Court in *the City of Burbank, City of Los Angeles v. State Water Resources Control Board* case. Applicable water quality standards for the San Gabriel River are contained in the Basin Plan and CTR, as described in previous findings.

13. ***Water Quality Based Effluent Limitations for Toxic Pollutants.*** Toxic substances are regulated in this permit by water quality based effluent limitations derived from the 1994 Basin Plan, the CTR, and/or best professional judgment (BPJ) pursuant to Part 122.44. If a discharge causes, has a reasonable potential to cause, or contribute to a receiving water excursion above a narrative or numeric objective within a State water quality standard, federal law and regulations, as specified in 40 CFR 122.44(d)(1)(i), and in part, the SIP, require the establishment of WQBELs that will protect water quality. As documented in the fact sheet, pollutants exhibiting reasonable potential in the discharge, authorized in this Order, are identified in the Reasonable Potential Analysis (RPA) section and have final effluent limits. Reasonable potential was not triggered for some of the 126 priority pollutants and final limits cannot be determined at this time. The Discharger is required to gather the appropriate data and the Regional Board will determine if final effluent limits are needed. If final limits are needed, the permit will be reopened and limits will be included in the permit.

14. ***Basis for Effluent Limits for 303(d) Listed Pollutants -*** For 303(d) listed pollutants, the Regional Board plans to develop and adopt Total Maximum Daily Loads (TMDLs) which will specify wasteload allocations (WLAs) for point sources and load allocations (LA) for non-point sources, as appropriate. Following the adoption of TMDLs by the Regional Board, NPDES permits will be issued, and where appropriate, reopened to include effluent limits consistent with the assumptions of the TMDL, based on applicable WLAs. In the absence of a TMDL, the permits will include water quality-based effluent limitations derived as provided

in the Basin Plan, CTR, and SIP (if applicable). These effluent limits are based on criteria applied end-of-pipe due to no mixing zone or dilution credits allowed.

15. ***303(d) Listed Pollutants -*** On July 25, 2003, USEPA approved the State's most recent list of impaired waterbodies. The list (hereinafter referred to as the 303(d) list) was prepared in accordance with Section 303(d) of the Federal Clean Water Act to identify specific impaired waterbodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources.

The San Gabriel River (SGR) and its tributaries are on the 303(d) List for the following pollutants/stressors, from point and non-point sources:

San Jose Creek Reach 2 (Temple to I-10 at White Ave.) -- Hydrologic Unit 405.51:
- algae, and high coliform count;

San Jose Creek Reach 1 (SGR confluence to Temple St.)—Hydro. Unit 405.41:
- algae, and high coliform count;

San Gabriel River Reach 3 (Whittier Narrows to Ramona) – Hydro. Unit 405.41
- toxicity

San Gabriel River Reach 2 (Firestone to Whittier N. Dam) – Hydro. Unit 405.15:
- copper (dissolved), high coliform count, lead, and zinc (dissolved);

San Gabriel River Reach 1 (Estuary to Firestone) -- Hydrologic Unit 405.15
- abnormal fish histology, algae, high coliform count, and toxicity; and,

San Gabriel River Estuary -- Hydrologic unit 405.15
- abnormal fish histology.

The Regional Board revised the 303(d) list in 2002 and submitted the draft to the State Board for approval. The State Board had scheduled the draft 303(d) list, dated October 15, 2002, for approval at two of its meetings, however the item was postponed to hold additional workshops and to allow more time for the public to submit comments. The draft 303(d) list dated October 15, 2002, was revised on January 13, 2003, based on comments received. The draft 303(d) list, dated January 13, 2003, was adopted by the State Board at its February 4, 2003 meeting. The adopted 303(d) list was approved by USEPA on July 25, 2003.

16. ***Relevant Total Maximum Daily Loads (TMDLs).*** A TMDL is a determination of the amount of a pollutant, from point, nonpoint, and natural background sources, including a margin of safety, which may be discharged to a water quality-limited water body. Section 303(d) of the CWA established the TMDL process. The statutory requirements are codified at 40 CFR, Part 130.7. TMDLs must be developed for the pollutants of concern, which impact the water quality of water bodies on the 303(d) list. Under the federal consent decree, the San Gabriel River was listed for toxicity, algae, coliform, and metals. The ammonia listing was removed on the 2002 303(d) list because the POTWs were scheduled to implement nitrification/denitrification. Under the federal consent decree, USEPA

was to establish TMDLs for algae and pollutants causing toxicity by March 22, 2004. USEPA has requested a multi-year extension of the consent decree deadline for the nutrient TMDL from the litigants. The approval of the extension is currently under review, and USEPA has been given a temporary 60-day extension (until May 21, 2004) while the litigants review the request for more time. Under the federal consent decree the, the San Gabriel River metals TMDL is scheduled to be adopted by the Regional Board by March 22, 2006.

17. ***Mixing Zones and Dilution Credits -*** Mixing zones, dilution credits, and attenuation factors are not allowed in this Order. Allowance of a mixing zone is in the Regional Board's discretion under Section 1.4.2 of the SIP and under the Basin Plan (Basin Plan Chapter 4, page 30). If the Discharger subsequently conducts appropriate mixing zone and dilution credit studies, the Regional Board can evaluate the propriety of granting a mixing zone or establishing dilution credits. The Regional Board has concluded mixing zones and dilution credits would be inappropriate to grant, at this time, in light of the following factors:

    A. The Pomona WRP discharge contributes the largest flow (effluent dominated) into the South Fork San Jose Creek, within the San Gabriel River watershed, in the vicinity of the discharge point where it overwhelms the receiving water providing very limited mixing and dilution;

    B. Even in the absence of the Pomona WRP discharge, the receiving water primarily consists of nuisance flows and other effluents, limiting its assimilative capacity;

    C. Several reaches of the San Gabriel River [including those subject to this Order] are 303(d) listed (i.e., impaired) for certain constituents;

    D. Impaired waters do not have the capacity to assimilate pollutants of concern at concentrations greater than the applicable objective;

    E. For the protection of the beneficial uses listed in Section VI.7 of this Fact Sheet;

    F. Consistent with Antidegradation Policies;

    G. Because a mixing zone study has not been conducted;

    H. Because hydrologic models of the discharge and the receiving waters have not been conducted;

    I. Because there has been no Site-specific Soil Attenuation Study nor Fate and Transportation Modeling performed.

18. Specific effluent limitations for each constituent contained in this order were developed in accordance with the foregoing laws, regulations, plans, policies, and guidance. The specific methodology and example calculations are documented in the fact sheet prepared by Regional Board staff that accompanies this Order.

VIII. REASONABLE POTENTIAL ANALYSIS

1. As specified in 40 CFR, Part 122.44(d)(1)(i), permits are required to include limits for all pollutants "which the Director (defined as the Regional Administrator, State Director, or authorized representative in 40 CFR, Part 122.2) determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard."

   A. Using the method described in the TSD, the Regional Board has conducted Reasonable Potential Analysis (RPA) for:

      1. Chronic Toxicity - RPA was conducted for Chronic Toxicity (Table R2 of the accompanying Fact Sheet) using the discharger's effluent data from their ROWD and annual self monitoring reports. Chronic Toxicity effluent data is summarized in Table D1 of the accompanying Fact Sheet. The RPA compares the effluent data with USEPA's 1 TUc water quality criteria. The Discharger's effluent demonstrated Chronic Toxicity during the last permit cycle. Based on this information, the Regional Board has determined that there is a reasonable potential that the discharge will cause toxicity in the receiving water and, consistent with SIP section 4, the Order contains a narrative effluent limitation for Chronic Toxicity. The circumstances warranting a numeric Chronic Toxicity effluent limitation were reviewed by the State Board in SWRCB/OCC Files A-1496 & A-1496(a) [Los Coyotes/Long Beach Petitions]. On September 16, 2003, the State Board adopted Order No. WQO 2003-0012, deferring the numeric chronic toxicity effluent limitation issue until the adoption of Phase II of the SIP, and replaced the numeric chronic toxicity effluent limitation with a narrative effluent limitation for the time being.

      2. Ammonia-N, other Nitrogen Species, and MBAS – RPA was conducted for Ammonia, Nitrate plus Nitrite as Nitrogen, Nitrite Nitrogen, and MBAS (Table **R2** of the accompanying Fact Sheet) using the Discharger's effluent data from their self monitoring reports. Ammonia, Nitrate plus Nitrite as Nitrogen, and Nitrite Nitrogen effluent data is summarized in Table A1 of the accompanying Fact Sheet. Temperature and pH effluent data is summarized in Table A1 of the accompanying Fact Sheet. The RPA compares the effluent data with the Basin Plan WQOs. The Discharger's effluent exceeded the Basin Plan WQOs for Ammonia, Nitrate plus Nitrite as Nitrogen, and Nitrite Nitrogen, during the last permit cycle. Based on this information, the Regional Board has determined that there is a reasonable potential that the discharge will cause or contribute to an exceedance of the Basin Plan WQOs and, consistent with 40 CFR 122.44(d), the Order contains numeric effluent limitations for Ammonia, Nitrate plus Nitrite as Nitrogen, and Nitrite Nitrogen.

B. Using the method described in the SIP, the Regional Board has conducted RPA for priority pollutants using the discharger's effluent data contained in Table D1. The RPA compares the effluent data with water quality objectives in the Basin Plan and CTR.

1. ***Reasonable Potential Determination -*** The RPA (per the SIP) involves identifying the observed maximum pollutant concentration in the effluent (MEC) for each constituent based on the effluent concentration data. There are three tiers to determining reasonable potential. If any of the following three tiers is triggered, then reasonable potential exists:

   a. For the first tier, the MEC is compared with the lowest applicable Water Quality Objective (WQO), which has been adjusted for pH, hardness and translator data, if appropriate. If the MEC is greater than the (adjusted) WQO, then there is reasonable potential for the constituent to cause or contribute to an excursion above the WQO and a WQBEL is required. However, if the pollutant was not detected in any of the effluent samples and all of the reported detection limits are greater than or equal to the WQO, proceed with Tier 2. The Regional Board exercised its discretion in identifying all available, valid, relevant, representative data and information in accordance with SIP Section 1.2 (page 8).

   b. For the second tier, if the MEC is less than the adjusted WQO, then the observed maximum ambient background concentration (B) for the pollutant is compared with the adjusted WQO. If B is greater than the adjusted WQO, then a WQBEL is required. If B is less than the WQO, then a limit is only required under certain circumstances to protect beneficial uses. If a constituent was not detected in any of the effluent samples and all of the detection limits are greater than or equal to the adjusted WQO, then the ambient background water quality concentration is compared with the adjusted WQO. The Regional Board exercised its discretion in identifying all available, applicable ambient background data in accordance with SIP Section 1.4.3 (page 16).

   c. For the third tier, other information is used to determine RPA, such as the current CWA 303(d) List. Section 1.3 of the SIP describes the type of information that can be considered in Tier 3.

   For all parameters that have reasonable potential to cause or contribute to an exceedance of a WQO/criteria, numeric WQBELs are required. Section 1.4, Step 5 of the SIP (Page 8) states that MDELs shall be used for POTWs in place of average weekly

limitations. WQBELs are based on CTR, USEPA water quality criteria, and Basin Plan objectives.

If the data are unavailable or insufficient to conduct the RPA for the pollutant, or if all reported detection limits of the pollutant in the effluent are greater than or equal to the WQO, the Regional Board shall establish interim requirements, in accordance with Section 2.2.2. of the SIP, that require additional monitoring for the pollutant in place of a WQBEL. The effluent monitoring data from July 1995 to December 2003 indicate that the following constituents were not detected and their lowest detection limits were greater than their corresponding CTR WQO: 2,3,7,8-TCDD, benzidine, benzo(a)anthracene, 3,3'-dichlorobenzene, 1,2-diphenylhydrazine, hexachlorobenzene, aldrin, chlordane, 44'-DDD, dieldrin, heptachlor, heptachlor epoxide, PCBs, and toxaphene.

Therefore these constituents require interim requirements. Section 2.4.5 of the SIP discusses how compliance will be determined in those cases. The Discharger should work with the laboratory to lower detection levels to meet applicable and reliable detection limits; follow procedures set forth in 40 CFR Part 136; and, report the status of their findings in the annual report. During the term of the permit, if and when monitoring with lowered detection limits shows any of the priority pollutants at levels exceeding the applicable WQOs, the Discharger will be required to initiate source identification and control for the particular pollutant. Appendix 4 of the SIP lists the minimum levels and laboratory techniques for each constituent.

Upon completion of the required monitoring, the Regional Board shall use the gathered data to conduct RPA and determine if a WQBEL is required. However, if Tier 1 or Tier 3 triggered reasonable potential for a pollutant, then the lack of receiving water data for Tier 2 evaluation would not prohibit the establishing of WQBELs in the permit.

A numerical limit has not been prescribed for a toxic constituent if it has been determined that it has no reasonable potential to cause or contribute to excursions of water quality standards. However, if the constituent had a limit in the previous permit, and if none of the Antibacksliding exceptions apply, then the limit will be retained. A narrative limit to comply with all water quality objectives is provided in *Standard Provisions* for the priority pollutants, which have no available numeric criteria.

2. ***RPA Data -*** The RPA was based on effluent monitoring data for July 1995 through November 2003, including interim monitoring results from July 2001 to December 2002. Table R1 of the fact sheet summarizes the RPA, lists the constituents, and where available, the lowest, adjusted WQO, the MEC, the "Reasonable Potential" result, and the limits from the previous permit.

a. **Metals Water Quality Objective -** For metals, the lowest applicable WQO was expressed as total recoverable, and where applicable, adjusted for hardness. A spreadsheet (Table R3) was used to calculate the total recoverable CTR criteria. Hardness values from samples collected in the receiving water upstream of the discharge point are typically averaged and used to determine the appropriate CTR WQO for those hardness-dependent metals. However, there was no receiving water data upstream of the discharge point. Therefore, the average effluent hardness values were used to determine the appropriate CTR WQO for hardness-dependent metals. Individual harness values greater than 400 mg/L were capped at 400 prior to calculating the average hardness. This is consistent with the preamble to the CTR, contained in Federal Register Section E.f. *Hardness* (p.31692), 40 CFR Part 131.

b. **Interim Monitoring Requirements -** In accordance with the SIP, the Regional Board may impose interim monitoring requirements upon the Discharger, so that the Discharger obtains adequate ambient, background water data for priority pollutants upstream of the discharge point as well as suitable effluent data. The Executive Officer directed the Discharger to begin an interim monitoring program for the duration of 18 months, beginning July 2001. The Discharger collected the eighteen required samples and reported the results quarterly to the Regional Board. After additional information is gathered, Regional Board staff will conduct RPA once again, to determine if additional numeric limitations are necessary. Section 1.3, Step 8, of the SIP authorizes the Regional Board to use the gathered data to conduct RPA, as outlined in Steps 1 through 7, and determine if a water quality-based effluent limitation is required.

A reopener provision is included in this Order that allows the permit to be reopened to allow the inclusion of new numeric limitations for any constituent that exhibits reasonable potential to cause or contribute to exceedance of applicable water quality objectives.

C. The numeric limitations contained in this Order are intended to protect and maintain existing and potential beneficial uses of the receiving waters. Environmental benefits provided by these limitations are reasonable and necessary.

D. Regional Board staff have determined that lead, mercury, cyanide, and acrylonitrile showed the potential to exceed respective CTR objectives, and, therefore, require CTR-based effluent limitations.

2. This Order is consistent with State and Federal antidegradation policies in that it does not authorize a change in the quantity of wastewater discharged by the facility, nor does it authorize a change or relaxation in the manner or level of treatment. As a result, both the quantity and quality of the discharge are expected to remain the same consistent with antidegradation policies. The accompanying monitoring and reporting program requires continued data collection and if monitoring data show a reasonable potential for a constituent to cause or contribute to an exceedance of water quality standards, the permit will be reopened to incorporate appropriate WQBELs. Such an approach ensures that the discharge will adequately protect water quality standards for potential and existing uses and conforms with antidegradation policies and antibacksliding provisions.

IX. PROPOSED EFFLUENT LIMITATIONS

1. Numeric toxic constituent limitations are based on the Basin Plan the narrative water quality objective for toxic constituents, "All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in, human, plant, animal, or aquatic life"; on the CTR; and, the interpretation of the Basin Plan narrative criteria using USEPA's 304(a) nationally recommended water quality criteria. For toxic constituents that have no reasonable potential to cause or contribute to excursions of water quality objectives, no numerical limitations are prescribed.

2. Pursuant to 40 CFR 122.45(d)(2), for a POTWs continuous discharges, all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall, unless impracticable, be stated as average weekly and average monthly discharge limitations for POTWs. It is impracticable to only include average weekly and average monthly effluent limitations in the permit, because a single daily discharge of a pollutant, in excess amounts, can cause violations of water quality objectives. The effects of pollutants on aquatic organisms are often rapid. For many pollutants, an average weekly or average monthly effluent limitation alone is not sufficiently protective of beneficial uses. As a result, maximum daily effluent limitations, as referenced in 40 CFR 122.45(d)(1), are included in the permit.

3. Furthermore, Section 1.4 of the SIP requires the step-by-step procedure to "adjust" or convert CTR numeric criteria into Average Monthly Effluent Limitations (AMELs) and Maximum Daily Effluent Limitations (MDELs), for toxics.

   A. Step 3 of Section 1.4 of the SIP (page 6) lists the statistical equations that adjust CTR criteria for effluent variability.

   B. Step 5 of Section 1.4 of the SIP (page 8) lists the statistical equations that adjust CTR criteria for averaging periods and exceedance frequencies of the criteria/ objectives. This section also reads, "For this method only, maximum daily effluent limitations shall be used for publicly-owned treatment works (POTWs) in place of average weekly limitations.

4. Table R is the spreadsheet that staff used to calculate the AMELs and MDELs for priority pollutants.

5. 40 CFR section 122.45(f)(1) requires that except under certain conditions, all permit limits, standards, or prohibitions be expressed in terms of mass units. 40 CFR section 122.45(f)(2) allows the permit writer, at its discretion, to express limits in additional units (e.g., concentration units). The regulations mandate that, where limits are expressed in more than one unit, the permittee must comply with both.

6. Generally, mass-based limits ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limits. Concentration-based effluent limits, on the other hand, discourage the reduction in treatment efficiency during low-flow periods and require proper operation of the treatment units at all times. In the absence of concentration-based effluent limits, a permittee would be able to increase its effluent concentration (i.e., reduce its level of treatment) during low-flow periods and still meet its mass-based limits. To account for this, this permit includes mass and concentration limits for some constituents.

A. Effluent Limitations:

1. Limits for Conventional and non-conventional pollutants:

Constituent	Units	Discharge Limitations		
		Daily Maximum [1]	Weekly Average[2]	Monthly Average[2]
BOD_5 20°C [4]	mg/L	45	30	20
	lbs/day[3]	5,600	3,800	2,500
Suspended solids[4]	mg/L	45	40	15
	lbs/day[3]	5,600	5,000	1,900
Settleable solids [5]	ml/L	0.3	--	0.1
Oil and grease [6]	mg/L	15	--	10
	lbs/day[3]	1,900	--	1,200
Total residual chlorine [7]	mg/L	0.1[8]	--	--
Fluoride [9]	mg/L	--	--	1.6
	lbs/day[3]	--	--	200
Total dissolved solids [10]	mg/L	--	--	750
	lbs/day[3]	--	--	94,000
Chloride [10]	mg/L	--	--	180
	lbs/day[3]	--	--	23,000
Sulfate [10]	mg/L	--	--	300
	lbs/day[3]	--	--	38,000
Boron [10]	mg/L	--	--	1.0
	lbs/day[3]	--	--	130
MBAS [11]	mg/L	--	--	0.5
	lbs/day[3]	--	--	63
Total inorganic nitrogen [12]	mg/L	---	--	8
(nitrate + nitrite as nitrogen)	lbs/day[3]	---	--	1000
Nitrite-N (as N)	mg/L	--	--	1.0
	lbs/day[3]	--	--	130
Total Ammonia [13]	mg/L	[14]	--	[15]

Constituent	Units	Discharge Limitations		
		Daily Maximum [1]	Weekly Average[2]	Monthly Average[2]
	lbs/day	[3]	--	[3]

[1] The daily maximum effluent concentration limit shall apply to both flow weighted 24-hour composite samples and grab samples, as specified in the Monitoring and Reporting Program (Attachment T).

[2] Average Monthly Discharge Limitation means the highest allowable average of daily discharge over a calendar month, calculated as the sum of all daily discharges measures during that month divided by the number of days on which monitoring was performed.

Average Weekly Discharge Limitation means the highest allowable average of daily discharge over a calendar week, calculated as the sum of all daily discharges measures during that week divided by the number of days on which monitoring was performed.

[3] The mass emission rates are based on the plant design flow rate of 15.0 mgd, and are calculated as follows: Flow (MDG) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

[4] See detailed information on the following Section IX.6.B.a.

[5] See detailed information on the following Section IX.6.B.b.

[6] See detailed information on the following Section IX.6.B.c.

[7] See detailed information on the following Section IX.6.B.d.

[8] For the determination of compliance with total residual chlorine limit, one of the following applies:

a. Total residual chlorine concentration excursions of up to 0.3 mg/L, at the point in treatment train immediately following dechlorination, shall not be considered violations of this requirement provided the total duration of such excursions do not exceed 15 minutes during any calendar day. Peaks in excess of 0.3 mg/L lasting less than one minute shall not be considered a violation of this requirement; or

b. For continuous total residual chlorine recording devices that require greater than one minute to level off after the detection of a spike: if it can be demonstrated that a stoichiometrically appropriate amount of dechlorination chemical has been added to effectively dechlorinate the effluent to 0.1 mg/L or less, then the exceedance over one minute, but not for more than five minutes, will not be considered to be a violation.

[9] See detailed information on the following Section IX.6.B.e.

[10] See detailed information on the following Section IX.6.B.f.

[11] See detailed information on the following Section IX.6.B.h.

[12] See detailed information on the following Section IX.6.B.i.

[13] See detailed information on the following Section IX.6.B.j.

[14] The Discharger must comply with the updated ammonia water quality objectives in the Basin Plan, Table 3-1 (Attachment H) which resulted from Resolution No. 2002-011 adopted by the Regional Board on April 25, 2002.

For compliance with Criteria Maximum Concentration (CMC) in the Attachment H, the pH sample collected in the receiving water downstream of the discharge and the ammonia nitrogen sample collected in the effluent, shall be taken and reported at the same time. Should there be no receiving water present, the pH of the

effluent at the end of pipe shall be determined and reported. However, the Discharger has the option of using average effluent pH and temperature, as approved by the Executive Officer.

[15] The Discharger must comply with the updated ammonia water quality objectives in the Basin Plan, Table 3-3 (Attachment H) which resulted from Resolution No. 2002-011 adopted by the Regional Board on April 25, 2002.

For compliance with Criteria Continuous Concentration (CCC) in the Attachment H, the pH and temperature samples collected in the receiving water downstream of the discharge and the ammonia nitrogen sample collected in the effluent, shall be taken and reported at the same time. Shall there be no receiving water present, the pH and temperature of the effluent at the end of pipe shall be determined and reported. However, the Discharger has the option of using average effluent pH and temperature, as approved by the Executive Officer.

B. Basis for Conventional and nonconventional pollutants:

a. *Biochemical Oxygen Demand (BOD) and Suspended solids*

Biochemical oxygen demand (BOD) is a measure of the quality of the organic matter in the water and, therefore, the water's potential for becoming depleted in dissolved oxygen. As organic degradation takes place, bacteria and other decomposers use the oxygen in the water for respiration. Unless there is a steady re-supply of oxygen to the system, the water will quickly become depleted of oxygen. Adequate dissolved oxygen levels are required to support aquatic life. Depressions of dissolved oxygen can lead to anaerobic conditions resulting in odors, or, in extreme cases, in fish kills.

40 CFR Part 133 describes the minimum level of effluent quality attainable by secondary treatment, for BOD and suspended solids, as:
- the monthly average shall not exceed 30 mg/L and
- the 7-day average shall not exceed 45 mg/L.

Pomona WRP provides tertiary treatment, as such, the limits in the permit are more stringent than secondary treatment requirements. The Plant achieves solids removal that are better than secondary-treated wastewater by adding a polymer (Alum) to enhance the precipitation of solids, and by filtering the effluent.

The monthly average, the 7-day average, and the daily maximum limits cannot be removed because none of the antibacksliding exceptions under apply. Those limits were all included in the previous permit (Order 95-078) and the Pomona WRP has been able to meet all three limits (monthly average, the 7-day average, and the daily maximum), for both BOD and suspended solids.

In addition to having mass-based and concentration-based effluent limitations for BOD and suspended solids, the Pomona WRP also has a percent removal requirement for these two constituents. In accordance with 40 CFR section 133.102(a)(3) and 133.102(b)(3), the 30-day average percent removal shall not be less than 85 percent. Percent removal is defined as a percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as

determined from the 30-day average values of the raw wastewater influent pollutant concentrations to the facility and the 30-day average values of the effluent pollutant concentrations for a given time period.

b. *Settleable solids*

Excessive deposition of sediments can destroy spawning habitat, blanket benthic (bottom dwelling) organisms, and abrade the gills of larval fish. The limits for settleable solids are based on the Basin Plan (page 3-16) narrative, "Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses." The numeric limits are empirically based on results obtained from the settleable solids 1-hour test, using an Imhoff cone.

It is impracticable to use a 7-day average limitation, because short-term spikes of settleable solid levels that would be permissible under a 7-day average scheme would not be adequately protective of all beneficial uses. The monthly average and the daily maximum limits cannot be removed because none of the antibacksliding exceptions apply. The monthly average and daily maximum limits were both included in the previous permit (Order 95-078) and the Pomona WRP has been able to meet both limits.

c. *Oil and grease*

Oil and grease are not readily soluble in water and form a film on the water surface. Oily films can coat birds and aquatic organisms, impacting respiration and thermal regulation, and causing death. Oil and grease can also cause nuissance conditions (odors and taste), are aesthetically unpleasant, and can restrict a wide variety of beneficial uses. The limits for oil and grease are based on the Basin Plan (page 3-11) narrative, "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."

The numeric limits are empirically based on concentrations at which an oily sheen becomes visible in water. It is impracticable to use a 7-day average limitation, because spikes that occur under a 7-day average scheme could cause a visible oil sheen. A 7-day average scheme would not be sufficiently protective of beneficial uses. The monthly average and the daily maximum limits cannot be removed because none of the antibacksliding exceptions apply. Both limits were included in the previous permit (Order 95-078) and the Pomona WRP has been able to meet both limits.

d. *Residual chlorine*

Disinfection of wastewaters with chlorine produces a chlorine residual. Chlorine and its reaction products are toxic to aquatic life. The limit for residual chlorine is based on the Basin Plan (page 3-9) narrative, "Chlorine residual shall not be present in surface water discharges at

concentrations that exceed 0.1 mg/L and shall not persist in receiving waters at any concentration that causes impairment of beneficial uses."

It is impracticable to use a 7-day average or a 30-day average limitation, because it is not as protective as of beneficial uses as a daily maximum limitation is. Chlorine is very toxic to aquatic life and short term exposures of chlorine may cause fish kills.

e. *Fluoride*

The existing permit effluent limitation of 1.6 mg/l for fluoride was developed based on the Basin Plan incorporation of Title 22, *Drinking Water Standards,* by reference, for the protection of GWR. It is practicable to express the limit as a monthly average, since fluoride is not expected to cause acute effects on beneficial uses.

f. *Total Dissolved Solids, Sulfate, Chloride, and Boron*

The limits for total dissolved solids, sulfate, and boron are based on Basin Plan Table 3-8 (page 3-13), for the San Gabriel River watershed between Ramona Boulevard and Firestone Boulevard. TDS = 750 mg/L; Sulfate = 300 mg/L; and Boron = 1.0. The Chloride limit is no longer 150 mg/L, but 180 mg/L, which resulted from Regional Board Resolution No. 97-02*, Amendment to the Water Quality Control Plan to incorporate a Policy for Addressing Levels of Chloride in Discharges of Wastewaters*. Resolution 97-02 was adopted by Regional Board on January 27, 1997; approved by SWRCB (Resolution 97-94); and, approved by OAL on January 8, 1998; and served to revise the chloride water quality objective in the San Gabriel River and other surface waters. It is practicable to express these limits as monthly averages, since they are not expected to cause acute effects on beneficial uses.

g. *Iron*

The existing permit effluent limitation of 300 mg/l for iron was developed based on the USEPA document, *Quality Criteria for Water 1986* [EPA 440/5-86-001, May 1, 1986], also referred to as the *Gold Book*, for the protection of GWR beneficial use. 300 µg/L is the secondary MCL for iron, however iron is not a priority pollutant. The monthly average limit included in the previous permit (Order 95-078) was removed because one of the antibacksliding exceptions apply. New monitoring information and the TSD methodology was used to determine that there was no reasonable potential for the treated effluent to exceed the Gold Book criteria for iron.

h. *Methylene Blue Activated Substances (MBAS)*

The MBAS procedure tests for the presence of anionic surfactants (detergents) in surface and ground waters. Surfactants disturb the water surface tension, which affects insects and can affect gills in aquatic life. The MBAS can also impart an unpleasant soapy taste to water, as well

as cause scum and foaming in waters, which impact the aesthetic quality of both surface and ground waters.

Given the nature of the facility (a POTW) which accepts domestic wastewater into the sewer system and treatment plant, and the characteristics of the wastes discharged, the discharge has reasonable potential to exceed both the numeric MBAS water quality objective (WQO) and the narrative WQO for prohibition of floating material such as foams and scums. Therefore an effluent limitation is required.

In self-monitoring reports submitted to the Regional Board under MRP requirements, the Discharger has reported MBAS concentrations in the effluent in excess of 0.5 mg/L. The 0.5 mg/L concentration (which has been determined to be protective of beneficial uses and the aesthetic quality of waters), is based on the Department of Health Services' secondary drinking water standard, and on the Basin Plan WQO (p.3-11) which reads, "Waters shall not have MBAS concentrations greater than 0.5 mg/L in waters designated MUN." While the wastewater from this POTW is not directly discharged into a MUN designated surface water body, it will percolate into unlined reaches of the Santa Clara River [via ground water recharge designated beneficial use (GWR)] to ground water designated for MUN beneficial use. In addition, the Basin Plan states that "Ground water shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses." Therefore, the secondary MCL should be the MBAS limit for this discharge to protect ground water recharge and the MUN use of the underlying ground water, while also protecting surface waters from exhibiting scum or foaming.

Since the Basin Plan objective is based on a secondary drinking water standard, it is practicable to have a monthly average limitation in the permit.

i. *Total inorganic nitrogen*

Total inorganic nitrogen is the sum of Nitrate-nitrogen and Nitrite-nitrogen. Nitrogen is considered a nutrient. High nitrate levels in drinking water can cause health problems in humans. Infants are particularly sensitive and can develop methemoglobinemia (blue-baby syndrome). The nitrite-N limit of 1 mg/L is based on the Basin Plan WQO located on page 3-11.

1. **Algae**. Several reaches of the San Gabriel River are 303(d) listed for algae. Excessive growth of algae and/or other aquatic plants can degrade water quality. Algal blooms sometimes occur naturally, but they are often the result of excess nutrients (i.e., nitrogen, phosphorus) from waste discharges or nonpoint sources. These algal blooms can lead to problems with tastes, odors, color, and increased turbidity and can depress the dissolved oxygen content of the water, leading to fish kills. Floating algal scum and algal mats are also an aesthetically unpleasant nuisance.

The 303(d) listing for algae is being addressed by applying the narrative WQO for biostimulatory substances, "Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses," and other relevant information to arrive at a mass based-limit intended to be protective of the beneficial uses, pursuant to 40 CFR 122.44(d). Total nitrogen will be the indicator parameter intended to control algae, pursuant to 40 CFR 122.44(d)(1)(vi)(C).

2. **Concentration-based limit**. The effluent limit for total inorganic nitrogen (NO2-N + NO3-N) of 8 mg/L is based on Basin Plan Table 3-8 (page 3-13), for the San Gabriel River watershed (between Ramona Boulevard and Firestone Boulevard)

3. **Mass based limit.** The mass emission rates are based on the plant design flow rate of 15.0 mgd.

Watershed-wide monitoring will track concentration levels of phosphorus and all nitrogen series pollutants present in the effluent and receiving waters, pursuant to 40 CFR 122.44(d)(1)(vi)(C)(3).

j. *Ammonia-nitrogen*

1. Ammonia is a pollutant routinely found in the wastewater effluent of POTWs, in landfill-leachate, as well as in run-off from agricultural fields where commercial fertilizers and animal manure are applied. Ammonia exists in two forms – un-ionized ammonia (NH_3) and the ammonium ion (NH_4^+). They are both toxic, but the neutral, un-ionized ammonia species (NH_3) is much more toxic, because it is able to diffuse across the epithelial membranes of aquatic organisms much more readily than the charged ammonium ion. The form of ammonia is primarily a function of pH, but it is also affected by temperature and other factors. Additional impacts can also occur as the oxidation of ammonia lowers the dissolved oxygen content of the water, further stressing aquatic organisms. Oxidation of ammonia to nitrate may lead to groundwater impacts in areas of recharge. [There is groundwater recharge in these reaches]. Ammonia also combines with chlorine (often both are present in POTW treated effluent discharges) to form chloramines – persistent toxic compounds that extend the effects of ammonia and chlorine downstream.

2. Ammonia is 303(d) listed in the San Gabriel River and San Jose Creek. Since ammonia has reasonable potential to cause or contribute to an excursion of a water quality objective, a water quality-based effluent limitation for total ammonia is required in order to be protective of the water quality objective.

3. The 1994 Basin Plan contained water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Board, with the adoption of Resolution No. 2002-011, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (including enclosed bays, estuaries and wetlands) with Beneficial Use designations for protection of Aquatic Life*. Resolution No. 2002-011 was approved by the State Board, the Office of Administrative Law, and USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively, and is now in effect. The final effluent limitations for ammonia prescribed in this Order are based on the revised ammonia criteria (see Attachment H) and apply at the end of pipe.

k. *Coliform/Bacteria*

Total and fecal coliform bacteria are used to indicate the likelihood of pathogenic bacteria in surface waters. Given the nature of the facility, a wastewater treatment plant, pathogens are likely to be present in the effluent in cases where the disinfection process is not operating adequately. As such, the permit contains the following:

1. Effluent Limitations:

   a. The 7 day median number of coliform organisms at some point in the treatment process must not exceed 2.2 Most Probable Number (MPN) per 100 milliliters, and

   b. The number of coliform organisms must not exceed 23 MPN per 100 milliliters in more than one sample within any 30-day period.

   These disinfection-based effluent limitations for coliform are for human health protection and are consistent with requirements established by the Department of Health Services. These limits for coliform must be met at the point of the treatment train immediately following disinfection, as a measure of the effectiveness of the disinfection process.

2. Receiving Water Limitation

   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 Limits

      * E.coli density shall not exceed 235/100 mL.

* Fecal coliform density shall not exceed 400/100 mL.

These receiving water limitations are based on Resolution No. 01-018, Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Bacteria Objectives for Water Bodies Designated for Water Contact Recreation, adopted by the Regional Board on October 25, 2001. The Resolution was approved by State Board, OAL, and USEPA, on July 18, 2002, September 19, 2002, and September 25, 2002, respectively.

l. pH

The hydrogen ion activity of water (pH) is measured on a logarithmic scale, ranging from 0 to 14. While the pH of "pure" water at 25°C is 7.0, the pH of natural waters is usually slightly basic due to the solubility of carbon dioxide from the atmosphere. Minor changes from natural conditions can harm aquatic life. The effluent limitation for pH which reads, "the wastes discharged shall at all times be within the range of 6.5 to 8.5," is taken from the Basin Plan (page 3-15) which reads" the pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharge.

m. Turbidity

Turbidity is an expression of the optical property that causes light to be scattered in water due to particulate matter such as clay, silt, organic matter, and microscopic organisms. Turbidity can result in a variety of water quality impairments. The effluent limitation for turbidity which reads, "For the protection of the water contact recreation beneficial use, the wastes discharged to water courses shall have received adequate treatment, so that the turbidity of the wastewater does not exceed: (a) a daily average of 2 Nephelometric turbidity units (NTUs); and (b) 5 NTUs more than 5 percent of the time (72 minutes) during any 24 hour period," is based on the Basin Plan (page 3-17).

n. Radioactivity

Radioactive substances are generally present in natural waters in extremely low concentrations. Mining or industrial activities increase the amount of radioactive substances in waters to levels that are harmful to aquatic life, wildlife, or humans. The existing effluent limitation for radioactivity which reads, "Radioactivity of the wastes discharged shall not exceed the limits specified in Title 22, Chapter 15, Article 5, Section 64443, of the California Code of Regulations, or subsequent revisions," is based on the Basin Plan incorporation of Title 22, *Drinking Water Standards,* by reference, to protect the surface water MUN beneficial use. However, the Regional Board has new information about the appropriate designated uses for the water body, and based on the current designated uses, a limit for Radioactivity is unnecessary and inappropriate unless discharge is to a reach used for groundwater recharge, where Title 22-based limits apply. Therefore, the accompanying Order will contain a limit for radioactivity to protect the GWR beneficial use.

C. *Toxicity.*

Ambient monitoring data indicates that the background concentration in the lower San Gabriel River is toxic to aquatic organisms, and therefore exceeds water quality standards. Final effluent water quality data, contained in the Discharger's monitoring reports, also shows that chronic toxicity in the effluent has exceeded 1TUc (EPA WQO) several times. Therefore, pursuant to the TSD, reasonable potential exists for toxicity. As such, the permit should contain a numeric effluent limitation for toxicity.

The following support the inclusion of toxicity numeric effluent limitations for chronic toxicity:

a. 40 CFR 122.2 (Definition of Effluent Limitation);

b. 40 CFR 122.44(d)(v) – limits on whole effluent toxicity are necessary when chemical-specific limits are not sufficient to attain and maintain applicable numeric or narrative water quality standards;

c. 40 CFR 122.44(d)(vi)(A) – where a State has not developed a water quality criterion for a specific pollutant that is present in the effluent and has reasonable potential, the permitting authority can establish effluent limits using numeric water quality criterion;

d. Basin Plan objectives and implementation provisions for toxicity;

e. Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity Programs Final May 31, 1996;

f. Whole Effluent Toxicity (WET) Control Policy July 1994; and,

g. Technical Support Document (several chapters and Appendix B).

However, the circumstances warranting a numeric chronic toxicity effluent limitation when there is reasonable potential were reviewed by the State Water Resources Control Board (State Board) in SWRCB/OCC Files A-1496 & A-1496(a) [Los Coyotes/Long Beach Petitions]. On September 17, 2003, at a public hearing, the State Board decided to defer the issue of numeric chronic toxicity effluent limitations until Phase II of the SIP is adopted. In the mean time, the State Board replaced the numeric chronic toxicity limit with a narrative effluent limitation and a 1 TUc trigger, in the Long Beach and Los Coyotes WRP NPDES permits. This permit contains a similar chronic toxicity effluent limitation. This Order also contains a reopener to allow the Regional Board to modify the permit, if necessary, consistent with any new policy, law, or regulation.

Acute Toxicity Limitation:

The Dischargers may test for Acute toxicity by using USEPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, October 2002 (EPA-821-R-02-012). Acute toxicity

provisions in the accompanying Order are derived from the Basin Plan's toxicity standards (Basin Plan 3-16 and 3-17). The provisions require the Discharger to accelerate acute toxicity monitoring and take further actions to identify the source of toxicity and to reduce acute toxicity.

Chronic Toxicity Limitation and Requirements:

Chronic toxicity provisions in the accompanying Order are derived from the Basin Plan's toxicity standards (Basin Plan 3-16 and 3-17). The provisions require the Discharger to accelerate chronic toxicity monitoring and take further actions to identify the source of toxicity and to reduce chronic toxicity. The monthly median trigger of 1.0 TU_c for chronic toxicity is based on *USEPA Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity (WET) Programs* Final May 31, 1996 (Chapter 2 – Developing WET Permitting Conditions, page 2-8). In cases where effluent receives no dilution or where mixing zones are not allowed, the 1.0 TU_c chronic criterion should be expressed as a monthly median. The "median" is defined as the middle value in a distribution, above which and below which lie an equal number of values. For example, if the results of the WET testing for a month were 1.5, 1.0, and 1.0 TU_c, the median would be 1.0 TU_c.

The *USEPA Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity (WET) Programs* Final May 31, 1996 (Chapter 2 – Developing WET Permitting Conditions, page 2-8) recommends two alternatives: using 2.0 TUc as the maximum daily limit; or using a statistical approach to develop a maximum daily effluent limitation.

D. Limits for priority pollutants for Discharge Serial No. 001:

CTR # [1]	Constituent	Units	Discharge Limitations	
			Monthly Average	Daily Maximum
4	Cadmium	µg/L	5 [c]	---
		lbs/day[3]	0.6	---
7	Lead [6]	µg/L	6.6 [2] [4]	13 [2] [4]
		lbs/day[3]	0.83	1.6
8	Mercury [6]	µg/L	0.051 [4], b	0.10[4], b
		lbs/day[3]	0.0064	0.013
14	Cyanide [6]	µg/L	4.2 [4], a	8.5 [4], a
		lbs/day[3]	0.53	1.1
18	Acrylonitrile [6]	µg/L	0.66 [4], b	1.3 [4], b
		lbs/day[3]	0.083	0.16
38	Tetrachloroethylene	µg/L	5 [c]	---
		lbs/day[3]	0.6	---
68	Bis(2-Ethylhexyl)phthalate	µg/L	4 [c, [7]	---
		lbs/day[3]	0.5 [7]	---
77	1,4-Dichlorobenzene	µg/L	5 [c]	---
	(p-dichlorobenzene)	lbs/day[3]	0.6	---
96	N-Nitrosodimethylamine	µg/L	8.1	16
	(NDMA) [5]	lbs/day[3]	1.0	2.0

[1] This number corresponds to the compound number found in Table 1 of CTR. It is simply the order in which the 126 priority pollutants were listed 40 CFR part 131.38 (b)(1).

[2] Concentration expressed as total recoverable.

[3] The mass emission rates are based on the plant design flow rate of 15 mgd, and calculated as follows: Flow (MDG) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

[4] For priority pollutants, Section 2.4.5 of CTR *Compliance Determination*, reads, "Dischargers shall be deemed out of compliance with an effluent limitation if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported ML."

[5] There was RPA (tier 3) for the Pomona WRP effluent to exceed the CTR human health organisms only criteria, therefore, a CTR-based effluent limitation was included in the accompanying Order.

[6] this effluent limitation will not be in effect until May 10, 2009, and until that time the Discharger shall comply with the interim limits established in Section I.A.(9) of the accompanying NPDES Order No. R4-2004-0099.

[7] This effluent limitation will not be in effect until May 10, 2009, and until that time the Discharger shall comply with the interim limits established in the Time Schedule Order No. R4-2004-0100.

Additional Footnotes - Priority Pollutants:

a. Based on most stringent CTR criteria [Criterion Continuous Concentration (CCC)] for the protection of freshwater aquatic life. To arrive at this calculated limitation, the CTR CCC was adjusted, according to SIP Section 1.4.

   Federal Register Vol. 65, No. 97, page 31689, discusses the basis for the aquatic life criteria in the CTR. The Criterion Maximum Concentration (CMC), a short term concentration limit, and the Criterion Continuous Concentration (CCC), a four day concentration limit, are designed to provide protection of aquatic life and its uses from acute and chronic toxicity to animals and plants. The criteria are intended to identify average pollutant concentrations which will produce water quality generally suited to maintenance of aquatic life and designated uses while restricting the duration of excursions over the average so that total exposures will not cause unacceptable adverse effects.

   Federal Register Vol. 65, No. 97, page 31691, discusses how CCC is intended to be the highest concentration that could be maintained indefinitely in a water body without causing an unacceptable effect on aquatic community or its uses.

b. Based on most stringent CTR criteria for the protection of human health from consumption of organisms only. CTR criteria was adjusted according to SIP Section 1.4, to arrive at this calculated limitation.

c. Based on the Basin Plan chemical constituent incorporation of Title 22, *Drinking Water Standards,* by reference, for the protection of GWR beneficial use.

E. Basis for priority pollutants:

Mixing zones, dilution credits, and attenuation factors are not used in the accompanying order and would be inappropriate to grant, at this time, in light of the factors discussed in Section VII.17.A. through I of this Fact Sheet.

Allowance of a mixing zone is in the Regional Board's discretion under Section 1.4.2 of the SIP and under the Basin Plan (Basin Plan Chapter 4,

page 30). If the Discharger subsequently conducts appropriate mixing zone and dilution credit studies, the Regional Board can evaluate the propriety of granting a mixing zone or establishing dilution credits.

F. Example calculation: Cyanide

Is a limit required? What is RPA?

- From Table R, *Reasonable Potential & Limit Derivation*, we determined that Reasonable potential analysis (RPA) = Yes, therefore a limit is required.

Step 1 – Identify applicable water quality criteria.
From California Toxics Rule (CTR), we can obtain the Criterion Maximum Concentration (CMC) and the Criterion Continuous Concentration (CCC).

Freshwater Aquatic Life Criteria:
CMC = 22 µg/L (CTR page 31712, column B1) and
CCC = 5.2 µg/L (CTR page 31712, column B2); and

Human Health Criteria for Water & Organisms = 700 µg/L.

Step 2 – Calculate effluent concentration allowance (ECA)
ECA = Criteria in CTR, since no dilution is allowed.

Step 3 – Determine long-term average (LTA) discharge condition

a. Calculate CV:
CV = Standard Deviation / Mean
= 0.6 (By default because data was > 80% nondetect, SIP page 6)

b. Find the ECA Multipliers from SIP Table 1 (page 7), or by calculating them using equations on SIP page 6. When CV = 0.6, then:
ECA Multiplier acute = 0.321 and
ECA Multiplier acute = 0.527.

c. LTA acute = ECA acute x ECA Multiplier acute
= 22 µg/L x 0.321 = 7.062 µg/L

d. LTA chronic = ECA chronic x ECA Multiplier chronic
= 5.2 µg/L x 0.527 = 2.7404 µg/L

Step 4 – Select the lowest LTA.
In this case, LTA chronic < LTA acute, therefore lowest LTA = 2.74 µg/L

Step 5 – Calculate the Average Monthly Effluent Limitation (AMEL) & Maximum Daily Effluent Limitation (MDEL) for AQUATIC LIFE.

a. Find the multipliers. You need to know CV and n (frequency of sample collection per month). If effluent samples are collected 4 times a month or less, then n = 4. CV was determined to be 0.6 in a previous step.
AMEL Multiplier = 1.55
MDEL Multiplier = 3.11

b. AMEL aquatic life = lowest LTA (from Step4) x AMEL Multiplier
= 2.74 µg/L x 1.55 = 4.2476 µg/L

c. MDEL aquatic life = lowest LTA (from Step4) x AMEL Multiplier
= 2.74 µg/L x 3.11 = 8.5226 µg/L

Step 6 – Find the Average Monthly Effluent Limitation (AMEL) & Maximum Daily Effluent Limitation (MDEL) for HUMAN HEALTH.

a. Find factors. Given CV = 0.6 and n = 4.
For AMEL human health limit, there is no factor.
The MDEL/AMEL human health factor = 2.01

b. AMEL human health = ECA = 700 µg/L

c. MDEL human health = ECA x MDEL/AMEL factor
= 700 µg/L x 2.01 = 1407

Step 7 – Compare the AMELs for Aquatic life and Human health and select the lowest. Compare the MDELs for Aquatic life and Human health and select the lowest.

a. Lowest AMEL = 4.2 µg/L (Based on Aquatic life protection)

b. Lowest MDEL = 8.5 µg/L (Based on Aquatic life protection)

G. A numerical limit has not been prescribed for a toxic constituent if it has been determined that it has no reasonable potential to cause or contribute to excursions of water quality standards. A narrative limit to comply with all water quality objectives is provided in *Standard Provisions* for the priority pollutants which have no available numeric criteria.

H. The numeric limitations contained in the accompanying Order were derived using best professional judgement and are based on applicable state and federal authorities, and as they are met, will be in conformance with the goals of the aforementioned water quality control plans, and water quality criteria; and will protect and maintain existing and potential beneficial uses of the receiving waters.

X. INTERIM REQUIREMENTS

1. Pollutant Minimization Program

A. The accompanying Order provides for the use of Pollutant Minimization Program, developed in conformance with Section 2.4.5.1 of the SIP, when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than

those methods included in the permit in accordance with sections 2.4.2 or 2.4.3 above, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organisms tissue sampling) that a priority pollutant is present in the discharger's effluent above an effluent limitation.

B. The Discharger shall develop a Pollutant Minimization Program (PMP), in accordance with Section 2.4.5.1.,of the SIP, if all of the following conditions are true, and shall submit the PMP to the Regional Board within 120 days of determining the conditions are true:

a. when there is evidence that the priority pollutant is present in the effluent above an effluent limitation and either:

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

ii. A sample result is reported as nondetect (ND) and the effluent limitation is less than the MDL.

b. Examples of evidence that the priority pollutant is present in the effluent above an effluent limitation are:

i. sample results reported as DNQ when the effluent limitation is less than the method detection limit (MDL);

ii. sample results from analytical methods more sensitive than those methods included in the permit in accordance with Sections 2.4.2 or 2.4.3;

iii. presence of whole effluent toxicity;

iv. health advisories for fish consumption; or,

v. results of benthic or aquatic organism tissue sampling.

C. The goal of the PMP is to reduce all potential sources of a priority pollutant(s) through pollution minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the WQBEL.

D. The Discharger shall propose a plan with a logical sequence of actions to achieve full compliance with the limits in this Order. The first phase of the plan is to investigate the sources of the high levels of contaminants in the collection system. If the sources can be identified, source reduction measures (including, when appropriate, Pollution Minimization Plans) will be instituted. At the time this Order is considered, the Discharger is unsure whether or not all sources contributing to the high contaminant levels can be identified. Therefore, a parallel effort will be made to evaluate the appropriateness of Site Specific Objectives (SSO) and, where appropriate, Use Attainability Analyses (UAA), and modifications to and/or

construction of treatment facilities. If it is determined that a SSO or UAA is necessary and appropriate, the Discharger will submit a written request for a SSO study, accompanied by a preliminary commitment to fund the study, to the Regional Board. The Discharger will then develop a workplan and submit it to the Regional Board for approval prior to the initiation of the studies.

2. Interim Limits

A. The Pomona WRP may not be able to achieve immediate compliance with the limits for lead, mercury, cyanide, acrylonitrile, and bis(2-ethylhexyl)phthalate contained in the accompanying Order Section I.A.2.b Data submitted in previous self-monitoring reports indicate that these constituents have been detected in the effluent/receiving water, at least once, at a concentration greater than the new limit proposed in the accompanying Order.

B. 40 CFR, Section 131.38(e) provides conditions under which interim effluent limits and compliance schedules may be issued. However, until recently, the Basin Plan did not allow inclusion of interim limits and compliance schedules in NPDES permits for effluent limits.

1. With the Regional Board adoption and USEPA approval of Resolution No. 2003-001, compliance schedules can be allowed in NPDES permits if:

a. the effluent limit implements new, revised, or newly interpreted water quality standards, or

b. the effluent limit implements TMDLs for new, revised or newly interpreted water quality standards.

However, the provisions under Resolution No. 2003-001 do not apply to any constituent with a final effluent limitation.

2. The SIP allows inclusion of interim limits in NPDES permits for CTR-based priority pollutants. The CTR provides for a five-year maximum compliance schedule, while the SIP allows for longer, TMDL-based compliance schedule. However, the USEPA has yet to approve the longer compliance schedules. Therefore, this Order includes interim limits and compliance schedules for CTR-based priority pollutant limits, for a maximum of five years, when the Discharger has been determined to have problems in meeting the new limits. This Order also includes a reopener to allow the Regional Board to grant TMDL-based compliance schedules if the USEPA approves the longer compliance schedule provisions of the SIP.

3. For new non-CTR-based limits (bis(2-ethylhexyl)phthalate) prescribed in this Order, for which the Discharger will not be able to meet immediately, interim limits and compliance dates are provided in an accompanying Time Schedule Order R4-2004-0100.

C. In conformance with the CTR and the relevant provisions of SIP Section 2.1, the Discharger has submitted documentation regarding the efforts they have made

to quantify pollutant levels in the discharge and the sources of the pollutants entering the POTW. In addition, the Discharger already has in place a source control and pollutant minimization approach through its existing pollutant minimization strategies and through the pretreatment program. The duration of interim requirements established in this Order was developed in coordination with Regional Board staff and the Discharger, and the proposed schedule is as short as practicable. The five-year compliance schedule is based on the maximum allowable compliance schedule. However, the Discharger anticipates it may take longer than five years to achieve some of the final limits.