

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 92-068
NPDES NO. CA1014949

WASTE DISCHARGE REQUIREMENTS
AND
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
FOR
IMPERIAL IRRIGATION DISTRICT
ROCKWOOD GAS TURBINE POWER PLANT
South of Brawley - Imperial County

The California Regional Water Quality Control Board, Colorado River Basin Region, finds that:

1. Imperial Irrigation District (hereinafter also referred to as the discharger) P.O. Box 937, Imperial, California 92251, submitted an NPDES Application for Permit to Discharge, dated October 10, 1991. Said application is assigned Application No. CA0104949 for the Rockwood Gas Turbine Power Plant at 4195 Dogwood Road, Brawley, CA 92227.
2. The discharger is periodically discharging a maximum of 28,800 gallons-per-operating day of wastewater from a gas turbine powered electricity generating plant. The wastewater is generated from daily cleaning and operating of plant filters, softeners, reverse osmosis units, a demineralizer, neutralizer and evaporative cooler. Wastewater is discharged into Bryant Drain No. 2, flows approximately three miles to Bryant Drain, which then flows for about two miles to the Alamo River. Bryant Drain enters the Alamo River, then drains about 25 miles to the Salton Sea. The discharge location is in the SW $\frac{1}{4}$, SW $\frac{1}{4}$ of Section 4, T14S, R14E, SBB&M.
3. The discharger reports using the following chemicals:
 - a. Chlorine is added to control biological growth in the softeners, filters and reverse osmosis units.
 - b. Sulfuric acid and hexameta phosphate are added to protect the reverse osmosis from deterioration and silt fouling and to maintain a pH level between 4.0 and 7.5 and a phosphate level of 5.0 mg/L.
 - c. The demineralizer is regenerated with sulfuric acid and caustic soda, which are mixed and neutralized before being discharged into the drain.
4. Blow-down wastewater from the evaporative coolers has been shown to contain a total dissolved solids concentration of (2965 mg/L).
5. The Water Quality Control Plan for the Colorado River Basin Region of California was adopted on May 15, 1991, and designates the beneficial uses of ground and surface waters in this Region.

*Superseded
by: Bd. Order
No. 98-057
6/11/98*

6. The beneficial uses of waters in the Imperial Valley drains and the Alamo River are:
 - a. Fresh Water Replenishment of Salton Sea (FRSH)
 - b. Noncontact Water Recreation (REC II)
 - c. Warm Water Habitat (WARM)
 - d. Wildlife Habitat (WILD)
 - e. Preservation of Rare, Endangered or Threatened Species (RARE)
 - f. Water Contact Recreation (REC I)
7. In accordance with Section 13389, Chapter 5.5, Division 7 of the California Water Code, and Section 15263, Chapter 3, Title 14 of the California Code of Regulations, the issuance of these waste discharge requirements is exempt from the California Environmental Quality Act requirement to prepare an Environmental Impact Report or Negative Declaration (Public Resources Code, Section 21100 et seq.).
8. This discharge has been subject to Waste Discharge Requirements, Board Order No. 86-073, (NPDES No. CA0104949), adopted by the Regional Board on November 19, 1986, which allowed discharge into Bryant Drain No. 2. Order No. 86-073 expired approximately one year ago.
9. The Board has notified the discharger and all known interested agencies and persons of its intent to update waste discharge requirements for said discharge and has provided them with an opportunity for a public meeting and an opportunity to submit comments.
10. The Board in a public meeting heard and considered all comments pertaining to this discharge.
11. This permit shall be modified, or alternatively, revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Section 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act.

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

A. Discharge Specifications

1. The treatment or disposal of wastes at this facility shall not cause pollution or nuisance as defined in Sections 13050(l) and 13050(m) of Division 7 of the California Water Code.
2. Adequate measures shall be taken to assure that flood or surface drainage waters do not erode or otherwise render portions of the treatment and discharge facilities inoperable.

B. Effluent Limitations

1. Wastewater discharged to Bryant Drain No. 2 shall not contain constituents in excess of the following limits:

<u>Constituent</u>	<u>Unit</u>	<u>30-Day Arithmetic Mean Discharge Rate¹</u>	<u>Maximum Discharge Rate</u>
Total Dissolved Solids	mg/L	4,000	4,500
Suspended Solids	mg/L	30	100
Settleable Matter	mg/L	0.3	1.0
Total Chlorine Residual*	mg/L	0.1	0.2

* Established for the protection of aquatic organisms.

2. The pH of the effluent shall be maintained within the limits of 6.0 to 9.0.
3. There shall be no acute toxicity in the wastewater being discharged to Bryant Drain No. 2. Acute toxicity is defined as less than ninety percent survival, fifty percent of the time, and less than seventy percent survival, ten percent of the time, of standard test organisms in undiluted effluent in a 96-hour static or continuous-flow test.
4. Wastewater discharged to Bryant Drain No. 2 shall not:
 - a. Depress the dissolved oxygen content of Bryant Drain No. 2 below 5.0 mg/L. During any period when the receiving water's dissolved oxygen content is already below 5.0 mg/L, the discharge shall not cause any further depression.
 - b. Cause the presence of oil, grease, scum, or sludge.
 - c. Result in the deposition of objectionable solids.
 - d. Contain metals, chemicals, pesticides, or other constituents in concentrations which are toxic to or which produce detrimental physiological responses in human, plant, animal, or indigenous aquatic life.

C. Provisions

1. Wastewater discharged to Bryant Drain No. 2 shall be monitored for toxicity using bioassays as specified in "Monitoring and Reporting Program No. 92-068" (attached) or future revisions thereto, as specified by the Regional Board's Executive Officer.
2. If the discharge consistently exceeds the applicable chronic or acute toxicity limitation, a toxicity reduction evaluation (TRE) is required. The TRE shall include all reasonable steps to identify the source(s) of

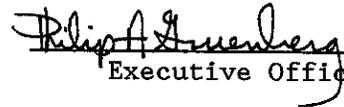
¹30-Day Mean: The arithmetic mean of pollutant parameter values of samples collected in a period of 30 consecutive days.

- toxicity. Once the source(s) of toxicity is identified, the discharger shall take all reasonable steps necessary to reduce toxicity to the required level.
3. The discharger shall comply with the attached "Monitoring and Reporting Program No. 92-068", and future revisions thereto, as specified by the Regional Board's Executive Officer.
 4. The discharger shall comply with the attached "Standard Provisions for National Pollutant Discharge Elimination System Permit" dated October, 1990.
 5. Prior to any modifications in this facility which would result in material change in the quality or quantity of wastewater treated or discharged, or any material change in the location of discharge, the discharger shall report all pertinent information in writing to the Regional Board, and obtain revised requirements before any modifications are implemented.
 6. Prior to any change in ownership or management of this operation, the discharger shall transmit a copy of this Board Order to the succeeding owner/operator, and forward a copy of the transmittal letter to the Regional Board.
 7. The discharger shall ensure that all site operating personnel are familiar with the content of this Board Order.
 8. Any proposed change of corrosion control or biological control chemicals utilized in the plant processes shall be reported to the Regional Board, and the discharger shall obtain approval from the Executive Officer prior to commencement of the discharge of these chemicals.
 9. This Board Order does not authorize violation of any federal, state, or local laws or regulations.
 10. This Board Order expires five years from date of adoption and the discharger shall file a complete Report of Waste Discharge in accordance with Title 23, California Code of Regulations, at least 180 days in advance of such date as an application for issuance of new waste discharge requirements.
 11. This Board Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Federal Clean Water Act, as amended, and shall become effective at the end of ten (10) days from the date of the hearing at which this Board Order was adopted by the Regional Board, provided the Regional Administrator, U. S. Environmental Protection Agency, has no objections.
 12. All sampling and testing performed for the Monitoring and Reporting Program shall be conducted by a laboratory certified by the California Department of Health Services.
 13. The discharger shall develop and implement a Storm Water Pollution Prevention Plan for this facility. The plan must be submitted to the Executive Officer for review and approval not later than ninety days after the adoption of this Order.

14. All storm water discharges from this facility must comply with the lawful requirements of municipalities, counties, drainage districts and other local agencies regarding discharge of storm water to storm/drain systems or other courses under their jurisdiction.
15. Compliance with the discharge limitations shall be determined at the end of the discharge pipe.
16. This discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Board or the State Water Resources Control Board, as required by the Federal Clean Water Act and regulations adopted thereunder.

IT IS FURTHER ORDERED that Board Order No. 86-073 be superseded by this Board Order.

I, Philip A. Gruenberg, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on November 18, 1992.


Executive Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

ORDER NO. 92-068 (REVISION NO. 2)
NPDES NO. CA0104949

MONITORING AND REPORTING PROGRAM
FOR
IMPERIAL IRRIGATION DISTRICT
ROCKWOOD GAS TURBINE POWER PLANT
South of Brawley - Imperial County

Location of Discharge: Bryant Drain No. 2 in a Portion of the SW¼, SW¼ of Section 4, T14S, R14E, SBB&M

MONITORING

Wastewater effluent discharged to Bryant Drain No. 2 shall be monitored for constituents indicated below. If the facility is not in operation, a letter should be sent each month to the Regional Board indicating that the facility is not in operation.

Approximately 15,000 gallons of potable water will be used, at one time, to fill the evaporation cooler storage basins. After one week of use, the wastewater will be discharged to aboveground storage tanks (ASTs), and the cooler storage basins will be again refilled with potable water. While the wastewater is in the ASTs, it will be tested for the constituents indicated below. Should the test results not exceed the Effluent Limitations of this Board Order, the wastewater can be discharged into the Bryant Drain No. 2. However, should test results exceed the Board Order Effluent Limitations, the wastewater should be treated as necessary to meet the Effluent Limitations. Once the wastewater is treated, it can be discharge at said location.

<u>Constituent</u>	<u>Unit</u>	<u>Type of Samples</u>	<u>Sampling Frequency</u>
Quantity	Gallons	Measurement	Once per discharge
Total Dissolved Solids	mg/L	Grab	Once per discharge
Settleable Matter	ml/L	Grab	Once per discharge
Suspended Solids	mg/L	Grab	Once per discharge
Bioassay	tu _c	Composite	Annually
Total Chlorine Residual	mg/L	Grab	Once per discharge
pH	pH units	Grab	Once per discharge
Dissolved Oxygen of Bryant Drain No. 2 Upstream and downstream of the discharge pipe	mg/L	Grab	Once per discharge

The collection, preservation and holding times of all samples shall be in accordance with EPA-approved procedures. All analyses shall be conducted by a laboratory certified by the State Department of Health Services to perform the required analyses.

The discharger shall maintain a daily record of the following:

- a) The chlorine residual in the effluent during peak flow
- b) The amount of chlorine used and flow treated

EFFLUENT CHRONIC TOXICITY TESTING

The discharger shall conduct chronic toxicity testing on the plant wastewater as follows:

<u>Test</u>	<u>Units</u>	<u>Type of Samples</u>	<u>Minimum Frequency of Test</u>
Chronic Toxicity	tu _c	Grab	Annually ¹

Both test species given below shall be used to measure chronic toxicity:

Critical Life Stage Toxicity Tests

<u>Species</u>	<u>Effect</u>	<u>Test Duration (Days)</u>	<u>Reference</u>
fathead minnow (Pimephales promelas)	larval survival and growth rate	7	Horning & Weber, 1989
water flea (Ceriodaphnia dubia)	survival; number of young	7	Horning & Weber, 1989

Toxicity Test Reference: Horning W.B. and C.I. Weber (eds). 1989. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organism. Second Edition. U.S. EPA Environmental Monitoring Systems Laboratory, Cincinnati, Ohio. EPA/600/4-89/001.

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

¹ Sampling shall begin on the first day of discharge.

Chronic toxicity shall be expressed and reported as toxic units (tu_c) where:

$$tu_c = 100/NOEL$$

and the No Observed Effect Level (NOEL) is expressed as the maximum percent effluent of test water that causes no observed effect on a test organism, as determined in a critical life stage toxicity test (indicated above).

Acute toxicity shall be calculated from the results of the chronic toxicity test described above and shall be reported along with the results of each chronic test. Acute toxicity shall be expressed as percent survival of test organism over a ninety six hour period.

REPORTING

1. Monitoring reports shall be submitted to the Regional Board by the 15th day of the following month after each discharge. Annual reports shall be submitted by January 15th of each year.
2. A record of power sales for each month shall be reported with the monthly effluent monitoring.
3. Submit monitoring reports to:

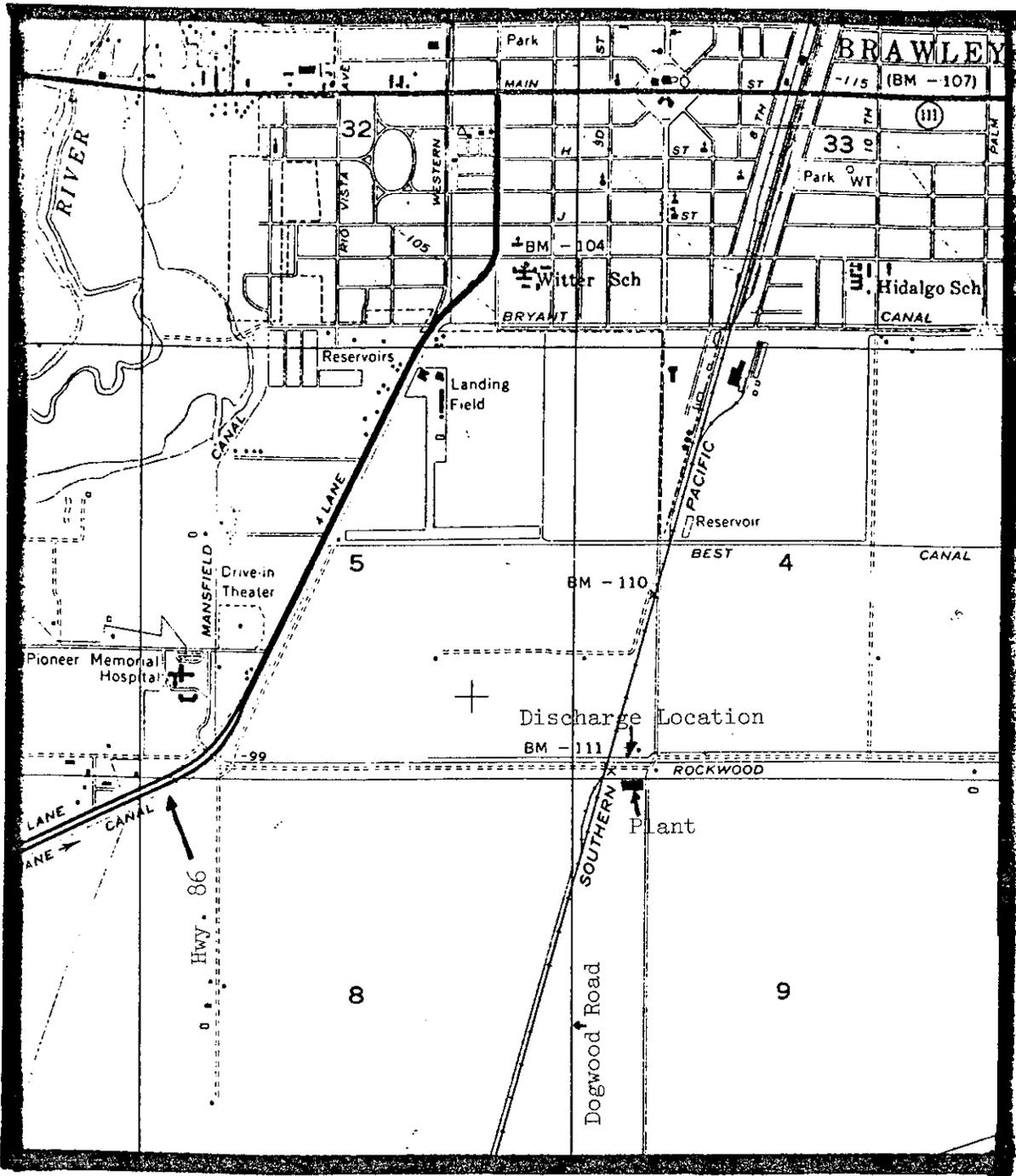
California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

ORDERED BY:

Philip A. Stuenkel
Executive Officer

12-4-96

Date



SITE MAP

IMPERIAL IRRIGATION DISTRICT
ROCKWOOD GAS TURBINE POWER PLANT
South of Brawley - Imperial County
Discharge Location: SW $\frac{1}{4}$, SW $\frac{1}{4}$ of Section 4, T14S, R14E, SBB&M
USGS Brawley 7.5 min. Topographic Map

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 92-068 (Revision No. 1)
NPDES NO. CA0104949

MONITORING AND REPORTING PROGRAM
FOR
IMPERIAL IRRIGATION DISTRICT
ROCKWOOD GAS TURBINE POWER PLANT
South of Brawley - Imperial County

Location of Discharge: Bryant Drain No. 2 in a Portion of the SW $\frac{1}{4}$, SW $\frac{1}{4}$ of Section
4, T14S, R14E, SBB&M

MONITORING

Wastewater effluent discharged to Bryant Drain No. 2 shall be monitored for constituents indicated below. If the facility is not in operation, a letter should be sent each month to the Regional Board indicating that the facility is not in operation.

A sampling station shall be established where representative samples of the effluent can be obtained. All samples shall be taken at the end of the outfall. Effluent monitoring is required during any day operation occurs, including short cycle operations and regular maintenance where discharge occurs.

<u>Constituent</u>	<u>Unit</u>	<u>Type of Samples</u>	<u>Sampling Frequency</u>
Flow	Gallons/day	Grab	Average Daily
Total Dissolved Solids	mg/L	Grab	Weekly
Settleable Matter	ml/L	Grab	Daily
Suspended Solids	mg/L	Grab	Daily
Bioassay	tu	Composite	Quarterly
Total Chlorine Residual	mg/L	Grab	Daily
pH	pH Units	Grab	Daily
Dissolved Oxygen of Bryant Drain No. 2	mg/L	Grab	Weekly

The collection, preservation and holding times of all samples shall be in accordance with EPA-approved procedures. All analyses shall be conducted by a laboratory certified by the State Department of Health Services to perform the required analyses.

*Superseded
by: Ord. # 92-068
R. 2 12/14/96*

The discharger shall maintain a daily record of the following:

- a) The chlorine residual in the effluent during peak flow
- b) The amount of chlorine used and flow treated

EFFLUENT CHRONIC TOXICITY TESTING

The discharger shall conduct chronic toxicity testing on the treatment plant effluent as follows:

<u>Test</u>	<u>Units</u>	<u>Type of Samples</u>	<u>Minimum Frequency of Test</u>
Chronic Toxicity	tu _c	Grab	Quarterly ¹

Both test species given below shall be used to measure chronic toxicity:

Critical Life Stage Toxicity Tests

<u>Species</u>	<u>Effect</u>	<u>Test Duration (Days)</u>	<u>Reference</u>
fathead minnow (Pimephales promelas)	larval survival and growth rate	7	Horning & Weber, 1989
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Dilution and control waters should be obtained from an unaffected area of the receiving waters. Standard dilution water should be used if the above source exhibits toxicity greater than 1.0 tu_c. The sensitivity of the test organism to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results.

Chronic toxicity shall be expressed and reported as toxic units (tu_c) where:

$$tu_c = 100/NOEL$$

and the No Observed Effect Level (NOEL) is expressed as the maximum percent effluent of test water that causes no observed effect on a test organism, as determined in a critical life stage toxicity test (indicated above).

¹ Sampling shall begin on the first day of discharge.

Acute toxicity shall be calculated from the results of the chronic toxicity test described above and shall be reported along with the results of each chronic test. Acute toxicity shall be expressed as percent survival of test organism over a ninety six hour period.

REPORTING

1. Monthly monitoring reports shall be submitted to the Regional Board by the 15th day of the following month. Quarterly monitoring reports shall be submitted to the Regional Board by January 15, April 15, July 15, and October 15 of each year.
2. All monitoring data for samples collected more frequently than quarterly shall be submitted quarterly.
3. A record of power sales for each month shall be reported with the monthly effluent monitoring.
4. Submit monitoring reports to:

California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

ORDERED BY: Philip A. Gruenberg
Executive Officer
December 30, 1992
Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 92-068
NPDES NO. CA0104949

MONITORING AND REPORTING PROGRAM
FOR
IMPERIAL IRRIGATION DISTRICT
ROCKWOOD GAS TURBINE POWER PLANT
South of Brawley - Imperial County

Location of Discharge: Bryant Drain No. 2 in a Portion of the SW $\frac{1}{4}$, SW $\frac{1}{4}$ of Section 4, T14S, R14E, SBB&M

MONITORING

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Flow	Gallons/day	Grab	Average daily
Total Dissolved Solids	mg/L	Grab	Weekly
Suspended Solids	mg/L	Grab	Daily
Bioassay	tu	Composite	Quarterly
Total Chlorine Residual	mg/L	Grab	Daily
pH	pH units	Grab	Daily
Dissolved Oxygen of Bryant Drain No. 2	mg/L	Grab	Weekly

The collection, preservation and holding times of all samples shall be in accordance with EPA-approved procedures. All analyses shall be conducted by a laboratory certified by the State Department of Health Services to perform the required analyses.

12/30/92 Revised
MSR to
include
Settleable
matter

The discharger shall maintain a daily record of the following:

- a) The chlorine residual in the effluent during peak flow
- b) The amount of chlorine used and flow treated

EFFLUENT CHRONIC TOXICITY TESTING

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California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

ORDERED BY: Philip A. Gussenberg
Executive Officer
November 18, 1992
Date