California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. 01-45
NPDES NO. CA8000304

Waste Discharge Requirements

for the

Colton/San Bernardino
Regional Tertiary Treatment and Water Reclamation Authority
Regional Tertiary Treatment Rapid Infiltration and Extraction Facility
San Bernardino County

California Regional Water Quality Control Board
Santa Ana Region

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The California Regional Water Quality Control Board, Santa Ana Region (hereinafter, Regional Board), finds that:

1. The Colton/San Bernardino Regional Tertiary Treatment and Water Reclamation Authority (hereinafter, CSBRTTWRA or discharger) presently operates the Regional Tertiary Treatment Rapid Infiltration and Extraction (RIX) facility. The discharge from the RIX facility is currently regulated by Order No. 93-45, National Pollutant Discharge Elimination System (NPDES) No. CA8000304. On June 6, 1997, Order No. 93-45 was amended by Order No. 97-47. Order No. 93-45 as amended expired on July 1, 1998 and was administratively extended until updated waste discharge requirements are adopted by the Regional Board.

2. Order No. 93-45, NPDES No. CA8000304 was originally issued to the Santa Ana Watershed Project Authority[1] (SAWPA), the City of Colton and the City of San Bernardino.

3. On August 2, 1994, the Cities of Colton and San Bernardino (Cities) entered into a Joint Powers Agreement establishing the CSBRTTWRA to operate the RIX facility.

4. On May 7, 1996, SAWPA notified the Regional Board of the transfer of operation of the RIX facility to the CSBRTTWRA. On September 11, 1996, CSBRTTWRA informed the Regional Board of the transfer acceptance.

5. The RIX facility started operation on March 29, 1996. It is located at 1990 West Agua Mansa Road in Colton.

6. On December 23, 1997, the CSBRTTWRA submitted an application for renewal of the NPDES permit for the RIX facility.

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[1] *SAWPA is a Joint Powers Authority composed of the San Bernardino Valley Municipal Water District, the Inland Empire Utilities Agency, the Western Municipal Water District, the Eastern Municipal Water District, and the Orange County Water District. SAWPA is involved in planning, financing, constructing and operating projects which relate to water quality/quantity management.*

7. A year long demonstration of a pilot scale RIX facility was conducted to determine whether the RIX treatment process could provide treatment equivalent to that of conventional tertiary facilities. Based on the results of that demonstration study (*"Rapid Infiltration Extraction (RIX) Demonstration Project" report dated June 8, 1992*), the Department of Health Services (DHS) found that the RIX treatment process (as described in the report) provided treatment equivalent to that of conventional tertiary facilities. DHS' finding of tertiary equivalency was contingent on the implementation and operation of the RIX facility pursuant to the soils, hydrogeologic and operational criteria identified in the report. The demonstration project also included a pilot study to evaluate the effectiveness of a UV disinfection process. As a result of this study, the discharger proposed to utilize UV disinfection in lieu of conventional chlorine disinfection. The DHS has found that an acceptable system for providing UV disinfection must be able to deliver under worst operating conditions a minimum UV dose of 140 milli-watts seconds per square centimeter (mW-s/cm2) at maximum weekly flow and 100 mW-s/cm2 at peak flow (maximum day). In March 2000, Fred Soroushian, the discharger's consultant submitted a report indicating that under certain operating conditions (high percent UV transmittance, very low turbidity and coliform count of influent wastewater into the UV disinfection system, and overall quality of influent wastewater), the recommended UV dosage could be reduced from 140 mW-s/cm2 to 75 mW-s/cm2 and still provide a 4-log virus reduction through the UV disinfection system. The Department of Health Services approved the use of 75 mW-s/cm2 UV dosage provided that the character or flow of the influent to the disinfection system does not significantly differ from that set forth in the March 31, 2000 technical memorandum authored by Fred Soroushian.

8. The RIX facility is designed as a 40 MGD regional tertiary treatment plant. As proposed by CSBRTTWRA, the RIX treatment train includes infiltration of secondary treated wastewaters into a series of ponds under conditions of wet and dry cycles, extraction of the infiltrated wastewater (and over extraction of some groundwater to assure wastewater capture), and disinfection of the extracted water by ultraviolet (UV) light prior to the discharge to the Santa Ana River, Reach 4.

9. The RIX facility accepts secondary treated wastewaters from the City of Colton's Municipal Wastewater Treatment Plant and from the City of San Bernardino's Water Reclamation Facility. These treatment facilities treat domestic, commercial and industrial wastewaters from areas serviced by each city, respectively.

10. The following summarizes relevant information concerning the RIX facility and the two contributory secondary treatment facilities.

DESCRIPTION	RIX FACILITY	CITY OF COLTON MUNICIPAL WASTEWATER TREATMENT PLANT	CITY OF SAN BERNARDINO WATER RECLAMATION PLANT
TREATMENT CAPACITY	40 mgd	6.4 mgd	33 mgd
AVERAGE DISCHARGE FLOW	39.06[2] mgd	5 mgd	25 mgd
SERVICE AREA	Discharges from the Colton and San Bernardino treatment plants	City of Colton, City of Grand Terrace and unincorporated areas of San Bernardino County	City of San Bernardino, City of Loma Linda, City of Highland, areas within the service area of East Valley Water District, former Norton Air Force Base, Patton State Hospital, and unincorporated areas of San Bernardino County
TREATMENT UNIT PROCESSES	The secondary wastewater is applied to a series of shallow earthen basins on a rotational basis so that basins can be operated on alternately wet and dry cycles. Extraction and disinfection using ultraviolet radiation.	Screening and grit removal, primary clarification, biological oxidation, secondary clarification	Screening, grit removal, primary clarification, activated sludge (biological oxidation) with nitrification and denitrification, secondary clarification
SLUDGE TREATMENT AND DISPOSAL		Dissolved air flotation, primary and secondary anaerobic digestion, aerobic digestion, and dewatering by air drying beds or use of mechanical equipment. Processed sludge is composted for landfill application or disposed at a designated landfill	DAF thickeners, primary anaerobic digestion, sludge dewatering using belt press and centrifuge. sludge is disposed of at designated local landfills, by land application or composted.

11. A 7 mgd conventional tertiary sand filter was constructed and placed into service in December 2000 to augment treatment capacity during wet weather conditions.

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[2] *This is the reported effluent flow annual average value. The reported effluent flow highest monthly average value is 46.08 MGD and the reported total volume of discharge is 54 MGD. Effluent flows from the facility may be larger than plant design capacity due to over-extraction of groundwater.*

12. Treated wastewater from the RIX facility is discharged to Reach 4 of the Santa Ana River at Discharge Serial No. 001 at NW ¼ of the SE ¼ of Section 36, T1s, R5W, SBB&M at latitude 34°02'28 and longitude 117°21'14.8", between La Cadena and Riverside Avenue in Colton.

13. A Water Quality Control Plan (the Basin Plan) became effective on January 24, 1995. The Basin Plan contains beneficial uses and water quality objectives for waters in the Santa Ana Region.

14. The discharge will affect the Santa Ana River, Reach 4, as well as downstream reaches of the River, the beneficial uses of which include:

    a. Agricultural supply,
    b. Groundwater recharge,
    c. Water contact recreation,
    d. Non-contact water recreation,
    e. Warm freshwater habitat,
    f. Wildlife habitat, and
    g. Rare, threatened or endangered species.

15. The discharge will also affect groundwater subbasins underlying the downstream reaches of the Santa Ana River, including the Colton Subbasin. The beneficial uses of these groundwater subbasins include:

    a. Municipal and domestic supply,
    b. Agricultural supply,
    c. Industrial service supply, and
    d. Industrial process supply.

16. The requirements contained in this Order are necessary to implement the Basin Plan.

17. The Santa Ana River is not naturally perennial. In dry weather, the flow in the Santa Ana River is comprised predominantly of effluent discharges from municipal wastewater treatment facilities including the discharge from the RIX facility, and very little natural flow exists.

18. Article 3, Section 60305, of Title 22 Division 4, Chapter 3, "Water Recycling Criteria" of the California Code of Regulations specifies that recycled water used as a source supply for nonrestricted recreational impoundments shall be disinfected tertiary recycled water that has been subjected to conventional treatment. Section 60305 also provides that disinfected tertiary recycled water that has not received conventional treatment may be used for nonrestricted recreational impoundments provided that the recycled water is monitored for the presence of pathogenic organisms in accordance with certain conditions. The degree of treatment specified represents an approximate 5-log reduction in the virus content of the water. The State Department of Health Services has determined that this degree of virus removal is necessary to protect the health of people using these impoundments for water contact recreation.

19. The Department of Health Services has developed wastewater disinfection guidelines ("Wastewater Disinfection for Health Protection", Department of Health Services, Sanitary Engineering Branch, February 1987) for discharges of wastewater to surface waters where water contact recreation (REC-1) is a beneficial use. The disinfection guidelines recommend the same treatment requirements for wastewater discharges to REC-1 waters as those stipulated in Title 22 for supply of recycled water to nonrestricted recreational impoundments, since the public health risks under both scenarios are analogous. The disinfection guidelines are based on sound science and are widely used as guidance to assure public health and beneficial use protection.

20. The Santa Ana River is not a "nonrestricted recreational impoundment," nor is "disinfected tertiary recycled water[3] " being used as a supply source for the River. However, except during major storms, most of the flow in the River is composed of treated municipal wastewater discharges. The River is used for water contact recreation and, accordingly, is designated REC-1 (water contact beneficial use). People recreating in the River face an exposure similar to those coming in contact with recycled water in an impoundment. Therefore, to protect the water contact recreation beneficial use and to prevent nuisance and health risk, it is necessary and appropriate to require the same degree of treatment for wastewater discharges to the River as would be required for the use of recycled water in a nonrestricted recreational impoundment.

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[3] *As defined in Section 60301.230. Article 1 of Title 22, Division 4, Chapter 3 California Code of Regulations "Water Recycling Criteria."*

21. The requirements specified in this Order include a total coliform limit of 2.2 Most Probable Number (MPN) per 100 milliliters. The discharger has questioned the propriety of this limit given that the Basin Plan specifies a less stringent fecal coliform objective of 200 organisms per 100 milliliters (mL) for waters that are or may be used for water contact recreation (REC-1). REC-1 waters include Reach 4 of the Santa Ana River and downstream reaches. This Order specifies the more stringent total coliform limitation, rather than implementing the Basin Plan objective, based on the following considerations. The Basin Plan fecal coliform objective, which has been used widely elsewhere in the state and the country, was derived from studies in which the recreational sites investigated were outside the direct influence of sewage discharges. This fecal coliform objective was intended to apply to freshwaters that are beyond the direct, obvious influence of sewage discharges. However, as stated above, most of the flow in the River, including at the point of discharge from the RIX facility, is composed of treated municipal wastewater (sewage). Thus, the Basin Plan fecal coliform objective is not applicable to the RIX discharge situation.

    The Department of Health Services has determined that reliance on the 200 organisms/100 mL Basin Plan objective in this and comparable discharge situations would not protect public health and the REC-1 beneficial use. This determination is reflected in the Title 22 regulations and Disinfection Guidelines. In contrast, the Department has determined that application of the total coliform standard, specified in Title 22 and in the Disinfection Guidelines as an indicator of the efficacy of the disinfection process, will assure protection of public health and the REC-1 use.

    Compliance with the 2.2 total coliform limit will not only address fecal coliform bacteria but will also assure the requisite 5-log virus reduction, i.e., that the effluent will be essentially pathogen free. In establishing waste discharge requirements, the Regional Board must implement the Basin Plan (Water Code Section 13263) and must separately consider the protection of beneficial uses (Section 13263(a)). Effluent limits necessary to protect beneficial uses must be specified. These limits can and in fact must be more stringent than the established water quality objectives would dictate, where warranted by the particular discharge situation. This is the case here.

22. The tentative Order requires that the discharger contain/extract essentially all the wastewater percolated at the RIX facility (G. Provisions. Item 7). The Department of Health Services recommends that compliance with this requirement be defined as at least 90% capture/extraction of the infiltrated wastewater. The Department also recommends that if less than 90% of the infiltrated wastewater is captured/extracted, then the RIX facility operation should be considered a groundwater recharge project, subject to relevant DHS regulations that could necessitate additional treatment, monitoring and other controls. It is likely that separate waste discharge requirements would be issued to address these additional requirements. The Department may consider revision of its finding that at least 90% containment/extraction is required based on additional data and analyses to be provided by the discharger. If such revision is made, this Order will be modified as appropriate.

23. There has been disagreement between Regional Board staff and consultants and RIX Authority staff and consultants concerning the degree of containment and extraction achieved at the RIX facility. However, all parties agree that it is possible to assure at least 90% containment/extraction by employing appropriate operational procedures, including high rates of extraction. The parties agree that an operational evaluation plan should be developed to define the operational procedures needed to assure and assess adequate containment/extraction. This plan will include the use of a model populated with water level, water chemistry and RIX operational data. The intent is to provide a prospective operational planning and assessment tool to assure containment to the satisfaction of the Regional Board and DHS. This Order requires the development of this operational evaluation plan for review and approval by the Regional Board's Executive Officer, with input from DHS. In the interim, demonstration of at least 90% containment/extraction of the infiltrated wastewater will be based on an adaptive management approach involving review of water quality characteristics (influent and effluent chloride) and extraction data.

24. The discharge point overlies the Colton Groundwater Subbasin, which has a total dissolved solids (TDS) objective of 400 mg/l. The Colton Groundwater Subbasin lacks assimilative capacity for TDS. The Basin Plan notes that degradation of the groundwater is due, at least in part, to long-term recharge of the subbasin with sewage effluent and a lack of natural recharge.

25. This Order specifies TDS and mineral constituents limits for the discharge based on the objectives for the Colton Groundwater Subbasin. The Basin Plan recognizes that strict compliance with the Colton Groundwater Subbasin TDS objective may be difficult to achieve. The Basin Plan describes the regulatory approach the Regional Board uses to address such situations. The Board incorporates offset provisions in waste discharge requirements whereby dischargers can participate in approved programs to offset TDS discharges in excess of specified TDS limits, provided that the discharger makes all reasonable efforts to improve the TDS quality of the water supply (and, thereby, the wastewater).

26. Total dissolved solids is essentially the summation of the concentrations of sodium, sulfate, chloride and total hardness (carbonates) in water. The water quality objectives for these individual mineral constituents are commensurate with the TDS objective for a groundwater subbasin. An exceedance of the TDS objective would likely result in an exceedance of one or more of the objectives for these components of TDS. Therefore, although the offset provision mentioned above specifically addresses only TDS, it is reasonable that this provision should also apply to those individual mineral components of TDS.

27. This Order specifies that the TDS and mineral limits apply unless the discharger implements a program to offset TDS and mineral constituents discharges in excess of the Colton Subbasin objectives.

28. The Authority is a participant in the watershed wide study of TDS and TIN. The study may lead to revised findings regarding TDS and TIN assimilative capacity and recommendations for changes to the TDS and TIN wasteload allocations and other TDS and TIN management strategies. The study will investigate appropriate inputs to the Basin Plan's groundwater quality models and possibly the structure of the models themselves. It is possible that fundamental changes in TDS and TIN objectives for groundwater subbasins may result. Participation in this study is an acceptable offset for discharges of TDS and mineral constituents in excess of the relevant limitations in this Order, which are based on the Colton Groundwater Subbasin objectives.

29. The TIN/TDS Task Force that is conducting the watershed-wide TIN/TDS study has evaluated historic and current ambient water quality throughout the Santa Ana River watershed. The Task Force consultants have developed recommendations for revised groundwater basin boundaries and revised water quality objectives. During late 2001/early 2002, the Regional Board is expected to consider one or more Basin Plan amendments to incorporate these revised objectives and groundwater management zone boundaries for the entire watershed. These amendments may necessitate revisions to this Order.

30. The discharger proposes to submit documentation that a TDS offset is provided by the discharger's extraction of infiltrated wastewater/groundwater at rates higher than wastewater infiltration. If approved by the Regional Board's Executive Officer, this would constitute an acceptable offset.

31. In conformance with the nitrogen wasteload allocation specified in the 1995 Basin Plan, this Order specifies a limit of 10 mg/l total inorganic nitrogen (TIN) for the discharge.

32. On April 17, 1997, the State Board adopted the General Industrial Storm Water Permit, Order No. 97-03-DWQ, NPDES No. CAS000001. This General Permit implements the Final Regulations (40 CFR 122, 123, and 124) for storm water runoff published on November 16, 1990 by EPA in compliance with Section 402(p) of the Clean Water Act (CWA). There are no stormwater discharges to surface waters from the RIX facility site. All stormwater remain onsite. Therefore, coverage under Order No. 97-03-DWQ is not necessary for this facility.

33. On May 18, 2000, the U.S. Environmental Protection Agency issued a final rule for the establishment of Numeric Criteria for Priority Toxic Pollutants necessary to fulfill the requirements of Section 303(c)(2)(B) of the Clean Water Act for the State of California. This rule is commonly referred to as the California Toxics Rule.

34. Federal Regulations require permits to include limitations for all pollutants that are or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion of a water quality standard.

35. On March 2, 2000, the State Water Resources Control Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. This Policy includes implementation provisions for the California Toxics Rule. The Policy specifies a methodology to determine if pollutants in the discharge are at a level that will cause, have the reasonable potential to cause, or contribute to an excursion of a water quality standard. The Policy also delineates procedures to be used to calculate appropriate limits.

36. This Order implements relevant provisions of the California Toxic Rule and the State Board Policy.

37. Based on a review of historical effluent data for priority pollutants, including constituents previously limited in Order No. 93-45, there appears to be no reasonable potential for the discharge to cause or contribute to an excursion of water quality standards. These previously limited constituents include arsenic, benzene, cadmium, chromium VI, chloroform, copper, dichloromethane, halomethanes, lead, nickel, mercury, PCBs, pentachlorophenol, toluene, selenium, silver, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, boron, flouride, iron, and manganese. Consequently, there are no effluent limitations for these constituents in the Order.

38. In its January 8, 2001, guidance document, the US EPA finds that a fish tissue residue water quality criterion for methylmercury (Water Quality Criterion for the Protection of Human Health: Methylmercury - EPA-823-R-01-001, January 2001) is more appropriate than a water column based water quality criterion. The EPA further states that a fish tissue residue water quality criterion is more closely tied to the Clean Water Act goal of protecting the public health because it is based directly on the human exposure route for methylmercury. Consequently, this Order specifies a receiving water limitation in fish tissue of 0.3 mg methylmercury/kg fish in lieu of limitations for total mercury in the effluent.

39. Effluent limitations, and toxic pretreatment effluent standards established pursuant to Section 208(b), 301, 302, 303(d), 304, and 307 of the CWA, and amendments thereto, are applicable to the discharge.

40. The Regional Board has considered antidegradation pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16 and finds that the RIX facility discharge is consistent with those provisions.

41. In accordance with California Water Code Section 13389, the issuance of waste discharge requirements for this discharge is exempt from those provisions of the California Environmental Quality Act contained in Chapter 3 (commencing with Section 21100), Division 13 of the Public Resources Code.

42. The Regional Board has notified the discharger and other interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written views and recommendations.

43. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. DISCHARGE SPECIFICATIONS:

1. The discharge of wastes to the Santa Ana River from any point other than Discharge Serial 001 is prohibited. The discharge of wastes to the Santa Ana River from Discharge Serial 001 shall not contain constituent concentrations in excess of the following limits:

   a. Biological Limitations:

Constituent	Average Weekly limit	Average Monthly Limit	Average Weekly Mass Emission Rate[4]	Average Monthly Mass Emission Rate
	mg/l	Mg/l	lbs/day	lbs/day
Biochemical Oxygen Demand	30	20	10,008	6,672
Suspended Solids	30	20	10,008	6,672

   b. TDS/Mineral Limitations: For Discharge Specifications 1.b.(1) and 1.b.(2), the lower of the two total dissolved solids limit is the limit.

      (1) The 12-month average constituent concentrations and mass emission rates shall not exceed the values in the following table, unless:

         (a) The discharger demonstrates to the satisfaction of the Regional Board's Executive Officer that:

            i. The discharger has taken reasonable steps to improve the quality of the waters influent to the treatment facility (such as through source control or improved water supplies), and

            ii. The discharger has taken reasonable steps to optimize chemical additions at the treatment facility; and

[4] *Except where noted, mass emission rates for this and all other tables in this Order are based on 40 mgd flow.*

(b) The discharger implements a plan, with the approval of the Executive Officer, to offset discharges in excess of the following values. Participation in the watershed-wide TIN/TDS study (including any Basin Plan amendment to reflect revised groundwater quality objectives and subbasin boundaries, and revision of these waste discharge requirements to reflect the Basin Plan amendments) shall constitute an acceptable offset. If and as approved by the Regional Board's Executive Officer, the net removal of TDS from the Colton Subbasin as the result of the discharger's extraction of infiltrated wastewater/ groundwater at rates higher than wastewater infiltration shall also constitute an acceptable offset.

Constituent	**12-Month Average Concentration[5]**	**12-Month Average Mass Emission Rate**
	(mg/l)	**(lbs/day)**
Chloride	35	11,676
Sodium	35	11,676
Sulfate	64	21,350
Total Hardness	240	80,064
Total Dissolved Solids	400	133,440

(2) The 12-month average total dissolved solids concentration shall not exceed the 12-month average total dissolved solids concentration in the water supply by more than 250 mg/l, unless:

(a) The discharger demonstrates to the satisfaction of the Regional Board's Executive Officer that TDS discharges in excess of the 250 mg/l mineral increment are due solely to chemical additions in the treatment process needed to meet waste discharge requirements, and the discharger has taken all steps to optimize chemical additions so as to minimize the TDS increases; and

[5] *These limits are intended to meet surface water quality objectives established to protect groundwater.*

(b) The discharger implements a plan, with the approval of the Executive Officer, to offset TDS discharges in excess of the 250 mg/l mineral increment. Participation in the watershed-wide TIN/TDS study (including any Basin Plan amendment to reflect revised groundwater quality objectives and subbasin boundaries, and revision of these waste discharge requirements to reflect the Basin Plan amendments) shall constitute an acceptable offset. If and as approved by the Regional Board's Executive Officer, the net removal of TDS from the Colton Subbasin as the result of the discharger's extraction of infiltrated wastewater/groundwater at rates higher than wastewater infiltration shall also constitute an acceptable offset.

c. Total Inorganic Nitrogen (TIN) Limitations:

The 12-month average total inorganic nitrogen concentration shall not exceed 10 mg/l and the 12-month average mass emission rate shall not exceed 3336 lbs/day.

2. The discharge shall at all times be a filtered and subsequently disinfected wastewater.

a. Filtered wastewater means an oxidized wastewater that meets either (1) or (2):

(1) Has been coagulated and passed through natural undisturbed soils or a bed of filter media pursuant to the following:

(a) At a rate that does not exceed 5 gallons per minute per square foot of surface area in mono, dual or mixed media gravity, upflow or pressure filtration systems, or does not exceed 2 gallons per minute per square foot of surface area in traveling bridge automatic backwash filters, based on peak dry weather design flow; and

(b) The turbidity of the filtered wastewater does not exceed any of the following:

i. An average of 2 Nephelometric Turbidity Unit (NTU) within any calendar day.

ii. 5 NTU more than 5 percent of the time within any calendar day; and

iii. 10 NTU at any time[6].

(2) Has been passed through a microfiltration, ultrafiltration, nanofiltration, or reverse osmosis membrane so that the turbidity of the filtered wastewater does not exceed any of the following:

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6 *See Section D.6., " Compliance Determination."*

(a) 0.2 NTU more than 5 percent of the time within any calendar day; and

(b) 0.5 NTU at any time.

b. Disinfected wastewater shall mean a filtered wastewater that has been disinfected and meets the following criteria:

(1) The filtered wastewater has been disinfected by either:

(a) A chlorine disinfection process following filtration that provides a CT (the product of total chlorine residual and modal contact time measured at the same point) value of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes, based on peak dry weather design flow; or

(b) A disinfection process that, when combined with the filtration process, demonstrates inactivation and/or removal of 99.999 percent of the plaque-forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration. Where ultraviolet (UV) disinfection is used for disinfection, UV disinfection shall deliver under worst operating conditions a minimum UV dose of 140 milli-watts seconds per square centimeter (mW-s/cm2) at maximum weekly flow and 100 mW-s/cm2 at peak flow (maximum day), unless otherwise approved by the Department of Health Services[7].

(2) The average weekly concentration of total coliform bacteria measured in the disinfected effluent shall not exceed an MPN of 2.2 per 100 milliliters. The average weekly concentration shall be evaluated using the median of the bacteriological results of the last seven days[8].

(3) The number of total coliform bacteria shall not exceed an MPN of 23 per 100 milliliters in more than one sample in any calendar month.

(4) The number of total coliform bacteria shall not exceed an MPN of 240 per 100 milliliters in any sample.

3. The discharge of any substances in concentrations toxic to animal or plant life is prohibited.

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[7] *See Findings 7.*

[8] *See Section D.7., "Compliance Determination."*

4. The total residual chlorine of the discharge shall not exceed an instantaneous maximum concentration of 0.1 milligram per liter (mg/l).[9]

5. There shall be no visible oil and grease in the discharge.

6. The pH of the discharge shall be within 6.5 and 8.5 pH units[10].

B. <u>TOXICITY REQUIREMENTS</u>:

1. This Order contains no numeric limitation for toxicity. However, the discharger shall conduct chronic toxicity monitoring as specified in Monitoring and Reporting Program (M&RP) No. 01-45.

2. The discharger shall implement the accelerated monitoring as specified in Section D.4. of M&RP No. 01-45 when the result of any single chronic toxicity test of the effluent exceeds 1.0 TUc.

3. The discharger shall develop an Initial Investigation Toxicity Reduction Evaluation (IITRE) work plan that describes the steps the discharger intends to follow if required by Section B.4., below. The work plan shall include at a minimum:

   a. A description of the investigation and evaluation techniques that will be used to identify potential causes/sources of the exceedance, effluent variability, and/or efficiency of the treatment system in removing toxic substances. This shall include a description of an accelerated chronic toxicity testing program.

   b. A description of the methods to be used for investigating and maximizing in-house treatment efficiency and good housekeeping practices.

   c. A description of the evaluation process to be used to determine if implementation of a more detailed TRE\TIE is necessary.

4. The discharger shall implement the IITRE work plan whenever the results of chronic toxicity tests of the effluent exceed:

   a. A two month median value of 1.0 TUc for survival or reproduction endpoint or,

   b. Any single test value of 1.7 TUc for survival endpoint.

5. The discharger shall develop a detailed Toxicity Reduction Evaluation and Toxicity Identification Evaluation (TRE/TIE) work plan that shall describe the steps the discharger intends to follow if the implemented IITRE fails to identify the cause of, or to rectify, the toxicity.

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9 *See Section D.4., "Compliance Determination".*

10 *See Section D.5., "Compliance Determination."*

The discharger shall use as guidance, at a minimum, EPA manuals EPA/600/2-88/070 (industrial), EPA/600/4-89-001A (municipal), EPA/600/6-91/005F (Phase I), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III) to identify the cause(s) of toxicity. If during the life of this Order the aforementioned EPA manuals are revised or updated, the revised/updated manuals may also be used as guidance. The detailed TRE/TIE work plan shall include:

a. Further actions to investigate and identify the cause of toxicity;

b. Actions the discharger will take to mitigate the impact of the discharge and to prevent the recurrence of toxicity; and

c. A schedule for these actions.

6. The discharger shall implement the TRE/TIE workplan if the IITRE fails to identify the cause of, or rectify, the toxicity, or if in the opinion of the Executive Officer the IITRE does not adequately address an identified toxicity problem.

7. The discharger shall assure that adequate resources are available to implement the required TRE/TIE.

C. RECEIVING WATER LIMITATIONS: [11]

1. The discharge of wastes shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Board, U.S. EPA, or State Board, as required by the Clean Water Act and regulations adopted thereunder.

2. The discharge shall not cause any of the following:

a. Coloration of the receiving waters which causes a nuisance or adversely affects beneficial uses.

b. Deposition of oil, grease, wax or other materials in the receiving waters in concentrations which result in a visible film or in coating objects in the water, or which cause a nuisance or affect beneficial uses.

c. An increase in the amounts of suspended or settleable solids in the receiving waters which will cause a nuisance or adversely affect beneficial uses as a result of controllable water quality factors.

d. Taste or odor producing substances in the receiving waters at concentrations which cause a nuisance or adversely affect beneficial uses.

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[11] *Receiving water limitations are specific interpretations of water quality objectives from applicable water quality control plans. As such they are a required part of this Order. A receiving water condition not in conformance with any of these receiving water limitations, is not necessarily a violation of this Order. The Regional Board may require an investigation to determine the cause and culpability prior to asserting a violation has occurred, or requiring that corrective action be taken.*

e. The presence of radioactive materials in the receiving waters in concentrations which are deleterious to human, plant or animal life.

f. The depletion of the dissolved oxygen concentration below 5.0 mg/l.

g. The temperature of the receiving waters to be raised above 90°F (32°C) during the period of June through October, or above 78°F (26°C) during the rest of the year.

h. The concentration of pollutants in the water column, sediments, or biota to adversely affect the beneficial uses of the receiving water. The discharge shall not result in the degradation of inland surface water communities and populations, including vertebrate, invertebrate, and plant species.

3. Pollutants not specifically mentioned and limited in this Order shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health.

4. The discharge shall not contain constituent concentrations of mercury that will result in the bioaccumulation of methylmercury in fish flesh tissue greater than 0.3 mg methylmercury/kg fish.

D. <u>COMPLIANCE DETERMINATION</u>:

1. The "maximum daily" concentration is defined as the measurement made on any single grab sample or composite sample.

2. Compliance with average weekly and monthly discharge limitations specified under Discharge Specifications A.1.a. and A.2.b.(2) shall be determined from the average of the analytical results of all samples collected during a calendar week or month, respectively. Where a calendar week overlaps two different months, compliance shall be determined for the month in which the week ends.

3. Compliance with the 12-month average limit under Discharge Specification A.1.b. and A.1.c. shall be determined by the arithmetic mean of the last twelve monthly averages.

4. Compliance determinations for total chlorine residual shall be based on 99% compliance. To determine 99% compliance with the effluent limitation specified in Discharge Specification A.1.a. for total chlorine residual, the following conditions shall be satisfied:

   a. The total time during which the total chlorine residual values are above 0.1 mg/l (instantaneous maximum value) shall not exceed 7 hours and 26 minutes in any calendar month;

   b. No individual excursion from 0.1 mg/l value shall exceed 30 minutes; and

   c. No individual excursion shall exceed 5.0 mg/l.

5. Pursuant to 40 CFR 401.17, the discharger shall be in compliance with the pH limitation specified in this Order (Discharge Specification A.5., above), provided that both of the following conditions are satisfied:

a. The total time during which the pH values are outside the required range of 6.5-8.5 pH values shall not exceed 7 hours and 26 minutes in any calendar month; and

b. No individual excursion from the range of pH values shall exceed 60 minutes.

6. Exceedances of the "10 NTU at any time" turbidity requirement referenced in Discharge Specification A.2.(1)(b)iii. shall not be considered a violation of these waste discharge requirements if such exceedance does not exceed a duration of one minute. The discharger shall not be considered to be in violation of this requirement if the apparent exceedance was caused by interference with, or malfunction of, the monitoring instrument. If the discharger is using a properly operating backup turbidimeter, the reading of the backup turbidimeter shall be considered in determining whether there has been an actual noncompliance.

7. Compliance with the weekly average total coliform limit expressed in Discharge Specification A.2.b.(2) shall be based on a running median of the test results from the previous 7 days. To comply with the weekly average limit, the 7-day median MPN must not exceed 2.2 per 100 milliliters on any day during the week. However, only one violation is recorded for each week, even if the 7-day median MPN value is greater than 2.2 for more than one day in the week.

8. Compliance determinations shall be based on available analyses for the time interval associated with the effluent limitation. Where only one sample analysis is available in a specified time interval (e.g., monthly or weekly average), that sample shall serve to characterize the discharge for the entire interval. If quarterly sample result shows noncompliance with the average monthly limit and that sample result is used for compliance determinations for each month of the quarter, then three separate violations of the average monthly limit shall be deemed to have occurred.

9. For non-priority pollutants, compliance based on a single sample analysis shall be determined where appropriate, as described below:

   a. When the effluent limitation is greater than or equal to the PQL, compliance shall be determined based on the effluent limitation in either single or multiple sample analyses.

   b. When the effluent limitation is less than the PQL, compliance determinations based on analysis of a single sample shall only be undertaken if the concentration of the constituent of concern in the sample is greater than or equal to the PQL.

10. For non-priority pollutants, the discharge shall be considered to be in compliance with an effluent limitation which is less than or equal to the PQL specified in Attachment "A" of M&RP No. 01-45 if the arithmetic mean of all test results for the monitoring period is less than the constituent effluent limitation. Analytical results that are less than the specified PQL shall be assigned a value of zero.

11. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with permit effluent limitations because of factors beyond the reasonable control of the discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action. A discharger that wishes to establish the affirmative defense of an upset in an action brought for non-compliance shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

    a. an upset occurred and that the discharger can identify the cause(s) of the upset;

    b. the permitted facility was being properly operated at the time of the upset;

    c. the discharger submitted notice of the upset as required in Section E.13., below;

    d. the discharger complied with any remedial measures required under Section G.12., below.

    No determination made before an action for noncompliance, such as during administrative review of claims that noncompliance was caused by an upset, is final administrative action subject to judicial review. In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof.

E. <u>REQUIRED NOTICES AND REPORTS</u>:

1. Reporting Provisions:

    a. All applications, reports, or information submitted to the Regional Board shall be signed and certified in accordance with 40 CFR 122.22 except as otherwise specified by the Regional Board's Executive Officer.

    b. The discharger shall furnish, within a reasonable time, any information the Regional Board or EPA may request to determine compliance with this Order or whether cause exists for modifying, revoking and reissuing, or terminating this Order. The discharger shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.

    c. Except for data determined to be confidential under Section 308 of the CWA, all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the Regional Board and the Regional Administrator of EPA. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA and Section 13387 of the California Water Code.

2. By February 1, 2002, the discharger shall notify the Executive Officer of its continuous involvement with the comprehensive mercury investigation program currently being conducted by a group of Santa Ana River system dischargers. If the discharger discontinues its involvement with this comprehensive program, the discharger shall, within 60 days of that date, submit for the approval of the Executive Officer its plan for the annual testing of mercury levels in fish flesh samples collected from the Santa Ana River, upstream of, at, and downstream of the point of discharge. Upon approval, the discharger shall implement the plan.

3. By February 1, 2002, the discharger shall submit an updated written description of electrical power failure safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. The description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past year(s) of treatment plant operation on effluent quality and on the capability of the discharger to comply with the requirements of this Order. Deficiencies in present safeguards must be identified together with a plan for any necessary corrective actions. The adequacy of the safeguards and the corrective action plan (if necessary) is subject to the approval of the Executive Officer.

4. By February 1, 2002, the discharger shall submit an updated technical report on the discharger's preventive (failsafe) and contingency (response and cleanup) plans for controlling accidental discharges and for minimizing the effect of such events. This technical report may be combined with that required under Section E.3., above. The technical report shall:

    a. Identify the possible sources of accidental loss, untreated waste bypass, and contaminated drainage. Loading and storage areas, power outage, waste treatment outage, and failure of process equipment, tanks, and pipes should be considered.

    b. Evaluate the effectiveness of present facilities and procedures and state when they become operational.

    c. Describe any new facilities and procedures needed. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

    d. Describe proposed and completed training programs and schedules to train and familiarize plant operating personnel with the discharger's preventive (failsafe) and contingency (response and cleanup) plans for controlling accidental discharges and for minimizing the effect of such events.

5. By February 1, 2002, the discharger shall submit a copy of the Initial Investigation Toxicity Reduction Evaluation work plan specified in Toxicity Requirement B.3 of this Order.

6. By February 1, 2002, the discharger shall submit a copy of the TRE/TIE work plan specified in Toxicity Requirement B.5 of this Order.

7. By February 1, 2002, the discharger shall submit for approval by the Executive Officer, a report which details the manner in which sampling, monitoring and reporting will be performed as required in this Order.

8. By May 1, 2002, or per a revised schedule approved by the Regional Board's Executive Officer, the discharger shall submit a proposed operational-evaluation plan. The operational plan shall describe the tools and procedures that will be used over the long term to evaluate and assure at least 90% containment/extraction and recovery of the infiltrated wastewater.

9. The discharger shall give advance notice to the Regional Board of any planned physical alterations or additions to the permitted facility or changes in operation or activity that may result in noncompliance with these waste discharge requirements.

10. The discharger shall provide adequate notice to the Regional Board of:

    a. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants. [12]

    b. Any change in the volume or character of pollutants being introduced by an existing or new source into the treatment facility that will cause or threaten to cause a violation of this Order.

    c. Any planned changes in the discharger's sludge use or disposal practice, or provision of additional disposal sites not reported during the permit application process.

    d. Any proposed change in the character, location, or method of disposal of the discharge, or any proposed change in ownership of the facility.

    e. All instances of noncompliance. Reports of noncompliance shall be submitted with the discharger's next scheduled self-monitoring report or earlier, as specified in this Order, or if requested by the Executive Officer, or if required by an applicable standard for sludge use and disposal.

11. The discharger shall file a written report with the Regional Board within ninety (90) days after the average dry-weather waste flow for any month equals or exceeds 75 percent of the design capacity of the waste treatment and/or disposal facilities. The discharger's senior administrative officer shall sign a letter which transmits that report and certifies that the policy making body is adequately informed about it. The report shall include:

    a. Average daily flow for the month, the date on which the instantaneous peak flow occurred, the rate of that peak flow, and the total flow for the day.

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[12] *Adequate notice shall include information on the quality and quantity of effluent introduced, and any anticipated impact of the change on the quantity or quality of the discharger's effluent and/or sludge.*

b. The discharger's best estimate of when the average daily dry-weather flow rate will equal or exceed the design capacity of the treatment facilities.

c. The discharger's intended schedule for studies, design, and other steps needed to provide additional capacity for the waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units.

12. The discharger shall file with the Regional Board a Report of Waste Discharge at least 180 days before making any material change in the character, location, or volume of the discharge. A material change includes, but is not limited to, the following:

a. Adding a major industrial waste discharge to a discharge of essentially domestic sewage, or adding a new process or product by an industrial facility resulting in a change in the character of the waste. The Authority shall not be deemed to be in violation of this provision if the "major industrial waste discharge" is added by a user under circumstances where the Authority had no prior information that the new discharge would be added, and the Authority was properly implementing its pre-treatment program, so long as the Authority takes appropriate regulatory action promptly upon learning of the new discharge.

b. Significantly changing the disposal method or location, such as changing the disposal to another drainage area or water body.

c. Significantly changing the method of treatment.

d. Increasing the treatment plant design capacity beyond that specified in this Order.

13. The discharger shall immediately report any condition related to the discharge of waste from discharger's collection, treatment or disposal facilities that may endanger human health or the environment including any unauthorized discharge not regulated by this Order of treated, partially treated, or untreated wastewater from the discharger's collection, treatment, or disposal system in excess of 1000 gallons within a single continuous event or within a calendar day. All available information concerning the condition and/or unauthorized discharge shall be provided to the Executive Officer or the Executive Officer's designee (909-782-4130) and the Office of Emergency Services (1-800-852-7550), as soon as the discharger becomes aware of the circumstances. A written report shall be submitted within 5 days and shall contain a description of the condition and its cause; the duration of the condition, including exact dates and times, and, if the condition has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the condition, with a schedule for their implementation. The following shall be included as information that must be reported within 24 hours under this paragraph:

a. Any unanticipated bypass that exceeds any requirement of this Order.

b. Any upset that exceeds any requirement of this Order.

c. Any violation of a maximum daily discharge limitation for any of the pollutants listed in this Order.

d. Any unauthorized discharge not regulated by this Order of treated, partially treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment or disposal system.

e. The Executive Officer or the Executive Officer's designee may waive the above-required written report on a case-by-case basis.

Discharges of less than 1000 gallons within a single continuous event or within a calendar day that do not endanger human health or the environment shall be reported to the Executive Officer's designee no later than the last day of the month following the month the discharges occurred.

F. PENALTIES:

1. Violation of any of the provisions of the NPDES program or of any of the provisions of this Order may subject the violator to any of the penalties described under Section 309(c) of the CWA, or any subsequent amendments to Section 309(c). The violator may be subjected to any combination of the penalties described herein at the discretion of the prosecuting authority; however, only one kind of penalty may be applied for each kind of violation.

2. The CWA provides that any person who violates any portion of this Order implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any order requirement or limitation implementing any such sections in this Order, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who willfully or negligently violates this Order with regard to these sections of the CWA is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. Any person who knowingly violates a provision implementing these sections is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment of not more than 3 years, or both.

3. The CWA provides that any person who knowingly falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 2 years per violation, or by both.

4. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 2 years per violation, or by both.

5. The California Water Code provides that any person who violates an order of the Regional Board is subject to civil penalties of up to $25,000 per day of violation, and when the violation involves the discharge of pollutants, additional civil penalties of up to $25 per gallon.

G. PROVISIONS:

1. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the CWA, or amendments thereto, that shall become effective 10 days after the date of adoption, provided the Regional Administrator of the EPA has no objection. If the Regional Administrator objects to its issuance, this Order shall not serve as an NPDES permit until such objection is withdrawn.

2. Neither the treatment nor discharge of waste shall create, or threaten to create, a nuisance or pollution as defined by Section 13050 of the California Water Code.

3. Order No. 93-45 as amended by Order No. 97-47 is hereby rescinded.

4. This Order expires October 1, 2006 and the discharger must file a Report of Waste Discharge in accordance with Title 23, Division 3, Chapter 9 of the California Code of Regulations not later than 180 days in advance of this expiration date. The Report of Waste Discharge shall serve as the application for issuance of new waste discharge requirements.

5. The discharger shall comply with Monitoring and Reporting Program No. 01-45. This monitoring and reporting program may be modified by the Executive Officer at any time during the term of this Order, and may include an increase in the number of parameters to be monitored, the frequency of the monitoring or the number and size of samples to be collected. Any such modifications may be reduced back to the levels specified in the original monitoring and reporting program at the discretion of the Executive Officer.

6. To assure that the wastewater is adequately filtered and disinfected, the RIX facility shall be operated in accordance with the soils, hydrogeological and operational design criteria identified in the report dated June 8, 1992 "Rapid Infiltration Extraction (RIX) Demonstration Project", unless alternative strategies are approved by the Department of Health Services and the Executive Officer.

7. The discharger shall contain, extract and recover essentially all the wastewater percolated at the RIX facility. Compliance with this requirement is defined as containment, extraction, and recovery of at least 90% of the infiltrated wastewater.

8. The discharger shall continue its involvement with the comprehensive mercury investigation program currently being conducted by a group of Santa Ana River system dischargers. If the discharger discontinues its involvement with this comprehensive program, the discharger shall within one month of discontinuance of involvement submit for the approval of the Executive Officer its plan for the annual sampling and testing of mercury levels in fish flesh samples collected from the Santa Ana River, upstream of, at, and downstream of the point of discharge to the Santa Ana River. Upon approval, the discharger shall implement the plan.

9. The discharger shall immediately implement an approved plan for the investigation of the sources of mercury, if a single validated effluent monitoring result for mercury shows a concentration level at or above the PQL specified in Attachment "A" of M&RP No. 01-45.

10. The discharger shall maintain a copy of this Order at the site so that it is available to site operating personnel at all times. Key operating personnel shall be familiar with its content.

11. The discharger must comply with all of the requirements of this Order. Any violation of this Order constitutes a violation of the California Water Code and may constitute a violation of the CWA and its regulations, and is grounds for enforcement action, termination of this Order, revocation and reissuance of this Order, denial of an application for reissuance of this Order; or a combination thereof.

12. The discharger shall take all reasonable steps to:

    a. minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

    b. minimize any adverse impact to receiving waters resulting from noncompliance with any requirements specified in this Order, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

13. The discharger shall provide safeguards to assure that should there be reduction, loss, or failure of electric power, the discharger will comply with the requirements of this Order.

14. The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control including sludge use, disposal facilities, and related appurtenances which are installed or used by the discharger to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory controls, appropriate quality assurance procedures, effective performance, adequate funding, adequate staffing and training, and adequate process controls. This provision requires the operation of back up or auxiliary facilities or similar systems which are installed by a discharger only when the operation is necessary to achieve compliance with the requirements of this Order.

15. The discharger shall develop an "Operation and Maintenance Manual (O&M Manual)". If an O&M Manual has been developed, the discharger shall update it as necessary to conform with latest plant changes and requirements. The O&M Manual shall be readily available to operating personnel onsite. The O&M Manual shall include the following:

    a. Description of the treatment plant table of organization showing the number of employees, duties and qualifications and plant attendance schedules (daily, weekends and holidays, part-time, etc). The description should include documentation that the personnel are knowledgeable and qualified to operate the treatment facility so as to achieve the required level of treatment at all times.

b. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.

c. Description of laboratory and quality assurance procedures.

d. Process and equipment inspection and maintenance schedules.

e. Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharger will be able to comply with requirements of this Order.

f. Description of preventive (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.

16. The discharger's wastewater treatment plant shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Title 23, Division 3, Chapter 14, California Code of Regulations.

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

18. The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order shall not be affected thereby.

19. The filing of a request by the discharger for modification, revocation and reissuance, or termination of this Order or a notification of planned changes or anticipated noncompliance does not stay any requirements of this Order.

20. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from liabilities under federal, state, or local laws, nor guarantee the discharger a capacity right in the receiving waters.

21. This Order does not convey any property rights of any sort, or any exclusive privilege.

22. This Order is not transferable to any person except after notice to, and approval by the Executive Officer. The Regional Board may require modification or revocation and reissuance of this Order to change the name of the discharger and incorporate such other requirements as may be necessary under the CWA.

23. Collected screenings, sludge, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Regional Board's Executive Officer.

24. In the event of any change in control or ownership of land or waste discharge facility presently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Regional Board.

25. It shall not be a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the requirements of this Order.

26. Bypass (the intentional diversion of waste streams from any portion of a treatment facility or collection system) is prohibited unless it is permitted under the terms of this Order. The Regional Board may take enforcement action against the discharger for unpermitted bypass unless:

    a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.);

    b. There were no feasible alternative to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment down time or preventive maintenance; and

    c. The discharger submitted a notice to the Regional Board at least ten days in advance of the need for a bypass. The discharger may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if the by-pass is required for essential maintenance to assure efficient operation, and neither effluent nor receiving water limitations are exceeded. In such a case, the above bypass conditions are not applicable. The discharger shall promptly notify the Regional Board and the EPA within 24 hours of each such bypass.

27. The Regional Board, EPA, and other authorized representatives shall be allowed:

    a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the requirements of this Order;

    b. Access to copy any records that are kept under the requirements of this Order;

    c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

    d. To photograph, sample and monitor for the purpose of assuring compliance with this Order, or as otherwise authorized by the CWA.

H. PERMIT RE-OPENING, REVISION, REVOCATION, AND RE-ISSUANCE:

1. This Order may be modified, revoked and reissued, or terminated for cause.

2. This Order may be reopened to address any changes in State or federal plans, policies or regulations that would affect the quality requirements for the discharge.

3. This Order may be reopened to include effluent limitations for pollutants determined to be present in the discharge in concentrations that pose a reasonable potential to cause or contribute to violations of water quality standards.

4. This Order may be reopened to include an appropriate bioaccumulation based effluent limit for mercury when scientifically defensible guidance is developed to translate methylmercury in fish tissue to total mercury in effluent discharges.

5. This Order may be reopened and modified in accordance with the requirements set forth at 40 CFR 122 and 124, to include the appropriate conditions or limits to address demonstrated effluent toxicity based on newly available information, or to implement any EPA-approved new State water quality standards applicable to effluent toxicity.

6. This Order may be re-opened to address the following issues:

    a. New waste load allocations for total dissolved solids;

    b. New waste load allocations for total inorganic nitrogen; and,

    c. New objectives for un-ionized ammonia or the establishment of new toxicity limits and/or toxic reduction evaluation requirements.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on October 26, 2001.

_____

Gerard J. Thibeault
Executive Officer

California Regional Water Quality Control Board
Santa Ana Region

MONITORING AND REPORTING PROGRAM NO. 01-45
NPDES NO. CA8000304

for the

Colton/San Bernardino
Regional Tertiary Treatment and Water Reclamation Authority
Regional Tertiary Treatment Rapid Infiltration and Extraction Facility
San Bernardino County

MONITORING AND REPORTING PROGRAM NO. 01-45
NPDES NO. CA8000304

REGIONAL TERTIARY TREATMENT RAPID INFILTRATION AND EXTRACTION FACILITY

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Attachment "A" – Practical Quantitation Level List

Attachment "B" – Minimum Level List

Attachment "C" – EPA Priority Pollutant List

California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. 01-45
NPDES No. CA8000304
for the
Regional Tertiary Treatment Rapid Infiltration And Extraction Facility
Colton/San Bernardino Regional Tertiary Treatment and Water Reclamation Authority
San Bernardino County

A. MONITORING AND REPORTING REQUIREMENTS:

1. All sampling and sample preservation shall be in accordance with the current edition[1] of "*Standard Methods for the Examination of Water and Wastewater*" (American Public Health Association).

2. All laboratory analyses for wastewater shall be performed in accordance with test procedures under 40 CFR 136 (latest edition)[1] "*Guidelines Establishing Test Procedures for the Analysis of Pollutants*," promulgated by the United States Environmental Protection Agency (EPA), unless otherwise specified in this Monitoring and Reporting Program (M&RP). In addition, the Regional Board and/or EPA, at their discretion, may specify test methods which are more sensitive than those specified in 40 CFR 136. Laboratory analysis for biosolids shall be in accordance with 40 CFR 503.8.

3. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services or EPA or at laboratories approved by the Regional Board's Executive Officer.

4. In conformance with federal regulations 40 CFR 122.45(c), analyses to determine compliance with the effluent limitations for metals shall be conducted using the total recoverable method. For Chromium (VI), the dissolved method in conformance with 40 CFR 136 may be used to measure compliance with the Chromium (VI) limitation.

5. For effluent and ambient receiving water monitoring:

    a. Until May 1, 2002, the discharger shall require its testing laboratory analyzing priority pollutants to quantify each constituent at least down to the Practical Quantitation Levels[2] specified in Attachment "A". Any internal quality control data associated with the sample must be reported when requested by the Executive Officer. The Regional Board will reject the quantified laboratory data if quality control data is unavailable or unacceptable.

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[1] *Current or latest edition refers to those editions in effect when this Order is adopted.*

[2] *PQL is the lowest concentration of a substance which can be determined within ± 20 percent of the true concentration by 75 percent of the analytical laboratories tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL is the method detection limit (MDL) x 5 for carcinogens and MDL x 10 for noncarcinogens.*

b. By May 1, 2002, the discharger shall require its testing laboratory to calibrate the analytical system down to the minimum levels (MLs)[3] specified in Attachment "B" for priority pollutants with effluent limitations in this Order, unless an alternative minimum level is approved by the Regional Board's Executive Officer. The May 1, 2002 date may be extended by the Executive Officer provided that good cause is demonstrated by the discharger and provided that any such extension is as short as possible. Any internal quality control data associated with the sample must be reported when requested by the Executive Officer. The Regional Board will reject the quantified laboratory data if quality control data is unavailable or unacceptable.

c. For receiving water monitoring and for those priority pollutants without effluent limitations, the discharger shall require its testing laboratory to quantify constituent concentrations to the lowest achievable Method Detection Level (MDL)[4], as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999). In situations where the most stringent applicable receiving water objective (freshwater or human health (consumption of organisms only), as specified for that pollutant in 40 CFR 131.38[5]) is below the minimum level value specified in Attachment "B" and the discharger cannot achieve an MDL value for that pollutant below the ML value, the discharger shall submit justification why a lower MDL value cannot be achieved. Justification shall be submitted together with monthly monitoring reports.

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

1) For monitoring data submitted through May 1, 2002:

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

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

4 *MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136, Appendix B, revised as of May 14, 1999.*

5 *See Federal Register/ Vol. 65, No. 97 / Thursday, May 18, 2000 / Rules and Regulations.*

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

(c) Sample results not detected above the laboratory's MDL shall be reported as "not detected" or "ND."

2) For monitoring data submitted after May 1, 2002[6] :

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

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

(c) Sample results not detected above the laboratory's MDL shall be reported as "not detected" or "ND."

e. The discharger shall submit to the Regional Board reports necessary to determine compliance with effluent limitations for priority pollutants in this Order and shall follow the chemical nomenclature and sequential order of constituents shown in Attachment "C" – Priority Pollutant Lists. The discharger shall report with each sample result:

1) The PQL or ML achieved by the testing laboratory; and

2) The laboratory's current Method Detection Limit (MDL) as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).

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6 *If an extension from this date is authorized by the Executive Officer for one or more constituents, then the requirements specified in paragraph A.5.c.1) above, shall apply to that constituent(s) until the extended date specified by the Executive Officer. After that date, the requirements specified in paragraph A.5.c.2) shall apply.*

6. The monitoring frequency for those priority pollutants that are detected during the required quarterly effluent monitoring at a concentration greater than fifty percent of the most stringent applicable receiving water objective (freshwater or human health (consumption of organisms only) specified for that pollutant[7] in 40 CFR 131.38[8]) shall be accelerated[9] to monthly. To return to the original monitoring frequency specified, the discharger shall request and receive approval from the Regional Board's Executive Officer or designee.

7. The monitoring frequency for those priority pollutants that are detected during the required annual effluent monitoring at a concentration greater than fifty percent of the most stringent applicable receiving water objective (freshwater or human health (consumption of organisms only) as specified for that pollutant[7] in 40 CFR 131.38[8]) shall be accelerated[9] to quarterly for one year following detection. To return to the original monitoring frequency specified, the discharger shall request and receive approval from the Regional Board's Executive Officer or designee.

8. The monthly monitoring frequency of constituents may be reduced to quarterly with prior approval from the Executive Officer when effluent monitoring data for the last 12 months show concentration values less than the most stringent applicable receiving water objective (freshwater or human health (consumption of organisms only) as specified for that pollutant[7] in 40 CFR 131.38[8]). The discharger shall immediately return to the original monthly monitoring frequency when quarterly monitoring test result for a specific pollutant show a concentration greater than fifty percent of the most stringent applicable receiving water objective (freshwater or human health (consumption of organisms only) as specified for that pollutant[7] in 40 CFR 131.38[8]).

9. For non-priority pollutants monitoring, all analytical data shall be reported with identification of practical quantitation levels and with method detection limits, as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).

10. The discharger shall have, and implement an acceptable written quality assurance (QA) plan for laboratory analyses. Duplicate chemical analyses must be conducted on a minimum of ten percent (10%) of the samples, or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples. When requested by the Regional Board or EPA, the discharger will participate in the NPDES discharge monitoring report QA performance study.

11. Discharge monitoring data shall be submitted in a format acceptable by the Regional Board and EPA. Specific reporting format may include preprinted forms and/or electronic media. The results of all monitoring required by this Order shall be reported to the Regional Board, and shall be submitted in such a format as to allow direct comparison

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[7] *For those priority pollutants without specified criteria values, accelerated monitoring is not required.*

[8] *See Federal Register/ Vol. 65, No. 97 / Thursday, May 18, 2000 /Rules and Regulations.*

[9] *For any priority pollutant with criteria values below the Minimum Level, accelerated monitoring shall be triggered if such pollutant is detected at or above the Minimum Level.*

with the limitations and requirements of this Order. The hard copy of submitted reports shall serve as the official submittal.

12. The discharger shall tabulate the monitoring data to clearly illustrate compliance and/or noncompliance with the requirements of the Order.

13. The discharger shall multiply each measured or estimated congener concentration by its respective toxic equivalency factor (TEF) as shown below and report the sum of these values. The discharger shall use the U.S. EPA approved test method 1613 for dioxins and furans.

Toxic Equivalency Factors for 2,3,7, 8-TCDD Equivalents	
Congener	TEF
2,3,7,8-TetraCDD	1
1,2,3,7,8-PentaCDD	1.0
1,2,3,4,7,8-HexaCDD	0.1
1,2,3,6,7,8-HexaCDD	0.1
1,2,3,7,8,9-HexaCDD	0.1
1,2,3,4,6,7,8-HeptaCDD	0.01
OctaCDD	0.0001
2,3,7,8-TetraCDF	0.1
1,2,3,7,8-PentaCDF	0.05
2,3,4,7,8-PentaCDF	0.5
1,2,3,4,7,8-HexaCDF	0.1
1,2,3,6,7,8-HexaCDF	0.1
1,2,3,7,8,9-HexaCDF	0.1
2,3,4,6,7,8-HexaCDF	0.1
1,2,3,4,6,7,8-HeptaCDF	0.01
1,2,3,4,7,8,9-HeptaCDF	0.01
OctaCDF	0.0001

14. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, and of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and an estimate of the date when the discharger will be in compliance. The discharger shall notify the Regional Board by letter when compliance with the time schedule has been achieved.

15. The reports for June and December shall include a roster of plant personnel, including job titles, duties, and level of State certification for each individual.

16. By April 1 of each year, the discharger shall submit an annual report to the Regional Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. In addition, the discharger shall discuss the compliance record and the corrective actions taken or planned which may be needed to bring the discharge into full compliance with the waste discharge requirements. The

annual report shall include a summary of the quality assurance (QA) activities for the previous year.

17. The discharger shall assure that records of all monitoring information are maintained and accessible for a period of at least five years from the date of the sample, report, or application. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or by the request of the Regional Board at any time. Records of monitoring information shall include:

    a. The date, exact place, and time of sampling or measurements;
    b. The individual(s) who performed the sampling, and/or measurements;
    c. The date(s) analyses were performed;
    d. The laboratory which performed the analyses,
    e. The individual(s) who performed the analyses;
    f. The analytical techniques or methods used;
    g. All sampling and analytical results;
    h. All monitoring equipment calibration and maintenance records;
    i. All original strip charts from continuous monitoring devices;
    j. All data used to complete the application for this Order
    k. Copies of all reports required by this Order; and
    l. Electronic data. and information generated by the Supervisory Control And Data Acquisition (SCADA) System.

18. The flow measurement system shall be calibrated at least once per year or more frequently, to ensure continued accuracy.

19. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. In the event that continuous monitoring equipment is out of service for greater than a 24 hour period, the discharger shall obtain a representative grab sample each day the equipment is out of service. The discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. In its monitoring report, the discharger shall specify the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.

20. Monitoring and reporting shall be in accordance with the following:

    a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

    b. The monitoring and reporting of influent, effluent, and sludge shall be done, at a minimum, on an annual basis, and more frequently, depending on the nature and effect of the sewage sludge use or disposal practice, or as specified in this Order.

    c. All monitoring, including that of sludge use or disposal, must be conducted according to test procedures approved under 40 CFR 136 or as specified in this Order.

d. The results of any analysis of samples taken more frequently than required at the locations specified in this M&RP shall be reported to the Regional Board.

e. A "grab" sample is defined as any individual sample collected in less than 15 minutes.

f. A composite sample is defined as a combination of no fewer than eight individual grab samples obtained over the specified sampling period. The volume of each individual grab sample shall be proportional to the discharge flow rate at the time of sampling. The compositing period shall equal the specific sampling period, or 24 hours, if no period is specified.

g. Daily samples shall be collected on each day of the week.

h. Weekly samples shall be collected on any representative day of each week.

i. Monthly samples shall be collected on any representative day of each month.

j. Quarterly samples shall be collected in March, June, September, and December.

k. Semi-annual samples shall be collected in January for the period of January through June with the report due by the end of July and a sample in July for the period July through December with the report due the following January.

l. Annual samples shall be collected in accordance with the following schedule:

Year	Annual samples
2002	January
2003	April
2004	July
2005	October
2006	January

21. All reports shall be signed by either a principal executive officer or ranking elected or appointed official or a duly authorized representative of a principal executive officer or ranking elected or appointed official. A duly authorized representative of a principal executive officer or ranking elected or appointed official may sign the reports only if;

a. the authorization is made in writing by a principal executive officer or ranking elected or appointed official,

b. the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position), and

c. the written authorization is submitted to the Regional Board.

Each person signing a report required by this Order or other information requested by the Regional Board shall make the following certification:

" I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons responsible for gathering the information, all information except for whole effluent toxicity test (WET) results is, to the best of my knowledge and belief, true, accurate, and complete. With respect to WET test data, for which accuracy cannot be ascertained (see, Federal Register, Vol. 60, No. 199, Oct. 16, 1995 at p. 53535), I certify that all results reported are complete and uncensored and contain no known errors or omissions. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

22. The discharger, unless otherwise specified elsewhere in this M&RP, shall deliver a copy of each monitoring report in the appropriate format to:

    a. California Regional Water Quality Control Board
       Santa Ana Region
       3737 Main Street, Suite 500
       Riverside, CA 92501-3348, and

    b. NPDES/DMR
       CWA Compliance Office, WTR-7
       Water Division
       75 Hawthorne Street
       San Francisco, CA 94105

B. INFLUENT MONITORING:

1. Representative samples shall be taken at the inflow to the tertiary treatment plant. Influent monitoring may be substituted by monitoring the required constituents at the effluent structures of the City of San Bernardino's Water Reclamation Facility and the City of Colton's Municipal Wastewater Treatment Facility before the conveyance pipeline leading into the RIX facility.

2. The following shall constitute the influent monitoring program:

Constituent	Units	Type of Sample	Minimum Frequency of Sampling and Analysis
Flow	MGD	Recorder/Totalizer	Continuous[10]
Ammonia-Nitrogen	mg/l	Composite	Weekly
Total Inorganic Nitrogen	"	"	"
Nitrate-Nitrogen	"	"	Weekly
Total Dissolved Solids	"	"	Monthly
Chloride[11]	"	"	"
Manganese	mg/l	"	"
Cadmium[12]	ug/l	"	"
Chromium	"	"	"
Cobalt	"	"	"
Copper	"	"	"
Iron	"	"	"
Lead	"	"	"
Mercury	"	"	"
Nitrosodimethylamine	"	"	"
Selenium	"	"	"
Silver	"	"	"

C. EFFLUENT MONITORING:

1. A sampling station shall be established at the point of discharge and shall be located where representative samples of the effluent can be obtained.

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10 *In the event the discharger is unable to make continuous flow measurements of the influent to the Regional Tertiary facility, continuous flow measurements of each of the secondary facilities' effluent flow may be used.*

11 *To be measured time coincident with monitoring of chloride concentration in the effluent.*

12 *For influent monitoring of all metal constituents, total metal concentrations shall be reported.*

2. The following shall constitute the effluent monitoring program:

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Flow	Mgd	Recorder/Totalizer	Continuous
Fluid Transmittance	%	Recorder	Continuous
Turbidity	NTU	Recorder	Continuous
Specific Conductance	µmhos/cm	grab	Daily
pH	pH units	"	"
Suspended Solids	mg/l	Composite	"
BOD[13]	mg/l	Composite	Daily
Coliform Organisms	MPN per 100 ml	Grab	"
Fecal Coliform	"	Grab	"
Total Inorganic Nitrogen	mg/l	Composite	Weekly
Total Kjeldahl Nitrogen	"	"	"
Nitrate Nitrogen	"	"	"
Ammonia-Nitrogen	mg/l	Composite	Weekly
Toxicity Monitoring	(See Section D., below)	grab	(See Section D., below)
Bicarbonate	mg/l	Composite	Monthly (see Section A.8., above)
Boron	"	"	"
Calcium	"	"	"
Carbonate	"	"	"
Chloride[14]	"	"	"
Fluoride	"	"	"
Manganese	"	"	"
Sodium	"	"	"
Phosphate	"	"	"
Sulfate	"	"	"
Total Dissolved Solids	"	"	"

[13] *If the discharger satisfactorily demonstrates to the Regional Board's Executive Officer a BOD/TOC relationship, TOC monitoring can be substituted for BOD.*

[14] *To be measured time coincident with monitoring of chloride concentration in the influent.*

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Total Organic Carbon (TOC)	mg/l	Composite	Monthly (see Section A.8., above)
Total Hardness	"	"	"
Nitrosodimethylamine	ug/l	Grab	Monthly (see Section A.8., above)
Arsenic	ug/l	Composite	Quarterly (see A.6., above)
Barium	"	"	"
Cadmium	"	"	"
Chromium (VI) or Total Chromium	ug/l	Composite	Quarterly (see A.6., above)
Cobalt	"	"	"
Copper	"	"	"
Iron	"	"	"
Lead	"	"	"
Mercury	"	"	"
Nickel	"	"	"
Selenium	"	"	"
Silver	"	"	"
Zinc	ug/l	Composite	"
Cyanide	"	Grab	Quarterly (see A.6., above)
2,3,7,8-TetraCDD	ρg/l (parts-per-quadrillion)	Composite	Semi-annual (see A.13. & A.20.k.)
1,2,3,7,8-PentaCDD	"	"	"
1,2,3,4,7,8-HexaCDD	"	"	"
1,2,3,6,7,8-HexaCDD	"	"	"
1,2,3,7,8,9-HexaCDD	"	"	"
1,2,3,4,6,7,8-HeptaCDD	"	"	"
OctaCDD	"	"	"
2,3,7,8-TetraCDF	"	"	"
1,2,3,7,8-PentaCDF	"	"	"
2,3,4,7,8-PentaCDF	"	"	"
1,2,3,4,7,8-HexaCDF	"	"	"
1,2,3,6,7,8-HexaCDF	"	"	"
1,2,3,7,8,9-HexaCDF	"	"	"

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
2,3,4,6,7,8-HexaCDF	ρg/l (parts-per-quadrillion)	Composite	Semi-annual (see A.13. & A.20.k.)
1,2,3,4,6,7,8-HeptaCDF	"	"	"
1,2,3,4,7,8,9-HeptaCDF	"	"	"
OctaCDF	ρg/l (parts-per-quadrillion)	Composite	Semi-annual (see A.13. & A.20.k.)
Volatile organic portion of remaining EPA Priority Pollutants (See Attachment "C)	µg/l	Grab	Annually (see A.7., above)
Remaining EPA Priority Pollutants (See Attachment "C)	µg/l	Composite	Annually (see A.7., above)

D. TOXICITY MONITORING REQUIREMENTS:

1. The discharger shall conduct critical life stage chronic toxicity testing in accordance with Method 1002.0 - Survival and Reproduction test for water flea, Ceriodaphnia dubia as specified in "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", third edition, Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency 1994, Cincinnati, Ohio (July 1994, EPA/600/4-91/002).

2. The discharger shall establish procedures to ensure that the toxicity testing laboratory notifies the discharger of the results of toxicity testing within twenty-four hours of completing such tests.

3. A minimum of one monthly chronic toxicity test shall be conducted on grab samples.

4. The discharger shall increase the frequency of chronic toxicity testing to every two weeks whenever any test result exceeds 1.0 TUc. The first test under the accelerated schedule shall be conducted within two weeks of receiving notice of the test which exceeds 1.0 TUc, and every two weeks thereafter. The discharger may resume the regular test schedule when two consecutive chronic toxicity tests result in 1.0 TUc, or when the results of the Initial Investigation Reduction Evaluation conducted by the discharger have adequately addressed the identified toxicity problem .

5. The presence of chronic toxicity shall be estimated as specified in Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. Third Edition. EPA/600/4-91/002 and "Understanding and Accounting for Method Variability in WET Applications Under the NPDES Program" (EPA-833-R-00-003) and Method Guidance and Recommendations for Whole Effluent Toxicity Testing (EPA-821-B-00-004) and Preliminary Report: Interlaboratory Variability study of EPA Short-term Chronic and Acute Whole Effluent Toxicity Test Methods (EPA-821-R-00-028A).

6. Results for both survival and reproduction endpoints shall be reported in TUc, where TUc = 100/NOEC or $100/IC_p$ or EC_p (p is the percent effluent). The no observed effect concentration (NOEC) is the highest concentration of toxicant to which organisms are exposed in a chronic test, that causes no observable adverse effect on the tests organisms (e.g., the highest concentration of toxicant to which the values for the observed responses are not statistically significant different from the controls). The inhibition concentration (IC) is a point estimate of the toxicant concentration that causes a given percent reduction in a non-quantal biological measurement (e.g., reproduction or growth) calculated from a continuous model (the EPA Interpolation Method). The effective concentration (EC) is a point estimate of the toxicant concentration that would cause a given percent reduction in quantal biological measurement (e.g., larval development, survival) calculated from a continuous model (e.g., probit).

7. Additional Testing Requirements.

   a. A series of at least five dilutions and a control will be tested. The series shall be within 60% to 100% effluent concentration.

   b. If organisms are not cultured in-house, concurrent testing with reference toxicants shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicants shall also be conducted using the same test conditions as the effluent toxicity test (e.g., same test duration, etc).

   c. If either of the reference toxicant test or the effluent tests do not meet all test acceptability criteria as specified in the manual[15], then the discharger must re-sample and re-test within 14 days or as soon as the discharger receives notification of failed tests.

   d. Control and dilution water should be receiving water or lab water, as appropriate, as described in the manual. If the dilution water used is different from the culture water, a second control, using culture water shall also be used.

8. Quality Assurance/Control:

   a. A quality assurance/quality control (QA/QC) program shall be instituted to verify the results of the effluent toxicity monitoring program. The QA/QC program shall include but shall not be limited to the following: (1) Selection of an independent testing laboratory; (2) Approval by the Regional Board's Executive Officer or Executive Officer's designee of the independent testing laboratory; (3) Once during the year, the discharger shall split samples with the independent laboratory for conducting chronic toxicity testing; (4) Results from the independent laboratory shall be submitted to the Regional Board and the discharger for evaluation; (5) The discharger shall review the test acceptability criteria in accordance with the EPA test protocols, EPA/600/4-91/002.

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15 *Refers to USEPA Manual "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. Third Edition. EPA/600/4-91/002."*

b. Results from the independent laboratory of the annual QA/QC split samples are to be used for Quality Assurance/Quality Control (QA/QC) purposes only and not for purposes of determining compliance with other requirements of this Order.

9. The use of alternative methods for measuring chronic toxicity may be considered by the Executive Officer on a case–by-case basis. The use of a different test species, in lieu of conducting the required test species may be considered/approved by the Executive Officer on a case-by case basis upon submittal of the documentation supporting discharger's determination that a different species is more sensitive and appropriate.

10. Reporting: Results of all toxicity testing conducted within the month shall be submitted the following month in accordance with Section 10 of "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", third edition, Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency 1994, Cincinnati, Ohio (July 1994, EPA/600/4-91/002) and Certification of 'Accuracy' of Information Submissions of Test Results Measuring Whole Effluent Toxicity". EPA Memorandum to Regional Water Management Division Directors and Regional Enforcement Division Directors. Signed by Charles S. Sutfin, Director Water Permits Division, EPA Office of Wastewater Management and Sheila E. France, Director Engineering and Analysis Division, EPA Office of Science and Technology, and Brian J. Maas, Director Water Enforcement Division, EPA Office of Regulatory Enforcement. The report shall include a determination of the median value of all chronic toxicity testing results conducted during the previous two months.

11. Whenever an Initial Investigation Reduction Evaluation is conducted, the results of the evaluation shall be submitted upon completion. In addition, monthly status reports shall be submitted as part of the discharger's monitoring report for the previous month.

E. RECEIVING WATER MONITORING:

1. The following receiving water stations shall be monitored for the indicated constituents:

Station A[16]: Santa Ana River at suitable location within 500 feet upstream of the point of discharge.
Station B: Santa Ana River immediately downstream of the point of discharge.

Constituent	Unit	Type of Sample	Minimum Frequency of Analysis
Dissolved Oxygen	mg/l	Grab	Weekly
Temperature	°C	"	"
pH	pH units	"	"
A check for the presence of any color changes, foam, deposition of material, or odor in the receiving water from the discharge shall be made daily at station B.			

16 *Sampling station shall be located where there is natural stream flow and does not include City of Rialto's wastewater treatment plant effluent.*

2. At station A, all the priority pollutants[17] listed in Attachment "C" shall be monitored quarterly. A grab sample shall be taken, analyzed and test results shall be reported in micrograms/liter (ug/l) by the last day of the month following the monitoring period. Where there is no natural stream flow at Station A, a note to this observation shall be recorded and reported with the date and time in lieu of the required priority pollutant monitoring.

3. Unless otherwise directed by the Regional Board Executive Officer, the discharger shall implement the approved plan for the annual sampling and testing of mercury levels in fish flesh samples collected from the Santa Ana River (see Section E.2. of the Order). The frequency of monitoring and submission of reports shall be as stipulated in the approved plan.

F. REPORTING:

1. Monitoring reports shall be submitted by the dates in the following schedule:

Report	Monitoring Frequency	Report Due Date
Influent and effluent constituents monitoring	Continuous,/Daily/ Weekly/Monthly/ Quarterly/ Semi-Annually/ Annually	By the 30th day of the month following the monitoring period
Toxicity Testing	See Section D., above.	"
Receiving Water Monitoring	Weekly	"
Receiving Water Priority Pollutants Monitoring	Quarterly	By the 30th day of the month following the monitoring period
Fish Bioassay Monitoring	Annually	See Section E.3., above.
Annual Report (see Section A.16., above)	"	April 1 of each year

17 *Receiving water monitoring for the congeners (as listed in Section A.10.) is not required.*

2. The following reports shall also be submitted by the dates indicated:

REQUIRED REPORTS OF ORDER NO. 01-45	
Report	Report Due Date
Report Section E.2.	February 1, 2002
Report per Section E.3.	February 1, 2002
Report per Section E.4.	February 1, 2002
Report per Section E.5.	February 1, 2002
Report per Section E.6.	February 1, 2002
Report per Section E.7.	February 1, 2002
Report per Section E.8.	May 1, 2002
Report per Section E.9.	See Section E.9. of the Order
Report per Section E.10.	See Section E.10. of the Order
Report per Section E.11.	90-days after effective date of the Order (see Section E.11. of the Order)
Report of Waste Discharge per Section E.12.	180-days before any plant changes (see Section E.12. of the Order)
Non-compliance Reporting per Section E.13.	within 24-hours followed by a written report within 5-days (see Section E.13. of the Order)
This table attempts to summarize all of the special reports that are required to be submitted in accordance with Order No. 01-45; however, the omission of a report from this table does not absolve the discharger from the requirement to submit that report.	

Gerard J. Thibeault
Executive Officer

October 26, 2001

PRACTICAL QUANTITATION LEVELS FOR COMPLIANCE DETERMINATION

	Constituent	RL µg/l	Analysis Method
1	Arsenic	7.5	GF/AA
2	Barium	20	ICP/GFAA
3	Cadmium	15	ICP
4	Chromium (VI)	15.0	ICP
5	Cobalt	10.0	GF/AA
6	Copper	19.0	GF/ICP
7	Cyanide	50.0	335.2/335.3
8	Iron	100.0	ICP
9	Lead	26.0	GF/AA
10	Manganese	20.0	ICP
11	Mercury	0.5	CV/AA
12	Nickel	50.0	ICP
13	Selenium	14.0	GF/HYDRIDE GENERATION
14	Silver	16.0	ICP
15	Zinc	20	ICP
16	1,2 - Dichlorobenzene	5.0	601/602/624
17	1,3 - Dichlorobenzene	5.0	601
18	1,4 - Dichlorobenzene	5.0	601
18	2,4 - Dichlorophenol	10.0	625/604
20	4 - Chloro -3-methylphenol	10.0	625/604
21	Aldrin	0.04	608
22	Benzene	1.0	602/624
23	Chlordane	0.30	608
24	Chloroform	5.0	601/624
25	DDT	0.10	608
26	Dichloromethane	5.0	601/624
27	Dieldrin	0.10	608
28	Fluorantene	10.0	625/610
29	Endosulfan	0.50	608
30	Endrin	0.10	608
31	Halomethanes	5.0	601/624
32	Heptachlor	0.03	608
33	Hepthachlor Epoxide	0.05	608
34	Hexachlorobenzene	10.0	625
35	Hexachlorocyclohexane		
	Alpha	0.03	608
	Beta	0.03	608
	Gamma	0.03	608
36	PAH's	10.0	625/610
37	PCB	1.0	608
38	Pentachlorophenol	10.0	625/604
39	Phenol	10.0	625/604
40	TCDD Equivalent	0.05	8280
41	Toluene	1.0	602/625
42	Toxaphene	2.0	608
43	Tributyltin	0.02	GC
44	2,4,6-Trichlorophenol	10.0	625/604

MINIMUM LEVELS IN PPB (µg/l)

Table 2a - VOLATILE SUBSTANCES[1]	GC	GCMS
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromomethane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Dichlorobromomethane	0.5	2
1,1 Dichloroethane	0.5	1
1,2 Dichloroethane	0.5	2
1,1 Dichloroethylene	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichloropropylene (volatile)	0.5	2
Ethylbenzene	0.5	2
Methyl Bromide (*Bromomethane*)	1.0	2
Methyl Chloride (*Chloromethane*)	0.5	2
Methylene Chloride (*Dichloromethane*)	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
Tetrachloroethylene	0.5	2
Toluene	0.5	2
trans-1,2 Dichloroethylene	0.5	1
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
Trichloroethylene	0.5	2
Vinyl Chloride	0.5	2
1,2 Dichlorobenzene (volatile)	0.5	2
1,3 Dichlorobenzene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2

Selection and Use of Appropriate ML Value:

ML Selection: When there is more than one ML value for a given substance, the discharger may select any one of those ML values, and their associated analytical methods, listed in Attachment "A" that are below the calculated effluent limitation for compliance determination. If no ML value is below the effluent limitation, then the discharger shall select the lowest ML value, and its associated analytical method, listed in this Attachment "A".

ML Usage: The ML value in Attachment "A" represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences. Assuming that all method-specific analytical steps are followed, the ML value will also represent, after the appropriate application of method-specific factors, the lowest standard in the calibration curve for that specific analytical technique. Common analytical practices sometimes require different treatment of the sample relative to calibration standards.

Note: chemical names in parenthesis and italicized is another name for the constituent.

[1] *The normal method-specific factor for these substances is 1, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.*

MINIMUM LEVELS IN PPB (µg/l)

Table 2b – Semi-Volatile Substances[2]	GC	GCMS	LC
2-Chloroethyl vinyl ether	1	1	
2 Chlorophenol	2	5	
2,4 Dichlorophenol	1	5	
2,4 Dimethylphenol	1	2	
4,6 Dinitro-2-methylphenol	10	5	
2,4 Dinitrophenol	5	5	
2- Nitrophenol		10	
4- Nitrophenol	5	10	
4 Chloro-3-methylphenol	5	1	
2,4,6 Trichlorophenol	10	10	
Acenaphthene	1	1	0.5
Acenaphthylene		10	0.2
Anthracene		10	2
Benzidine		5	
Benzo (a) Anthracene (*1,2 Benzanthracene*)	10	5	
Benzo(a) pyrene (*3,4 Benzopyrene*)		10	2
Benzo (b) Flouranthene (*3,4 Benzofluoranthene*)		10	10
Benzo(g,h,i)perylene		5	0.1
Benzo(k)fluoranthene		10	2
bis 2-(1-Chloroethoxyl) methane		5	
bis(2-chloroethyl) ether	10	1	
bis(2-Chloroisopropyl) ether	10	2	
bis(2-Ethylhexyl) phthalate	10	5	
4-Bromophenyl phenyl ether	10	5	
Butyl benzyl phthalate	10	10	
2-Chloronaphthalene		10	
4-Chlorophenyl phenyl ether		5	
Chrysene		10	5
Dibenzo(a,h)-anthracene		10	0.1
1,2 Dichlorobenzene (semivolatile)	2	2	
1,3 Dichlorobenzene (semivolatile)	2	1	
1,4 Dichlorobenzene (semivolatile)	2	1	
3,3' Dichlorobenzidine		5	
Diethyl phthalate	10	2	
Dimethyl phthalate	10	2	
di-n-Butyl phthalate		10	
2,4 Dinitrotoluene	10	5	
2,6 Dinitrotoluene		5	
di-n-Octyl phthalate		10	
1,2 Diphenylhydrazine		1	
Fluoranthene	10	1	0.05
Fluorene		10	0.1
Hexachloro-cyclopentadiene	5	5	
1,2,4 Trichlorobenzene	1	5	

MINIMUM LEVELS IN PPB (µg/l)

Table 2b - SEMI-VOLATILE SUBSTANCES[2]	GC	GCMS	LC	COLOR
Pentachlorophenol	1	5		
Phenol [3]	1	1		50
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
N-Nitroso diphenyl amine	10	1		
Phenanthrene		5	0.05	
Pyrene		10	0.05	

Table 2c – INORGANICS[4]	FAA	GFAA	ICP	ICPMS	SPGF AA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1000
Arsenic		2	10	2	2	1		20	1000
Beryllium	20	0.5	2	0.5	1				1000
Cadmium	10	0.5	10	0.25	0.5				1000
Chromium (total)	50	2	10	0.5	1				1000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1000
Lead	20	5	5	0.5	2				10000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1000
Selenium		5	10	2	5	1			1000
Silver	10	1	10	0.25	2				1000
Thallium	10	2	10	1	5				1000
Zinc	20		20	1	10				1000
Cyanide								5	

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2 *With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1000, therefore, the lowest standards concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1000.*

3 *Phenol by colorimetric technique has a factor of 1*

4 *The normal method-specific factor for these substances is 1, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.*

MINIMUM LEVELS IN PPB (µg/l)

Table 2d - PESTICIDES – PCBs[5]	GC
Aldrin	0.005
alpha–BHC (*a-Hexachloro-cyclohexane*)	0.01
beta–BHC (*b-Hexachloro-cyclohexane*)	0.005
Gamma–BHC (*Lindane; g-Hexachloro-cyclohexane*)	0.02
Delta-BHC (*d-Hexachloro-cyclohexane*)	0.005
Chlordane	0.1
4,4'-DDT	0.01
4,4'-DDE	0.05
4,4'-DDD	0.05
Dieldrin	0.01
Alpha-Endosulfan	0.02
Beta-Endosulfan	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

Techniques:
GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR - Colorimetric

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[5] *The normal method-specific factor for these substances is 100, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.*

EPA PRIORITY POLLUTANT LIST

Metals		Acid Extractibles		Base/Neutral Extractibles (continuation)	
1.	Antimony	45.	2-Chlorophenol	91.	Hexachloroethane
2.	Arsenic	46.	2,4-Dichlorophenol	92.	Indeno (1,2,3-cd) Pyrene
3.	Beryllium	47.	2,4-Dimethylphenol	93.	Isophorone
4.	Cadmium	48.	2-Methyl-4,6-Dinitrophenol	94.	Naphthalene
5a.	Chromium (III)	49.	2,4-Dinitrophenol	95.	Nitrobenzene
5b.	Chromium (VI)	50.	2-Nitrophenol	96.	N-Nitrosodimethylamine
6.	Copper	51.	4-Nitrophenol	97.	N-Nitrosodi-N-Propylamine
7.	Lead	52.	3-Methyl-4-Chlorophenol	98.	N-Nitrosodiphenylamine
8.	Mercury	53.	Pentachlorophenol	99.	Phenanthrene
9.	Nickel	54.	Phenol	100.	Pyrene
10.	Selenium	55.	2, 4, 6 – Trichlorophenol	101.	1,2,4-Trichlorobenzene
11.	Silver	**Base/Neutral Extractibles**		**Pesticides**	
12.	Thallium	56.	Acenaphthene	102.	Aldrin
13.	Zinc	57.	Acenaphthylene	103.	Alpha BHC
Miscellaneous		58.	Anthracene	104.	Beta BHC
14.	Cyanide	59.	Benzidine	105.	Delta BHC
15.	Asbestos (not required unless requested)	60.	Benzo (a) Anthracene	106.	Gamma BHC
16.	2,3,7,8-Tetrachlorodibenzo-P-Dioxin (TCDD)	61.	Benzo (a) Pyrene	107.	Chlordane
Volatile Organics		62.	Benzo (b) Fluoranthene	108.	4, 4' - DDT
17.	Acrolein	63.	Benzo (g,h,i) Perylene	109.	4, 4' - DDE
18.	Acrylonitrile	64.	Benzo (k) Fluoranthene	110.	4, 4' - DDD
19.	Benzene	65.	Bis (2-Chloroethoxy) Methane	111.	Dieldrin
20.	Bromoform	66.	Bis (2-Chloroethyl) Ether	112.	Alpha Endosulfan
21.	Carbon Tetrachloride	67.	Bis (2-Chloroisopropyl) Ether	113.	Beta Endosulfan
22.	Chlorobenzene	68.	Bis (2-Ethylhexyl) Phthalate	114.	Endosulfan Sulfate
23.	Chlorodibromomethane	69.	4-Bromophenyl Phenyl Ether	115.	Endrin
24.	Chloroethane	70.	Butylbenzyl Phthalate	116.	Endrin Aldehyde
25.	2-Chloroethyl Vinyl Ether	71.	2-Chloronaphthalene	117.	Heptachlor
26.	Chloroform	72.	4-Chlorophenyl Phenyl Ether	118.	Heptachlor Epoxide
27.	Dichlorobromomethane	73.	Chrysene	119.	PCB 1016
28.	1,1-Dichloroethane	74.	Dibenzo (a,h) Anthracene	120.	PCB 1221
29.	1,2-Dichloroethane	75.	1,2-Dichlorobenzene	121.	PCB 1232
30.	1,1-Dichloroethylene	76.	1,3-Dichlorobenzene	122.	PCB 1242
31.	1,2-Dichloropropane	77.	1,4-Dichlorobenzene	123.	PCB 1248
32.	1,3-Dichloropropylene	78.	3,3'-Dichlorobenzidine	124.	PCB 1254
33.	Ethylbenzene	79.	Diethyl Phthalate	125.	PCB 1260
34.	Methyl Bromide	80.	Dimethyl Phthalate	126.	Toxaphene
35.	Methyl Chloride	81.	Di-n-Butyl Phthalate		
36.	Methylene Chloride	82.	2,4-Dinitrotoluene		
37.	1,1,2,2-Tetrachloroethane	83.	2-6-Dinitrotoluene		
38.	Tetrachloroethylene	84.	Di-n-Octyl Phthalate		
39.	Toluene	85.	1,2-Dipenylhydrazine		
40.	1,2-Trans-Dichloroethylene	86.	Fluoranthene		
41.	1,1,1-Trichloroethane	87.	Fluorene		
42.	1,1,2-Trichloroethane	88.	Hexachlorobenzene		
43.	Trichloroethylene	89.	Hexachlorobutadiene		
44.	Vinyl Chloride	90.	Hexachlorocyclopentadiene	Revised: 7/7/2000	

California Regional Water Quality Control Board
Santa Ana Region

October 26, 2001

ITEM:

SUBJECT:

Waste Discharge Requirements for the Colton/San Bernardino Regional Tertiary Treatment and Water Reclamation Authority - Regional Tertiary Treatment Rapid Infiltration and Extraction Facility (RIX facility), San Bernardino County, Order No. 01-45, NPDES No. CA8000304.

DISCUSSION:

See Attached Fact Sheet

RECOMMENDATION:

Adopt Order No. 01-45, NPDES No. CA8000304, as presented.

Comments were solicited from the following agencies:

U.S. Environmental Protection Agency, Permits Issuance Section (WTR-5) - Terry Oda
U.S. Army District, Los Angeles, Corps of Engineers, Regulatory Branch
U.S. Fish and Wildlife Service - Carlsbad
State Water Resources Control Board, Office of the Chief Counsel – Jorge Leon
State Water Resources Control Board, Division of Water Quality- James Kassel
State Water Resources Control Board, Division of Clean Water Programs - Lynn E. Johnson
State Department of Health Services, San Bernardino – Kalyanpur Baliga
State Department of Health Services, Sacramento – Robert Hultquist
State Department of Health Services, Carpenteria - Jeff Stone
State Department of Water Resources - Glendale
State Department of Fish and Game - Long Beach
City of Highland - City Manager
City of Loma Linda - City Manager
City of San Bernardino - City Manager
City of Colton - City Manager
City of Grand Terrace - City Manager
City of Colton, Water and Wastewater Department - Thomas Clarke
City of Rialto, Public Works Director – John Gerardi
East Valley Water District -Robert Martin
Orange County Water District - Nira Yamachika
San Bernardino County Department of Public Works, Envr. Mngmt. Div. – Jim Borcuk
San Bernardino County Environmental Health Services - Scott Maass
Riverside Regional Water Quality Control Plant – John Claus
Santa Ana Watershed Project Authority – Joseph Grindstaff
Santa Ana River Dischargers Association
Orange County Coastkeeper – Garry Brown
Lawyers for Clean Water C/c San Francisco Baykeeper

California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

FACT SHEET

October 26, 2001

The attached pages contain information concerning an application for waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permit for the Colton/San Bernardino Regional Tertiary Treatment and Water Reclamation Authority for discharges from the Rapid Infiltration and Extraction (RIX) facility.

I. BACKGROUND

The Cities of Colton and San Bernardino operate their own municipal treatment plants. These treatment plants treat domestic, commercial and industrial wastes. Prior to the implementation of RIX, the treated wastewater from these plants was discharged to the Santa Ana River. The City of San Bernardino's municipal wastewater treatment plant discharged approximately 28 million gallons per day (mgd) of secondary treated wastewater to the River. This discharge was regulated under Order No. 92-22, NPDES No. CA0105392, as amended by Order No. 93-42. The City of Colton discharged approximately 5.0 mgd of secondary treated municipal wastewater to the River. This discharge was regulated under Order No. 92-17, NPDES No. CA0105236, as amended by Order No. 92-40 and Order No. 93-42. To protect public health and the beneficial uses of the Santa Ana River, these Orders required the Cities to comply with effluent requirements based on tertiary (or equivalent) treatment. Since the Cities could not comply immediately with these requirements, the Regional Board adopted cease and desist orders for the Cities, specifying time schedules for compliance.

To comply with waste discharge requirements and the cease and desist orders, the Cities contracted with the Santa Ana Watershed Project Authority (SAWPA[1]) to assist them with the evaluation, design and implementation of necessary facilities. The Cities and SAWPA proposed the implementation of the Regional Rapid Infiltration and Extraction (RIX) facility to meet the Regional Board's requirements. A 12-month demonstration of a pilot scale RIX facility conducted by SAWPA showed that the RIX treatment train as a whole could provide treatment equivalent to that of conventional tertiary treatment facilities. As proposed by the Cities and SAWPA, the RIX treatment process utilizes in-situ native soil filtration by applying the secondary treated wastewater to a series of shallow earthen basins on a rotational basis so that basins can be operated on alternately wet and dry cycles. As the secondary effluent percolates through the unsaturated soil media to the groundwater table, physical, biological and chemical processes take place within the soil structure. As a result, dissolved organic matter and suspended solids in the secondary effluent are significantly reduced, resulting in a water quality equivalent to that produced by conventional tertiary filtration systems. In addition, pathogens and some chemical constituents, such as nitrogen and carbon, are also reduced. Once the wastewater is filtered through the soil, it is pumped and extracted along with some native groundwater

[1] *SAWPA is a Joint Powers Authority composed of the San Bernardino Valley Municipal Water District, the Inland Empirte Utilities Agency, the Western Municipal Water District, the Eastern Municipal Water District, and the Orange County Water District. SAWPA is involved in planning, financing, constructing and operating projects which relate to water quality/quantity management.*

underlying the percolation basins. The extracted water is then channeled to flow through UV disinfection banks prior to discharging to the Santa Ana River, Reach 4.

On July 16, 1993, the Regional Board adopted Order No. 93-45 (NPDES No. CA 8000304) for the discharge of approximately 45 mgd of tertiary equivalent treated wastewater from the RIX facility. Order No. 93-45 was issued to SAWPA and the Cities of San Bernardino and Colton. The Order expired on July 1, 1998.

On August 2, 1994, the Cities of San Bernardino and Colton entered into an agreement forming the Colton/San Bernardino Regional Tertiary Treatment and Water Reclamation Authority (hereinafter, CSBRTTWRA or discharger). The CSBRTTWRA is a joint powers authority formed to operate the RIX facility.

On March 29, 1996, a full scale 40 mgd capacity RIX facility commenced accepting and treating secondary treated wastewaters from the municipal treatment plants of the Cities of Colton and San Bernardino. The RIX facility, which covers an approximate area of eighty seven (87) acres, is located at 1990 West Agua Mansa Road in the Colton area of San Bernardino County. The total basin bottom surface area is approximately 43 acres. An additional 35 acres is being considered for additional percolation ponds to accommodate wastewater flows. Currently onsite are 10 percolation ponds which vary in size, five banks of UV disinfection, 18 containment wells and 13 relief wells. On-site extraction wells are located within and down-gradient of the percolation basins. Groundwater monitoring wells are installed within the same area. Approximately 30.0 mgd of secondary treated effluent (25.0 mgd from the City of San Bernardino and 5.0 mgd from the City of Colton) are percolated daily at the site. Currently, more than 10 percent of the native groundwater is extracted together with percolated wastewater. This over-extraction is intended to assure wastewater capture and recovery.

On May 7, 1996, SAWPA notified the Regional Board of the transfer of the RIX facility to the CSBRTTWRA. On September 11, 1996, CSBRTTWRA notified the Regional Board of the transfer acceptance. The RIX facility is now being operated by the CSBRTTWRA.

To address tertiary treatment capacity restraints during wet weather, CSBRTTWRA recently constructed a 7 mgd conventional tertiary sand filter (Dyna Sand) plant adjacent to the RIX ponds. The plant was placed in service in December 2000.

These draft requirements are proposed to update Order No. 93-45 for the discharge of tertiary equivalent treated wastewater from the RIX facility to Reach 4 of the Santa Ana River.

The site location is shown on Attachment "A". The treatment system schematic of water flow is shown on Attachment "B".

II. REGULATORY BASIS FOR WASTE DISCHARGE REQUIREMENTS

This Order includes requirements that implement the Water Quality Control Plan (Basin Plan), which was adopted by the Regional Board on March 11, 1994. The Basin Plan was approved by the Office of Administrative Law and became effective on January 24, 1995. The Basin Plan specifies water quality objectives and beneficial uses for the waters of the Santa Ana Region, including site-specific objectives for ammonia for the middle reaches of the Santa Ana River. The Plan also specifies wasteload allocations for total dissolved solids (TDS) and total inorganic nitrogen[2] (TIN) for the upper Santa Ana River dischargers, including the RIX facility.

Tertiary treated wastewater from the facility is discharged to Reach 4 of the Santa Ana River. The beneficial uses of the Santa Ana River, Reach 4, from Mission Boulevard in Riverside to the San Jacinto Fault in San Bernardino include: groundwater recharge, water contact recreation, non-contact water recreation, warm freshwater habitat, and, wildlife habitat.

Surface flows in Reach 4 of the Santa Ana River can affect the downstream reaches. The beneficial uses of downstream reaches of the Santa Ana River include: agricultural supply, groundwater recharge, water contact recreation, non-contact water recreation, warm freshwater habitat, wildlife habitat, and rare, threatened or endangered species.

The RIX site overlies the Colton Groundwater Subbasin, the beneficial uses of which include: municipal and domestic supply, agricultural supply, industrial service supply, and, industrial process supply.

The Santa Ana River is not naturally perennial. In dry weather, the flow in the Santa Ana River is comprised predominantly of effluent discharges from municipal wastewater treatment facilities, including the discharge from the RIX facility, and very little natural flow exists.

Article 3, Section 60305 of Title 22 Division 4, Chapter 3, "Water Recycling Criteria" of the California Code of Regulations specifies that recycled water used as a source supply for nonrestricted recreational impoundments shall be disinfected tertiary recycled water that has been subjected to conventional treatment. Section 60305 also provides that disinfected tertiary recycled water that has not received conventional treatment may be used for nonrestricted recreational impoundments provided that the recycled water is monitored for the presence of pathogenic organisms in accordance with certain conditions. The degree of treatment specified represents an approximate 5-log reduction in the virus content of the water. The State Department of Health Services has determined, based on numerous scientific studies, that this degree of virus removal is necessary to protect the health of people using these impoundments for water contact recreation.

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[2] *Total Inorganic Nitrogen (TIN) is the sum of the nitrate-N, nitrite-N and ammonia-N.*

The Department of Health Services has developed wastewater disinfection guidelines ("Wastewater Disinfection for Health Protection", Department of Health Services, Sanitary Engineering Branch, February 1987) for discharges of wastewater to surface waters where water contact recreation (REC-1) is a beneficial use. The disinfection guidelines recommend the same treatment requirements for wastewater discharges to REC-1 waters as those stipulated in Title 22 for supply of reclaimed water to nonrestricted recreational impoundments, since the public health risks under both scenarios are analogous. The disinfection guidelines are based on sound science and are widely used as guidance to assure public health and beneficial use protection.

The Santa Ana River is not a "nonrestricted recreational impoundment," nor is "disinfected tertiary recycled water" (as defined in the Water Recycling Criteria) being used as a supply source for the River. However, except during major storms, most of the flow in the River is composed of treated municipal wastewater discharges. The River is used for water contact recreation and, accordingly, is designated REC-1 (water contact beneficial use). People recreating in the River face a similar exposure as do those coming in contact with reclaimed water in an impoundment. Therefore, to protect the water contact recreation beneficial use and to prevent nuisance and health risk, it is necessary and appropriate to require the same degree of treatment for wastewater discharges to the River as would be required for the use of reclaimed water in a nonrestricted recreational impoundment. Thus, this Order specifies requirements based on tertiary or equivalent treatment, as specified in Title 22.

The requirements specified in this Order include a total coliform limit of 2.2 Most Probable Number (MPN) per 100 milliliters. The discharger has questioned the propriety of this limit given that the Basin Plan specifies a less stringent fecal coliform objective of 200 organisms per 100 milliliters (mL) for waters that are or may be used for water contact recreation (REC-1). REC-1 waters include Reach 4 of the Santa Ana River and downstream reaches. This Order specifies the more stringent total coliform limitation, rather than implementing the Basin Plan objective, based on the following considerations. The Basin Plan fecal coliform objective, which has been used widely elsewhere in the state and the country, was derived from studies in which the recreational sites investigated were outside the direct influence of sewage discharges. This fecal coliform objective was intended to apply to freshwaters that are beyond the direct, obvious influence of sewage discharges. However, as stated above, most of the flow in the River, including at the point of discharge from the RIX facility, is composed of treated municipal wastewater (sewage). Thus, the Basin Plan fecal coliform objective is not applicable to the RIX discharge situation. The Department of Health Services has determined that reliance on the 200 organisms/100 mL Basin Plan objective in this and comparable discharge situations would not protect public health and the REC-1 beneficial use. This determination is reflected in the Title 22 regulations and Disinfection Guidelines. In contrast, the Department has determined that application of the total coliform standard, specified in Title 22 and in the Disinfection Guidelines as an indicator of the efficacy of the disinfection process, will assure protection of public health and the REC-1 use. Compliance with the 2.2 total coliform limit will not only address fecal coliform bacteria but will also assure the requisite 5-log virus reduction, i.e., that the effluent will be essentially pathogen free. In establishing waste discharge requirements, the Regional Board must implement the Basin Plan (Water Code Section 13263) and must separately consider the protection of beneficial uses (Section 13263(a)). Effluent limits necessary to protect beneficial uses must be specified. These limits can and in fact must be more stringent than the established

water quality objectives would dictate, where warranted by the particular discharge situation. This is the case here.

The tentative Order requires that the discharger contain/extract essentially all the wastewater percolated at the RIX facility (G. Provisions. Item 7). The Department of Health Services recommends that compliance with this requirement be defined as at least 90% capture/extraction of the infiltrated wastewater. The Department also recommends that if less than 90% of the infiltrated wastewater is captured/extracted, then the RIX facility operation should be considered a groundwater recharge project, subject to relevant DHS regulations that could necessitate additional treatment, monitoring and other controls. It is likely that separate waste discharge requirements would be issued to address these additional requirements. The Department may consider revision of its finding that at least 90% containment/extraction is required based on additional data and analyses to be provided by the discharger. If such revision is made, this Order will be modified as appropriate.

There has been disagreement between Regional Board staff and consultants and RIX Authority staff and consultants concerning the degree of containment and extraction achieved at the RIX facility. However, all parties agree that it is possible to assure at least 90% containment/extraction by employing appropriate operational procedures, including high rates of extraction. The parties agree that an operational evaluation plan should be developed to define the operational procedures needed to assure and assess adequate containment/extraction. This plan will include the use of a model populated with water level, water chemistry and RIX operational data. The intent is to provide a prospective operational planning and assessment tool to assure containment to the satisfaction of the Regional Board and DHS. This Order requires the development of this operational evaluation plan for review and approval by the Regional Board's Executive Officer, with input from DHS. In the interim, demonstration of at least 90% containment/extraction of the infiltrated wastewater will be based on an adaptive management approach involving review of water quality characteristics (influent and effluent chloride) and extraction data.

The proposed Order specifies numeric and narrative limits for the control of toxic substances. These limits are based on best professional judgement using the following as guidance documents:

1. 1995 Basin Plan
2. Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California adopted on March 2, 2000 by the State Water Resources Control Board (hereinafter, "Policy")
3. Code of Federal Regulations (40 CFR Parts 122-503)
4. U.S. EPA, Quality Criteria for Water (1986)
5. National Toxics Rule (Federal Register, vol. 57, No. 256, Dec. 22, 1992, 60848-60922)
6. U.S. EPA, Office of Water Policy and Technical Guidance on Interpretation of Aquatic Life Metals Criteria (October 1, 1993)
7. Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001, March 1991)

8. Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, promulgated in May 18, 2000 by the U.S. EPA.
9. Santa Ana River Use-Attainability Analysis, Volume 10, Calculation of Total-to-Dissolved Metal Ratios to Translate Site-Specific Water Quality Objectives into NPDES Effluent Limits", Risk Sciences (May, 1994).
10. Water Quality Criterion for the Protection of Human Health: Methylmercury – EPA-823-R-01-001, January 2001.

Pursuant to federal regulations, this Order requires that for compliance determination, the effluent analysis for metals, except chromium VI, shall be conducted using the total recoverable method. For chromium VI, the dissolved method may be used as specified under 40 CFR 136.

This Order implements federal regulations specified in 40 CFR 122, 123, 124, 125, and 129 which pertain to all publicly-owned treatment works (POTW) with average design flows exceeding 1 mgd.

In accordance with Section 402 (p) of the Federal Clean Water Act, EPA published the final regulations for storm water runoff on November 16, 1990 (40 CFR Parts 122, 123 and 124). Industrial facilities, including POTW sites, are required to obtain NPDES Permits for storm water discharges. On April 17, 1997, the State Board adopted a General Industrial Storm Water Permit, Order No. 97-03-DWQ, NPDES No. CAS000001. Stormwater discharges from the RIX facility site are channeled to the infiltration basins so that no storm water is directly discharged from this facility to surface waters. Consequently, coverage under Order No. 97-03-DWQ is not necessary.

III. PROPOSED EFFLUENT LIMITATIONS

The limitations in this Order are intended to control pollutants in the waste discharge, maintain water quality, and protect the beneficial uses of the affected receiving waters. Revisions to water quality objectives, to beneficial uses, or to the implementation plan specified in the Basin Plan may occur in the course of periodic review and update of the Plan. These waste discharge requirements will be re-evaluated and may be revised to accommodate any of these changes.

In determining compliance with the effluent limitations in this Order, no mixing zone allowance is provided. No mixing zone allowance is proposed since there are essentially no natural receiving waters at the points of discharge.

A. Biological Oxygen Demand (BOD) and Suspended Solids

The proposed Biochemical Oxygen Demand (BOD) and suspended solids limits are based on values that are achievable with tertiary treatment. These limits are intended to ensure that only adequately oxidized wastewater is discharged.

B. Total Dissolved Solids (TDS)/Inorganic Minerals

The discharge affects the Colton Groundwater Subbasin, which lacks assimilative capacity for TDS. This Order specifies a TDS limit of 400 mg/l for the discharge from the facility unless the discharger implements a program to offset TDS discharges in excess of the Colton Groundwater Subbasin TDS objective of 400 mg/l.

The Basin Plan recognizes that strict compliance with TDS limits may be difficult to achieve. The Basin Plan describes the regulatory approach the Regional Board uses to address such situations. The Board incorporates offset provisions in waste discharge requirements, including this Order, whereby dischargers can participate in approved programs to offset TDS discharges in excess of specified TDS limits, provided that the discharger makes all reasonable efforts to improve the TDS quality of the water supply (and, thereby, the wastewater). The Board has indicated that participation in the watershed-wide study of TDS and total inorganic nitrogen (TIN) which is being conducted under the auspices of a number of dischargers and other interested parties, with participation by the Regional Board and coordination by the Santa Ana Watershed Project Authority (SAWPA), will constitute an acceptable TDS offset. The CSBRTTWRA is a participant in this study. Without an offset program, the discharger must meet the subbasin objective.

The TIN/TDS study may lead to revised findings regarding TDS assimilative capacity and recommendations for changes to the TDS wasteload allocation and other TDS management strategies that will be reflected in a Basin Plan amendment. This Order will be re-opened to accommodate such changes, as necessary.

Total dissolved solids is essentially the summation of the concentrations of sodium, sulfate, chloride and total hardness (carbonates) in water. The water quality objectives for these individual mineral constituents are commensurate with the TDS objective for a groundwater subbasin. An exceedance of the TDS objective would likely result in an exceedance of one or more of the objectives for these components of TDS. Therefore, although the offset provision mentioned above specifically addresses only TDS, it is reasonable that this provision should also apply to those individual mineral components of TDS.

Furthermore, in accordance with the Basin Plan, a TDS limit based on the quality of the water supplied to the service area plus a reasonable use increment[3] is also specified in the Order.

C. Total Inorganic Nitrogen (Nitrate, Nitrite, Ammonia)

High concentrations of nitrates in domestic water can be toxic to human life. To protect human health, the concentrations of nitrates in lakes, streams, and groundwater which are sources of drinking water shall not exceed 45 mg/l (as NO3) or 10 mg/l (as N) as a result of controllable water quality factors.

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[3] *See Mineral Increments on Page 5-15 of 1995 Basin Plan.*

The Basin Plan specifies a wasteload allocation for total inorganic nitrogen in Publicly Owned Treatment Works (POTW) discharges to the Santa Ana River and its tributaries and to groundwater in the Upper Santa Ana River Basin. In accordance with the wasteload allocation, the proposed Order specifies a TIN limit of 10 mg/l for all flows.

D. Trace constituent limitations

The U.S. EPA has identified 126 priority pollutants, including metals and organic chemicals. No effluents limits for the 126 priority pollutants are included in the Order, based on the discharger's demonstration that none of these pollutants are present nor likely to be present in the wastewater discharge and thus do not have the reasonable potential to exceed water quality standards. However, the discharger is required to monitor for these pollutants either on a monthly or quarterly and annual basis. It may be noted that numeric limits were placed in Order No. 93-45 for several priority pollutants, however, these limits are not included in this Order since it has been determined that the constituents do not have the reasonable potential to cause or contribute to a violation of water quality standards.

E. Toxicity Limitations

Since April 1996, when RIX started operation, toxicity tests performed on the effluent have not detected any toxicity. This indicates that there is no reasonable potential for the discharge to cause or contribute to the violation of the narrative toxicity objectives identified in the Basin Plan. Consequently, numeric effluent limits for toxicity are not included in this Order.

The US EPA's Region IX Guidance for Implementing Whole Effluent Toxicity (WET) Testing Programs states that in cases where effluent receives little or no dilution (effluent dominated waters) or where mixing zones are not allowed by state water quality standards, the chronic criterion will likely be more limiting than the acute criterion. Accordingly, this Order requires the discharger to conduct chronic[4] toxicity testing of the effluent on a monthly basis. The Order also requires the discharger to conduct an Initial Investigation Toxicity Reduction Evaluation (IITRE[5]) program when either the two month median of toxicity test results exceeds 1 TUc or any single test exceeds 1.7 TUc for survival endpoint. Based on the results of this investigation program and at the discretion of the Executive Officer, a more rigorous Toxicity Reduction Evaluation/Toxicity Identification Evaluation (TRE/TIE) may be required. A re-opener provision is included in the Order to incorporate a chronic toxicity effluent limitation if warranted by the toxicity test results.

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4 *The chronic test method for water flea (Ceriodaphnia dubia) also measures acute toxicity.*

5 *An IITRE is the initial stage of investigation conducted prior to implementing a complete toxicity reduction evaluation (TRE) study. A TRE is a stepwise process for identifying the agent(s) and/or source(s) of toxicity in a given effluent.*

F. Compliance and Assessment

Many of the objectives specified in the California Toxics Rule are at extremely low concentrations. In several cases, these concentrations are below current laboratory detection values. As such, it is necessary to require laboratory analyses to be performed to the lowest possible concentrations. The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Policy) includes a list of priority pollutants with their respective Minimum Levels (ML)[6] on which "reported Minimum Levels" (i.e., quantitation values for the sample) shall be based. The Policy recognizes that the "reported ML" may be orders of magnitude different than the listed MLs depending on the amount of dilution/concentration required for sample preparation, and the amount of dilution necessary to address matrix interferences. Unfortunately, the policy lacks guidance for the development of appropriate "reported MLs".

For the last several years, POTWs have been required to meet practical quantitation levels (PQLs[7]). The PQLs for wastewater were developed based on the following:

1. A survey of laboratories in the Southern California area and a review of method detection levels (MDLs) in accordance with 40 CFR 136 for a wastewater matrix reported by local laboratories;

2. The consensus PQLs determined during the meeting of major Southern California laboratories with the Regional Board staff on January 28, 1992. The consensus PQLs are believed to represent the lowest quantitation levels that can be achieved by most laboratories in Southern California based on proven laboratory performance and the reasonable application of best available analytical technology for most toxic substances;

3. The report "A Study To Determine The Practical Quantitation Levels (PQL) For Selected Water Chemistry Parameters Analyzed by Commercial Laboratories Operating In The Santa Ana River Watershed" (Risk Sciences, 1993). This report recommended PQLs for cadmium, copper, lead, selenium, and silver that better represented the actual PQLs attained by analytical laboratories performing analyses for these substances in a recycled water matrix.

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

7 *PQL is the lowest concentration of a substance that can be determined within ± 20 percent of the true concentration by 75 percent of the analytical laboratories tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL is the method detection limit (MDL) x 5 for carcinogens and MDL x 10 for noncarcinogens.*

Order No. 01-45 sets the PQLs listed in Attachment "A" of the monitoring and reporting program as the "reported MLs" for those constituents listed, until May 1, 2002. For all other constituents not listed in the PQL list, the lowest detection level achieved by the discharger shall be used with prior approval by the Executive Officer. Order No. 01-45 requires that by May 1, 2002, the discharger shall meet the quantitation levels specified in Attachment "B" of the Monitoring and Reporting Program No. 01-45 for those priority pollutants with effluent limitations in the Order.

In cases where the discharger believes that the sample matrix justifies a different "reported ML", the discharger is required to demonstrate to the satisfaction of the Regional Board's Executive Officer the appropriateness of the alternative "reported ML" for that sample matrix prior to May 1, 2002.

All analytical data are required to be submitted with the corresponding MDLs and MLs. Sample results shall be reported as "DNQ" (Detected, but Not Quantified) if the results are less than the reported ML, but greater than the MDL. Sample results shall be reported as "ND" (Not Detected) if the results are less than the MDL.

Dischargers shall be deemed out of compliance with an effluent concentration limit if the concentration of the effluent sample is greater than the effluent limit and greater than or equal to the "reported ML". Dischargers shall not be deemed out of compliance for any sample result reported as DNQ or ND. However, the discharger is required to conduct a Pollutant Minimization Program, as described in the Policy, if there is an indication that a constituent is present in the effluent above an effluent limitation and either:

a. A sample result is reported as DNQ and the effluent limitation is less than the "reported ML", or

b. A sample result is reported as ND and the effluent limitation is less than the MDL.

IV. ANTIDEGRADATION ANALYSIS

The Regional Board has considered antidegradation pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16. The water quality of the receiving waters is not expected to degrade as a result of this discharge. These waste discharge requirements do not permit any increase in the concentration and mass loading of pollutants over that currently permitted. Neither the constituent concentrations of the discharge nor the mass loading of pollutants associated with the discharge will adversely affect the beneficial uses of the receiving waters. Therefore, this discharge is consistent with federal and state antidegradation policies.

V. WRITTEN COMMENTS

Interested persons are invited to submit written comments on the proposed discharge limits and the Fact Sheet. Although all comments which are provided up to and during the public hearing on this matter will be considered, receipt of comments by October 5, 2001, would be appreciated so that they can be used in the formulation of the final draft requirements which will be transmitted to the Board two weeks prior to the hearing. Comments should be submitted either in person or by mail to:

J. Shami
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

VI. INFORMATION AND COPYING

Persons wishing further information may write to the above address or call Jun Martirez of the Regional Board at (909) 782-3258. Copies of the application, proposed waste discharge requirements, Fact Sheet, and other documents (other than those which the Executive Officer maintains as confidential) are available at the Regional Board office for inspection and copying between the hours of 9:00 a.m. and 3:00 p.m., Monday through Friday (excluding holidays).

VII. REGISTER OF INTERESTED PERSONS

Any person interested in a particular application or group of applications may leave his name, address, and phone number as part of the file for an application.

VIII. PUBLIC HEARING

The Regional Board will hold a public hearing regarding the proposed waste discharge requirements as follows:

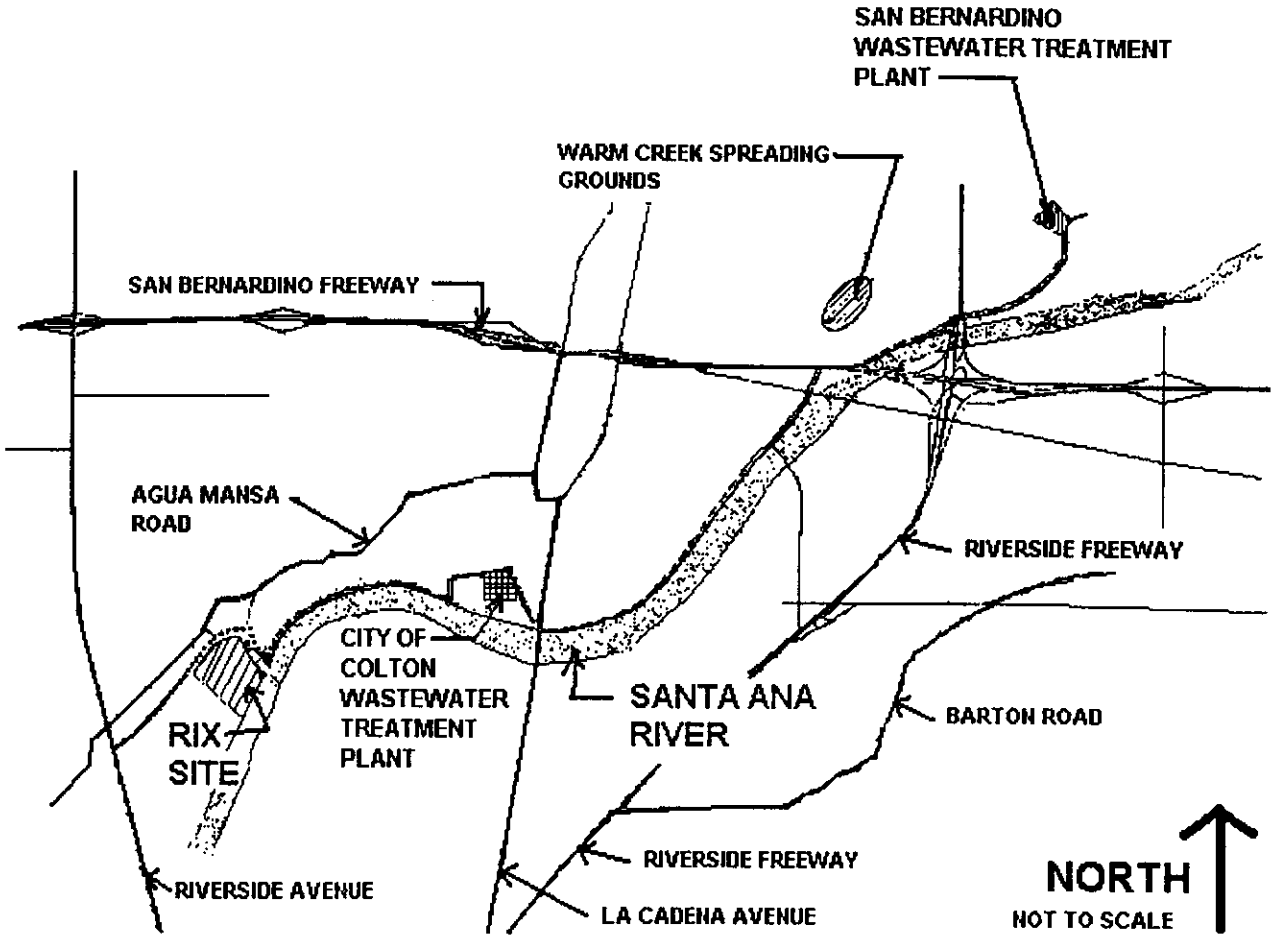
DATE:	October 26, 2001
TIME:	9:00 a.m.
PLACE:	City Council Chambers of Corona 815 W. Sixth Street Corona, California

LOCATION MAP

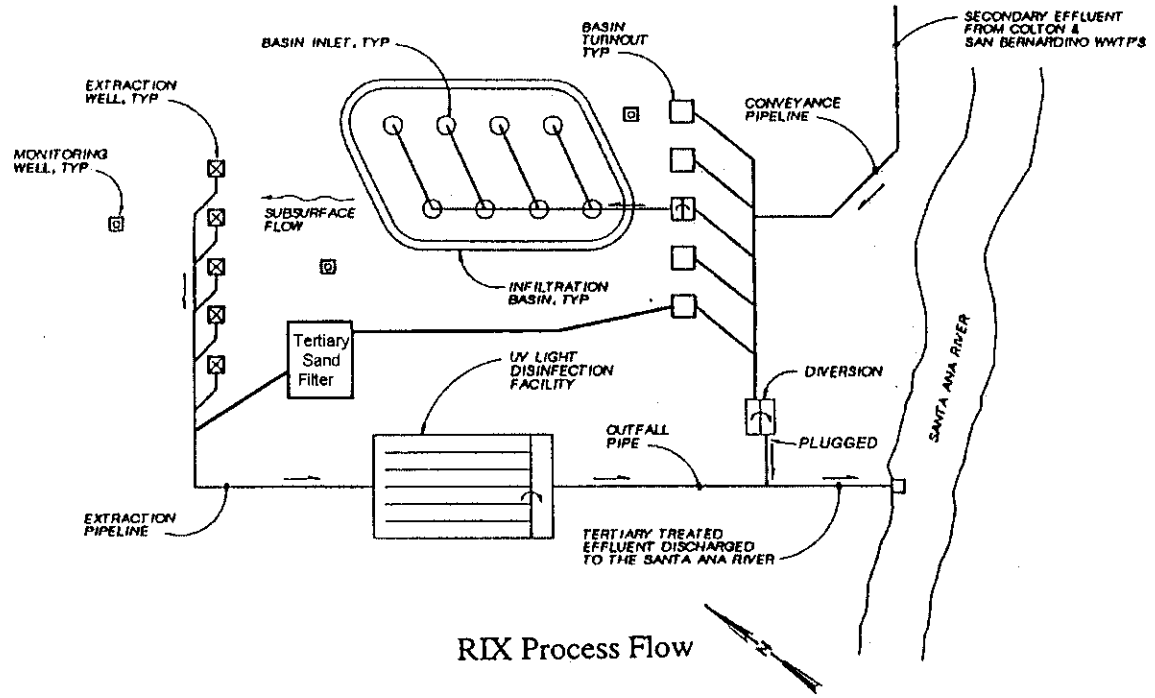
RAPID INFILTRATION AND EXTRACTION (RIX) PROCESS FLOW

EXTRACTION AND MONITORING WELL LOCATIONS

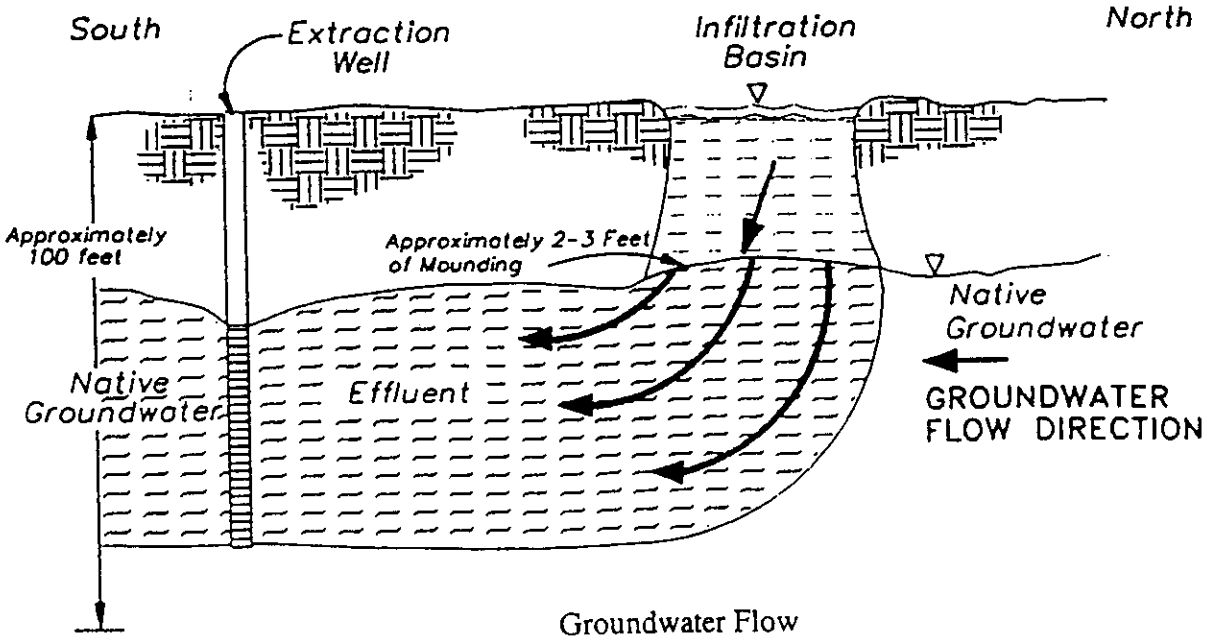
LOCATION MAP



RAPID INFILTRATION AND EXTRACTION (RIX) PROCESS FLOW



RIX Process Flow



Groundwater Flow