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

**MONITORING AND REPORTING PROGRAM No. CI-6523
FOR
CITY OF FILLMORE
(Fillmore Wastewater Treatment Plant)
(NPDES NO. CA0059021)**

I. SUBMITTAL OF MONITORING REPORTS

- A. All monthly monitoring reports must be received by the fifteenth day of the second month following each monthly sampling period.
- B. By April 15th of each year, the Discharger shall submit an annual summary report containing a discussion of the previous year's influent, 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 each year at the Regional Board by April 15, and will cover the monitoring period of previous year. In addition, the Discharger shall discuss 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. The Regional Board may request electronic submittal of data at any time.
- C. 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.
- D. 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-6523 to facilitate routing to the appropriate staff and file.
- E. 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

- A. All samples shall be representative of the waste discharged 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, stating 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.
- B. 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.
- C. 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 them 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.
- D. For all bacteriological analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000 MPN/100 mL. 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

- A. 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 in 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 RML.
- B. 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 136, and obtains approval for a higher ML from the Executive Officer, as provided for in E. of this section. If the effluent limitation is lower than all the MLs in Appendix 4, SIP, the Discharger 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.
- C. 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 E, below, the Discharger's laboratory may employ a calibration standard lower than the ML in Appendix 4 of the SIP.
- D. For the purpose of reporting compliance with numerical effluent limitations and receiving water limitations, analytical data shall be reported using the following reporting protocols:
1. Sample results greater than or equal to the ML or RML must be reported "as measured" by the laboratory (i.e., the measured chemical concentration in the sample); or
 2. Sample results less than the ML or 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

3. Sample results less than the laboratory's MDL must be reported as "Not-Detected", or ND.
- E. 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:
1. When the pollutant under consideration is not included in Appendix 4, SIP;
 2. 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 136 (revised as of May 14, 1999);
 3. When a discharger agrees to use an ML that is lower than those listed in Appendix 4;
 4. 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,
 5. 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 Board shall agree on a lowest quantifiable limit and that limit shall 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.
- F. 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.

- G. 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:
1. 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.
 2. For spills that reach receiving waters, the Discharger shall obtain and analyze grab samples for total, fecal coliforms, 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 Ventura County Department of Health Services.
 3. Regional Board notification shall be followed by a written report five working days after verbal/electronic notification.
- H. The Discharger shall inform the Regional Board well in advance of any construction activity that could potentially affect compliance with applicable requirements.

IV. MONITORING PROGRAM

- A. Pursuant to the Code of Federal Regulations [40 CFR §122.41(j) and §122.48(b)], the monitoring program for a Discharger receiving an NPDES permit must be designed to determine compliance with NPDES permit terms and conditions, and demonstrate that State water quality standards are met.
- B. Since compliance monitoring focuses on the effects of point source discharge, it is not designed to assess impacts from other sources of pollution (e.g., nonpoint source run-off, aerial fallout) nor to evaluate the current status of important ecological resources on a regional basis.

The Regional Board is planning to develop and implement a comprehensive monitoring program for each watershed in the region. The goals of a watershed-wide monitoring program may include: compliance with receiving water limits, trends in surface water quality, impacts to beneficial uses, and data needs for modeling contaminants of concern.

The Santa Clara *River* was a focus for Surface Water Ambient Monitoring Program (SWAMP) (Phase I) in FY00/01 and Phase II work in FY01/02. SWAMP is a collaborative effort between the State Board, Regional Board, implement a volunteer based water quality monitoring program to provide scientific data on the water quality of the Santa Clara River Watershed. Much of the Fillmore Monitoring Program acts as Watershed Monitoring for the lower section of the Santa Clara River Watershed. Another goal is to assess the physical and eventually biological health of the system and to address non point sources of pollution such as equestrian activities.

In a letter, dated February 3, 2003, Fillmore was requested to monitor nutrient levels upgradient and downgradient of percolation ponds and quarterly groundwater discharges to the Santa Clara River to characterize the nutrient loading from the percolation ponds into the Santa Clara River.

- C. Substantial changes to the compliance monitoring program may be required to fulfill the goals of a watershed-wide monitoring program, while retaining the compliance monitoring component required to evaluate the potential impacts from the NPDES discharge. Revisions to the Fillmore program will be made under the direction of USEPA and the Regional Board, as necessary, to accomplish this goal, and may include a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, and/or the number or size of samples collected.
- D. Until such time when a regional monitoring program is developed, Fillmore shall implement the following monitoring program.

V. INFLUENT MONITORING REQUIREMENTS

- A. Influent monitoring is required:
 - 1. To determine compliance with the permit conditions for BOD₅20°C and suspended solids removal rates;
 - 2. To assess treatment plant performance; and,

3. As a requirement of the Pollutant Minimization Program.
 - B. Sampling stations shall be established at each point of inflow to the sewage treatment plant and shall be located upstream of any in-plant return flows and/or where representative samples of the influent can be obtained. The date and time of sampling shall be reported with the analytical results.
 - C. Samples for influent BOD₅20°C and suspended solids analysis shall be obtained on the same day that the effluent BOD₅20°C and suspended solids samples are obtained in order to demonstrate percent removal. Similarly, sampling for other constituents shall also be coordinated with effluent sampling.
 - D. The following shall constitute the influent monitoring program:

CTR # ¹	Constituent	Units	Type of Sample	Minimum Frequency of Analysis
	Total waste flow	mgd	recorder	continuous ²
	BOD ₅ 20°C	mg/L	24-hour composite	weekly
	Suspended solids	mg/L	24-hour composite	weekly
8	Mercury	ug/L	24-hour composite	quarterly
6	Copper	µg/L	24-hour composite	quarterly
10	Selenium	µg/L	24-hour composite	quarterly
68	Bis(2-Ethylhexyl)Phthalate	µg/L	24-hour composite	quarterly

VI. EFFLUENT MONITORING REQUIREMENTS

- A. Effluent monitoring is required:
 1. To determine compliance with NPDES permit conditions;
 2. To identify operational problems and aid in improving plant performance;
 3. To provide information on wastewater characteristics and flows for use in interpreting water quality and biological data; and,
 4. To determine Reasonable Potential Analysis for toxic pollutants.

¹ This number corresponds to the compound number found in Table 1 of CTR. It is simply the order in which the 126 priority pollutants were listed in 40 CFR part 131.38(b)(1).

² Where continuous monitoring of total waste flow is required, report total daily flow and peak daily flow on a 24-hour basis.

- B. An effluent sampling station shall be established at the point of discharge from Percolation Pond No. 5 and shall be located downstream of any in-plant return flows and/or storm water runoff and where representative samples of the effluent (after receiving all treatment) can be obtained. Effluent samples may be obtained at a single station provided that such station is representative of the effluent quality at all discharge points. Any changes in sampling station locations must be approved by the Executive Officer.
- C. The following shall constitute the effluent monitoring program:

CTR # ¹	Constituent	Units	Type of Sample	Minimum Frequency of Analysis
	Total waste flow	mgd	recorder	continuous ²
	Turbidity ³	NTU	grab	when discharged ²
	Total residual chlorine	mg/L	grab	when discharged ²
	Total coliform ³	MPN/100 ml	grab	daily
	Fecal coliform ³	MPN/100 ml	grab	daily
	E-coli	MPN/100 ml	grab	daily
	pH	pH units	grab	daily
	Temperature	°F	grab	daily
	Settleable solids	ml/L	grab	weekly
	Oil and grease	mg/L	grab	weekly
	BOD ₅ 20°C ⁴	mg/L	24-hour comp.	weekly
	Suspended solids ⁴	mg/L	24-hour comp.	weekly
	Dissolved oxygen	mg/L	grab	monthly

¹ This number corresponds to the compound number found in Table 1 of CTR. It is simply the order in which the 126 priority pollutants were listed in 40 CFR part 131.38(b)(1).

² Where continuous monitoring of a constituent is required, the following shall be reported:

Total waste flow - Total daily flow and peak daily flow on a 24-hour basis;

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

Total residual chlorine - maximum value within any calendar day.

³ Turbidity and coliform 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 and disinfection procedures.

⁴ If any result of the weekly 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 7 consecutive days and until compliance with the 7-day and 30-day average limits are demonstrated; after which the frequency shall revert to weekly.

CTR # ¹	Constituent	Units	Type of Sample	Minimum Frequency of Analysis
	Total dissolved solids	mg/L	24-hour comp.	monthly
	Sulfate	mg/L	24-hour comp.	monthly
	Chloride	mg/L	24-hour comp.	monthly
	Boron	mg/L	24-hour comp.	monthly
	Fluoride	mg/L	24-hour comp.	monthly
	Nitrate nitrogen	mg/L	24-hour comp.	monthly
	Nitrite nitrogen	mg/L	24-hour comp.	monthly
	Ammonia nitrogen	mg/L	24-hour comp.	monthly
	Organic nitrogen	mg/L	24-hour comp.	monthly
	Total kjeldahl nitrogen (TKN)	mg/L	24-hour comp.	monthly
	Total nitrogen	mg/L	24-hour comp.	monthly
	Orthophosphate-P	mg/L	24-hour comp.	monthly
	Total phosphorus	mg/L	24-hour comp.	monthly
	Surfactants as MBAS ⁵	mg/L	24-hour comp.	monthly
	Surfactants as CTAS ⁵	mg/L	24-hour comp.	monthly
	Total hardness as CaCO ₃	mg/L	24-hour comp.	monthly
	Methyl tertiary butyl ether (MTBE)	µg/L	grab.	semiannually
	Radioactivity ⁶	pCi/L	24-hour comp.	annually
	Chronic toxicity	TUc	24-hour comp.	monthly
	Acute toxicity	% Survival	grab	quarterly
6	Copper	µg/L	24-hour comp.	monthly
8	Mercury	µg/L	24-hour comp.	monthly
10	Selenium	µg/L	24-hour comp.	monthly
14	Cyanide	µg/L	grab	semiannually
13	Zinc	µg/L	24-hour comp.	semiannually
26	Chloroform	µg/L	grab	semiannually
68	Bis(2-ethylhexyl)Phthalate	µg/L	24-hr comp.	monthly
102	Aldrin	µg/L	24-hr comp.	semiannually
103	alpha-BHC	µg/L	24-hr comp.	semiannually
104	beta-BHC	µg/L	24-hr comp.	semiannually
105	gamma-BHC (Lindane)	µg/L	24-hr comp.	semiannually
106	delta-BHC	µg/L	24-hr comp.	semiannually
107	Chlordane	µg/L	24-hr comp.	semiannually
111	Dieldrin	µg/L	24-hr comp.	semiannually

⁵ MBAS is Methylene blue active substances and CTAS is Cobalt thiocyanate active substances.

⁶ If gross α activity exceeds 5 pCi/L in any sample, measurement of Ra²²⁶ shall be made; if Ra²²⁶ exceeds 3 pCi/L, measurement of Ra²²⁸ shall be made. If gross β activity exceeds 50 pCi/L in any sample, an analysis of the sample shall be performed to identify the major constituents present and compliance with Title 17, Section 30269 shall also be demonstrated.

CTR # ¹	Constituent	Units	Type of Sample	Minimum Frequency of Analysis
112	alpha-Endosulfan	µg/L	24-hr comp.	semiannually
113	beta-Endosulfan	µg/L	24-hr comp.	semiannually
114	Endosulfan Sulfate	µg/L	24-hr comp.	semiannually
115	Endrin	µg/L	24-hr comp.	semiannually
116	Endrin Aldehyde	µg/L	24-hr comp.	semiannually
117	Heptachlor	µg/L	24-hr comp.	semiannually
118	Heptachlor Epoxide	µg/L	24-hr comp.	semiannually
126	Toxaphene	µg/L	24-hr comp.	semiannually
	Perchlorate	µg/L	24-hr comp.	semiannually
	1,4-Dioxane	µg/L	24-hr comp.	semiannually
	1,2,3 Trichloropropane	µg/L	grab	semiannually
5b	Hexavalent Chromium	µg/L	grab	semiannually
96	N-Nitrosodimethylamine (NDMA)	µg/L	24-hr comp.	semiannually

Remaining priority pollutants shall be monitored semi-annually.

D. TOXICITY MONITORING REQUIREMENTS

1. Acute Toxicity Effluent Monitoring Program

- a. The Discharger shall conduct acute toxicity tests on 100% effluent grab samples by methods specified in 40 CFR Part 136 which cites USEPA's *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms*, Fifth edition, 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. The method for topsmelt is found in USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine to Freshwater Organisms*, Fifth Edition, October 2002, (EPA/821/R-02-014).

- 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.
- d. If either of the effluent toxicity requirements in Section I.D.1.a.i. or I.D.1.a.ii. 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 the 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.

2. Chronic Toxicity Effluent/Receiving Water Monitoring Program

- a. The Discharger shall conduct critical life stage chronic toxicity tests on composite samples of 100% effluent, or grab for receiving water samples in accordance with USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, 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, Third Edition October 2002, (EPA/821/R-02/014).

- b. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water. Receiving water samples shall be collected in accordance with the conditions specified in this MRP. Receiving water samples shall be collected at mid-depth.
- c. Freshwater Test Species and Methods:

Screening and Monitoring

- i. 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/receiving water. After this screening period, monitoring shall be conducted using the most sensitive species.

Re-screening

- ii. Re-screening is required every 15 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*, Fourth Edition, October 2002 (EPA/821-R-02-013), expressed as:

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

The No Observed 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 the effluent toxicity test result exceeds the trigger in Effluent Limitation I.D.2.c. in Order No. R4-2003-XXXX, or if the receiving water chronic toxicity test result (taken at the receiving water station located immediately downstream of the discharge) exceeds the trigger, 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, the Discharger shall immediately implement the Initial Investigation of the TRE Workplan.
- 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 V.D and VI.C. of this MRP.
- iii. If toxicity is in compliance with the limitations in all of the six additional tests required above, then the Discharger may return to the normal sampling frequency required in Sections V.D and VI.C. 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.

3. Quality Assurance for Toxicity Testing

- i 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).
- ii 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/600/4-91/002 and EPA/600/R-95/136), then the Discharger must re-sample and re-test within 14 days.
- iii 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.

4. 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. 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.

- 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 guidance manuals.
- 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 limitation, the Discharger may resume regular monthly testing.
 - ii. If the results of any of the six accelerated tests exceeds the limitation, 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 the limitation, the Discharger shall initiate a TRE.
 - iv. If implementation of the initial investigation TRE workplan (see item 5, below) indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger shall return to the regular testing frequency.

5. 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 limitation is exceeded, 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)

6. 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.

7. 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 MRP. Test results shall be reported in Toxicity Units (percent survival or TU_c) 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.D.2.d.ii, then those results shall also be submitted with the DMR for the period in which the Investigation occurred.
 - i. The full report shall be submitted on or before the end of the month the DMR is submitted.
 - ii. The full report shall consist of (1) the results; (2) the dates of sample collection, initiation, and completion of each toxicity test; and (3) the acute toxicity average limit or chronic toxicity limit or trigger as described in Order No. R4-03-XXXX.
 - iii. Test results for toxicity tests shall also 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:
 - (a) sample date(s);
 - (b) test initiation date;
 - (c) test species;
 - (d) end point values for each dilution (e.g., number of young, growth rate, percent survival);
 - (e) NOEC value(s) in percent effluent;
 - (f) IC_{15} , IC_{25} , IC_{40} and IC_{50} values in percent effluent;
 - (g) TU_c values $\left(TU_c = \frac{100}{NOEC} \right)$
 - (h) Mean percent mortality (\pm standard deviation) after 96 hours in 100% effluent (if applicable);
 - (i) NOEC and LOEC values for reference toxicant test(s);
 - (j) IC_{25} value for reference toxicant test(s);
 - (k) Any applicable control charts; and,
 - (l) Available water quality measurements for each test (e.g., pH, D.O., temperature, conductivity, hardness, salinity, and 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, by telephone or electronically, this Regional Board of any toxicity exceedance of the limit or trigger within 24 hours of receipt of the results followed by a written report within 14 calendar days of receipt of the results. The verbal or electronic notification shall include the exceedance and the plan the Discharger will pursue. The written report shall 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

VII. WATERSHED-WIDE MONITORING PROGRAM

- A. The goals of the Watershed-wide Monitoring Program for the Santa Clara River Watershed are to:
 1. Determine compliance with receiving water limits;
 2. Monitor trends in surface water quality;
 3. Assure reasonable protection of beneficial uses;
 4. Provide data for modeling contaminants of concern;
 5. Characterize water quality including seasonal variation of surface waters within the watershed;
 6. Assess the health of the biological community; and,
 7. Determine mixing dynamics of effluent and receiving waters in the estuary.
- B. The Discharger shall participate in the implementation of the Watershed-wide Monitoring Program. The watershed-wide monitoring program has been developed and implemented. The Discharger 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 maybe made under the direction of the Regional Board. Fillmore shall continue to participate with the Regional Board, Santa Clara River Enhancement and Management Plan Steering Committee, and other stakeholders, in the development and implementation of a watershed-wide monitoring program.

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Receiving water stations shall be established at the following locations:

<u>Station Number</u>	<u>Description</u>
R-1	Santa Clara River, approximately 300 feet upstream from the discharge point.
R-2	Santa Clara River, approximately 300 feet downstream from the discharge point.

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

CTR # ¹	Constituent	Units	Minimum Frequency of Analysis
	Total waste flow	cfs	monthly
	pH	pH units	monthly
	Temperature	°F	monthly
	Dissolved oxygen	mg/L	monthly
	Turbidity	NTU	monthly
	Total residual chlorine	mg/L	monthly
	Total coliform	MPN/100 ml	monthly
	E-coli	MPN/100 ml	monthly ⁶
	Fecal coliform	MPN/100 ml	monthly ⁶
	Conductivity	µmhos/cm	monthly
	Chemical oxygen demand (COD)	mg/L	monthly
	BOD ₅ 20°C	mg/L	monthly
	Suspended solids	mg/L	monthly
	Settleable solids	mL/L	monthly
	Oil and grease	mg/L	monthly
	Total dissolved solids	mg/L	monthly
	Sulfate	mg/L	monthly
	Chloride	mg/L	monthly
	Boron	mg/L	monthly
	Fluoride	mg/L	monthly
	Nitrate nitrogen	mg/L	monthly
	Nitrite nitrogen	mg/L	monthly

¹ This number corresponds to the compound number found in Table 1 of CTR. It is simply the order in which the 126 priority pollutants were listed in 40 CFR part 131.38(b)(1).

CTR # ¹	Constituent	Units	Minimum Frequency of Analysis
	Ammonia nitrogen	mg/L	monthly
	Organic nitrogen	mg/L	monthly
	Total kjeldahl nitrogen (TKN)	mg/L	monthly
	Total nitrogen	mg/L	monthly
	Orthophosphate-P	mg/L	monthly
	Total phosphorus	mg/L	monthly
	Surfactants as MBAS ⁵	mg/L	monthly
	Surfactants as CTAS ⁵	mg/L	monthly
	Total hardness as CaCO ₃	mg/L	monthly
	Chronic toxicity	TU _c	quarterly
	MTBE	µg/L	annually
6	Copper	µg/L	quarterly
10	Selenium	µg/L	quarterly
13	Zinc	µg/L	semiannually
26	Chloroform	µg/L	semiannually
68	Bis(2-ethylhexyl)Phthalate	µg/L	quarterly
102	Aldrin	µg/L	semiannually
103	alpha-BHC	µg/L	semiannually
104	beta-BHC	µg/L	semiannually
105	gamma-BHC (Lindane)	µg/L	semiannually
106	delta-BHC	µg/L	semiannually
107	Chlordane	µg/L	semiannually
111	Dieldrin	µg/L	semiannually
112	alpha-Endosulfan	µg/L	semiannually
113	beta-Endosulfan	µg/L	semiannually
114	Endosulfan Sulfate	µg/L	semiannually
115	Endrin	µg/L	semiannually
116	Endrin Aldehyde	µg/L	semiannually
117	Heptachlor	µg/L	semiannually
118	Heptachlor Epoxide	µg/L	semiannually
126	Toxaphene	µg/L	semiannually
	Perchlorate	µg/L	annually
	1,4-Dioxane	µg/L	annually
	1,2,3 Trichloropropane	µg/L	annually
5b	Hexavalent Chromium	µg/L	annually
96	N-Nitrosodimethylamine (NDMA)	µg/L	annually

⁵ MBAS is Methylene blue active substances and CTAS is Cobalt thiocyanate active substances.

⁶ Should the value obtained exceed the geometric mean limit for that bacteria specified in section I.A.C.4. of the Order, the Discharger shall collect additional four samples to demonstrate compliance with the limits.

- C. In the event of a spill or bypass of raw or partially-treated sewage from the FWTP into the Santa Clara River system, 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.

- D. 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.

1. 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,
- g. other significant observations in immediate vicinity (i.e. storm drain flows, etc.).

2. The following shall also be noted in the log:

- a. date and time of observation;
- b. weather days conditions (including air temperature);
- c. flow measurement (estimate);
- d. exact sampling location;
- e. users of water in the river (i.e. people washing, swimming and playing in the river, etc.);
- f. non-contact users (i.e. bikers, joggers, etc.); and,
- g. wildlife (i.e. birds, mammals, reptiles, estimated amount of vegetation).

3. A summary of these observations noted in the log shall be submitted with the monitoring reports.

- E. Receiving water samples shall not be taken during or within 48 hours following the flow of rainwater runoff into the Santa Clara River.

- F. Sampling may be rescheduled at receiving water stations if weather and flow conditions would endanger personnel collecting receiving water samples. The monthly monitoring report shall note such occasions.

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

- A. For constituents where both monthly average and daily maximum limits are specified, but where the monitoring frequency is less than four times a month, the following procedure shall apply:
- B. Initially, not later than the first week of the second month after the adoption of this Order, representative samples shall be obtained of each waste discharge at least once per week for at least four consecutive weeks and until compliance with the monthly average limit has been demonstrated. Once compliance has been demonstrated, sampling and analysis shall revert to the frequency specified in the Monitoring and Reporting Program.
- C. For any constituent monitored weekly: 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.
- D. For any constituent monitored monthly: 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 City of Fillmore shall implement the applicable provisions of *Section A: Storm Water Pollution Prevention Plan Requirements* and the *Storm Water Monitoring and Reporting Program* as outlined in Attachment A and Attachment T-2, respectively, for discharges of storm water associated with industrial activities.

XI. SOLIDS HANDLING MONITORING REQUIREMENTS

The monthly monitoring reports shall include the moisture content, weight, and volume of screenings, grit and other solids removed from the wastewater, the location(s) from which these wastes were obtained and the disposal sites to which the waste solids were transported. The Discharger shall implement monitoring required in Attachment (B)

City of Fillmore
Fillmore Wastewater Treatment Plant
Monitoring and Reporting Program No. CI-6523

Order No. R4-2003-0136
CA0059021

Ordered by:

Dennis A. Dickerson
Executive Officer

Date: October 2, 2003
/NJ