

Attachment E

MONITORING AND REPORTING PROGRAM

Order No. R9-2005-0015
NPDES Permit NO. CA0108391

TABLE OF CONTENTS

Attachment E – Monitoring and Reporting Program (MRP)	E-2
I. GENERAL MONITORING PROVISIONS	E-2
II. MONITORING LOCATIONS	E-3
III. INFLUENT MONITORING REQUIREMENTS (NOT APPLICABLE)	E-3
IV. EFFLUENT MONITORING REQUIREMENTS	E-3
A. Monitoring Location M-001	E-3
V. WOLE EFFLUENT TOXICITY TESTING REQUIREMENTS	E-4
VI. LAND DISCHARGE MONITORING REQUIREMENTS (NOT APPLICABLE)	E-5
VII. RECLAMATION MONITORING REQUIREMENTS (NOT APPLICABLE)	E-5
VIII. RECEIVING WATER MONITORING REQUIREMENTS	E-5
A. Monitoring Location R-001	E-6
IX. OTHER MONITORING REQUIREMENTS (NOT APPLICABLE)	E-6
X. REPORTING REQUIREMENTS	E-6
A. General Monitoring and Reporting Requirements	E-6
B. Self Monitoring Reports	E-8
C. Self Monitoring Report Form	E-9
D. Other Reports	E-9

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) 40 CFR §122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Quality Control Board to require technical and monitoring reports. This Monitoring and Reporting Program establishes monitoring and reporting requirements to implement the federal and state regulations.

I. GENERAL MONITORING PROVISIONS

- A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of this Regional Board.
- B. Monitoring must be conducted according to United States Environmental Protection Agency (U.S. EPA) test procedures approved under Title 40, United States Code of Federal Regulations (CFR), Part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act* as amended, unless other test procedures are specified in Order No. R9-2005-0015 and /or this Monitoring and Reporting Program and/or this Regional Board.
- C. A copy of the monitoring reports signed, and certified as required by Reporting Requirement E.2. of Attachment D of Order No. R9-2005-0015, shall be submitted to the Regional Board at the address listed in section X.B.5 of this Monitoring and Reporting Program.
- D. The discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by Order No. R9-2005-0015 and this Monitoring and Reporting Program, and records of all data used to complete the application for Order No. R9-2005-0015. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended by request of this Regional Board or by the U.S. EPA at any time.
- E. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services to perform such analyses or a laboratory approved by this Regional Board.
- F. The discharger shall report in a cover letter all instances of noncompliance not reported under Section 5 of Attachment D to Order No. R9-2005-0015 at the time monitoring reports are submitted. The reports shall contain the information listed in Section 5 of Attachment D to Order No. R9-2005-0015.
- G. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their

continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

H. Monitoring results shall be reported at intervals and in a manner specified in Order No. R9-2005-0015 or in this Monitoring and Reporting Program.

This Monitoring and Reporting Program may be modified by this Regional Board, as appropriate.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
001	M-001	Prior to discharge into concrete channel
--	R-001	Within 100 feet upstream of the point of discharge from the concrete channel into the San Luis Rey River.

III. INFLUENT MONITORING REQUIREMENTS (NOT APPLICABLE)

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-001

- The Discharger shall monitor the discharge of effluent at Discharge Point M-001 as follows:

Constituent	Units	Sample Type	Frequency	Required Test Method
Flow	GPD	Continuous	Daily	1
Temperature	°F	Grab	Semi-annual	1
pH	Standard Units	Grab	Semi-annual	1
Copper ²	µg/L	Grab	Semi-annual	1
	Lbs/day	Calculated ³		
Bromoform	µg/L	Grab	Semi-annual	1
	Lbs/day	Calculated ³		
Sulfate	mg/L	Grab	Semi-annual	1
Chloride	mg/L	Grab	Semi-annual	1
Total Chlorine Residual	mg/L	Grab	Semi-annual	1
	Lbs/day	Calculate ³		
Total Dissolved Solids (TDS)	mg/L	Grab	Monthly	1
	Lbs/day	Calculate ³		

Acute Toxicity ⁴	TUa	24 hr composite	Once over the term of the permit.	1
-----------------------------	-----	-----------------	-----------------------------------	---

¹ All parameters shall be analyzed by the methods specified in 40 CFR 136.3.

² All metals shall be expressed as total recoverable.

³ Lbs/day shall be calculated by the discharger for each monitoring event using the following formula:

$$\text{Lbs/day} = 0.00834 \times C_e \times Q$$

where:

C_e = the effluent concentration limit, $\mu\text{g/l}$.

Q = flow rate, million gallons per day (MGD)

⁴ Whole effluent toxicity monitoring shall be conducted in accordance with Section V. of this Monitoring and Reporting Program. Acute Toxicity results are due one year prior to the expiration date of the Order.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

- Acute toxicity testing shall be conducted once during the term of the permit and shall be submitted to the Regional Board at least one year prior to the permit expiration date.

Acute toxicity is to be calculated using the following formula:

$$TU_a = \frac{100}{96 - hr LC 50\%}$$

Where Lethal Concentration 50% (LC 50) shall be determined by static or continuous flow bioassay techniques using standard test species. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the aquatic environment, but not as a result of dilution, the LC 50 may be determined after the test samples are adjusted to remove the influence of those substance.

Where it is not possible to measure the 96-hour LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$TU_a = \frac{\text{Log}(100 - S)}{1.7}$$

Where:

S = percentage survival in 100% waste

If $S > 99$, TU_a shall be reported as zero

Compliance with the acute toxicity effluent limitation shall be determined by short-term (acute) toxicity tests on undiluted effluent using an established protocol, e.g., American Society for Testing and Materials (ASTM), American Public Health Association, U.S. EPA, or SWRCB.

2. The discharger shall develop a Toxicity Reduction Evaluation (TRE) workplan in accordance with the TRE procedures established by the U.S. EPA in the following guidance manuals:
 - a. Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (EPA/600/2-88/070)
 - b. Toxicity Identification Evaluation, Phase I (EPA/600/6-91/005F)
 - c. Methods for Aquatic Toxicity Identification Evaluations, Phase II (EPA/600/R-92/080)
 - d. Methods for Aquatic Toxicity Identification Evaluations, Phase III (EPA/600/R-92/081)

The discharger shall submit the TRE workplan to the Regional Board **within 180 days** of the adoption of this Order. The TRE workplan shall be subject to the approval of the Regional Board and shall be modified as directed by the Regional Board.

3. If toxicity effluent limitations identified in Discharge Specification IV.A.1 of this Order are exceeded, then within 15 days of the exceedance, the discharger shall begin conducting six additional toxicity tests over a six month (at least one sample per calendar month) period and provide the results to the Regional Board. The additional monthly toxicity tests will be incorporated into the semiannual discharge monitoring reports submitted pursuant to MRP No. R9-2005-0015.

If the additional monthly tests indicate that toxicity effluent limitations are being consistently violated (at least three exceedances out of the six tests), the Regional Board may recommend that the discharger conduct a TRE and a Toxic Identification Evaluation (TIE), as identified in the approved TRE workplan.

If the Discharger conducts the TRE/TIE, the Discharger shall, within 15 days of completion of the TRE/TIE, submit the results of the TRE/TIE, including a summary of findings, identified sources of toxicity, a list of corrective actions necessary to achieve consistent compliance with all the toxicity limitations of this Order and prevent recurrence of violations of those limitations and a time schedule for implementations of such corrective actions. The corrective actions and time schedule shall be modified at the direction of the Regional Board.

VI. LAND DISCHARGE MONITORING REQUIREMENTS (NOT APPLICABLE)

VII. RECLAMATION MONITORING REQUIREMENTS (NOT APPLICABLE)

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Location R-001

1. The Discharger shall monitor the San Luis Rey River at Monitoring Location R-001 as follows:

Constituent	Units	Sample Type	Frequency	Required Test Method
Temperature	°F	Grab	Semi-annual	1

¹ All parameters shall be analyzed by the methods specified in 40 CFR 136.3.

The discharger shall measure the temperature of the receiving water within 15 minutes of the effluent sampling for temperature.

IX. OTHER MONITORING REQUIREMENTS

The Discharger shall conduct monthly effluent monitoring for TDS, copper, bromoform, temperature and total residual chlorine, for the first 12 months after the adoption of this Order. The Discharger shall submit the monitoring data to the Regional Board by June 1, 2006. The Discharger will revert to the effluent monitoring schedule as specified in the Monitoring and Reporting Program, Section IV.A.1.

The Discharger shall conduct effluent monitoring for the priority pollutants for which there are no effluent limitations established in the permit and listed in Attachment G to Order No. R9-2005-0015. In addition, the Discharger shall conduct receiving water monitoring for the priority pollutants at the same time effluent monitoring is conducted. Further, the Discharger must analyze pH and hardness of the receiving water concurrent with the analyses for the priority pollutants.

This monitoring shall occur at the following locations:

- Effluent discharge point (Discharge Point No. 001).
- Receiving water. The monitoring station shall be at least 50 feet upstream from the discharge point of the concrete channel to the San Luis Rey River.

The Discharger shall conduct CTR monitoring once during the term of the permit. Monitoring shall be conducted between January 1, 2009 and June 31, 2009. The results of this CTR monitoring data shall be submitted at least 180 days prior to the expiration date of this Order and shall be submitted with the Report of Waste Discharge.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping and the general monitoring and reporting requirements below. In cases where the monitoring and reporting requirements contained within this section, and the Standard Provisions conflict, the more stringent of the two requirements apply.

2. The discharger shall file a new Report of Waste Discharge not less than 180 days prior to the following:
 - i. Addition of any industrial waste to the discharge or the addition of a new process or product resulting in a change in the character of the wastes.
 - ii. Significant change in disposal method (e.g. change in the method of treatment which would significantly alter the nature of the waste).
 - iii. Significant change in disposal area (e.g. moving the discharge to a disposal area significantly removed from the original area, potentially causing different water quality or nuisance problems).
 - iv. Increase in flow beyond that specified in this Order.
 - v. Other circumstances, which result in a material change in character, amount, or location or the waste discharge.
3. This Order expires on March 9, 2010. If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain new Waste Discharge Requirements. The Discharger must file a complete Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date, as an application for issuance of new Waste Discharge Requirements.
4. The results of the CTR monitoring specified in section X of Monitoring and Reporting Program R9-2005-0015 shall be submitted as an attachment to the Report of Waste Discharge, not later than 180 days in advance of the expiration date of Order No. R9-2005-0015.
5. The discharger must notify this Regional Board, in writing, at least 30 days in advance of any proposed transfer of this facility to a new discharger. The notice must include a written agreement between the existing and new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current discharger and the new discharger. This agreement shall include an acknowledgment that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable after the transfer date.
6. Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the California Regional Water Quality Control Board, San Diego Region. As required by the Clean Water Act, Reports of Waste Discharge, this Order, and effluent monitoring data shall not be considered confidential.

B. Self Monitoring Reports

1. The Discharger shall submit semiannual Self Monitoring Reports including the results of all required monitoring and monitoring conducted in addition to the minimum required monitoring and using U.S. EPA approved test methods or other test methods specified in this Order. Semiannual reports shall be due on August 1 and February 1 following each semiannual period.
2. Monitoring periods for all required monitoring shall commence according to the following schedule:

Sampling Frequency	Monitoring Period Starts On...	Monitoring Period	Reporting Due with SMR on...
1 / day	March 19, 2005	Calendar day (Midnight through 11:59 PM)	August 1 February 1
1 / month ¹	March 19, 2005	1 st day of calendar month through last day of calendar month	August 1 February 1
2 / semiannual period	March 19, 2005	January 1 through June 30 July 1 through December 31	August 1 February 1
1/ 5 years	January 1, 2009	During the term of the permit	One year prior to the expiration date of the permit

3. The Discharger shall report with each sample result the applicable Minimum Level (ML) and the laboratory current Method Detection Limit (MDL) as determined by the procedure in 40 CFR Part 136.
4. The Discharger shall submit data on a copy of the Monitoring and Reporting Form provided in section X.C. of this Monitoring and Reporting Program. Additional data, and data required to be submitted as an attachment to the reporting form must be arranged in tabular form so that the specified information is readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the facility is operating in compliance with Waste Discharge Requirements.
5. The Discharger shall attach a cover letter to its Self Monitoring Report. The information contained in the cover letter shall clearly identify violations of the WDRs, discuss corrective actions taken or planned and the proposed time schedule of corrective actions. Identified violations should include a description of the requirement that was violated and a description of the violation. Monitoring results must be reported on forms approved by this Regional Board. Self Monitoring Reports shall be submitted to the addresses listed below:

Submit monitoring reports to:
 Industrial Compliance Unit
 California Regional Water Quality Control Board
 San Diego Region
 9174 Sky Park Court, Suite 100
 San Diego, California 92123-4340

Notifications required to be provided to this Regional Board shall be made to:

Telephone – (858) 467-2952 or
Facsimile – (858) 571-6972

C. Self Monitoring Report Form

As specified in section X.B.4 of this Monitoring and Reporting Program, the Discharger shall submit data to the Regional Board using a copy of the Monitoring and Reporting Form provided on the next page of this document. Additional monitoring data and applicable signatory requirements should be submitted as an attachment to this form.

D. Other Reports

The Discharger is required to develop and implement a **compliance plan** that will identify the measures that will be taken to reduce the concentrations of copper, bromoform, and total residual chlorine in their discharge. The plan should evaluate options to achieve compliance with the newly established permit limitations. These options can include, for example, evaluating and updating available treatment unit processes, upgrading the system if necessary, and maintaining proper operation and maintenance of the treatment system.

Order No. R9-2005-0015 contains a compliance schedule that allows the Discharger up to 3 years to comply with the final established effluent limitations for copper and bromoform and 12 months to comply with the final established effluent limitations for total residual chlorine. Within **1 year** after the effective date of the Order, the Discharger must prepare and submit a compliance plan that describes the steps that will be taken to ensure compliance with the final effluent limitations for copper and bromoform. Within **6 months** after the effective date of the Order, the Discharger must prepare and submit a compliance plan that describes the steps that will be taken to ensure compliance with the final effluent limitations for total residual chlorine.

The compliance plan for total chlorine residual is due no later than **September 9, 2005**.

The compliance plan for copper and bromoform is due no later than **March 9, 2006**.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 9, SAN DIEGO REGION
MONITORING AND REPORTING FORM
ORDER NO. R9-2005-0015
NPDES PERMIT NO. CA0108391

Please check the applicable reporting period: January 1st – June 30th (Due by August 1st)

July 1st – December 31st (Due by February 1st)

Sample Point M-001 Date ___/___/___

Constituent	Sample Type	Minimum Sampling Frequency	Sample Date	Results	Effluent Limitations			Units
					Monthly Average	Maximum Daily	Instantaneous Maximum	
Flow	Continuous	Daily	N/A	1	-- ²	-- ²	-- ²	GPD
Total Dissolved Solids (TDS) ⁶	Grab	Monthly			500 mg/L	550 mg/L	10 mg/L	mg/L
	Calculated ⁴							Lbs/day
	Grab							mg/L
	Calculated ⁴							Lbs/day
	Grab							mg/L
	Calculated ⁴							Lbs/day
	Grab				500 mg/L	550 mg/L	10 mg/L	mg/L
	Calculated ⁴				355 Lbs/day	390 Lbs/day	0.0071 Lbs/day	Lbs/day
	Grab							mg/L
	Calculated ⁴							Lbs/day
	Grab							mg/L
	Calculated ⁴							Lbs/day
Temperature	Grab	Semi-annual			--	--	--	°F
PH	Grab	Semi-annual			Within limit of 6.5 to 8.5 at all times			pH units
Copper ³	Grab	Semi-annual			21.35 ⁵	42.84 ⁵	--	µg/L
	Calculated ⁴				0.0151 ⁵	0.0304 ⁵	--	Lbs/day
Bromoform	Grab	Semi-annual			4.3 ⁵	8.63 ⁵	--	µg/L
	Calculated ⁴				0.003 ⁵	0.0061 ⁵	--	Lbs/day
Sulfate	Grab	Semi-annual			--	--	--	mg/L
Chloride	Grab	Semi-annual			--	--	--	mg/L
Chlorine,	Grab	Semi-annual			2	4	--	µg/L

Total Residual	Calculated ⁴				0.0014 ⁵	0.0028 ⁵		Lbs/day
Acute Toxicity	Grab	Once over the term of the permit ⁷			Daily Maximum of 0.0			TUa

Sample Point R-001 Date ___/___/___

Constituent	Sample Type	Minimum Sampling Frequency	Sample Date	Results	Effluent Limitations			Units
					Monthly Average	Weekly Average	Instantaneous Maximum	
Temperature ⁸	Grab	Semi-annual			--	--	--	°F

¹ Daily flow data should be submitted as an attachment to this form.

² Daily flow effluent limitation is 85,000 gallons per day.

³ These metals shall be expressed as total recoverable.

⁴ Lbs/day shall be calculated by the discharger for each monitoring event using the following formula:

$$\text{Lbs/day} = 0.00834 \times \text{Ce} \times \text{Q}$$

where:

Ce = the effluent concentration limit, µg/l.

Q = flow rate for the sample date, million gallons per day (MGD)

⁵ These effluent limits become effective on the dates indicated in Section IV.A.2.a. of Order No. R9-2005-0015. Interim limits established are applicable as established in Section IV.A.2.a of Order No. R9-2005-0015.

⁶ Not to exceed Water Quality Objectives in Table 3-2 of the Basin Plan, which state 500 mg/L shall not be exceeded more than 10% of the sampling events any one year period.

⁷ Acute toxicity results are due one year prior to the expiration date of the permit. Chronic toxicity data should be submitted as an attachment to this form.

⁸ The discharger shall measure the temperature of the receiving water within 15 minutes of the effluent sampling for temperature.