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

**MONITORING AND REPORTING PROGRAM NO. CI-5542
FOR
COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY
(San Jose Creek Water Reclamation Plant)
(NPDES NO. CA0053911)**

The County Sanitation Districts of Los Angeles County (Discharger) shall implement this monitoring and reporting program the first of the month following the month of the effective date of this Order.

I. SUBMITTAL OF MONITORING REPORTS

1. All monthly monitoring reports must be received by the fifteenth day of the third month following each monthly sampling period.
2. By April 15th of each year, the Discharger shall submit an annual summary 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 first annual report under this Program shall be received at the Regional Board by April 15, 2005, and will cover the monitoring period of calendar year 2004. The Regional Board may request electronic submittal of data at any time.
3. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with discharge requirements, as well as all excursions of effluent limitations.
4. Each annual monitoring report shall contain a separate section titled "Reasonable Potential Analysis" which discusses whether or not reasonable potential was triggered for pollutants which do not have a final effluent limitation in the NPDES permit. This section shall contain the following statement: "The analytical results for this sampling period did/did not trigger reasonable potential." If reasonable potential was triggered, then the following information should also be provided:
 - A. A list of the pollutant(s) that triggered reasonable potential;
 - B. The Basin Plan or CTR criteria that was exceeded for each given pollutant;
 - C. The concentration of the pollutant(s);
 - D. The test method used to analyze the sample; and,
 - E. The date and time of sample collection.

5. All monitoring and annual summary reports must be addressed to the Regional Board, Attention: Information Technology Unit. Reference the reports to Compliance File No. CI-5542 to facilitate routing to the appropriate staff and file.
6. Database Management System: The Regional Board and the State Water Resources Control Board (State Board) are developing a database compliance monitoring management system that may require the Discharger to submit the monitoring and annual summary reports electronically when it becomes fully operational.

II. MONITORING REQUIREMENTS

1. All samples shall be representative of the waste discharge under conditions of peak load. Quarterly effluent analyses shall be performed during the months of February, May, August, and November. Semiannual analyses shall be performed during the months of February and August. Annual analyses shall be performed during the month of August. Should there be instances when monitoring could not be done during these specified months, the Discharger must notify the Regional Board, state the reason why monitoring could not be conducted, and obtain approval from the Executive Officer for an alternate schedule. Results of quarterly, semiannual, and annual analyses shall be reported in the monthly monitoring report following the analysis.
2. Pollutants shall be analyzed using the analytical methods described in 40 CFR, Part 136; or where no methods are specified for a given pollutant, by methods approved by the Regional Board or State Board. The laboratory conducting analyses shall be certified by the California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) or approved by the Regional Board for that particular parameter. A copy of the laboratory certification shall be submitted with the annual summary report.
3. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR, Part 136.3. All QA/QC analyses must be run on the same dates that samples are actually analyzed. The Discharger shall retain the QA/QC documentation in its files and make available for inspection and/or submit them when requested by the Regional Board. Proper chain of custody procedures must be followed and a copy of that documentation shall be submitted with the monthly report.
4. For all bacteriological analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000. The detection methods used for each analysis shall be reported with the results of the analyses.

Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 CFR, Part 136 (revised May 14, 1999), unless alternate methods have been approved in advance by the United State Environmental Protection Agency (USEPA) pursuant to 40 CFR Part 136.

Detection methods used for enterococcus shall be those presented in the USEPA publication EPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure* or any improved method determined by the Regional Board to be appropriate.

III. REPORTING REQUIREMENTS

1. The monitoring report shall specify the USEPA analytical method used, the Method Detection Limit (MDL), the minimum level (ML) and the reported Minimum Level (RML) for each pollutant. The MLs are those published by the State Board in the *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, March 2, 2000, Appendix 4. The ML represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interference. When all specific analytical steps are followed and after appropriate application of method specific factors, the ML also represents the lowest standard in the calibration curve for that specific analytical technique. When there is deviation from the method analytical procedures, such as dilution or concentration of samples, other factors may be applied to the ML depending on the sample preparation. The resulting value is the reported minimum level.
2. The Discharger shall select the analytical method that provides a ML lower than the permit limit established for a given parameter, unless the Discharger can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR, Part 136, and obtains approval for a higher ML from the Executive Officer, as provided for in III.E. of this section. If the effluent limitation is lower than all the MLs in Appendix 4, SIP, the Discharge must select the method with the lowest ML for compliance purposes. The Discharger shall include in the Annual Summary Report a list of the analytical methods employed for each test.
3. The Discharger shall instruct its laboratories to establish calibration standards so that the ML (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve. In accordance with section 5, below, the Discharger's laboratory may employ a calibration standard lower than the ML in Appendix 4 of the SIP.
4. For the purpose of reporting compliance with numerical effluent limitations and receiving water limitations, analytical data shall be reported using the following reporting protocols:
 - A. Sample results greater than or equal to the RML must be reported "as measured" by the laboratory (i.e., the measured chemical concentration in the sample); or
 - B. Sample results less than the RML, but greater than or equal to the laboratory's MDL, must be reported as "Detected, but Not Quantified", or DNQ. The laboratory must write the estimated chemical concentration of the sample next to DNQ as well as the words "Estimated Concentration" (may be shortened to Est. Conc.); or
 - C. Sample results less than the laboratory's MDL must be reported as "Not-Detected", or ND.

5. In accordance with Section 2.4.3 of the SIP, the Regional Board Executive Officer, in consultation with the State Board's Quality Assurance Program Manager, may establish an ML that is not contained in Appendix 4 of the SIP to be included in the discharger's permit in any of the following situations:
 - A. When the pollutant under consideration is not included in Appendix 4, SIP;
 - B. When the discharger and the Regional Board agree to include in the permit a test method that is more sensitive than those specified in 40 CFR, Part 136 (revised as of May 14, 1999);
 - C. When a discharger agrees to use an ML that is lower than those listed in Appendix 4;
 - D. When a discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Appendix 4 and proposes an appropriate ML for the matrix; or,
 - E. When the discharger uses a method, which quantification practices are not consistent with the definition of the ML. Examples of such methods are USEPA-approved method 1613 for dioxins, and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the discharger, the Regional Board, and the State Water Resources Control Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

If there is any conflict between foregoing provisions and the State Implementation Policy (SIP), the provisions stated in the SIP (Section 2.4) shall prevail.

6. If the Discharger samples and performs analyses (other than for process/operational control, startup, research, or equipment testing) on any influent, effluent, or receiving water constituent more frequently than required by this Program using approved analytical methods, the results of those analyses shall be included in the report. These results shall be reflected in the calculation of the average used in demonstrating compliance with average effluent, receiving water, etc., limitations.
7. The Discharger shall develop and maintain a record of all spills or bypasses of raw or partially treated sewage from its collection system or treatment plant. This record shall be made available to the Regional Board upon request and a spill summary shall be included in the annual summary report.
 - A. For spills/bypass of 500 gallons or more that flowed to receiving waters or entered a shallow ground water aquifer or has public exposure, the Discharger shall report such spills to the Regional Board and the local health agency by telephone or electronically as soon as possible but not later than 24 hours of knowledge of the incident. The following information shall be included in the report: location; date and time of spill; volume and nature of the spill; cause(s) of the spill; mitigation measures implemented; and corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences.

- B. For spills that reach receiving waters, the Discharger shall obtain and analyze grab samples for total and fecal coliforms, and enterococcus, upstream and downstream of the point of entry of the spill. This monitoring shall be on a daily basis from time the spill is known until the results of two consecutive sets of bacteriological monitoring indicate the return to the normal level or cessation of monitoring is authorized by the County Department of Health Services.
 - C. Regional Board notification shall be followed by a written report five working days after verbal/electronic notification.
8. The Discharger shall inform the Regional Board well in advance of any construction activity that could potentially affect compliance with applicable requirements.

IV. MONITORING REQUIREMENTS

1. Pursuant to the Code of Federal Regulations [40 CFR, Section 122.41(j) and Section 122.48(b)], the monitoring program for a discharger receiving an NPDES permit must be designed to determine compliance with NPDES permit terms and conditions, and demonstrate that State water quality standards are met.
2. Since compliance monitoring focuses on the effects of a point source discharge, it is not designed to assess impacts from other sources of pollution (e.g., non-point source run-off, aerial fallout) or to evaluate the current status of important ecological resources on a regional basis.

A watershed-wide Monitoring Program will be developed within two years from the effective date of this Order and permit for the San Gabriel River Watershed. The goals of the watershed-wide monitoring program will include evaluating or assessing: compliance with receiving water objectives, trends in surface water quality, impacts to beneficial uses, the health of the biological community, data needs for modeling contaminants of concern, and attaining the goals of the TMDLs under implementation in the San Gabriel River. The Discharger shall participate in the development and implementation of the watershed-wide monitoring program, and submit draft Watershed-wide Monitoring Program by December 31, 2004, to the Regional Board.

3. Changes to the compliance monitoring program may be required to fulfill the goals of the watershed-wide monitoring program, while retaining the compliance monitoring component required to evaluate compliance with the NPDES permit. Revisions to the Discharger's program will be made under the direction of the Regional Board, as necessary, to accomplish the goal, and may include a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, and/or the number of samples collected.
4. Until such time when a watershed-wide monitoring program is developed, CSDLAC shall implement the monitoring program in the following sections.

V. INFLUENT MONITORING REQUIREMENTS

(Footnotes are on pages T-23 and T-25)

1. Influent monitoring is required:
 - A. To determine compliance with the permit conditions for BOD₅ 20°C and suspended solids removal rates;
 - B. To assess treatment plant performance;
 - C. To assess the effectiveness of the pretreatment program; and,
 - D. As a requirement of the Pollution Minimization Program.
2. 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/or where representative samples of the influent can be obtained. The date and time of sampling shall be reported with the analytical results.
3. Samples for influent BOD₅20°C and suspended solids analysis shall be obtained on the same day that the effluent BOD₅20°C and suspended solids samples are obtained to demonstrate percent removal. Similarly, sampling for other constituents shall also be coordinated with effluent sampling.
4. The following shall constitute the influent monitoring program:

CTR #	Constituents	Units	Type of Sample	Minimum Frequency of Analysis
	Flow	mgd	recorder	continuous
	pH	pH units	grab	weekly
	Suspended solids	mg/L	24-hour composite	weekly
	BOD ₅ 20°C	mg/L	24-hour composite	weekly
1	Antimony	µg/L	24-hour composite	semiannually
2	Arsenic	µg/L	24-hour composite	semiannually
4	Cadmium	µg/L	24-hour composite	semiannually
5	Total Chromium			
5a	Chromium (III)	µg/L	grab	semiannually
5b	Chromium (VI)	µg/L	grab	semiannually
6	Copper	µg/L	24-hour composite	[1]
7	Lead	µg/L	24-hour composite	[1]
8	Mercury	µg/L	24-hour composite	quarterly
10	Selenium	µg/L	24-hour composite	quarterly
14	Cyanide	µg/L	grab	quarterly
38	Tetrachloroethylene	µg/L	grab	[3]
61	Benzo(a)pyrene	µg/L	24-hour composite	[3]

CTR #	Constituents	Units	Type of Sample	Minimum Frequency of Analysis
64	Benzo(k)fluoranthracene	µg/L	24-hour composite	[3]
74	Dibenzo(1,2,3-cd)anthracene	µg/L	24-hour composite	[3]
92	Indeno(a,h)pyrene	µg/L	24-hour composite	[3]
96	N-nitrosodimethylamine	µg/L	24-hour composite	[1]
108	4,4'-DDT ^[4]	µg/L	24-hour composite	[1]
109	4,4'-DDE ^[4]	µg/L	24-hour composite	[1]
	Pesticide ^[5]	µg/L	24-hour composite	semiannually
	Remaining EPA priority pollutants excluding asbestos and TCDD	µg/L	24-hour composite/ grab for VOCs and Chromium VI	semiannually

VI. EFFLUENT MONITORING REQUIREMENTS

(Footnotes are on pages T-23 and T-25)

1. Effluent monitoring is required to:
 - A. Determine compliance with NPDES permit conditions;
 - B. Identify operational problems and aid in improving plant performance;
 - C. Provide information on wastewater characteristics and flows for use in interpreting water quality and biological data; and,
 - D. Determine Reasonable Potential Analysis for toxic pollutants.

2. An effluent sampling station shall be established for each point of discharge and shall be located downstream of any in-plant return flows where representative samples of the effluent 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 must be approved by the Executive Officer. The effluent monitoring at Discharge Serial Nos. 001A and/or 001B is required only when the effluent through these outfalls.

3. The following shall constitute the effluent monitoring program:

CTR #	Constituents	Units	Type of Sample	Minimum Frequency of Analysis
	Total waste flow	mgd	recorder	continuous
	Turbidity ^[6]	NTU	recorder	continuous
	Total residual chlorine	mg/L	recorder	continuous ^[7]
	Total coliform ^[6]	MPN/100 ml	grab	daily
	Fecal coliform ^[6]	MPN/100 ml	grab	daily
	E. coli	MPN/100 ml	grab	weekly

CTR #	Constituents	Units	Type of Sample	Minimum Frequency of Analysis
	Temperature ^[22]	°F	grab/recorder	daily/continuous
	pH	pH units	grab	daily
	Settleable solids	ml/L	grab	daily
	Suspended solids	mg/L	24-hour composite	daily
	BOD ₅ 20°C ^[8]	mg/L	24-hour composite	weekly
	Oil and grease	mg/L	grab	monthly
	Dissolved oxygen	mg/L	grab	monthly
	Total dissolved solids	mg/L	24-hour composite	monthly
	Chloride	mg/L	24-hour composite	monthly
	Sulfates	mg/L	24-hour composite	monthly
	Boron	mg/L	24-hour composite	monthly
	Fluoride	mg/L	24-hour composite	monthly
	Ammonia nitrogen	mg/L	24-hour composite	[9]
	Nitrate + nitrite nitrogen	mg/L	24-hour composite	monthly
	Organic nitrogen	mg/L	24-hour composite	monthly
	Total nitrogen	mg/L	24-hour composite	monthly
	Surfactants (MBAS) ^[10]	mg/L	24-hour composite	monthly
	Surfactants (CTAS) ^[10]	mg/L	24-hour composite	monthly
	Total hardness (CaCO ₃)	mg/L	24-hour composite	monthly
	Chronic toxicity ^[11]	TUc	24-hour composite	monthly
	Acute toxicity ^[12]	% Survival	grab	annually
	Perchlorate	µg/L	grab	semiannually
	1,4-Dioxane	µg/L	grab	semiannually
	1,2,3-Trichloropropane	µg/L	grab	semiannually
	MTBE	µg/L	grab	semiannually
1	Antimony	µg/L	24-hour composite	quarterly
2	Arsenic	µg/L	24-hour composite	quarterly
3	Beryllium	µg/L	24-hour composite	quarterly
4	Cadmium	µg/L	24-hour composite	quarterly
5a	Chromium III	µg/L	grab	quarterly
5b	Chromium VI	µg/L	grab	quarterly
6	Copper	µg/L	24-hour composite	[13]
7	Lead	µg/L	24-hour composite	[13]
8	Mercury	µg/L	24-hour composite	monthly
9	Nickel	µg/L	24-hour composite	quarterly
10	Selenium	µg/L	24-hour composite	monthly
11	Silver	µg/L	24-hour composite	quarterly
12	Thallium	µg/L	24-hour composite	quarterly
13	Zinc	µg/L	24-hour composite	quarterly
14	Cyanide	µg/L	grab	monthly
38	Tetrachloroethylene	µg/L	grab	[14]

CTR #	Constituents	Units	Type of Sample	Minimum Frequency of Analysis
61	Benzo(a)pyrene	µg/L	24-hour composite	[14]
64	Benzo(k)fluoranthene	µg/L	24-hour composite	[14]
74	Dibenzo(1,2,3-cd)anthracene	µg/L	24-hour composite	[14]
92	Indeno(a,h)pyrene	µg/L	24-hour composite	[14]
96	N-nitrosodimethylamine	µg/L	24-hour composite	[15]
108	4,4'-DDT ^[4]	ng/L	24-hour composite	[15]
109	4,4'-DDE ^[4]	ng/L	24-hour composite	[15]
	Barium	µg/L	24-hour composite	quarterly
	Diazinon	µg/L	24-hour composite	semiannually
	Pesticide ^[5]	µg/L	24-hour composite	semiannually
	Remaining EPA priority pollutants ^[2] excluding asbestos	µg/L	24-hour composite/ grab for VOCs	semiannually
	Radioactivity ^[16]	PCi/L	24-hour composite	semiannually

4. Toxicity Testing – Applicable for both Effluent and Receiving Waters

A. Acute Toxicity Testing

- a. The Discharger shall conduct acute toxicity tests on 100 % effluent and receiving water grab samples by methods specified in 40 CFR Part 136, which cites USEPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, October, 2002 (EPA-821-R-02-012) or a more recent edition to ensure compliance.
- b. The fathead minnow, *Pimephales promelas*, shall be used as the test species for fresh water discharges and the topsmelt, *Atherinops affinis*, shall be used as the test species for brackish discharges. However, if the salinity of the receiving water is between 1 to 32 parts per thousand (ppt), then Discharger may have the option of using the inland silverside, *Menidia beryllina*, instead of the topsmelt. The method for topsmelt is found in USEPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, October, 2002 (EPA-821-R-02-012).
- c. In lieu of conducting the standard acute toxicity testing with the fathead minnow, the Discharger may elect to report the results or endpoint from the first 48 hours of the chronic toxicity test as the results of the acute toxicity test, but only if the Discharger uses USEPA's August 1993 protocol (EPA/600/4-90/027F) to conduct the chronic toxicity test.
- d. If either of the effluent and receiving water toxicity requirements in Section I.1.K.b.i. or I.1.K.b.ii. and Section I.2.Q., respectively, of this Order is not

met, the Discharger shall conduct six additional tests over a six-week period. The Discharger shall ensure that results of a failing acute toxicity test are received by the Discharger within 24 hours of completion of the test and the additional tests shall begin within 3 business days of receipt of the result. If the additional tests indicate compliance with acute toxicity limitation, the Discharger may resume regular testing. However, if the results of any two of the six accelerated tests are less than 90% survival, then the Discharger shall begin 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.

- e. If the initial test and any of the additional six acute toxicity bioassay tests results are less than 70% survival, the Discharger shall immediately implement Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan. Once the sources are identified the Discharger shall take all reasonable steps to reduce toxicity to meet the requirements.

B. Chronic Toxicity Testing

- a. The Discharger shall conduct critical life stage chronic toxicity tests on 24-hour composite 100 % effluent samples and receiving water samples in accordance with EPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, October 2002 (EPA-821-R-02-013) or EPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, October 2002 (EPA-821-R-02-014), or current version.
- b. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water. Where a sample has been dechlorinated prior to submittal to the laboratory, a statement to that effect must be made in the report. Receiving water samples shall be collected in accordance with the conditions specified in this MRP (CI-5542). Receiving water samples shall be collected at mid-depth.
- c. Test Species, Methods and Units:
 - i. Screening and Monitoring - The Discharger shall conduct short-term tests with the cladoceran, water flea (*Ceriodaphnia dubia* - survival and reproduction test), the fathead minnow (*Pimephales promelas* - larval survival and growth test), and the green alga (*Selenastrum capricornutum* - growth test) as an initial screening process for a minimum of three, but not to exceed, five suites of tests to account for potential variability of the effluent and receiving water. After this screening period, monitoring shall be conducted using the most sensitive species. This is applicable to new dischargers.

- ii. Re-screening - Re-screening is required every 24 months. The Discharger shall re-screen with the three species listed above and continue to monitor with the most sensitive species. If the first suite of re-screening tests demonstrates that the same species is the most sensitive then the re-screening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is ambiguity, then the Discharger shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites.
- iii. Toxicity Units - 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*, October 2002 (EPA-821-R-02-013), expressed as:

$$TU_c = \frac{100}{NOEC}$$

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

d. Accelerated Monitoring

If toxicity is detected as defined in Order No. R4-2004-0097, Section I.1.L.c. or Section I.2.R.c., then the Discharger shall conduct six additional tests, approximately every 7 days, over a six-week period. The samples shall be collected and the tests initiated no less than 7 days apart. The Discharger shall ensure that they receive results of a failing chronic toxicity test within 24 hours of the completion of the test and the additional tests shall begin within 3 business days of the receipt of the result.

- i. If any three out of the initial test and the six additional tests results exceed 1.0 TU_c trigger, the Discharger shall immediately implement the Initial Investigation of the TRE.
- ii. If implementation of the initial investigation TRE Workplan indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger shall return to the normal sampling frequency required in Sections VI.3 and VII.2. of this MRP.
- iii. If all of the six additional tests required above do not exceed 1 TU_c , then the Discharger may return to the normal sampling frequency required in Sections VI.3. and VII.2. of this MRP.
- iv. If a TRE/TIE is initiated prior to completion of the accelerated testing schedule required, then the accelerated testing schedule may be

terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer.

C. Quality Assurance

- a. Concurrent testing with a reference toxicant shall be conducted. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).
- b. If either the reference toxicant test or effluent test or receiving water does not meet all test acceptability criteria (TAC) as specified in the test methods manuals (EPA-821-R-02-013 and EPA-821-R-02-014), then the Discharger must re-sample and re-test within 14 days.
- c. Control and dilution water for effluent should be receiving water or laboratory water, as appropriate, as described in the manuals. If the dilution water used is different from the culture water, a second control using culture water shall be used.

D. Steps in TRE and TIE

- a. Following a TRE trigger, the Discharger shall initiate a TRE in accordance with the facility's initial investigation TRE Workplan. At a minimum, the Discharger shall use EPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance, or current version. The Discharger shall expeditiously develop a more detailed TRE Workplan for submittal to the Executive Officer within 15 days of the trigger, that will include but not limited to:
 - i. Further actions to investigate and identify the cause of toxicity;
 - ii. Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity;
 - iii. Standards the Discharger will apply to consider the TRE complete and for the return to normal sampling frequency; and,
 - iv. A schedule for these actions.
- b. The following is a stepwise approach in conducting the TRE:
 - i. Step 1 includes basic data collection. Data collected as part of the accelerated monitoring required may be used to conduct the TRE.
 - ii. Step 2 evaluates optimization of the treatment system operation, facility housekeeping, and the selection and use of in-plant process chemicals.

- iii. If Steps 1 and 2 are unsuccessful, Step 3 implements a TIE employing all reasonable efforts, and using currently available TIE methodologies. The objective of the TIE is to identify the substance or combination of substances causing the observed toxicity.
- iv. Assuming successful identification or characterization of the toxicant(s), Step 4 evaluates final effluent treatment options;
- v. Step 5 evaluates within plant treatment options; and,
- vi. Step 6 consists of confirmation once a toxicity control method has been implemented.

Many recommended TRE elements parallel source control, pollution prevention, and storm water control program best management practices (BMPs). To prevent duplication of efforts, evidence of implementation of these control measures may be sufficient to comply with TRE requirements. By requiring the first steps of a TRE to be accelerated testing, a TRE may be ended in its early stages. All reasonable steps shall be taken to reduce toxicity to the required level. The TRE may be ended at any stage if monitoring finds there is no longer toxicity (or six consecutive chronic toxicity results less than or equal to 1 TUc (monthly median).

- c. The Discharger may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. The Discharger shall use the EPA acute and chronic manuals, EPA/600/6-91/005F (Phase I) /EPA/600/R-96-054 (for marine), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III) as guidance.
- d. If a TRE/TIE is initiated prior to completion of the accelerated testing schedule required, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer.
- e. Toxicity tests conducted as part of a TRE/TIE may also be used for compliance, if appropriate.
- f. The Board recognizes that toxicity may be episodic and identification of causes of and reduction of sources of toxicity may not be successful in all cases. Consideration of enforcement action by the Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.
 - i. If all the results of the six additional tests are in compliance with the chronic toxicity 1 TUc trigger, the Discharger may resume regular monthly testing.

- ii. If the results of any of the six accelerated tests exceeds 1 TUc, the Discharger shall continue to monitor weekly until six consecutive weekly tests are in compliance. At that time, the Discharger may resume regular monthly testing.
- iii. If the results of two of the six tests, or any two tests in a six-week period, exceed 1 TUc, the Discharger shall initiate a TRE.
- iv. If implementation of the initial investigation TRE workplan (see item E, below) indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger shall return to the regular testing frequency.

E. Preparation of an Initial Investigation TRE Workplan

Within 90 days of the effective date of this Order and permit, the Discharger shall submit a copy of its initial investigation TRE workplan to the Executive Officer of the Regional Board for approval. The Discharger shall use the USEPA manual, *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants*, EPA/833B-99/002, as guidance. This workplan shall describe the steps the Discharger intends to follow if the toxicity exceeds 1 TUc, and should include, at a minimum, the following:

- a. Description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency;
- b. Description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility; and,
- c. If a TIE is necessary, an indication of the person who will conduct the TIE (i.e., an in-house expert or an outside contractor), or current version.

F. Ammonia Removal

- a. Except with prior approval from the Executive Officer of the Regional Board ammonia shall not be removed from the bioassay samples. The Discharger must demonstrate the effluent toxicity is caused by ammonia because of increasing test pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following may be steps to demonstrate the toxicity is caused by ammonia and not other toxicants before the Executive Officer of the Regional Board would allow for control of pH in the test.
 - i. There is consistent toxicity in the effluent/receiving water and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.

- ii. Chronic ammonia concentrations in the effluent/receiving water are greater than 4 mg/L total ammonia. The level of detection for total ammonia generally need not be below 0.5-1.0 mg/L, since concentrations < 1.0 mg/L of total ammonia have not been found to be toxic to fathead minnows and *Ceriodaphnia dubia* (Acute ammonia LC₅₀ values of 3 mg/L and 1 mg/L for *Ceriodaphnia dubia* and fathead minnows, respectively, at pH 8.0). Then,
 - iii. Conduct the graduated pH tests as specified in the toxicity identification evaluation methods. For example, mortality should be higher at pH 8 and lower at pH 6.
 - iv. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.
- b. After it has been demonstrated that toxicity is due to ammonia, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent after submitting a written request to the Regional Board, and receiving written permission expressing approval from the Executive Officer of the Regional Board.

G. Reporting

- a. The Discharger shall submit a full report of the toxicity test results, including any accelerated testing conducted during the month as required by this permit. Test results shall be reported in Toxicity Units (TUc) for chronic toxicity and in percent survival for acute toxicity with the discharge monitoring reports (DMR) for the month in which the test is conducted.
- b. If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, pursuant to Section VI.4.D.f.iv, then those results also shall be submitted with the DMR for the period in which the Investigation occurred.
 - i. The full report shall be submitted by the end of the month in which the DMR is submitted.
 - ii. The full report shall consist of (1) the results; (2) the dates of sample collection and initiation of each toxicity test; (3) the acute toxicity average limit or chronic toxicity limit; and (4) printout of the toxicity program (ToxCalc or CETIS) results.
 - iii. Test results for toxicity tests also shall be reported according to the appropriate manual chapter on Report Preparation and shall be attached to the DMR. Routine reporting shall include, at a minimum, as applicable, for each test:

- sample date(s)
 - test initiation date
 - test species
 - end point values for each dilution (e.g. number of young, growth rate, percent survival)
 - NOEC value(s) in percent effluent
 - TUc values $\left(TU_c = \frac{100}{NOEC} \right)$
 - Mean percent mortality (+standard deviation) after 96 hours in 100% effluent (if applicable)
 - NOEC and LOEC (Lowest Observable Effect Concentration) values for reference toxicant test(s)
 - Available water quality measurements for each test (e.g., pH, D.O., temperature, conductivity, hardness, salinity, ammonia).
- iv. The Discharger shall provide a compliance summary, which includes a summary table of toxicity data from at least eleven of the most recent samples.
- v. The Discharger shall notify this Regional Board immediately of any toxicity exceedance and in writing 14 days after the receipt of the results of a monitoring limit 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 the permit, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.
5. Tertiary Filter Treatment Bypasses
- A. During any day that the filters are bypassed, CSDLAC shall monitor the effluent for BOD, suspended solids, settleable solids, and oil and grease, on a daily basis, until it is demonstrated that the filter “bypass” has not caused an adverse impact on the receiving water.
- B. CSDLAC shall maintain a chronological log of tertiary filter treatment process bypasses, to including the following:
- a. Date and time of bypass start and end;
 - b. Total duration time; and,

- c. Estimated total volume bypassed.
- C. CSDLAC shall notify Regional Board staff by telephone within 24 hours of the filter bypass event.
- D. CSDLAC shall submit a written report to the Regional Board, according to the corresponding monthly self-monitoring report schedule. The report shall include, at a minimum, the information from the chronological log. Results from the daily effluent monitoring, required by Section VI.5.A. above, shall be submitted to the Regional Board in the Discharger's self-monitoring report as soon as the results become available.

VII. RECEIVING WATER MONITORING REQUIREMENTS

(Footnotes are on pages T-23 and T-25)

1. Receiving water stations shall be established at the locations shown in Figure 1 and as follows:

A. San Gabriel River Stations

<u>Station Number</u>	<u>Coordinates and Description</u>
R-2	N33 55' 39.5" W118 06' 31.4", at Firestone Blvd. downstream of Discharge Serial No. 001
R-10	N34 02' 22.5" W118 01' 29", upstream of San Jose Creek confluence
R-11	N34 02' 11.5" W118 01' 51.9", downstream of San Jose Creek confluence
R-12	N33 59' 28.9" W118 04' 24.4", a few yards below the Discharge Serial No. 001A on the San Gabriel River
R-13	N33 50' 10.5" W118 05' 14.5", 100 yards downstream of Rubber Dam No. 4 on the San Gabriel river

B. San Jose Creek Station

<u>Station Number</u>	<u>Coordinates and Description</u>
C-1	N34 02' 0.2" W118 01' 3.5", upstream of Discharge Serial No. 002
C-2	N34 02' 13.8" W118 01' 25.3", downstream of Discharge Serial No. 002

2. The following analyses, which constitute the receiving water monitoring program, shall be conducted on grab samples obtained at R-2, R-10, R-11, R-12 and/or R-13

(applicable only when reclaimed water discharged through Discharge Serial Nos. 001A and/or 001B), C-1, and C-2:

Constituent	Units	Minimal Frequency of Analysis
Temperature	°F	monthly
pH	pH units	monthly
Dissolved oxygen	mg/L	monthly
Conductivity	µmho/cm	monthly
COD	mg/L	monthly
BOD ₅ 20°C ^[8]	mg/L	monthly
Nitrate nitrogen	mg/L	monthly
Nitrite nitrogen	mg/L	monthly
Ammonia nitrogen	mg/L	[17]
Organic nitrogen	mg/L	monthly
Total nitrogen	mg/L	monthly
Total phosphate	mg/L	monthly
Total coliform ^[6]	MPN/100 ml	monthly
Fecal coliform ^[6]	MPN/100 ml	monthly
E. coli	MPN/100 ml	monthly
Total dissolved solids	mg/L	monthly
Oil and grease	mg/L	monthly
Total Residual chlorine	mg/L	weekly
Chloride	mg/L	monthly
Sulfates	mg/L	monthly
Boron	mg/L	monthly
Fluoride	mg/L	monthly
Surfactants (MBAS) ^[10]	mg/L	monthly
Surfactants (CTAS) ^[10]	mg/L	monthly
Total hardness (CaCO ₃)	mg/L	monthly
Chronic toxicity	TUc	quarterly
Acute toxicity	TUa	annually
Perchlorate	µg/L	semiannually
1,4-Dioxane	µg/L	semiannually
1,2,3-Trichloropropane	µg/L	semiannually
MTBE	µg/L	semiannually
Antimony	µg/L	quarterly
Arsenic	µg/L	quarterly
Beryllium	µg/L	quarterly
Cadmium	µg/L	quarterly
Chromium III	µg/L	quarterly
Chromium VI	µg/L	quarterly
Copper	µg/L	[18]
Lead	µg/L	[18]
Mercury	µg/L	[18]
Nickel	µg/L	quarterly

Constituent	Units	Minimal Frequency of Analysis
Selenium	µg/L	[19]
Silver	µg/L	quarterly
Thallium	µg/L	quarterly
Zinc	µg/L	quarterly
Cyanide	µg/L	monthly
Tetrachloroethylene	µg/L	[20]
Benzo(a)pyrene	µg/L	[20]
Benzo(k)fluoranthene	µg/L	[20]
Dibenzo(1,2,3-cd)anthracene	µg/L	[20]
Indeno(a,h)pyrene	µg/L	[20]
N-nitrosodimethylamine	µg/L	[21]
4,4'-DDT ^[4]	ng/L	[21]
4,4'-DDE ^[4]	ng/L	[21]
Barium	µg/L	quarterly
Diazinon	µg/L	semiannually
Pesticide ^[5]	µg/L	semiannually
Remaining EPA priority pollutants ^[2] excluding asbestos	µg/L	semiannually

3. In the event of a spill or bypass of raw or partially treated sewage from the San Jose Creek Water Reclamation Plant into the San Gabriel River and San Jose Creek, total and fecal 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 or until coliform levels in the receiving water are within normal range and the bypass or spill has ceased.

4. At the same time the receiving waters are sampled, observations shall be made in the reach bounded by the Stations, and a log shall be maintained thereof.
- A. Attention shall be given to the presence and extent, or absence of:
- a. oil, grease, scum, or solids of waste origin;
 - b. sludge deposits;
 - c. discoloration of surface waters;
 - d. algal blooms;
 - e. odors;
 - f. foam; and,

- C. Ensure protection of beneficial uses;
 - D. Provide data for modeling contaminants of concern;
 - E. Characterize water quality including seasonal variation of surface waters within the watershed;
 - F. Assess the health of the biological community; and,
 - G. Determine mixing dynamics of effluent and receiving waters in the estuary.
2. The Discharger shall participate in the implementation of the Watershed-wide Monitoring Program. The CSDLAC' s responsibilities under the Watershed-wide Monitoring Program are described in the Receiving Water Monitoring Requirements section. To achieve the goals of the Watershed-wide Monitoring Program, revisions to the Receiving Water Monitoring Requirements will be made under the direction of USEPA and the Regional Board. CSDLAC shall participate with interested stakeholders in the San Gabriel River Watershed (such as, Southern California Coastal Water Research Project (SCWRP), the Los Angeles & San Gabriel Rivers Watershed Council, Los Angeles County Public Works for development of a San Gabriel River Master Plan, the San Gabriel Mountains Regional Conservancy, and the Rivers and Mountains Conservancy), in the development and implementation of a watershed-wide monitoring program. In order to develop a comprehensive watershed-wide monitoring program, the stakeholders requested additional time beyond what was originally allowed. The Discharger shall submit a draft Watershed-wide Monitoring Program by December 31, 2004, to the Regional Board. In the interim, the Discharger shall submit quarterly progress reports detailing ongoing efforts towards the development of a Watershed-wide Monitoring Program. The first report should be received in the Regional Board office by October 15, 2004
3. In coordination with the Los Angeles County Public Works and other interested stakeholders in the San Gabriel River Watershed, the Discharger shall conduct instream bioassessment monitoring once a year, during the fall. Over time, bioassessment monitoring will provide a measure of the physical condition of the waterbody and the integrity of its biological communities.
- A. The bioassessment program shall include an analysis of the community structure of the instream macroinvertebrate assemblages and physical habitat assessment at the monitoring stations R-2, R-10, R-11, R-12 and R-13, C-1, and C-2.

This program shall be implemented by appropriately trained staff. Alternatively, a professional subcontractor qualified to conduct bioassessments may be selected to perform the bioassessment work for the Discharger. Analyses of the results of the bioassessment monitoring program, along with photographs of the monitoring site locations taken during sample collection, shall be submitted in the corresponding annual report. If another stakeholder, or interested party in the watershed subcontracts a qualified professional to conduct bioassessment monitoring during the same season and at the same

location as specified in the MRP, then the Discharger may, in lieu of duplicative sampling, submit the data, a report interpreting the data, photographs of the site, and related QA/QC documentation in the corresponding annual report.

- B. The Discharger must provide a copy of their Standard Operation Procedures (SOPs) for the Bioassessment Monitoring Program to the Regional Board upon request. The document must contain step-by-step field, laboratory and data entry procedures, as well as, related QA/QC procedures. The SOP must also include specific information about each bioassessment program including: assessment program description, its organization and the responsibilities of all its personnel; assessment project description and objectives; qualifications of all personnel; and the type of training each member has received.
- C. Field sampling must conform to the SOP established for the California Stream Bioassessment Procedure (CSBP). Field crews shall be trained on aspects of the protocol and appropriate safety issues. All field data and sample Chain of Custody (COC) forms must be examined for completion and gross errors. Field inspections shall be planned with random visits and shall be performed by the Discharger or an independent auditor. These visits shall report on all aspects of the field procedure with corrective action occurring immediately.
- D. A taxonomic identification laboratory shall process the biological samples that usually consist of subsampling organisms, enumerating and identifying taxonomic groups and entering the information into an electronic format. The Regional Board may require QA/QC documents from the taxonomic laboratories and examine their records regularly. Intra-laboratory QA/QC for subsampling, taxonomic validation and corrective actions shall be conducted and documented. Biological laboratories shall also maintain reference collections, vouchered specimens (the Discharger may request the return of their sample voucher collections) and remnant collections. The laboratory should participate in an (external) laboratory taxonomic validation program at a recommended level of 10% or 20%. External QA/QC be arranged through the California Department of Fish and Game's Aquatic Bioassessment Laboratory located in Rancho Cordova, California.

IX. COMPLIANCE WITH WEEKLY AND MONTHLY AVERAGE LIMITS

- 1. 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.
- 2. For any monthly monitored: 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.

X. STORM WATER MONITORING AND REPORTING

The CSDLAC 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 (General Industrial Permit, Order No. 97-03-DWQ), or any subsequent revision of the General Industrial Permit.

XI. PRETREATMENT ANNUAL REPORT

The Discharger shall submit annually a report to the Regional Board, with a copy to 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 pretreatment conditions or requirements in this permit, then the Discharger shall also include the reasons for non-compliance and state how and when the Discharger shall comply with such conditions and requirements. The annual report is due on April 15 in the calendar year of 2004 to 2006 and on March 1 starting from 2007. The annual report shall contain, but not be limited to, the information required in the attached "Pretreatment Reporting Requirements Annual Report." (Attachment P), or any approved revised version thereof.

XII. FOOTNOTES

1. Quarterly and semiannually are applicable for the influent of the San Jose Creek East and West WRPs, respectively.
2. In accordance with the SIP, the Discharger shall conduct monitoring for the seventeen 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD or dioxin) congeners in the effluent and in receiving water stations C-1 and R-10, located upstream of the discharge point. The Discharger shall use the appropriate Toxicity Equivalence Factor (TEF) to determine Toxic Equivalence (TEQ). Where TEQ equals the product between each of the 17 individual congeners' (i) concentration analytical result (C_i) and their corresponding Toxicity Equivalence Factor (TEF_i), (i.e., $TEQ_i = C_i \times TEF_i$). Compliance with the Dioxin limitation shall be determined by the summation of the seventeen individual TEQs, or the following equation:

$$\text{Dioxin concentration in effluent} = \sum_1^{17} (TEQ_i) = \sum_1^{17} (C_i)(TEF_i)$$

3. Quarterly and semiannually are applicable for the influent of the San Jose Creek West and East WRPs, respectively.
4. This shall mean the sum of the p,p' and o,p' isomers.
5. Pesticides are, for purposes of this order, those six constituents referred to in 40 CFR, Part 125.58 (m) (demeton, guthion, malathion, methoxychlor, mirex, and parathion).
6. 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. Fecal coliform testing shall be conducted only if total coliform test result is positive.
7. Total residual chlorine is continuously monitored at Discharge Serial Nos. 002 and 003. A grab sample of total residual chlorine is taken from Discharge Serial Nos. 001, 001A, and 001B from Monday through Friday during normal working days.
 8. If any result of a weekly BOD analysis yields a value greater than the 30-day average limit, the frequency of analysis shall be increased to daily within one week of knowledge of the test result for at least 30 days and until compliance with the 7-day and 30-day average BOD limits is demonstrated; after which the frequency shall revert to weekly.
 9. Weekly, weekly, weekly, monthly, and weekly are applicable for the Discharge Serial No. 001, 001A, 001B, 002, and 003, respectively.
 10. MBAS is Methylene blue active substances and CTAS is cobalt thiocyanate active substances. Reaches of San Gabriel River and San Jose Creek are unlined in several reaches downstream of the points of wastewater discharge and are designated with the beneficial use of groundwater recharge (GWR) in the Basin Plan. Monitoring is required to assess compliance with the Title 22-based limit prescribed to protect underlying groundwater quality with the MUN beneficial use.
 11. See Section VI.4.B.
 12. See Section VI.4.A.
 13. Monthly, monthly, monthly, monthly, and quarterly are applicable for the Discharge Serial No. 001, 001A, 001B, 002, and 003, respectively.
 14. Quarterly, quarterly, quarterly, semiannually, and quarterly are applicable for the Discharge Serial No. 001, 001A, 001B, 002, and 003, respectively.
 15. Quarterly, quarterly, quarterly, quarterly, and semiannually are applicable for the Discharge Serial No. 001, 001A, 001B, 002, and 003, respectively.
 16. If gross α activity exceeds 5 pCi/L in any sample, measurement of Ra^{226} shall be made; if Ra^{226} exceeds 3 pCi/L, measurement of Ra^{228} 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.
 17. Weekly, monthly, weekly, weekly, weekly, monthly, and monthly are applicable for the Receiving Water Stations R2, R-10, R-11, R-12, R-13, C-1, and C-2, respectively.
 18. Monthly, quarterly, monthly, monthly, monthly, quarterly, and monthly are applicable for the Receiving Water Stations R2, R-10, R-11, R-12, R-13, C-1, and C-2, respectively.

19. Monthly, quarterly, monthly, monthly, monthly, monthly, and monthly are applicable for the Receiving Water Stations R2, R-10, R-11, R-12, R-13, C-1, and C-2, respectively.
20. Quarterly, semiannually, quarterly, quarterly, quarterly, semiannually, and semiannually are applicable for the Receiving Water Stations R2, R-10, R-11, R-12, R-13, C-1, and C-2, respectively.
21. Quarterly, semiannually, quarterly, quarterly, quarterly, semiannually, and quarterly are applicable for the Receiving Water Stations R2, R-10, R-11, R-12, R-13, C-1, and C-2, respectively.
22. The discharger has the option of collecting grab temperature samples on a daily basis or using a recorder to take continuous temperature readings.

Ordered by:

Dennis A. Dickerson
Executive Officer

Date: June 10, 2004

/DTSAl/