State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. 95-080

NPDES NO. CA0054313

WASTE DISCHARGE REQUIREMENTS FOR COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY (Saugus Water Reclamation Plant)

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), finds:

1. County Sanitation Districts of Los Angeles County (hereinafter CSDLAC or Discharger) discharge treated wastewater from the Saugus Water Reclamation Plant (WRP) under waste discharge requirements contained in Order No. 89-130 (NPDES No. CA0054313), adopted by this Regional Board on December 4, 1989.

2. CSDLAC have filed a Report of Waste Discharge (RWD) and have applied for renewal of their waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permit.

3. The Saugus WRP, located at 26200 Springbrook Avenue, Saugus, is a tertiary wastewater treatment plant with a design capacity of 6.5 million gallons per day (mgd). Treatment consists of comminution, primary sedimentation, flow equalization, activated sludge biological treatment, secondary sedimentation, inert media filtration, chlorination, and dechlorination. No facilities are provided for solids processing at the plant. All sewage solids separated from the wastewater are transported, via a sludge force main, to the Valencia WRP for treatment and disposal.

   The Saugus WRP is a part of CSDLAC's regional system, known as the Santa Clarita Joint Sewerage System, which combines two water reclamation plants: Valencia WRP (District No. 32) and Saugus WRP (District No. 26). The regional system allows biosolids, solids, and excess flows from the Saugus WRP to be diverted to the Valencia WRP for treatment and disposal.

   Figures 1 and 2 show the location of the plant and the schematic of wastewater flow.

4. The Saugus WRP discharges tertiary treated municipal and industrial wastewater to North Fork Santa Clara River, a water of the United States, through Discharge Serial No. 001 (Latitude 34°25'23", Longitude 118°32'24"). The Discharge Serial No. 001 is located 400 feet downstream from Bouquet Canyon Road, above the estuary.

5. The RWD describes the 1993 discharge as follows:

Constituent	Unit	Effluent Annual Average
Flow	mgd	6.32
pH	pH unit	7.2-7.4
Temperature	°F	72-78
BOD	mg/l	7
Chemical oxygen demand	mg/l	31
Suspended solids	mg/l	< 2
Total dissolved solids	mg/l	710

6. The U.S. Environmental Protection Agency (USEPA) and the Regional Board have classified this discharge as a major discharge.

7. A portion of the treated effluent is reclaimed for landscape irrigation and is regulated under Order No. 87-49, adopted by this Board on April 27, 1987.

8. The Board adopted a revised Water Quality Control Plan for the Santa Clara River Basin (4A) on June 13, 1994. The plan contains water quality objectives for the Santa Clara River.

9. The beneficial uses of the receiving water (Santa Clara River) are: (a) potential - municipal and domestic water supply; (b) existing - industrial service and process supply, agricultural supply, groundwater recharge, freshwater replenishment, contact and non-contact water recreation, warm freshwater habitat, wildlife habitat, preservation of rare and endangered species, migration of aquatic organisms (downstream from the boundary of the hydrologic areas 403.40 and 403.50), and wetland habitat.

10. There is public contact in the downstream areas; hence, the quality of wastewater discharged to the Santa Clara River must be such that no health hazard is created.

11. In 1993, the chloride concentrations of the final effluent ranged from 100 mg/l to 125 mg/l (annual average 110 mg/l). The daily maximum chloride limit in Order No. 89-130 was 100 mg/l. On March 26, 1990, the Board adopted Resolution No. 90-

004, which stated that because of the long term drought in California, the Board would temporarily not enforce the chloride limit where violations were primarily due to increased chloride concentrations in imported water. However, if a discharge exceeds the chloride limitation, Resolution No. 90-004 requires the discharger to take measures to reduce chlorides in the waste discharge. CSDLAC have fully complied with this provision and have not exceeded the interim limits and guidelines for chloride contained in Resolution No. 90-004.

12. This discharge is subject to USEPA's 304(l) regulations which prescribe biological and other laboratory testing procedures and toxicity limits, particularly chronic toxicity, for the implementation of USEPA's "Policy for the Development of Water Quality-based Permit Limitations for Toxic Pollutants" (49 FR 9016, dated March 9, 1984).

13. Pursuant to Section 402(p) of the Clean Water Act and 40 CFR Parts 122, 123, and 124, the State Water Resources Control Board (State Board) adopted a general NPDES permit to regulate stormwater discharges associated with industrial activity (State Board Order No. 91-13-DWQ adopted in November 1991, amended by Order No. 92-12-DWQ adopted in September 1992). Stormwater discharges from Saugus WRP are subject to requirements under this general permit.

14. Pursuant to 40 CFR Part 403, CSDLAC developed and have implemented a USEPA approved industrial wastewater pretreatment program.

15. Effluent limitations, national standards of performance, toxic and pretreatment effluent standards, regulations, requirements, and/or guidelines established pursuant to Sections 208(b), 301, 302, 303(d), 304, 306, 307, and 405 of the Clean water Act, and amendments thereto, are applicable to the discharges.

16. Except for constituents imposed in the previous permit, no numerical limit is prescribed for any toxic constituent that is consistently not detectable in the effluent and where it has been determined that there is a very low probability of causing or contributing to excursions in water quality standards. A narrative limit to comply with all water quality objectives is provided in lieu of such numerical limits.

17. The requirements contained in this Order are based on the Basin Plan, other Federal and State plans, policies, guidelines, and best engineering judgment; and, as they are met, will be in conformance with the goals of the aforementioned water quality control plans and will protect

and maintain existing beneficial uses of the receiving waters.

18. The Discharger's monitoring data during 1989-1993 consistently showed high effluent quality. To maintain the plant performance, effluent quality performance goals are prescribed in this Order. This approach requires the Discharger to maintain its treatment efficiency, while recognizing normal variations in treatment plant operations, influent quality, and sampling and analytical techniques. However, this approach does not address substantial changes in plant operations that may occur in the future and could affect the quality of the treated effluent. As such, the performance goals may be modified by the Executive Officer, if warranted.

    For pollutants which have been routinely detected in the effluent, the performance goals are statistically set at the 95th percentile of the 1989-1993 performance data. At the 95th percentile, it is expected that one sample in twenty would exceed the goal in the long term.

    For other pollutants whose effluent monitoring data have consistently showed non-detectable levels or occasionally detected at levels less than the Practical Quantitation Level (PQL), the effluent quality performance goals are set at the PQL. The PQL is determined by multiplying the USEPA published method detection limit (MDL) or the Discharger's MDL approved by the Executive Officer with the factor five (5) for carcinogens and ten (10) for non-carcinogens.

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

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

The Regional Board, in a public hearing, heard and considered all comments pertaining to the discharge and to the tentative requirements.

This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Clean Water Act or amendments thereto, and shall take effect at the end of ten days from the date of its adoption provided the Regional Administrator, USEPA, has no objections.

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

I. DISCHARGE REQUIREMENTS

A. Effluent Limitations

1. Wastes discharged shall be limited to treated municipal wastewater only, as proposed.

2. The pH of wastes discharged shall at all times be within the range of 6.0 and 9.0.

3. The temperature of wastes discharged shall not exceed 100°F.

4. The discharge of an effluent from Discharge Serial No. 001 with constituents in excess of the following limits is prohibited:

a. Conventional and nonconventional pollutants:

		Discharge Limitations		
Constituent	Units	30-day Average[1]	7-day Average[1]	Daily Maximum[2]
BOD_5 20°C	mg/l	20	30	45
	lbs/day[3]	1,084	1,626	2,439
Suspended solids	mg/l	15	40	45
	lbs/day[3]	813	2,168	2,439
Settleable solids	ml/l	0.1	---	0.3
Oil and grease	mg/l	10	---	15
	lbs/day[3]	542	---	813
Total dissolved solids	mg/l	---	---	1,000
	lbs/day[3]	---	---	54,210
Sulfate	mg/l	---	---	400
	lbs/day[3]	---	---	21,684
Chloride[4]	mg/l	---	---	100
	lbs/day[3]	---	---	5,421

Constituent	Units	Discharge Limitations Daily Maximum[2/]
Boron	mg/l	1.5
	lbs/day[3/]	81.3
Nitrate + Nitrite (as Nitrogen)	mg/l	10
	lbs/day[3/]	542
Fluoride	mg/l	1.6
	lbs/day[3/]	86.7
Detergents (as MBAS)	mg/l	0.5
	lbs/day[3/]	27.1

1/ As defined in Standard Provisions, Attachment N.

2/ Except for grab samples, the daily maximum effluent concentration limit shall apply to flow-weighted 24-hour composite samples.

3/ Based on the plant design capacity of 6.5 mgd. During events such as extended rainfalls in which the flow exceeds the plant design capacity, the mass discharge rate limitations shall be tabulated using the same concentration limits and the plant actual flowrates.

4/ In accordance with the Resolution 90-004, the chloride limitation shall not be considered to be violated unless the effluent concentrations of chlorides exceed 250 mg/l or water supply concentrations plus 85 mg/l, whichever is less.

b. Toxic pollutants:

Constituent	Units	Discharge Limitations 30-day Average[5/]
Antimony	µg/l	6[6/]
	lbs/day[3/]	325
Arsenic	µg/l	50[6/]
	lbs/day[3/]	2.71
Barium	µg/l	1,000[6/]
	lbs/day[3/]	54.2
Cadmium	µg/l	5[6/]
	lbs/day[3/]	0.271
Chromium (VI)[7/]	µg/l	50[6/]
	lbs/day[3/]	2.71

Constituent	Units	Discharge Limitations 30-day Average[5]
Iron	µg/l	300[6]
	lbs/day[3]	16.3
Lead	µg/l	50[6]
	lbs/day[3]	2.71
Mercury	µg/l	2[6]
	lbs/day[3]	0.108
Nickel	µg/l	100[6]
	lbs/day[3]	5.42
Selenium	µg/l	10[6]
	lbs/day[3]	0.542
Silver	µg/l	50[6]
	lbs/day[3]	2.71
Zinc	µg/l	5,000[6]
	lbs/day[3]	271
Cyanide[8]	µg/l	5.2
	lbs/day[3]	0.282
Endrin[9]	µg/l	2
	lbs/day[3]	0.108
Lindane	µg/l	0.2
	lbs/day[3]	0.0108
Methoxychlor	µg/l	40
	lbs/day[3]	2.17
Toxaphene	µg/l	3
	lbs/day[3]	0.163
2,4-D	µg/l	70
	lbs/day[3]	3.79
2,4,5-TP (Silvex)	µg/l	10
	lbs/day[3]	0.542
Halomethanes[10]	µg/l	100
	lbs/day[3]	5.42

Constituent	Units	Discharge Limitations 30-day Average[5/]
Tetrachloroethylene	µg/l	5
	lbs/day[3/]	0.271
Methylene chloride	µg/l	5
	lbs/day[3/]	0.271
1,2-Dichloroethane	µg/l	0.5
	lbs/day[3/]	0.0271
p-Dichlorobenzene	µg/l	5
	lbs/day[3/]	0.271

5/ Compliance may be determined from a single analysis or from the average of the initial analysis and three additional analyses taken one week apart once the results of the initial analysis are obtained.

6/ Based on total recoverable metals. These limits may be modified to total dissolved metals if the Discharger requests and has conducted a study on the water-effect ratio (WER) according to the USEPA guidance document and/or state protocols, if available.

7/ The Discharger may, at his option, meet this limitation as total chromium.

8/ The recovery of free cyanide from metal complexes must be comparable to that achieved by Standard Methods 412 F, G, and H (Standard Methods for the Examination of Water and Wastewater; Joint Editorial Board, American Public Health Association, American Water Works Association, and Water Pollution Control Federation [Water Environment Federation]; Most recent edition).

9/ ENDRIN shall mean the sum of endrin and endrin aldehyde.

10/ HALOMETHANES shall mean the sum of bromoform, bromomethane, chloroform, chloromethane, chlorodibromomethane, and dichlorobromomethane.

5. Radioactivity of the wastes discharged shall not exceed the limits specified in Title 22, Chapter 15, Article 5, Section 64443, of the California Code of Regulations, or subsequent revisions.

6. The arithmetic mean of BOD_5 20°C and suspended solids values, by weight, for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of values, by weight, for influent samples collected at approximately the same time during the same period.

7. The wastes discharged to water courses shall at all times be adequately disinfected. For the purpose of this

requirement, the wastes shall be considered adequately disinfected if the median number of coliform organisms at some point in the treatment process does not exceed 2.2 per 100 milliliters, and the number of coliform organisms does not exceed 23 per 100 milliliters in more than one sample within any 30-day period. The median value shall be determined from the bacteriological results of the last seven (7) days for which analysis have been completed. Samples shall be collected at a time when wastewater flow and characteristics are most demanding on treatment facilities and disinfection processes.

8. The wastes discharged to water courses shall have received treatment equivalent to that of filtered wastewater. Filtered wastewater means oxidized and coagulated wastewater which has been passed through natural undisturbed soils or filter media, such as sand or diatomaceous earth, so that the turbidity of the filtered wastewater does not exceed (a) a daily average of 2 Nephelometric turbidity units (NTU's), (b) and does not exceed 5 NTU's more than 5 percent of the time (72 minutes) during any 24 hour period.

"Oxidized wastewater" means wastewater in which the organic matter has been stabilized, is nonputrescible, and contains dissolved oxygen. "Coagulated wastewater" means oxidized wastewater in which colloidal and finely divided suspended matter have been destabilized and agglomerated upstream of a filter by the addition of suitable floc-forming chemicals.

NTU means a measurement of turbidity as determined by the ratio of the intensity of light scattered by the sample to the intensity of incident light using approved laboratory methods.

9. Acute Toxicity Limitation:

a. The acute toxicity of the effluent shall be such that the average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test producing less than 70% survival.

b. If the discharge consistently exceeds the acute toxicity limitation, a toxicity reduction evaluation (TRE) is required. The TRE shall include all reasonable steps to identify the source(s) of toxicity. Once the source(s) of toxicity is (are) identified, the Discharger shall take

all reasonable steps necessary to reduce toxicity to the required level.

B. Effluent Quality Performance Goals

The Discharger shall make best efforts to maintain the following effluent quality goals. Any exceedance of any goal shall trigger an investigation by the Discharger on the cause of the exceedance. The Discharger shall report to the Regional Board on a quarterly basis any exceedance of any of these effluent quality goals. If exceedance of any particular goal persists on two succeeding quarterly monitoring periods, the Discharger shall submit with the second quarterly report the investigation results including but not limited to the description of the exceedance, cause(s) of the exceedance, and proposed corrective measures, if necessary. If the exceedance of any goal becomes chronic, the Discharger shall proceed to implement the proposed action plan to correct the exceedance. The Executive Officer may modify the action plan.

The Executive Officer may modify any of the performance goals if the Discharger requests and has demonstrated that the change is warranted.

	Effluent Quality Performance Goals		
Constituent	Units	30-day Average	Daily Maximum
BOD_5 20°C	mg/l	11[11/]	---
Suspended solids	mg/l	3[11/]	---
Arsenic	µg/l	---	7[11/]
Chromium (VI)[7/]	µg/l	---	20[11/]
Copper	µg/l	---	20[11/]
Lead	µg/l	---	40[11/]
Mercury	µg/l	---	PQL[12/]
Nickel	µg/l	---	30[11/]
Selenium	µg/l	---	2[11/]
Silver	µg/l	---	5[11/]
Zinc	µg/l	---	58[11/]
Phenol	µg/l	---	18[11/]
Methylene chloride	µg/l	---	2[11/]
Chloroform	µg/l	---	12[11/]
Bromodichloromethane	µg/l	---	3[11/]
Dibromochloromethane	µg/l	---	6[11/]
Bromoform	µg/l	---	5[11/]
Remaining priority pollutants	µg/l	---	PQL[12/]

11/ Numerical effluent quality performance goals were derived statistically

using effluent performance data for the period of 1989 through 1993. Effluent values (X_i) are assumed to be lognormally distributed. The use of logarithmic transformation equation, $Y_i = Ln\ (X_i)$, results in effluent values (Y_i) that are normally distributed. Effluent quality performance goals are determined by the equation:

$$X_{.95} = \exp\ [u_n + (Z_{.95})\ (\sigma_n)]$$

where $X_{.95}$ = discharge effluent quality performance goal at the 95th percentile of the normal distribution.
u_n = mean of the distribution of the average of n values transformed.
$Z_{.95}$ = z-value from the Table of Areas under the Standard Normal Curve, equal to 1.645 at 95 percent.
σ_n = standard deviation of the distribution of the average of n values transformed.
Exp is an exponential to the base "e" value = 2.7183

12/ PQL (Practical Quantitation Limit) shall be determined by multiplying the USEPA published method detection limit (MDL) (Attachment 1) or the Discharger's MDL approved by the Executive Officer with the factor five (5) for carcinogens and ten (10) for non-carcinogens.

C. Receiving Water Limitations

1. The temperature of the receiving water at any time or place and within any given 24-hour period shall not be increased by more than 5°F (or above 70°F if the ambient receiving water temperature is less than 60°F) as a result of the wastes discharged.

2. The pH of the receiving water shall not be depressed below 6.5 or raised above 8.5 as a result of wastes discharged. Ambient pH levels shall not be changed more than 0.5 units from natural conditions.

3. The dissolved oxygen in the receiving water shall not be depressed below 5 mg/l as a result of the wastes discharged.

4. The residual chlorine in the receiving water shall not exceed 0.1 mg/l as a result of the wastes discharged.

5. The fecal coliform concentration in the receiving water shall not exceed a log mean of 200/100 ml (based on a minimum of not less than four samples for any 30-day period), nor shall more than 10 % of total samples during any 30-day period exceed 400/100 ml as a result of the wastes discharged.

6. The wastes discharged shall not produce concentrations of toxic substances in the receiving water that are toxic to

D. Receiving Water Objective

1. To protect aquatic life, ammonia in receiving waters shall not exceed concentrations specified in Tables 3-2 and 3-4 of the Basin Plan (Attachment 2) as a result of the wastes discharged, subject to the following conditions:

   The Discharger shall have up to 8 years following the adoption of this Order (i) to make the necessary adjustments/improvements to meet these objectives; or (ii) to conduct studies leading to an approved less restrictive site specific objective for ammonia. If it is determined that there is an immediate threat or impairment of beneficial uses due to ammonia, the objectives in Tables 3-2 and 3-4 of Attachment 2 shall apply and the timing of compliance will be determined on a case-by-case basis.

2. To protect underlying groundwater basins, ammonia shall not be present in the wastes discharged at levels that when oxidized to nitrate will pose a threat to ground water.

3. There shall be no chronic toxicity in ambient waters as a result of wastes discharged.

   If the chronic toxicity in the receiving water downstream of the discharge point consistently exceeds 1.0 TU_c in a critical life stage test, the Discharger shall determine if the cause of the exceedance is the wastes discharged. If it is determined that the wastes discharged caused the exceedance, the Discharger shall conduct a toxicity reduction evaluation (TRE). The TRE shall include all reasonable steps to identify the sources of toxicity. Once the sources are identified, the Discharger shall take all reasonable steps to reduce toxicity to meet the objective.

II. PRETREATMENT REQUIREMENTS

1. This Order includes the discharger's pretreatment program as previously submitted to this Regional Board. Any change to the program shall be reported to the Regional Board and EPA in writing and shall not become effective until approved by the Executive Officer.

7. The Discharger shall protect the facility from inundation which could occur as a result of a flood having a predicted frequency of once in 100 years.

8. This Order may be modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR Parts 122.44, 122.62, 122.63, 122.64, 125.62, and 125.64.

IV. EXPIRATION DATE

This Order expires on May 10, 2000.

The Discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the expiration date as application for issuance of new waste discharge requirements.

V. RESCISSION

Order No. 89-130, adopted by this Board on December 4, 1989, is hereby rescinded.

I, Robert P. Ghirelli, 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, Los Angeles Region on June 12, 1995.

ROBERT P. GHIRELLI, D.Env.
Executive Officer

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