

Attachment E – Monitoring and Reporting Program – Table of Contents

Attachment E – Monitoring and Reporting Program (MRP).....	2
I. General Monitoring Provisions.....	2
II. Monitoring Locations.....	2
III. Influent Monitoring Requirements	2
IV. Effluent Monitoring Requirements	3
V. Whole Effluent Toxicity Testing Requirements	4
VI. Land Discharge Monitoring Requirements.....	9
VII. Reclamation Monitoring Requirements.....	9
VIII. Receiving Water Monitoring Requirements	9
IX. Other Monitoring Requirements (IF APPLICABLE).....	10
X. Reporting Requirements	10
A. General Monitoring and Reporting Requirements	10
B. Self Monitoring Reports	10
C. Discharge Monitoring Reports	13

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) at 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 (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

- A. Wastewater Monitoring Provision. Composite samples may be taken by a proportional sampling device approved by the Executive Officer or by grab samples composited in proportion to flow. In compositing grab samples, the sampling interval shall not exceed one hour.
- B. If the Discharger monitors any pollutant more frequently than required by this Order, using test procedures approved by 40 CFR Part 136 or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the monthly and annual discharger monitoring reports.
- C. Laboratories analyzing monitoring samples shall be certified by the Department of Health Services, in accordance with the provision of California Water Code (CWC) Section 13176, and must include quality assurance/quality control data with the reports.

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)
--	M-INF	at a representative point preceding primary treatment
001	M-001	Chlorine contact chamber effluent weir OR at a representative point following full treatment and disinfection but prior to discharge to Russian River
002	M-002	Chlorine contact chamber effluent weir OR At a representative point following full treatment and disinfection but prior to discharge to percolation ponds
---	R-001A	Russian River, upstream beyond the influence of the discharge
---	R-001B	Russian River surface water at the point of discharge or other downstream location approved by the Executive Officer
---	GW-XX	Groundwater Monitoring Wells

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-INF

- 1. The Discharger shall monitor influent to the facility at Monitoring Location M-INF as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
BOD (20° C, 5-day)	mg/L	24-hour composite	weekly	Standard Methods ¹
Total Suspended Solids	mg/L	24-hour composite	weekly	Standard Methods
Settleable Solids	ml/L	grab	weekly	Standard Methods
Flow (Mean)	mgd	metered	continuous	Meter

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-002 (Effluent Monitoring Prior to Discharge to Percolation Ponds)

1. The Discharger shall monitor the disinfected secondary/advanced treated effluent at Monitoring Location M-002 as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
BOD (20° C, 5-day)	mg/L	24-hour composite	weekly	Standard Methods
Total Suspended Solids	mg/L	24-hour composite	weekly	Standard Methods
Hydrogen Ion	pH Units	grab	weekly	Standard Methods
Total Coliform Organisms	MPN/100 ml	grab	weekly	Standard Methods
Chlorine Residual ²	mg/L	grab	daily	Standard Methods
Mean Daily Flow	mgd	metered	continuous	Meter

B. Monitoring Location M-001 (Effluent Monitoring Prior to Discharge to Russian River)

1. The Discharger shall monitor disinfected advanced treated effluent at Monitoring Location M-001, during periods of discharge to the Russian River, as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
BOD (20° C, 5-day)	mg/L and lb/day	24-hour composite	weekly	Standard Methods
Total Suspended Solids	mg/L and lb/day	24-hour composite	weekly	Standard Methods
Settleable Solids	ml/L	grab	weekly	Standard Methods
Hydrogen Ion	pH Units	grab	weekly	Standard Methods
Total Coliform Organisms	MPN/100 ml	grab	daily	Standard Methods
Chlorine Residual ³	mg/L	grab	daily	Standard Methods
Turbidity	NTU	metered	continuous	Meter

¹ In accordance with current edition of *Standard Methods for the Examination of Water and Wastewater* (American Public Health Administration) or current test procedures specified in 40 CFR Part 136.

² Chlorine residual monitoring at Monitoring Location M-002 shall demonstrate that a chlorine residual is present after chlorination.

³ Chlorine residual monitoring at Monitoring Location M-001 shall demonstrate that the disinfected, advanced treated effluent has been properly dechlorinated prior to discharge to the Russian River.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	grab	weekly	Standard Methods
Temperature	°C or °F	grab	weekly	Standard Methods
Ammonia Nitrogen	mg/L	grab	weekly	Standard Methods
Unionized Ammonia	mg/L	calculation	weekly	Standard Methods
Nitrate Nitrogen	mg/L	grab	weekly	Standard Methods
Organic Nitrogen	mg/L	grab	weekly	Standard Methods
Total Phosphorus	mg/L	grab	weekly	Standard Methods
Acute Toxicity Bioassay	96-hour % survival or TUa	grab	monthly	See Acute Toxicity Monitoring Requirements in Section V.A. Below
Chronic Toxicity Bioassay	TUc			See Chronic Toxicity Monitoring Requirements in Section V.B. Below
Mean Daily Flow	mgd	metered	continuous	Meter
Copper ⁴	ug/L	grab	monthly	Standard Methods
Cyanide ⁴	ug/L	grab	monthly	Standard Methods
Lead ⁴	ug/L	grab	monthly	Standard Methods
Mercury	ug/l	grab	monthly	Standard Methods
Carbon Tetrachloride ⁴	ug/L	grab	monthly	Standard Methods
Chlorodibromomethane ⁴	ug/L	grab	monthly	Standard Methods
Dichlorobromomethane ⁴	ug/L	grab	monthly	Standard Methods
Bromoform ⁴	ug/L			Standard Methods
Chloroform ⁴	ug/L	grab	monthly	Standard Methods
Bis (2-Ethylhexyl)Phthalate ⁴	ug/L	grab	monthly	Standard Methods
CTR Priority Pollutants ⁴	ug/L	grab	Every 5 years	Standard Methods
Discharge Dilution Rate	%	calculation	daily	

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The Discharger shall comply with the following requirements during periods of discharge to the Russian River.

A. Acute Toxicity Control

Compliance with the Basin Plan narrative toxicity objective shall be achieved in accordance with the following:

1. Test Species and Methods

⁴ For priority pollutants, the methods must meet the lowest minimum level (ML) specified in Attachment 4 of the SIP. In accordance with Section 2.4 of the SIP, the Discharger shall report the ML and MDL for each sample result. Where no methods are specified for a given pollutant, the Discharger shall use methods approved by the Regional Board. The laboratory's current MDL shall be determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).

- a. During the first discharge season after adoption of this Order, the Discharger shall conduct 96-hour static renewal tests with an invertebrate, the water flea, *Ceriodaphnia dubia*, and a vertebrate, the rainbow trout, *Orncorhychus mykiss*, for at least two suites of tests. At least one test during the screening period shall be conducted when the effluent is unaffected by storm-related inflow into the WWTF. After this screening period, monitoring shall be conducted using the most sensitive species determined for the given flow regime. At least once every five years, the Discharger shall re-screen once with the two species listed above and continue to monitor monthly with the most sensitive species.
- b. The presence of acute toxicity shall be estimated as specified in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (U.S. EPA Report No. EPA 600/4-90-027F, 4th edition or subsequent editions), or other methods approved by the Executive Officer, shall be used.

2. Definition of Toxicity Limits

- a. Acute toxicity is defined as the effluent concentration that would cause death in 50 percent of the test organisms (LC50). Where the LC50 is calculated, results shall be reported in TUa, where $TUa = 100/LC50$ (in percent effluent).
- b. Acute toxicity is significantly reduced survival at 100 percent effluent compared to a control, using a t-test. Where 100 percent effluent is used, results shall be reported as percent survival.
- c. If the result of any single acute toxicity test does not comply with the acute toxicity effluent limitation, the Discharger shall take two more samples, one within 14 days, and one within 21 days of receiving the sample results. If two of the three samples do not comply with the acute toxicity limitation, the Discharger shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with Section V.C., below. If the two additional samples are in compliance with the acute toxicity requirement, then a TRE will not be required. If the discharge has ceased before the additional samples could be collected, the Discharger shall contact the Executive Officer within 21 days with a plan to demonstrate compliance with the acute toxicity effluent limitation.

B. Chronic Toxicity Control

1. In addition to results from acute toxicity tests, compliance with the Basin Plan narrative toxicity objective shall be demonstrated according to the following tiered requirements based on results from representative samples of the treated effluent:
 - a. Routine monitoring;
 - b. Accelerate monitoring after exceeding a three sample median value of 1.0 TUc or a single sample maximum of 2.0 TUc;
 - c. Return to routine monitoring if accelerated monitoring does not exceed either “trigger” in “b”;
 - d. Initiate approved TRE workplan and continue accelerated monitoring if monitoring confirms consistent toxicity above either “trigger” in “b”;

- e. Return to routine monitoring after appropriate elements of TRE workplan are implemented and toxicity drops below “trigger” levels in “b”, or as directed by the Executive Officer.

2. Test Species and Methods

- a. The Discharger shall conduct short-term tests with the water flea, *Ceriodaphnia dubia* (survival and reproduction test), the fathead minnow, *Pimephales promelas* (larval survival and growth test), and the green alga, *Selanastrum capricornutum* (growth test) for the first two suites of tests. At least one test during the screening period shall be conducted when the effluent is unaffected by storm-related inflow into the WWTF. After this screening period, monitoring shall be conducted using the most sensitive species. At least once every five years, the Discharger shall re-screen once with the three species listed above and continue to monitor with the most sensitive species.
- b. The presence of chronic toxicity shall be estimated as specified in EPA’s Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms (U.S. EPA Report No. EPA-600-4-91-002, 3rd or subsequent editions).

3. Definition of Toxicity Limits

- a. Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms.
- b. Results shall be reported in TUC, where $TUC = 100/NOEC$ or $100/ICp$ or ECp (in percent effluent).

4. Quality Assurance

- a. A series of at least five dilutions and a control will be tested. The series shall consist of the following dilution series: 12.5, 25, 50, 75, and 100 percent effluent.
- b. If organisms are not cultured in-house, concurrent testing with a reference toxicant shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests also shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).
- c. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the manual, then the Discharger must re-sample and re-test within 14 days or as soon as possible.

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

5. Accelerated Testing for Toxicity

- a. If the initial investigation indicates the source of toxicity (for instance, a temporary plant upset), then only one additional test is necessary. If chronic toxicity is detected in this test, then this Section shall apply.
- b. If chronic toxicity is detected, then the Discharger shall conduct two more tests, one test conducted approximately every two weeks, over a four-week period. Testing shall commence within two weeks of receipt of the sample results of the exceedance of the toxicity monitoring trigger.
- c. The Discharger may return to routine monitoring after appropriate elements of the TRE workplan are implemented and toxicity drops below “trigger” levels in Section V.B.1.b. above, or as directed by the Executive Officer.

6. Reporting for Toxicity Tests

- a. Test results for chronic toxicity tests shall be reported according to the chronic toxicity manual Chapter 10 (Report Preparation) and the Monitoring and Reporting Program and shall be attached to the self-monitoring report.
- b. The Discharger shall notify the Regional Water Board in writing 14 days after the receipt of test results exceeding an effluent limitation or trigger. The notification will describe actions the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by this Order, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

C. Toxicity Reduction Evaluations

1. The Discharger shall prepare and submit to the Regional Water Board Executive Officer a TRE workplan within 180 days of the effective date of this Order. This plan shall be reviewed and updated as necessary in order to remain current and applicable to the discharge and discharge facilities. The workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at least the following items:
 - a. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
 - b. A description of the facility’s methods of maximizing in-house treatment efficiency and good housekeeping practices.

- c. If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).
2. The TRE shall be conducted in accordance with the following:
 - a. The TRE shall be initiated within 30 days of the date of completion of the accelerated monitoring test observed to exceed either the acute or chronic toxicity parameter.
 - b. The TRE shall be conducted in accordance with the Discharger's workplan.
 - c. The TRE shall be in accordance with current technical guidance and reference material including, at a minimum, the USEPA manual EPA/833B-99/002. The TRE shall be conducted as a tiered evaluation process, as summarized below:
 - i. Tier 1 consists of basic data collection (routine and accelerated monitoring).
 - ii. Tier 2 consists of the evaluation of treatment plant optimization including operational practices, and in-plant process chemicals.
 - iii. Tier 3 consists of a toxicity identification evaluation (TIE).
 - iv. Tier 4 consists of the evaluation of options for additional treatment processes.
 - v. Tier 5 consists of the evaluation of options for modifications of in-plant treatment processes.
 - vi. Tier 6 consists of the implementation of selected toxicity control measures, and follow-up monitoring and confirmation of implementation success.
 - d. The TRE may end at any stage if, through monitoring results, it is determined that there is no longer consistent toxicity.
 - e. The Discharger may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. As guidance, the Discharger shall use the USEPA acute and chronic manuals, EPA/600/6-91/005F(Phase I), EPA/600/R-92/080(Phase II), and EPA-600/R-92/081 (Phase III).
 - f. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the source(s) and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with chronic toxicity parameters.
 - g. Many recommended TRE elements accompany required efforts of source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements of recommendations of such programs may be acceptable to comply with requirements of the TRE.
 - h. The Regional Water Board recognizes that chronic toxicity may be episodic and identification of a reduction of sources of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

VI. LAND DISCHARGE MONITORING REQUIREMENTS - (NOT APPLICABLE)

VII. RECLAMATION MONITORING REQUIREMENTS - (NOT APPLICABLE)

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Surface Water Monitoring Locations R-001A and R-001B

1. The Discharger shall monitor the Russian River at Monitoring Location R-001A, upstream of the discharge point, and R-001B, downstream of the discharge point, during periods of discharge to the Russian River, as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
BOD (20°C, 5-day)	mg/L	grab	monthly	Standard Methods
Total Suspended Solids	mg/L	grab	monthly	Standard Methods
Dissolved Oxygen	mg/L	grab	monthly	Standard Methods
Hydrogen Ion	pH Units	grab	monthly	Standard Methods
Turbidity	NTU	grab	monthly	Meter
Hardness (CaCO ₃)	mg/L	grab	monthly	Standard Methods
Nitrate Nitrogen	mg/L	grab	monthly	Standard Methods
Ammonia Nitrogen	mg/L	grab	monthly	Standard Methods
Unionized Ammonia	mg/L	grab	monthly	Standard Methods
Organic Nitrogen	mg/L	grab	monthly	Standard Methods
Total Phosphorus	mg/L	grab	monthly	Standard Methods
Temperature	°F or °C	grab	monthly	Standard Methods
Hardness	mg/L	grab	monthly	Standard Methods
Stream Flow	mgd	Flow gage reading	daily	
Dilution	% of stream flow	calculation	daily	
Copper ⁵	ug/L	grab	monthly	Standard Methods
Cyanide ⁵	ug/L	grab	monthly	Standard Methods
Lead ⁵	ug/L	grab	monthly	Standard Methods
Carbon Tetrachloride ⁵	ug/L	grab	monthly	Standard Methods
Dichlorobromomethane ⁵	ug/L	grab	monthly	Standard Methods
Bis (2-Ethylhexyl) Phthalate ⁵	ug/L	grab	monthly	Standard Methods
Visual Observations	---	Visual/written record		

⁵ For priority pollutants, the methods must meet the lowest minimum level (ML) specified in Attachment 4 of the SIP. In accordance with Section 2.4 of the SIP, the Discharger shall report the ML and MDL for each sample result. Where no methods are specified for a given pollutant, the Discharger shall use methods approved by the Regional Board. The laboratory's current MDL shall be determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).

B. Groundwater Monitoring

The Discharger shall monitor groundwater and associated monitoring stations as follows:

Monitoring Locations: Groundwater wells 1, 7, 9, 10, 11, 12, 13, 14, 15, and 16; Russian River surface monitoring locations SS-1 and SS-2; and treated effluent monitoring location SS-3.

Constituents: pH, nitrate, specific conductance, chloride, and total coliform bacteria, surveyed groundwater level

Frequency: Every other month, including January, March, May, July, September, and November

In addition, the Discharger shall conduct ground water and surface water monitoring in accordance with Section VI. C.2.a.i. of Order No. R1-2006-0004 to determine the fate of pollutants discharged by percolation from the treatment facility. All chemical analyses performed for such a study shall adhere to methods established at 40 CFR 136. This requirement does not apply if the Discharger elects to conduct a study of alternative disposal methods in accordance with Section VI.C.2.a.ii. of Order No. R1-2006-0004.

The groundwater monitoring program specified in this section may be modified or replaced by groundwater monitoring conducted as part of the hydrogeologic study required in Section VI.C.2.a.i of this Order, at the request of the Discharger and upon approval by the Regional Water Board Executive Officer.

IX. OTHER MONITORING REQUIREMENTS - (NOT APPLICABLE)

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.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.
2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more

frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	July 28, 2006	All	First day of second calendar month following month of sampling
Hourly	July 28, 2006	Hourly	First day of second calendar month following month of sampling
Daily	July 28, 2006	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following month of sampling
Weekly	July 30, 2006 (Sunday following permit effective date)	Sunday through Saturday	First day of second calendar month following month of sampling
Monthly	August 1, 2006 (First day of calendar month following permit effective date)	1 st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
Annually	January 1 following permit effective date	January 1 through December 31	February 1
Once every 5 years	Discharger must sample one time during the period specified in the "Monitoring Period" Column	Between October 1, 2009 and May 14, 2010	Sampling data to be submitted with ROWD due by December 28, 2010

4. The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

5. SMR Content and Format.

- a. Monthly Reports. The purpose of the monthly report is to document treatment performance, effluent quality, and compliance with waste discharge requirements prescribed by Order No. R1-2006-XXXX. For each calendar month, an SMR shall be submitted to the Regional Water Board in accordance with the following:
- i. Letter of transmittal: Each SMR shall be submitted with a letter of transmittal. This letter shall include the following:
- Identification of facility: Name, address, WDID number;
 - Date of report and monitoring period;
 - Identification of all violations of discharge prohibitions, effluent limitations or other discharge requirements found during the monitoring period;
 - Details of the violations: parameters, magnitude, test results, frequency, and dates;
 - The cause of the violation(s);
 - Discussion of corrective actions taken or planned to resolve violations and prevent recurrence, and dates or time of action implementation;
 - Authorized signature and certification statement.

- ii. Compliance Evaluation Summary: Each report shall include a compliance evaluation summary. The summary shall illustrate clearly the facility's compliance (or lack thereof) with all effluent limitations and other waste discharge requirements. During periods of no discharge, the reports shall certify "no discharge".
- iii. Results of Analyses and Observations.
 - Tabulations of all required analyses, including parameter, sample date, and time, sample station, and test result.
 - If the Discharger monitors any pollutant more frequently than required by this Permit, using test procedures approved under 40 CFR Part 136 or as specified in this Permit, the results of this monitoring shall be included in the calculation and report of the data submitted in the Permittee's SMR.
 - Calculation of all effluent limitations that require averaging, taking of a median, or other calculation.
- b. Annual Report. The Discharger shall submit an annual report to the Regional Water Board for each calendar year. The report shall be submitted by February 1st of the following year. The report shall include, at a minimum, the following:
 - i. Both tabular and, where appropriate, graphical summaries of the monitoring data and disposal records from the previous year. If the Discharger monitors any pollutant more frequently than required by this Permit, using test procedures approved under 40 CFR Part 136 or as specified in this Permit, the results of this monitoring shall be included in the calculation and report of the data submitted SMR.
 - ii. Source control activities as required by Provision VI.C.6.c. of Waste Discharge Requirements Order No. R1-2006-0004.
 - iii. Collection system activities as required by Provision VI.C.6.a. of Waste Discharge Requirements Order No. R1-2006-0004.
 - iv. A comprehensive discussion of the facility's compliance (or lack thereof) with all effluent limitations and other waste discharge requirements, and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the Permit.
6. SMRs must be submitted to the Regional Water Board, signed and certified as required by the standard provisions (Attachment D), to the address listed below:

Regional Water Quality Control Board
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95407

C. Discharge Monitoring Reports (DMRs)

- 1.** As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit discharge monitoring reports (DMRs) in accordance with the requirements described below.
- 2.** DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

State Water Resources Control Board
Discharge Monitoring Report Processing Center
Post Office Box 671
Sacramento, CA 95812

- 3.** All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

061206_CAG_CloverdaleNPDESPermit

PERMIT ATTACHMENT E-1
 CITY OF CLOVERDALE WASTEWATER TREATMENT PLANT
 WASTE DISCHARGE REQUIREMENTS ORDER NO. R1-2006-XXXX
 FINAL COPPER EFFLUENT LIMITATIONS

Hardness-Dependent Effluent Limitations for Copper
 Total Recoverable Copper (in ug/l)

Hardness mg/l as CaCO ₃	Copper Concentration Limitations							CV = 0.60
	CCC 4-Day Ave. (ug/l)	CMC 1-Hour Ave. (ug/l)	0.527CCC	0.321CMC	Min D and E	AMEL (ug/l)	MDEL (ug/l)	
5	0.72	0.83	0.38	0.27	0.27	0.41	0.83	
10	1.30	1.60	0.69	0.51	0.51	0.80	1.60	
15	1.84	2.34	0.97	0.75	0.75	1.17	2.34	
20	2.36	3.07	1.24	0.99	0.99	1.53	3.07	
25	2.85	3.79	1.50	1.22	1.22	1.89	3.79	
30	3.33	4.50	1.76	1.45	1.45	2.24	4.49	
35	3.80	5.21	2.00	1.67	1.67	2.59	5.20	
40	4.26	5.90	2.25	1.90	1.90	2.94	5.89	
45	4.72	6.60	2.48	2.12	2.12	3.28	6.59	
50	5.16	7.29	2.72	2.34	2.34	3.62	7.27	
55	5.60	7.97	2.95	2.56	2.56	3.97	7.96	
60	6.03	8.65	3.18	2.78	2.78	4.30	8.64	
65	6.46	9.33	3.40	2.99	2.99	4.64	9.31	
67	6.63	9.60	3.49	3.08	3.08	4.78	9.58	
70	6.88	10.00	3.62	3.21	3.21	4.98	9.99	
75	7.30	10.68	3.84	3.43	3.43	5.31	10.66	
80	7.71	11.34	4.06	3.64	3.64	5.64	11.33	
85	8.12	12.01	4.28	3.86	3.86	5.98	11.99	
90	8.53	12.68	4.49	4.07	4.07	6.31	12.65	
95	8.93	13.34	4.71	4.28	4.28	6.64	13.32	
100	9.33	14.00	4.92	4.49	4.49	6.97	13.98	
105	9.73	14.66	5.13	4.71	4.71	7.29	14.63	
110	10.12	15.31	5.33	4.92	4.92	7.62	15.29	
115	10.51	15.97	5.54	5.13	5.13	7.95	15.94	
120	10.90	16.62	5.75	5.34	5.34	8.27	16.59	
125	11.29	17.27	5.95	5.55	5.55	8.59	17.25	
130	11.67	17.92	6.15	5.75	5.75	8.92	17.89	
135	12.06	18.57	6.35	5.96	5.96	9.24	18.54	
140	12.44	19.22	6.55	6.17	6.17	9.56	19.19	
145	12.82	19.87	6.75	6.38	6.38	9.89	19.83	
150	13.19	20.51	6.95	6.58	6.58	10.21	20.48	
155	13.57	21.16	7.15	6.79	6.79	10.53	21.12	
160	13.94	21.80	7.35	7.00	7.00	10.85	21.76	
165	14.31	22.44	7.54	7.20	7.20	11.16	22.40	
170	14.68	23.08	7.74	7.41	7.41	11.48	23.04	
175	15.05	23.72	7.93	7.61	7.61	11.80	23.68	
180	15.42	24.36	8.12	7.82	7.82	12.12	24.32	
185	15.78	24.99	8.32	8.02	8.02	12.44	24.95	
190	16.14	25.63	8.51	8.23	8.23	12.75	25.59	
195	16.51	26.26	8.70	8.43	8.43	13.07	26.22	
200	16.87	26.90	8.89	8.63	8.63	13.38	26.85	
205	17.23	27.53	9.08	8.84	8.84	13.70	27.49	
210	17.59	28.16	9.27	9.04	9.04	14.01	28.12	
215	17.94	28.80	9.46	9.24	9.24	14.33	28.75	
220	18.30	29.43	9.64	9.45	9.45	14.64	29.38	
225	18.65	30.06	9.83	9.65	9.65	14.95	30.00	
230	19.01	30.68	10.02	9.85	9.85	15.27	30.63	
235	19.36	31.31	10.20	10.05	10.05	15.58	31.26	
240	19.71	31.94	10.39	10.25	10.25	15.89	31.89	
245	20.06	32.57	10.57	10.45	10.45	16.20	32.51	
250	20.41	33.19	10.76	10.65	10.65	16.51	33.14	
255	20.76	33.82	10.94	10.86	10.86	16.83	33.76	
260	21.11	34.44	11.12	11.06	11.06	17.14	34.38	
265	21.45	35.07	11.31	11.26	11.26	17.45	35.01	
270	21.80	35.69	11.49	11.46	11.46	17.76	35.63	
275	22.14	36.31	11.67	11.66	11.66	18.07	36.25	
280	22.49	36.93	11.85	11.86	11.85	18.37	36.86	
285	22.83	37.55	12.03	12.05	12.03	18.65	37.42	
290	23.17	38.17	12.21	12.25	12.21	18.93	37.98	
295	23.51	38.79	12.39	12.45	12.39	19.21	38.54	
300	23.85	39.41	12.57	12.65	12.57	19.48	39.09	
310	24.53	40.65	12.93	13.05	12.93	20.04	40.20	
320	25.20	41.88	13.28	13.44	13.28	20.59	41.31	
330	25.88	43.12	13.64	13.84	13.64	21.14	42.41	
340	26.54	44.35	13.99	14.24	13.99	21.68	43.51	
350	27.21	45.57	14.34	14.63	14.34	22.23	44.60	
360	27.87	46.80	14.69	15.02	14.69	22.77	45.68	
370	28.53	48.02	15.04	15.42	15.04	23.31	46.77	
380	29.19	49.25	15.38	15.81	15.38	23.85	47.84	
400	30.50	51.68	16.07	16.59	16.07	24.91	49.99	
>400	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	

CCC = Criteria Continuous Concentration
 $\{0.8545[\ln(\text{hardness})] - 1.702\}$
 = e

CMC = Criteria Maximum Concentration
 $\{0.9422[\ln(\text{hardness})] - 1.700\}$
 = e

AMEL = Average Monthly Effluent Limitation
 $= 1.55[\min(0.527CCC, 0.321CMC)]$

MDEL = Maximum Daily Effluent Limitation
 $= 3.11[\min(0.527CCC, 0.321CMC)]$

Hardness – hardness of the receiving water
 at the time the discharge is sampled.