

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

ORDER NO. 98-052

NPDES NO. CA0055531

WASTE DISCHARGE REQUIREMENTS
FOR
City of Burbank, Public Works Department
(Burbank Water Reclamation Plant and Steam Power Plant)

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

Regulation of Discharge

1. The City of Burbank (hereafter City or Discharger) discharges wastes from the Burbank Water Reclamation Plant and Steam Power Plant under Waste Discharge Requirements (WDRs) contained in Order No. 96-050 adopted by this Regional Board on July 15, 1996, and amended on April 13, 1998 to incorporate new chloride limits. Order No. 96-050 as amended also serves as the National Pollutant Discharge Elimination System (NPDES) permit (NPDES No. CA0055531).
2. The Regional Board is implementing a Watershed Management Approach to address water quality protection in the Los Angeles Region. Pursuant to this Regional Board's watershed initiative framework, the Upper Los Angeles River Watershed is the targeted watershed for the fiscal year 1997-1998. Accordingly, the WDRs and NPDES permits for the facilities that discharge wastes to the Upper Los Angeles River (including the Burbank Water Reclamation Plant and Steam Power Plant) are being reviewed to consider and/or incorporate issues relating to the Watershed Management Approach. As a result of the review, this new Order is prepared to replace the Order No. 96-050 adopted on July 15, 1996.

Description of the Facility and Waste Discharges

3. The City of Burbank, Public Works Department owns the Burbank Water Reclamation Plant located at 2 West Chestnut Street, Burbank, California. The Burbank Water Reclamation Plant is a tertiary wastewater treatment plant, that treats municipal wastewater from domestic, commercial, and industrial sources. The treatment design capacity of the plant is 9 million gallons per day (mgd). In 1997, the average annual flow was 5.33 mgd. The Burbank Water Reclamation Plant discharges the treated wastewater to Burbank Western Wash.

May 27, 1998
June 17, 1998
Revised: June 29, 1998

4. The treatment system at the Burbank Water Reclamation Plant consists of comminution, primary clarification, activated sludge biological process, secondary clarification, filtration, chlorination, and de-chlorination.
5. Sludge generated from the Burbank Water Reclamation Plant is returned to the City of Burbank sewer system for transport to and treatment at the City of Los Angeles' Hyperion Treatment Plant. The influent to the water reclamation plant can be diverted/bypassed to the Hyperion Treatment Plant during periods of emergency.
6. The treated effluent (reclaimed water) from the water reclamation plant is used as cooling tower make-up water for the Burbank Steam Power Plant located at 164 West Magnolia Boulevard, Burbank and operated by the City's Public Service Department.

A portion of the treated effluent is also used for landscape irrigation and is regulated separately under Order No. 91-101, adopted by this Board on September 11, 1991. Surplus reclaimed water together with the wastewater from the Burbank Steam Power Plant is discharged to the Burbank Western Wash.

7. The U.S. Environmental Protection Agency (USEPA) and the Regional Board have classified the discharge from the Burbank Water Reclamation Plant and Steam Power Plant as a major discharge.

Discharge Outfalls and Types

8. The Burbank Water Reclamation Plant discharges the treated wastewater via two discharge points (one from the Burbank Water Reclamation Plant and the other from the Burbank Steam Power Plant) to the Burbank Western Wash. The Burbank Western Wash is tributary to Los Angeles River, a water of the United States, at a point near Riverside Drive, above the estuary.
9. Discharge Serial No. 001 (from the Burbank Steam Power Plant side) is located at the Burbank Western Wash at Olive Street (Latitude: 34° 10' 42" and Longitude: 118° 18' 44"). Wastewater discharged from the Discharge Serial No. 001 consists of (about 4.33 MGD):
 - a. Surplus effluent from the Burbank Water Reclamation Plant and Steam Power Plant cooling tower blowdown.

Depending upon the reclaimed water availability, potable water supplied by the Metropolitan Water District and/or groundwater wells may be used as make-up water for the cooling tower.

b. Reverse osmosis-demineralizer and water softener unit effluent

Effluent wastewater from the Burbank Steam Power Plant's reverse osmosis-demineralizer (ROD) and water softener units is also discharged into the cooling tower water system. Potable water influent for the ROD and water softener units is from the same source as the potable water for the cooling towers.

c. Storm water

Storm water from the Burbank Steam Power Plant is drained via an on-site drainage system which connects to the discharge point (001).

d. Boiler drainage

Boiler drainage is discharged via an on-site drainage system to the discharge point (001). Boiler drainage consists of water from the equipment packing glands, condensate, and boiler blowdown from the Magnolia plant and the Olive plant, which are two of the main plants in the Burbank Steam Power Plant.

10. Discharge Serial No. 002 (from the Burbank Water Reclamation Plant side) is located at the Burbank Western Wash near Burbank Boulevard (Latitude: 34° 10' 58" and Longitude: 118° 18' 58"). Discharge from the Burbank Water Reclamation Plant side consists of overflow when gravity line capacity to the Burbank Steam Power Plant is exceeded (about 0.89 MGD).

Discharge Quality

11. In 1997, the average annual removal of BOD and total suspended solids has been 96.2% and 97.8%, respectively. The median daily total coliform was less than 2 MPN/100 ml in the effluent.
12. The characteristics of the effluent in 1997 are as follows:

<u>Constituent</u>	<u>Unit</u>	<u>Annual Average</u>	<u>Maximum Monthly Avg.</u>
Temperature	°F	71	--
BOD ₅ 20°C	mg/L	8.0	--
Suspended solids	mg/L	3.2	--
Settleable solids	ml/L	<0.1	<0.1
Total dissolved solids	mg/L	--	583

Watershed Approach

13. This Regional Board has implemented a Watershed Management Approach to address water quality protection in the Los Angeles Region. The objective is to provide a comprehensive and integrated strategy resulting in water resource protection, enhancement, and restoration while balancing economic and environmental impacts within a hydrologically-defined drainage basin or watershed. The Management Approach emphasizes cooperative relationships between regulatory agencies, regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with the resources available. This Order fosters the implementation of this approach by protecting beneficial uses in the watershed and requiring the City to participate in the implementation of a regional monitoring program.

14. Pursuant to this Regional Board's watershed initiative framework, the Los Angeles River Watershed Management Area is the targeted watershed for fiscal years 1997-1999. The Los Angeles River watershed encompasses an area of about 825 square miles. Of those, approximately 324 square miles are covered by forest and open space land within the Angeles National Forest, the Santa Monica Mountains, the Verdugo Mountains and Griffith Park in the Upper watershed. The rest of the watershed is highly developed. The urban area in the upper watershed consists mostly of residential and commercial areas, while the area in the lower watershed consists of industrial, residential and commercial areas.

Waste Discharge Requirements and their Bases

Basin Plan

15. On June 13, 1994, this Regional Board adopted a revised *Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan). The Basin Plan contains beneficial uses and water quality objectives for the Los Angeles River.

Beneficial Uses

16. The beneficial uses of the receiving water are:

Los Angeles River upstream of Figueroa Street - Hydrologic Unit 405.21

Existing: ground water recharge; contact and non-contact water recreation; warm freshwater habitat; wildlife habitat; and wetland habitat.

Potential: municipal and domestic supply¹; and industrial service supply.

Los Angeles River downstream of Figueroa Street - Hydrologic Unit 405.15

Existing: ground water recharge; contact² and non-contact water recreation; and warm freshwater habitat.

Potential: municipal and domestic supply¹; and industrial service supply.

Los Angeles River downstream of Figueroa Street - Hydrologic Unit 405.12

Existing: ground water recharge; contact² and non-contact water recreation; warm freshwater habitat; marine habitat; wildlife habitat; and rare, threatened, or endangered species.

Potential: municipal and domestic supply¹; industrial service supply; industrial process supply; migration of aquatic organisms; spawning, reproduction, and/or early development; and shellfish harvesting².

Los Angeles River Estuary - Hydrologic Unit 405.12

Existing: industrial service supply; navigation; contact and non-contact water recreation; commercial and sport fishing; estuarine habitat; marine habitat; wildlife habitat; rare, threatened, or endangered species³; migration of aquatic organisms⁴; spawning, reproduction, and/or early development⁴; and wetland habitat.

Potential: shellfish harvesting.

The requirements in this order are intended to protect designated beneficial uses and enhance the water quality of the watershed.

¹ Municipal and domestic supply designations under State Water Resources Control Board Order No. 88-63 and Regional Board Resolution No. 89-003.

² Access prohibited by Los Angeles County Department of Public Works.

³ One or more rare species utilize all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.

⁴ Aquatic organisms utilize all bays, estuaries, lagoons, and coastal wetlands, to a certain extent, for spawning and early development. This may include migration into areas which are heavily influenced by freshwater inputs.

Pollutants of Concern and Impairments

17. The 1996 State Water Resources Control Board's (SWRCB) *Water Quality Assessment Report* identified the water quality condition of water bodies in the Los Angeles Region. In the Los Angeles River, the following beneficial uses were determined to be either impaired or threatened to be impaired: aquatic life, contact and non-contact recreation. The report also identified that the quality of the water is impacted by bacteriological contamination (coliform count), heavy metals (lead and silver), ammonia, nitrogen, nutrients (algae), oil, pH, total dissolved solids, chloride, turbidity, trash, scum, and odor.

Human Health

18. There is public contact in the downstream areas of the receiving water; therefore, the quality of wastewater discharged to the Los Angeles River must be such that no public health hazard is created.

Nutrients

19. The Federal Clean Water Act requires that each state provides a list of impaired surface waters (303(d) list). Water bodies on the 303(d) list must have Total Maximum Daily Loads (TMDLs) established.

The Los Angeles River is included in the 303(d) list due to ammonia and nitrogen pollution. The Regional Board has conducted a TMDL which assessed the extent of the ammonia and total nitrogen problem and sources in the Los Angeles River during dry weather conditions. The TMDL identified proposed future effluent limits for the existing POTWs which will result in achievement of Basin Plan objectives in the river. The study did not specifically address Burbank Western Channel, but the impacts from the Burbank Water Reclamation Plant and Steam Power Plant were measured at the confluence of Burbank Western Channel and the Los Angeles River.

The proposed future effluent limits for the Burbank Water Reclamation Plant and Steam Power Plant:

Ammonia-N	10 mg/L
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The Discharger will have until the year 2002 to: (a) meet the Basin Plan objective by making the necessary adjustments/improvements to meet the above limits, or (b) conduct studies leading to an approved site specific objective for ammonia which may be adopted by the Regional Board by June 14, 2002.

20. Phosphorus also contributes to the algae growth in the Los Angeles River, this permit contains provisions to monitor the amount of phosphorous that the Burbank Water Reclamation Plant and Steam Power Plant discharges into the Los Angeles River.

Methyl Tertiary Butyl Ether

21. Methyl Tertiary Butyl Ether (MTBE) is a major component of gasoline and has been detected in drinking water wells throughout California. The threat to human health from MTBE is being evaluated at this time by the USEPA and the California Department of Health Services.

Toxic Constituents

22. Numeric toxic constituent limitations are prescribed for this discharge pursuant to the narrative water quality objective in the Basin Plan for toxic constituents and 40 CFR part 122.44. The numeric toxic limitations are based on Basin Plan Objectives, USEPA's Water Quality Criteria, and the National Toxics Rule.

For toxic constituents that have not been consistently detected in the effluent and have been determined to have no reasonable potential for causing or contributing to excursions in water quality objectives, no numerical limitations are prescribed. Instead, a narrative limit to comply with all water quality requirements is provided in lieu of such numerical limitations.

Performance Goals

23. The Regional Board has implemented the Water Quality Task Force⁵ recommendations on the use of performance goals, rather than performance-based limits, when appropriate. The use of performance goals is intended to minimize pollutant loadings and at the same time maintain the incentive for future voluntary improvement of water quality wherever feasible, without fear of being punished with more stringent limits based on improved performance. This Order contains performance goals.

The performance goals require the Discharger to maintain its treatment efficiency while recognizing normal variations in treatment plant operations, influent quality, and sampling and analytical techniques. This approach, however, does not address substantial changes in operations that may occur in the future and could affect the quality of the treated effluent. As such, this Order provides that performance goals

⁵ *Working Together for an Affordable Clean Water Environment*. A final report presented to the California Regional Water Quality Control Board, Los Angeles Region by Water Quality Advisory Task Force, September, 1993.

may be modified by the Executive officer, if warranted. The listed effluent performance goals are not enforceable limitations or standards.

24. The performance goals prescribed in this Order are based on the following:
- (a) For pollutants which have been detected in the effluent, the performance goal of a constituent is statistically set at the 95th percentile confidence level of the January 1993 through December 1997 monitoring data. Therefore, it is expected that one sample in twenty may exceed the goal during normal plant operation in the long-term.
 - (b) For other pollutants whose monitoring data have consistently showed nondetectable levels, or which have been occasionally detected at levels less than the Practical Quantitation Levels (PQL), the effluent quality performance goals are set at the PQL. The PQL is determined by multiplying the USEPA published method detection limit or the Discharger's method detection limit approved by the Executive Officer with the factor five (5) for carcinogens and ten (10) for non-carcinogens.

State and Federal Regulations

25. Effluent limitations, toxic, and pretreatment effluent standards, established pursuant to Sections 208(b), 301, 302, 303(d), 304, 307, 403, and 405 of the Federal Clean Water Act and amendments thereto, are applicable to this discharge.
26. Pursuant to 40 CFR Part 403, the City developed and implemented a USEPA-approved industrial wastewater pretreatment program. This Order requires proper implementation of the pretreatment program.
27. Section 402(p) of the Federal Clean Water Act, as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. Pursuant to this requirement, in 1990, the USEPA promulgated 40 CFR Part 122.26 which established requirements for storm water discharges under NPDES program. To facilitate compliance with federal regulations, in 1992, the State Water Resource Control Board issued a statewide general permit [NPDES No. CAS000001, reissued on April 17, 1997] to regulate storm water discharges associated with industrial activity. The Burbank Water Reclamation Plant and Steam Power Plant is covered by that general permit and its requirements are incorporated in this Order by reference.
28. The requirements contained in this Order were derived using best professional judgement and are based on the Basin Plan, Federal and State plans, policies, guidelines; and, as they are met, will be in conformance with the goals of the aforementioned water quality control plans, water quality criteria, and will protect and maintain existing and potential beneficial uses of the receiving water.

29. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with §21100, et. seq.), Division 13, Public Resources Code pursuant to California Water Code §13389.
30. The Environmental Protection Agency promulgated Effluent Guidelines and Standards for the "Steam Electric Power Generating Point Source Category" on November 19, 1982. These regulations became effective on January 3, 1983, and prescribe effluent limitations for various inplant waste streams including cooling tower blowdown.

The Regional Board has notified the Discharger and interested agencies and persons of its intent to renew 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 §402 of the Federal Clean Water Act, or amendment thereto, and shall take effect at the end of seventy seven days from the date of its adoption provided the Regional Administrator of the USEPA has no objections.

IT IS HEREBY ORDERED that the City of Burbank, as operator of the Burbank Water Reclamation Plant and Steam Power Plant, 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, cooling tower blowdown, boiler drainage, ROD and water softener effluent, and storm water only, as proposed.
2. The discharge of an effluent with constituents in excess of the following limits is prohibited:

(a) Conventional and nonconventional pollutants:

<u>Constituent</u>	<u>Units</u>	<u>Discharge Limitations⁽¹⁾</u>		
		<u>Monthly Average</u>	<u>7-Day Average⁽²⁾</u>	<u>Daily Maximum⁽³⁾</u>
BOD ₅ 20°C	mg/L	20	30	45
	lbs/day ⁽⁴⁾	1,500	2,250	3,380
Suspended solids	mg/L	15	40	45
	lbs/day ⁽⁴⁾	1,125	3,000	3,380
Oil and grease	mg/L	10	--	15
	lbs/day ⁽⁴⁾	750	--	1,125
Settleable solids	ml/L	0.1	--	0.3
Cyanide	µg/L	5.2	--	22
Total residual chlorine	mg/L	--	--	0.1 ⁽⁸⁾
Total phosphates	mg/L	--	--	5
Total dissolved solids	mg/L	--	--	950
	lbs/day ⁽⁴⁾	--	--	71,350
Chloride	mg/L	--	--	190
	lbs/day ⁽⁴⁾	--	--	14,300
Sulfate	mg/L	--	--	300
	lbs/day ⁽⁴⁾	--	--	22,540
Boron	mg/L	--	--	1.5
Fluoride	mg/L	--	--	2.0
Barium	mg/L	--	--	1.0
Detergents (as MBAS)	mg/L	--	--	0.5
Nitrite-N	mg/L	--	--	1

<u>Constituent</u>	<u>Units</u>	<u>Discharge Limitations⁽¹⁾</u>		
		<u>Monthly Average</u>	<u>7-Day Average⁽²⁾</u>	<u>Daily Maximum⁽³⁾</u>
Nitrite + Nitrate-N	mg/L	--	--	8
Aluminum	μg/L	--	--	1000
Iron	μg/L	--	--	300
Manganese	μg/L	--	--	50

(b) Toxic pollutants (metals):

<u>Constituent</u>	<u>Units</u>	<u>Discharge Limitations⁽¹⁾</u>	
		<u>Monthly Average</u>	<u>Daily Maximum⁽³⁾</u>
Arsenic ⁽⁷⁾	μg/L	--	50
Cadmium ^(5,7)	μg/L	1	3.7
Chromium (VI) ^(6,7)	μg/L	10	15
Copper ^(5,7)	μg/L	11	17
Lead ⁽⁷⁾	μg/L	2.5 ⁽⁵⁾	15
Mercury ⁽⁷⁾	μg/L	0.012	2.1
Nickel ⁽⁷⁾	μg/L	--	100
Selenium ⁽⁷⁾	μg/L	5	20
Silver ^(5,7)	μg/L	--	3.4
Zinc ^(5,7)	μg/L	100	110

(c) Toxic pollutants (organics):

<u>Constituent</u>	<u>Units</u>	<u>Discharge Limitations⁽¹⁾</u>	
		<u>Monthly Average</u>	<u>Daily Maximum⁽³⁾</u>
Endrin	µg/L	0.0023	0.18
Lindane	µg/L	0.08	0.2
1,4-dichlorobenzene	µg/L	--	5
Bis(2-ethylhexyl)- phthalate	µg/L	--	4
1,2-dichloroethane	µg/L	--	0.5
Chloroform	µg/L	--	100
Ethylbenzene	µg/L	--	700
Toluene	µg/L	--	150
Tetrachloroethylene	µg/L	--	5
Methylene chloride	µg/L	--	5
Bromoform	µg/L	--	100
Bromodichloromethane	µg/L	--	100
Dibromochloromethane	µg/L	--	100
2,4-D	µg/L	--	70
2,4,5-TP Silvex	µg/L	--	10

Footnotes to discharge limitations:

[1] If the constituent limit is less than the method detection limit, compliance with the constituent limit shall be based on the PQL (Practical Quantitation Level). PQL shall be determined by multiplying the USEPA method detection limit (MDL) shown in Attachment 1 or the Discharger's performance MDL approved by the

Executive Officer, with the factors five (5) for carcinogens or ten (10) for noncarcinogens.

- [2] As defined in Standard Provisions, Attachment N.
- [3] The daily maximum effluent concentration limit shall apply to both flow weighted 24-hour composite samples and grab samples, as specified in the Monitoring and Reporting Program (Attachment T).
- [4] The mass emission rates are based on the plant design flow rate of 9 mgd.
- [5] Concentrations corresponded to a total hardness of 100 mg/L and water effect ratio of 1.0. For other conditions where total hardness exceeds 100 mg/l, the limits can be calculated by following 40 CFR §131.6(b)(2) and/or a water effect ratio study according to USEPA guidance documents and/or state protocols, if applicable.
- [6] The discharger has the option to meet the hexavalent chromium limitations with a total chromium analysis. However, if the total chromium level exceeds the hexavalent chromium limitation, it will be considered a violation unless an analysis has been made for hexavalent chromium in replicate sample and the result shows within the hexavalent chromium limits.
- [7] Concentration expressed as total recoverable.
- [8] Only apply to Discharge Serial No. 001.

3. In addition to the above effluent limits, the discharge of cooling tower and boiler blowdown from the Burbank Steam Power Plant in excess of the following limits is prohibited:

- (a) The quantity of pollutants discharged in cooling tower and boiler blowdown shall not exceed the quantity determined by multiplying the flow times the concentration listed below:

<u>Discharge Limitations⁽¹¹⁾</u>			
<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
Free Available Chlorine	mg/l	0.2	0.5
Chromium	mg/L	--	0.2
Zinc	mg/L	--	1.0
Priority pollutants ⁽⁹⁾	µg/L	Non-detectable	

¹⁹¹ Contained in chemicals added for maintenance of cooling tower, boiler, and reverse osmosis demineralizer and water softener units, except chromium and zinc.

- (b) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time.
- (c) There shall be no discharge of polychlorinated biphenyl compounds.
- (d) Discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States is prohibited unless specifically authorized elsewhere in this permit. This requirement is not applicable to products used for lawn and agricultural purposes. Discharge of chlorine for disinfection in plant potable and service water system and in sewage treatment is authorized.
- (e) Discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream which ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.
- (f) The discharger shall notify the Executive Officer in writing no later than six months prior to planned discharge of any chemical, other than chlorine or other product previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:
 - a. Name and general composition of the chemical,
 - b. Frequencies of use,
 - c. Quantities to be used,
 - d. Proposed discharge concentrations, and
 - e. EPA registration number, if applicable.

No discharge of such chemicals shall be made prior to the Executive Officer's approval.

- 4. The pH of wastes discharged shall at all times be within the range of 6.0 to 9.0.
- 5. The temperature of wastes discharged shall not exceed 100°F.
- 6. 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.

7. The arithmetic mean of BOD₅ 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.
8. The wastes discharged to water courses shall at all times be adequately disinfected. For the purpose of this requirements, 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 has been completed. Samples shall be collected at a time when wastewater flow and characteristics are most demanding on treatment facilities and disinfection processes.
9. The wastes discharged to water courses shall have received treatment equivalent to that of filtered wastewater. Filtered wastewater means an oxidized and coagulated wastewater that 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 any of the followings: (a) a daily average of 2 Nephelometric turbidity units (NTUs); and (b) 5 NTUs more than 5 percent of the time (72 minutes) during any 24 hour period.

"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.

10. Acute Toxicity Limitation:

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 less than 70% survival.

If the acute toxicity limitation is violated three consecutive months, the Discharger shall conduct a toxicity identification evaluation (TIE). The TIE 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

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

B. Effluent Quality Performance Goals

The performance goals are based upon the actual performance of the discharge facility and are specified here only as an indication of the efficiency of the treatment facility. They are not to be considered as limitations or standards for the regulation of the treatment facility.

The discharger shall make best efforts to maintain the following effluent quality goals. Exceedance of any goal shall trigger an investigation by the Discharger on the causes of the exceedance. The Discharger shall report to the Regional Board on a quarterly basis any exceedance of these effluent quality goals. If exceedance of any particular goal persists on two succeeding quarterly monitoring periods, the second quarterly report shall contain the results of the Discharger's investigation including, but not be limited to, the description of the exceedance, cause(s) of the exceedance, and proposed corrective measures, if necessary.

The Executive Officer may modify any of the performance goals upon demonstration by the discharger that the change is warranted.

Effluent Quality Performance Goals⁽¹⁾

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
BOD ₅ 20°C	mg/L	9	--
Suspended solids	mg/L	5	--
Aluminum	mg/L	--	0.5
Barium	mg/L	--	0.1
Chloroform	µg/L	--	18
Bromodichloromethane	µg/L	--	18
Dibromochloromethane	µg/L	--	13
Nitrobenzene	µg/L	--	57
Phenol	µg/L	--	182
2,4-chlorophenol	µg/L	--	111
Toluene	µg/L	--	82
Bromoform	µg/L	--	13
2,4-D	µg/L	--	3.5
Remaining priority pollutants (Attachment 1)	µg/L	--	PQL ⁽²⁾

Footnotes to effluent quality performance goals:

- [1] Numerical effluent quality performance goals were derived statistically using effluent performance data from January 1993 through December 1997. 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 using the mean (u_n) and the standard deviation (σ_n) of the distribution of the average using the equation:

$$x_{95th} = \exp [u_n + (Z_{0.95}) \sigma_n]$$

where

- x_{95th} = Discharge effluent quality performance goal at the 95th percentile of the normal distribution.
 u_n = Mean distribution of the average (transformed).
 $Z_{0.95}$ = 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 average transformed.
Exp is an exponential to the base "e" value = 2.7183

- [2] PQL (Practical Quantitation Level) 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 pH of wastes discharged shall at all times be within the range of 6.0 to 9.0.
2. The temperature of wastes discharged shall not exceed 100°F.
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 or cause detrimental physiological responses in human, animal, or aquatic life.
7. The wastes discharged shall not contain substances that result in increases in the BOD which adversely affect the beneficial uses of the receiving waters.

8. The wastes discharged shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses of the receiving waters.
9. The wastes discharged shall not cause the receiving waters to contain any substance in concentrations that adversely affect any designated beneficial use.
10. The wastes discharged shall not alter the color of the receiving waters; create a visual contrast with the natural appearance of the water; nor cause aesthetically undesirable discoloration of the receiving waters.
11. The wastes discharged shall not degrade surface water communities and populations, including vertebrate, invertebrate, and plant species.
12. The wastes discharged shall not result in problems due to breeding of mosquitos, gnats, black flies, midges, or other pests.
13. The wastes discharged shall not result in visible floating particulates, foams, and oil and grease in the receiving waters.
14. The wastes discharged shall not contain any individual pesticide or combination of pesticides in concentrations that adversely affect beneficial uses of the receiving waters. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.
15. The wastes discharged shall not alter the natural taste, odor, and color of fish, shellfish, or other surface water resources used for human consumption.
16. The wastes discharged shall not increase the turbidity of the receiving waters to the extent that such an increase causes nuisance or adversely affects beneficial uses.
17. 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 will have until the year 2002 to: (a) make the necessary adjustments/improvements to meet these objectives, or (b) conduct studies leading to an approved less restrictive site specific objective for ammonia which may be adopted by the Regional Board by June 14, 2002. 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.

18. There shall be no chronic toxicity in ambient waters as a result of the waste discharged.

If the chronic toxicity in the receiving water downstream of the discharge point during three consecutive months 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 identification evaluation (TIE). The TIE 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

- A. 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 USEPA in writing and shall not become effective until approved by the Executive Officer and the USEPA Regional Administrator.
- B. The Discharger shall implement and enforce its approved pretreatment program. The Discharger shall be responsible and liable for the performance of all pretreatment requirements contained in Federal Regulations 40 CFR Part 403, including subsequent regulatory revisions thereof. Where Part 403 or subsequent revision places mandatory actions upon the Discharger as Control Authority but does not specify a timetable for completion of the actions, the Discharger shall complete the required actions within six months from the effective date of this Order or the effective date of the Part 403 revisions, whichever comes later. For violations of pretreatment requirements, the Discharger shall be subject to enforcement actions, penalties, fines, and other remedies by the Regional Board, USEPA, or other appropriate parties, as provided in the Federal Clean Water Act. The Regional Board or USEPA may initiate enforcement action against an industrial user for non-compliance with acceptable standards and requirements as provided in the Federal Clean Water Act and/or the California Water Code.
- C. The Discharger shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d), and 402(b) of the Federal Clean Water Act. The Discharger shall cause industrial users subject to the Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new industrial user, upon commencement of the discharge.
- D. The Discharger shall perform the pretreatment functions as required in 40 CFR Part 403 including, but not be limited to:
- (i) Implement the necessary legal authorities as provided in 40 CFR 403.8 (f) (1);

- (ii) Enforce the pretreatment requirements under 40 CFR 403.5 and 403.6;
 - (iii) Implement the programmatic functions as provided in 40 CFR 403.8 (f) (2); and
 - (iv) Provide the requisite funding of personnel to implement the pretreatment program as provided in 40 CFR 403.8 (f) (3).
- E. The Discharger shall submit annually a report to the Regional Board, the SWRCB, and the USEPA Region 9, describing the discharger's pretreatment activities over the previous twelve months. In the event the Discharger is not in compliance with any conditions or requirements of this permit, then the Discharger will also include the reasons for noncompliance and state how and when the Discharger shall comply with such conditions and requirements. This annual report is due on March 1 of each year and shall contain, but not be limited to, the information required in the attached Requirements for Pretreatment Annual Report (Attachment P) or approved revised version thereof.

III. REQUIREMENTS AND PROVISIONS

- A. This order includes the attached Standard Provisions and General Monitoring and Reporting Requirements (Standard Provisions) (Attachment N). If there is any conflict between provisions stated herein and the Standard Provisions, those provisions stated herein prevail.
- B. This Order includes the attached Monitoring and Reporting Program (Attachment T). If there is any conflict between provisions stated in Monitoring and Reporting Program and the Standard Provisions, those provisions stated in the former prevail.
- C. The Discharger shall comply with the requirements of the State Water Resources Control Board's General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities (Order No. 97-03-DWQ) (Attachment S).
- D. The Discharger shall comply with all applicable water quality objectives for the Los Angeles River, including the toxic criteria in 40 CFR Part 131.36.
- E. The Discharger shall provide standby or emergency power facilities and/or storage capacity or other means so that in the event of plant upset or outage due to power failure or other causes, the discharge of raw or inadequately treated sewage does not occur.
- F. This Order may be modified, in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include requirements for the implementation of the watershed management approach.

- G. This Order may also be modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR Parts 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this order and permit, endangerment to human health, or the environment resulting from the permitted activity.
- H. Discharge of wastes to any point other than specifically described in this order and permit is prohibited and constitute a violation thereof.
- I. 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.
- J. For biosolids management, the Discharger must comply with all requirements of 40 CFR Parts 257, 258, 501, and 503, including all monitoring, record keeping, and reporting requirements.

Since the State of California, hence the Regional Board, has not been delegated the authority to implement the sludge program, enforcement of the sludge requirements contained in this Order and permit shall be the sole responsibility of EPA.

- K. This permit may be modified according to 40 CFR Part 122.62 if new regulations are adopted by the State of California, including the Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (California Toxics Rule) and implementation policies (State's Toxics Standards Implementation Policy).

IV. EXPIRATION DATE

This Order expires on May 10, 2003.

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 such date as application for issuance of new waste discharge requirements.

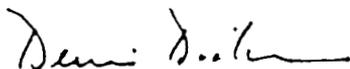
City of Burbank
Water Reclamation Plant and Steam Power Plant

CA0055531
Order No. 98-052

V. RESCISSION

Order No. 96-050, adopted by this Regional Board on July 15, 1996, is hereby rescinded, except for enforcement purposes.

I, Dennis Dickerson, 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 29, 1998.



DENNIS DICKERSON
Executive Officer

Attachments

Attachment 1	Pollutants Method Detection Limits
Attachment 2	Ammonia Concentrations
Attachment N	Standard Provisions, General Monitoring and Reporting Requirements
Attachment P	Pretreatment Reporting Requirements
Attachment S	National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 (General Permit) and Waste Discharge Requirements (WDRs) for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities
Attachment T	Monitoring and Reporting Program

A. USEPA PRIORITY POLLUTANTS	USEPA		TYPE *
	METHOD	MDL (ug/l)	
METALS AND CYANIDE			
Antimony	7062	1	NC
Arsenic	3114B	2	C
Barium	206.2	2	NC
Beryllium	210.2	0.2	C
Cadmium	200.7	4	NC
Chromium	200.7	7	NC
Cobalt	219.2	1	
Copper	200.7	8	NC
Lead	239.1	100	NC
Mercury	245.1	0.2	NC
Nickel	200.7	15	NC
Selenium	3114B	2	NC
Silver	272.1	0.2	NC
Thallium	279.2	1	NC
Zinc	200.7	2	NC
Cyanide			NC
VOLATILE COMPOUNDS			
Acrolein	603	0.6	NC
Acrylonitrile	603	0.5	C
Benzene	602	0.2	C
Bromoform	601	0.2	C
Bromodichloromethane	601	0.1	
Carbon Tetrachloride	601	0.12	C
Chlorobenzene (Monochlorobenzene)	602	0.2	NC
Chlorodibromomethane			C
Chloroethane	601	0.52	
Chloroform	601	0.05	C
Chloromethane	601	0.06	
Dibromochloromethane	601	0.09	
Dichlorobromomethane			C
Ethylbenzene	602	0.2	NC
Methylene Chloride	601	0.25	C
Methyl Bromide	601	1.15	C
Methyl Chloride	601	0.06	C
Tetrachloroethylene	601	0.03	C
Toluene	602	0.2	NC
Trichloroethylene	601	0.12	C
Vinyl Chloride	601	0.18	C
1,1-Dichloroethane	601	0.07	
1,1-Dichloroethylene	601	0.13	C
1,1,1-Trichloroethane	601	0.03	NC
1,1,2-Trichloroethane	601	0.02	C
1,1,2,2-Tetrachloroethane	601	0.03	C
1,2-Dichloroethane	601	0.03	C

* C - Carcinogen
 NC - Noncarcinogen

A. USEPA PRIORITY POLLUTANTS (cont)	USEPA		TYPE *
	METHOD	MDL (µg/l)	
1,2-Dichloropropane	801	0.04	C
1,2-Dichloropropylene			
1,2-Trans-Dichloroethylene	801	0.1	NC
1,3-Dichloropropylene	801	0.34	NC
2-Chloroethyvinyl Ether	801	0.13	
ACID COMPOUNDS			
2-Chlorophenol	825	3.3	NC
Pentachlorophenol	825	3.8	C
Phenol	825	1.5	NC
2-Nitrophenol	825	3.8	
2,4-Dichlorophenol	825	2.7	NC
2,4-Dimethylphenol	825	2.7	NC
2,4-Dinitrophenol	825	42	NC
2,4,6-Trichlorophenol	825	2.7	NC
4-Nitrophenol	825	2.4	
4,6-Dinitro-O-Cresol (4,6-Dinitro-2-Methylphenol)			NC
4-Methylphenol (p-cresol)			NC
3-Methyl-4-Chlorophenol (P-Chloro-M-Cresol)	825	3	NC
BASE/NEUTRAL COMPOUNDS			
Acenaphthene	825	1.9	NC
Benzidine	825	4.4	C
Bis(2-Chloroethoxy)Methane	825	5.3	NC
Bis(2-Chloroethyl)Ether	825	5.7	C
Bis(2-Chloroisopropyl)Ether	825	5.7	NC
Bis(2-Ethylhexyl)Phthalate	825	2.5	C
Bis(Chloromethyl)Ether			C
Butyl Benzyl Phthalate	825	2.5	NC
Diethyl Phthalate	825	2.2	NC
Dimethyl Phthalate	825	1.8	NC
Di-N-Butyl Phthalate	825	2.5	NC
Di-N-Octyl Phthalate	825	2.5	
Fluoranthene	825	2.2	NC
Hexachlorobenzene	825	1.9	C
Hexachlorobutadiene	825	0.9	C
Hexachlorocyclopentadiene			NC
Hexachloroethane	825	1.8	C
Isophorone	825	2.2	NC
Naphthalene	825	1.8	NC
Nitrobenzene	825	1.9	NC
N-Nitrosodimethylamine	825	0.15	C
N-Nitrosodi-N-Propylamine	825		C
N-Nitrosodiphenylamine	825	1.9	C
TCDD			

* C - Carcinogen

NC - Noncarcinogen

A. USEPA PRIORITY POLLUTANTS (con't)	USEPA		TYPE *
	METHOD	MDL (µg/l)	
Total PAHS			
Acenaphthylene		1.9	C
Anthracene	625	1.9	C
Benzo(A)Anthracene	625	7.8	C
Dibenzo(A,H)Anthracene (1,2,5,6-Dibenzanthracene)	625	2.5	C
Benzo(B)Fluoranthene	625	4.8	C
Benzo(K)Fluoranthene	625	2.5	C
Benzo(GH)Perylene (1,12-Benzoperylene)	625	4.1	C
Benzo(A)Pyrene	625	2.5	C
Chrysene	625	2.5	C
Fluorene	625	1.9	C
Indeno(1,2,3-CD)Pyrene	625	3.7	C
Phenanthrene	625	5.4	C
Pyrene	625	1.9	C
1,2-Dichlorobenzene	625	1.9	NC
1,2-Diphenylhydrazine	625		C
1,2,4-Trichlorobenzene	625	1.9	
1,3-Dichlorobenzene	625	1.9	NC
1,4-Dichlorobenzene	625	4.4	C
2-Chloronaphthalene	625	1.9	
2,4-Dinitrotoluene	625	5.7	C
2,6-Dinitrotoluene	625	1.9	
3,3-Dichlorobenzidine	625	16.5	C
4-BromoPhenyl Phenyl Ether	625	1.9	
4-ChloroPhenyl Phenyl Ether	625	4.2	
PESTICIDES AND PCBs			
4,4'-DDD	625	2.8	C
4,4'-DDE	625	5.6	C
4,4'-DDT	625	4.7	C
Aldrin	608	0.004	C
Alpha-BHC	608	0.003	C
Alpha-Endosulfan	608	0.014	NC
Beta-BHC	608	0.006	C
Beta-Endosulfan	608	0.004	NC
Chlordane	608	0.014	C
Delta-BHC	608	0.009	C
Dieldrin	608	0.002	C
Endosulfan Sulfate	608	0.066	NC
Endrin	608	0.006	NC
Endrin Aldehyde	608	0.023	NC
Gamma-BHC (Lindane)	608	0.004	
Heptachlor	608	0.003	C
Heptachlor Epoxide	608	0.083	C

* C - Carcinogen

NC - Noncarcinogen

POLLUTANTS METHOD DETECTION LIMITS

A. USEPA PRIORITY POLLUTANTS (con't)	USEPA		TYPE *
	METHOD	MDL (µg/l)	
Total PCBs		65	
PCB-1016			C
PCB-1221			C
PCB-1232			C
PCB-1242	608	0.065	C
PCB-1248			C
PCB-1254			C
PCB-1260			C
Toxaphene		240	C

B. MISCELLANEOUS POLLUTANTS	USEPA		TYPE *
	METHOD	MDL (µg/l)	
2,3,7,8-Tetrachlorodibenzo-P-Dioxin			
Asbestos			
Ethylene Dibromide			
1,2-Dibromo-3-Chloropropane			
2,4,5-TP			
Simazine			
2,4-D			
Methoxychlor			
1,1,2-Trichloro-1,2,2-Trifluoroethane			
Trichlorofluoromethane			
Xylene			
Bentazon			
Carbofuran			
Barium			
Molinate			
Atrazine			
1,2-Cis-Dichloroethylene			
Thiobencarb			
Glyphosate			
Acetone			
Molybdenum	246.2	1	
Vanadium	286.2	4	
Aluminum	202.2	3	

* C - Carcinogen
 NC - Noncarcinogen

Four-day Average Concentration for Ammonia^{1,2} for Waters Designated as WARM (Salmonids or Other Sensitive Coldwater Species Absent).

pH	Temperature, °C						
	0	5	10	15	20	25	30
Un-ionized ammonia (mg/liter NH₃)							
6.50	0.0008	0.0011	0.0016	0.0022	0.0031	0.0031	0.0031
6.75	0.0014	0.0020	0.0028	0.0039	0.0055	0.0055	0.0055
7.00	0.0025	0.0035	0.0049	0.0070	0.0099	0.0099	0.0099
7.25	0.0044	0.0062	0.0088	0.0124	0.0175	0.0175	0.0175
7.50	0.0078	0.0111	0.0156	0.022	0.031	0.031	0.031
7.75	0.0129	0.0182	0.026	0.036	0.051	0.051	0.051
8.00	0.0149	0.021	0.030	0.042	0.059	0.059	0.059
8.25	0.0149	0.021	0.030	0.042	0.059	0.059	0.059
8.50	0.0149	0.021	0.030	0.042	0.059	0.059	0.059
8.75	0.0149	0.021	0.030	0.042	0.059	0.059	0.059
9.00	0.0149	0.021	0.030	0.042	0.059	0.059	0.059
Total ammonia (mg/liter NH₃)							
6.50	3.0	2.8	2.7	2.5	2.5	1.73	1.23
6.75	3.0	2.8	2.7	2.6	2.5	1.74	1.23
7.00	3.0	2.8	2.7	2.6	2.5	1.74	1.23
7.25	3.0	2.8	2.7	2.6	2.5	1.75	1.24
7.50	3.0	2.8	2.7	2.6	2.5	1.76	1.25
7.75	2.8	2.6	2.5	2.4	2.3	1.65	1.18
8.00	1.82	1.70	1.62	1.57	1.55	1.10	0.79
8.25	1.03	0.97	0.93	0.90	0.90	0.64	0.47
8.50	0.58	0.55	0.53	0.53	0.53	0.39	0.29
8.75	0.34	0.32	0.31	0.31	0.32	0.24	0.190
9.00	0.195	0.189	0.189	0.195	0.21	0.163	0.133

1 To convert these values to mg/liter N, multiply by 0.822.

2 Source: USEPA, 1992

One-hour Average Concentration for Ammonia^{1,2} for Waters Designated as WARM (Salmonids or Other Sensitive Coldwater Species Absent).

pH	Temperature, °C				
	0	5	10	15	20
Un-ionized ammonia (mg/liter NH ₃)					
6.50	0.0091	0.0129	0.0182	0.026	0.036
6.75	0.0149	0.021	0.030	0.042	0.059
7.00	0.023	0.033	0.046	0.066	0.093
7.25	0.034	0.048	0.068	0.095	0.135
7.50	0.045	0.064	0.091	0.128	0.181
7.75	0.056	0.080	0.113	0.159	0.22
8.00	0.065	0.092	0.130	0.184	0.26
8.25	0.065	0.092	0.130	0.184	0.26
8.50	0.065	0.092	0.130	0.184	0.26
8.75	0.065	0.092	0.130	0.184	0.26
9.00	0.065	0.092	0.130	0.184	0.26
Total ammonia (mg/liter NH ₃)					
6.50	35	33	31	30	29
6.75	32	30	28	27	27
7.00	28	26	25	24	23
7.25	23	22	20	19.7	19.2
7.50	17.4	16.3	15.5	14.9	14.6
7.75	12.2	11.4	10.9	10.5	10.3
8.00	8.0	7.5	7.1	6.9	6.8
8.25	4.5	4.2	4.1	4.0	3.9
8.50	2.6	2.4	2.3	2.3	2.3
8.75	1.47	1.40	1.37	1.38	1.42
9.00	0.86	0.83	0.83	0.86	0.91

1 To convert these values to mg/liter N, multiply by 0.822

2 Source: USEPA, 1986

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

MONITORING AND REPORTING PROGRAM No. CI-4424
FOR
City of Burbank, Public Works Department
(Burbank Water Reclamation Plant and Steam Power Plant)

I. MONITORING AND REPORTING REQUIREMENTS

- A. The Discharger shall implement this monitoring program on the effective date of this Order. All monthly monitoring reports shall be submitted by the first day of the second month following each monthly sampling period, addressed to the Regional Board, Attention: Data and Information Management Unit. The first monitoring report under this Program is due by December 1, 1998, and will cover the monitoring period of October 1998.
- B. Quarterly monitoring shall be performed during the months of February, May, August, and November. Semi-annual monitoring shall be performed during the months of February and August. Annual monitoring shall be performed during the month of February.
- C. Laboratory analyses: all chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer. A copy of the laboratory certification shall be provided each time a new and/or renewal is obtained from ELAP.

The analyses shall specify the USEPA analytical method used and its Method Detection Limit (MDL). For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported with an actual numerical value or "non-detected (ND)" with the MDL indicated for the analytical method used. The maximum allowed MDLs are those published by the USEPA (MDLs for priority pollutants are listed in Attachment 1). In addition, the detection limits employed for effluent analyses shall be lower than the permit limits established for a given parameter, unless the Discharger can demonstrate that a particular detection limit is not attainable and obtains approval for a higher detection limit from the Executive Officer.

- D. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR Part 136.3. All Quality Assurance/Quality Control (QA/QC) items must be run on the same dates when the samples were actually analyzed. The Discharger shall make available for inspection and/or submit the QA/QC documentation upon request by Regional Board staff.

- E. By April 1 of each year, the Discharger shall submit an annual report containing a discussion of the previous year's effluent and receiving water monitoring data, as well as graphical and tabular summaries of the data. The data shall be submitted to the Regional Board on hard copy and on 3 1/2" computer diskette following the Regional Board's format. 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 waste discharge requirements.
- F. The Discharger shall inform the Regional Board well in advance of any construction activity proposed that can potentially affect compliance with applicable requirements.
- G. Monitoring frequencies may be adjusted to a less frequent basis and sampling constituents dropped by the Executive Officer if such is requested by the Discharger and backed by statistical trends of data submitted.

II. INFLUENT MONITORING REQUIREMENTS
 (Footnotes on pages T-10, T-11, and T-12).

- A. Influent monitoring is required to:
 - 1. determine compliance with NPDES permit conditions and water quality standards,
 - 2. assess treatment plant performance, and
 - 3. assess the effectiveness of the pretreatment program.
- B. Sampling stations shall be established at each point of inflow to the sewage treatment plant and shall be located upstream of any in-plant return flows and where representative samples of the influent can be obtained. The date and time of sampling shall be reported with the analytical results.
- C. Samples for influent BOD₅ 20°C and suspended solids shall be obtained on the same day that the effluent BOD₅ 20°C and suspended solids samples are obtained to demonstrate percent removal. Similarly, sampling of other constituents shall also be coordinated with effluent sampling.
- D. The following shall constitute the influent monitoring program:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Flow	mgd	---	continuous ⁽¹⁾
pH	pH units	grab	daily
Suspended solids	mg/L	24-hour composite	weekly
BOD ₅ 20°C	mg/L	24-hour composite	weekly
Chromium (VI)	mg/L	24-hour composite	semiannually
Pesticides	µg/L	24-hour composite	annually

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Remaining EPA priority pollutants (excluding asbestos, Attachment 1)	µg/L	24-hour composite	annually

III. EFFLUENT MONITORING REQUIREMENTS

(Footnotes on pages T-10, T-11, and T-12)

A. Effluent monitoring is required to:

1. determine compliance with NPDES permit conditions,
2. identify operational problems and improve plant performance, and
3. provide information on wastewater characteristics and flows for use in interpreting water quality and biological data.

B. An effluent sampling station shall be established for each point of discharge and shall be located downstream of any inplant return flows where representative samples of the effluent (after receiving all treatment) can be obtained. Effluent samples may be obtained at a single station provided that such station is representative of the effluent quality at all discharge points. Any changes in sampling station locations shall be approved by the Executive Officer.

C. The following shall constitute the effluent monitoring program for Discharge Serial No. 002:

<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Total waste flow	mgd	---	continuous ^{1, 6} ✓
Turbidity ²	NTU	---	continuous ^{1, 6}
Total residual chlorine	mg/L	---	continuous ^{1, 6}
Total coliform ²	MPN/100 ml	grab	daily
Temperature	°F	grab	daily
pH	pH units	grab	daily
Settleable solids	ml/L	grab	daily
Suspended solids	mg/L	24-hour composite	daily
BOD ₅ 20°C	mg/L	24-hour composite	weekly
Oil and grease	mg/L	grab	weekly
Ammonia nitrogen	mg/L	grab	monthly
Nitrate nitrogen	mg/L	grab	monthly
Nitrite nitrogen	mg/L	grab	monthly ⁶
Nitrate + nitrite nitrogen	mg/L	grab	monthly ⁶

<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Organic nitrogen	mg/L	grab	monthly
Total nitrogen	mg/L	grab	monthly
Total dissolved solids	mg/L	24-hour composite	monthly ⁽⁶⁾
Sulfate	mg/L	24-hour composite	monthly ⁽⁶⁾
Chloride	mg/L	24-hour composite	monthly ⁽⁶⁾
Phosphate (as P)	mg/L	24-hour composite	monthly
Fluoride	mg/L	24-hour composite	monthly
Detergents (as MBAS) ⁽³⁾	mg/L	24-hour composite	monthly ⁽⁶⁾
Chronic toxicity ⁽⁴⁾	TU _c	24-hour composite	monthly
Total hardness	mg/L	24-hour composite	monthly
Iron	µg/L	24-hour composite	monthly ⁽⁶⁾
Manganese	µg/L	24-hour composite	monthly ⁽⁶⁾
Arsenic	µg/L	24-hour composite	quarterly
Cadmium	µg/L	24-hour composite	quarterly
Chromium VI ⁽⁵⁾	µg/L	24-hour composite	quarterly
Copper	µg/L	24-hour composite	quarterly
Lead	µg/L	24-hour composite	quarterly
Mercury	µg/L	24-hour composite	quarterly
Nickel	µg/L	24-hour composite	quarterly
Selenium	µg/L	24-hour composite	quarterly
Silver	µg/L	24-hour composite	quarterly
Zinc	µg/L	24-hour composite	quarterly
Cyanide	µg/L	grab	quarterly
Boron	mg/L	24-hour composite	quarterly
Aluminum	µg/L	24-hour composite	quarterly
Barium	µg/L	24-hour composite	quarterly
Endrin	µg/L	24-hour composite	quarterly
Lindane	µg/L	24-hour composite	quarterly
Bis (2-ethylhexyl) phthalate	µg/L	24-hour composite	quarterly
Phenols			
chlorinated	µg/L	24-hour composite	quarterly
non-chlorinated	µg/L	grab	quarterly
1,2-dichloroethane	µg/L	grab	quarterly
1,4-dichlorobenzene	µg/L	grab	quarterly
Chloroform	µg/L	grab	quarterly
Ethylbenzene	µg/L	grab	quarterly
Tetrachloroethylene	µg/L	grab	quarterly
Methylene chloride	µg/L	grab	quarterly

<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Frequency of Analysis</u>
Bromoform	µg/L	grab	quarterly
Bromodichloromethane	µg/L	grab	quarterly
Dibromochloromethane	µg/L	grab	quarterly
Toluene	µg/L	grab	quarterly
Other volatile organic compounds	µg/L	grab	quarterly
Halomethanes	µg/L	grab	quarterly
Acute toxicity ⁽⁷⁾	TU	grab	quarterly
2,4-D	µg/L	24-hour composite	quarterly
2,4,5-TP (Silvex)	µg/L	24-hour composite	quarterly
Methoxychlor	µg/L	24-hour composite	semiannually
MTBE	µg/L	grab	semiannually
DDT ⁽⁸⁾	µg/L	24-hour composite	semiannually
PAHs ⁽⁹⁾	µg/L	24-hour composite	semiannually
PCBs ⁽¹⁰⁾	µg/L	24-hour composite	semiannually
Radioactivity ⁽¹¹⁾	pCi/L	24-hour composite	semiannually ⁽⁶⁾
Pesticides ⁽¹²⁾	µg/L	24-hour composite	semiannually
Remaining EPA priority pollutants ⁽¹³⁾ (excluding asbestos, Attachment 1)	µg/L	as specified in 40 CFR Part 136 July 1, 1993	semiannually ⁽⁶⁾

D. The monitoring program for cooling tower blowdown and boiler blowdown is as follows:

<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Flow	gal/day	grab	monthly ⁽¹⁴⁾
Free available chlorine	mg/L	grab	monthly
Chromium	mg/L	grab	quarterly
Zinc	mg/L	grab	quarterly
Remaining EPA priority pollutants ^(13,15) (excluding asbestos, Attachment 1)	µg/L	as specified in 40 CFR Part 136 July 1, 1993	quarterly

IV. WATERSHED-WIDE MONITORING PROGRAM

- A. Pursuant to the Code of Federal Regulations [40 CFR § 122.41 (j) and § 122.48 (b)], the monitoring program for a discharger receiving a NPDES permit must determine compliance with NPDES permit terms and conditions, and demonstrate that State water quality standards are met.
- B. Since compliance monitoring focuses on the effects of the point source discharge, it is not designed to assess impacts from other sources of pollution (e.g. non-point source runoff, aerial fallout) nor to evaluate the current status of important ecological resources on a regional basis.
- C. The goals of the Watershed-wide Monitoring Program for the upper Los Angeles River Watershed are: to determine compliance with receiving water limits, to monitor trends in surface water quality, to assure protection of beneficial uses, and to provide data for modeling contaminants of concern.
- D. The Discharger shall participate in the implementation of the Watershed-wide Monitoring Program. The City's responsibilities under the Watershed-wide Monitoring Program are described in the Receiving Water Monitoring Requirements section.

V. RECEIVING WATER MONITORING REQUIREMENTS

(Footnotes on pages T-10, T-11, and T-12)

- A. Receiving water stations shall be established at the following locations (See Figure T-1):

<u>Station Number</u>	<u>Los Angeles River Stations</u>
R-1	At the confluence of Burbank Western Wash and Lockheed Channel about 300 feet above the Reclamation Plant
R-2	Burbank Western Wash at Verdugo Avenue
R-5	Burbank Western Wash just upstream from the confluence with the Los Angeles River

Only stations R-1 and R-2 will be used to determine compliance with the receiving water limitations.

- B. The following analyses, which constitute the receiving water monitoring program, shall be conducted on grab samples obtained at Stations R-1, R-2, and R-5:

<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
pH	pH units	weekly
Temperature	°F	weekly
Dissolved oxygen	mg/L	weekly
Total residual chlorine	mg/L	weekly
Total coliform	MPN/100 ml	weekly
Turbidity	NTU	quarterly
Total dissolved solids	mg/L	quarterly
Conductivity	µmhos/cm	quarterly
Chloride	mg/L	quarterly
Sulfate	mg/L	quarterly
Nitrate nitrogen	mg/L	quarterly
Nitrite nitrogen	mg/L	quarterly
Ammonia nitrogen	mg/L	quarterly
Organic nitrogen	mg/L	quarterly
Total nitrogen	mg/L	quarterly
Total phosphate (as P)	mg/L	quarterly
Detergents (as MBAS) ¹³⁾	mg/L	quarterly
BOD ₅ 20°C	mg/L	quarterly
Total organic carbon	mg/L	quarterly
Oil and grease	mg/L	quarterly
MTBE	mg/L	quarterly
Chronic toxicity ¹⁴⁾	TU _c	quarterly
Acute toxicity ¹⁷⁾	TU _a	quarterly
Arsenic	µg/L	quarterly
Cadmium	µg/L	quarterly
Total chromium	µg/L	quarterly
Copper	µg/L	quarterly
Lead	µg/L	quarterly
Mercury	µg/L	quarterly
Nickel	µg/L	quarterly
Zinc	µg/L	quarterly
Total hardness	µg/L	quarterly
Cyanide	µg/L	quarterly
Phenolic compounds	µg/L	semiannually
Aldrin and dieldrin	µg/L	semiannually
Endrin	µg/L	semiannually
HCH	µg/L	semiannually
Chlordane	µg/L	semiannually
Lindane	µg/L	semiannually
Toxaphene	µg/L	semiannually

<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
PAHs ⁽⁹⁾	µg/L	semiannually

- C. The following analyses, which are part of the receiving water monitoring program, shall be conducted on grab samples of sediment obtained at Stations R-1, R-2, and R-5:

<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
DDTs ⁽⁸⁾	µg/L	semiannually
PCBs ⁽¹⁰⁾	µg/L	semiannually

- D. At the same time the receiving waters are sampled, observations shall be made in the reach bounded by Stations Nos. R-1 and R-2, and around R-5, and a log shall be maintained thereof. Attention shall be given to the presence and extent, or absence of:

- i. oil, grease, scum, or solids of waste origin
- ii. sludge deposits
- iii. discoloration of surface waters
- iv. algal blooms
- v. odors
- vi. foam
- vii. any unusual occurrences

The following shall also be noted in the log:

- i. date and time of observation
- ii. weather conditions
- iii. flow measurement
- iv. exact sampling location
- v. users of water in the river (i.e. homeless, people washing in the river, etc.)
- vi. non-contact users (i.e. bikers, joggers, etc.)
- vii. wildlife (i.e. birds, mammals, reptiles, estimated amount of vegetation)

Copies of the above log shall be submitted with the monitoring reports.

- E. At the same time the receiving waters are sampled, observations shall be made of the flow, if any, emanating from the storm drain that is tied into the final effluent surge chamber, and a log shall be maintained thereof. Attention shall be given to the presence and extent, or absence of:

- i. oil, grease, scum, or solids of waste origin

- ii. colored or odorous materials
- iii. any unusual waste like garbage, floating solids, foam, etc.

An estimate of the flow rate shall also be reported.

Copies of the above log shall be submitted with the monitoring reports.

- F. In the event of a spill or bypass of raw or partially treated sewage from the Burbank Water Reclamation Plant and Steam Power Plant into the Los Angeles River system, total coliform analyses shall be made on grab samples collected at all potentially affected downstream receiving water stations and at least one unaffected upstream receiving water station.

Coliform samples shall be collected at each station on the date of the spill or bypass, and daily on each of the following four days.

- G. Receiving water samples shall not be taken during or within 48 hours following the flow of rainwater runoff into the Los Angeles River system.
- H. Receiving water sampling and observations need not be performed during period of no discharge to surface waters.
- I. Storm drain flow observations need not be performed during periods of no discharge to surface waters.

VI. COMPLIANCE WITH 7-DAY, MONTHLY AVERAGE LIMITS AND DAILY MAXIMUM LIMITS

- A. For constituents where both monthly average and maximum limits are specified but where the monitoring frequency is less than four times a month, the following procedure shall apply: Initially, not later than the first week of the second month after the adoption of this Order, a representative sample shall be obtained of each waste discharge at least once per week for at least four consecutive weeks and until compliance with the monthly average limit has been demonstrated. Once compliance has been demonstrated, sampling and analyses shall revert to the frequency specified.
- B. For any weekly monitored constituent: if any result of a weekly analysis exceeds the 7-day average limit (or the monthly average limit if no 7-day limit is prescribed), the frequency of analysis shall be increased to daily within one week of knowledge of the test results. Daily testing shall continue for at least 7 consecutive days and until compliance with the 7-day average limit is demonstrated, after which the frequency shall revert to weekly.

- C. For any monthly monitored constituent: if any result of a monthly analysis exceeds the monthly average limit, the frequency of analysis shall be increased to weekly within one week of knowledge of the test result. Weekly testing shall continue for at least 4 consecutive weeks and until compliance with the monthly average limit is demonstrated, after which the frequency shall revert to monthly.

VII. FOOTNOTES TO INFLUENT, EFFLUENT, AND RECEIVING WATER MONITORING REQUIREMENTS

- [1] Where continuous monitoring of a constituent is required, the following shall be reported:

Total waste flow - Total daily flow and peak daily flow (24-hour basis);

Total residual chlorine - maximum daily value (24-hour basis);

Turbidity - Maximum daily value, total amount of time each day that turbidity exceeded five (5) turbidity units, the flow-proportioned average daily value.

- [2] Coliform and turbidity samples shall be obtained at some point in the treatment process at a time when wastewater flow and characteristics are most demanding on the treatment facilities, filtration, and disinfection procedures.

- [3] Methylene blue active substances.

- [4] Initial screening shall be conducted using a minimum of three test species with approved test protocols to determine the most sensitive test organism for chronic toxicity testing. The initial screening process shall be conducted for a minimum of three months, but not to exceed five months, to account for potential variability of the effluent/receiving water. If possible, the test species used during the screening process should include a fish, an invertebrate and aquatic plant. Two screening processes should be conducted, one for the effluent chronic toxicity testing and one for the receiving waters chronic toxicity testing (water form station R-2 should be used for the screening process).

After the initial screening period, chronic toxicity testing may be limited to the most sensitive test species. However, the initial screening process shall be repeated annually, with a minimum of three test species with approved test protocols, to ensure use of the most sensitive species for chronic toxicity testing.

Dilution and control waters for the effluent should be obtained from an unaffected area of the receiving waters. Standard dilution water may be used if the above source exhibits toxicity greater than 1.0 TUc. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each batch of bioassay tests and reported with the test results.

Chronic toxicity shall be expressed and reported as toxic units, where:

$$TUc = 100/NOEC$$

The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent/receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test.

Except with prior approval from this Regional Board (Executive Officer) or USEPA, ammonia shall not be removed from the bioassay samples. The wastewater used for the toxicity test shall be analyzed for ammonia, and the result, along with an interpretation, shall be submitted with the toxicity data. If the test result is greater than the permit limitation, parallel tests of 100% effluent without ammonia removal and 100% effluent with ammonia removed shall be conducted.

If chronic toxicity in the effluent is higher than 1.0 TU_c during three consecutive months, the City shall conduct a toxicity identification evaluation (TIE). The TIE shall include all reasonable steps to identify the sources of toxicity. Once the sources are identified, the City shall take all reasonable steps to reduce toxicity in the effluent.

- [5] The discharger has the option to meet the hexavalent chromium limitations with a total chromium analysis. However, if the total chromium level exceeds the hexavalent chromium limitation, it will be considered a violation unless an analysis has been made for hexavalent chromium in replicate sample and the result shows within the hexavalent chromium limits.
- [6] Apply also to Discharge Serial No. 001.
- [7] By methods specified in "Methods for Measuring the Acute Toxicity of Effluent to Freshwater and Marine Organisms" (September 1991, EPA/600/4-90/027). Submission of bioassay results should include the information noted on pages 70 through 73 of the "Methods" where appropriate. The fathead minow (*Pimephales promelas*) shall be used as the test species.

In lieu of conducting the standard acute toxicity test with fathead minow, the Discharger may elect to report the results from the first 48 hours to the chronic toxicity test as acute toxicity test results.

Except with prior approval from this Regional Board (Executive Officer) or USEPA, ammonia shall not be removed from the bioassay samples. The wastewater used for the toxicity test shall be analyzed for ammonia, and the result, along with an interpretation, shall be submitted with the toxicity data. If the test result is greater than the permit limitation, parallel tests of 100% effluent without ammonia removal and 100% effluent with ammonia removed shall be conducted.

If the survival rates are lower than the effluent permit limit, the frequency of monitoring should be increased to monthly for at least three months after a permit limit violation.

- [8] DDT shall mean the sum of the p,p' and o,p' isomers of DDT, DDD, and DDE.
- [9] PAHs (polynuclear, aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, ideno[1,2,3-cd]pyrene, phenanthrene, and pyrene.
- [10] PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.
- [11] If gross α activity exceeds 5 pCi/L in any sample, measurement of Ra²²⁶ shall be made; if Ra²²⁶ exceeds 3 pCi/L, measurement of Ra²²⁸ shall be made. If gross β activity exceeds 50 pCi/L in any sample, an analysis of the sample shall be performed to identify the major constituents present and compliance with Title 17, Section 30269 shall also be demonstrated.
- [12] Pesticides are, for purposes of this Order, those six constituents referred to in 40 CFR Part 125.58 (m) (demeton, guthion, malathion, mirex, methoxychlor, and parathion).

- [13] For volatile organics, grab samples shall be collected instead of 24-hour composite. Analyses conducted for pretreatment requirements may be reported in lieu of additional analyses.
- [14] Flow will be measured once a month during discharge. If no flow occurred during the month, the report shall so state.
- [15] Contained in chemicals added for maintenance of cooling tower, boiler, and reverse osmosis-demineralizer and water softener units, except chromium and zinc.

VIII. HAULING REPORT

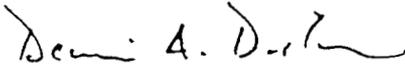
A monthly report shall be provided, noting the moisture content, weight, and volume of screenings, sludges, grit, and other solids removed from wastewater. The point(s) from which these wastes were obtained and the disposal sites to which waste solids were transported should be specified in the monthly reports.

This requirement does not cover those wastes that are routinely returned to the North Outfall Sewer Line for downstream treatment at Hyperion Treatment Plant.

IX. STORM WATER MONITORING AND REPORTING

The City shall implement the Storm Water Monitoring Program and Reporting Requirements of the State Water Resources Control Board's General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities (Order No. 97-03-DWQ) (Attachment 3).

Ordered by:



DENNIS DICKERSON
Executive Officer

Date: June 29, 1998

