ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations, title 40, Part 122.48 requires that all NPDES permits specify monitoring and reporting requirements. California Water Code sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

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I. GENERAL MONITORING PROVISIONS

A. All samples shall be representative of the waste discharge under conditions of peak load. Quarterly effluent analyses shall be performed during the months of January, April, July, and October. Semiannual analyses shall be performed during the months of January and July. Annual analyses shall be performed during the month of July (except for bioassessment monitoring, which will be conducted in the spring/summer; and, algal biomass, which will be conducted concurrently with the bioassessment monitoring). Biennial 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 Water 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, annual, and biennial analyses shall be reported in the third monthly monitoring report following the analysis.

B. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. parts 136.3, 136.4, and 136.5 (revised March 12, 2007); or where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. Laboratories analyzing effluent samples and receiving water samples shall be certified by the California Department of Public Health Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer and must include quality assurance/quality control (QA/QC) data in their reports. A copy of the laboratory certification shall be provided to the Regional Water Board each time a new certification and/or renewal of the certification is obtained from ELAP.

C. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 C.F.R., 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 Water Board. Proper chain of custody procedures must be followed and a copy of that documentation shall be submitted with the monthly report.

D. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to insure accuracy of measurements, or shall insure that both equipment activities will be conducted.

E. For any analyses performed for which no procedure is specified in the USEPA guidelines, or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.

F. Each monitoring report must affirm in writing that "all analyses were conducted at a laboratory certified for such analyses by the Department of Public Health (formerly known as the Department of Health Services) or approved by the Executive Officer and in accordance with current USEPA guideline procedures or as specified in this MRP."

G. 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 Water Board in the *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California,* February 9, 2005, 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.

H. The Discharger shall select the analytical method that provides a ML lower than the permit limitation 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 C.F.R., Part 136, and obtains approval for a higher ML from the Executive Officer, as provided for in Section J below. 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.

I. 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 shall the Discharger use analytical data derived from extrapolation beyond the lowest point of the calibration curve. In accordance with section J, below, the Discharger's laboratory may employ a calibration standard lower than the ML in Appendix 4 of the SIP.

J. In accordance with Section 2.4.3 of the SIP, the Regional Water Board Executive Officer, in consultation with the State Water 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 Water Board agree to include in the permit a test method that is more sensitive than those specified in 40 C.F.R., Part 136 (revised as of March 12, 2007);

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 Water 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.

K. 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 the limitations set forth in this Order.

L. 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 according to the requirements in the WDR section of this Order. This record shall be made available to the Regional Water Board upon request and a spill summary shall be included in the annual summary report.

M. For all bacteriological analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 ml for total and fecal coliform, at a minimum, and 1 to 1000 per 100 ml for enterococcus). The detection methods used for each analysis shall be reported with the results of the analyses.

a. Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 C.F.R., Part 136 (revised March 12, 2007), unless alternate methods have been approved in advance by the United State Environmental Protection Agency (USEPA) pursuant to 40 C.F.R. part 136.

b. 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 Water Board to be appropriate.

N. 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.

The Discharger shall participate in the development of an updated comprehensive Watershed-wide Monitoring Program and shall develop a plan for implementation of this monitoring program for the Malibu Creek Watershed, in conjunction with other interested stakeholders by March 30, 2011. (An implementation plan for the Los Angeles River Watershed Monitoring Program was completed in 2009.) In particular, the recommendations under Section 8.a "Water Quality Monitoring" of the USEPA's Nutrients TMDL for Malibu Creek Watershed shall be considered in developing an updated comprehensive Watershed-wide Monitoring Program. The Regional Water Board may provide some assistance through SWAMP to achieve these goals, but the District and other stakeholders may need to provide financial assistance to hire a facilitator or conduct other activities as necessary. 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 Water Board. The Discharger shall submit quarterly progress reports detailing ongoing efforts towards the implementation of the Watershed-wide Monitoring Program. The first report should be received in the Regional Water Board office by September 30, 2010. The District shall submit a copy of the proposed program to the Regional Water Board by March 30, 2011.

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 Executive Officer of the Regional Water 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.

Until such time when a watershed-wide monitoring program is developed, Las Virgenes Municipal Water District shall implement the monitoring program in the following sections.

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II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
--	INF-001	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 where representative samples of the influent can be obtained. Latitude 34°04'58" North, Longitude 118°42'36" West.
001 002 003	EFF-001	The effluent sampling station shall be located downstream of any inplant return flows and after the final disinfection process, where representative samples of the effluent can be obtained. Under normal conditions, treated effluent is discharged through Discharge Point 001. Latitude 34°04'53" North, Longitude 118°42'23" West.
005	EFF-005	The effluent sampling station shall be located downstream of any inplant return flows and after the final disinfection process, where representative samples of the effluent can be obtained. Latitude 34°09'02" North, Longitude 118°38'55" West.
--	RSW-MC001U	Malibu Creek upstream from Discharge Point 001 at the Salvation Army Camp Bridge (Dorothy Drive); Latitude 34° 04' 52", Longitude 118° 43' 00". (formerly known as station R-1)
--	RSW-MC002D	Malibu Creek at Malibu Canyon Road (County Highway N1); Latitude 34° 04' 38", Longitude 118° 42' 29". (formerly known as station R-2)
--	RSW-MC003D	Malibu Creek at a point below Rindge Dam; Latitude 34° 02' 35", Longitude 118° 41' 35". (formerly known as station R-3)
--	RSW-MC004D	Malibu Creek at Cross Creek Road; Latitude 34° 02' 20", Longitude 118° 41' 22". (formerly known as station R-4)
--	RSW-MC007D	Las Virgenes Creek 100' downstream from Discharge Point 002; Latitude 34° 07' 52", Longitude 118° 42' 32". (formerly known as station R-7)
--	RSW-MC009D	Malibu Creek at a point 100 feet upstream of the confluence of Malibu and Las Virgenes Creeks; Latitude 34° 05' 39", Longitude 118° 43' 38". (formerly known as station R-9)
--	RSW-MC011D	At the center of Malibu Lagoon, near the west shore; Latitude 34° 01' 46", Longitude 118° 41' 15". (formerly known as station R-11)
--	RSW-MC013D	Malibu Creek at a point 100 feet downstream of Discharge Point 003; Latitude 34° 04' 24", Longitude 118° 42' 23". (formerly known as station R-13)

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--	**RSW-MC001F** **RSW-MC002F** **RSW-MC003F**	Three "floating" stations, locations of which will change as needed, for nitrate, nitrite, organic nitrogen, ammonia, phosphate, BOD, pH, dissolved oxygen, temperature, total & fecal coliform monitoring, and visual observations. These stations shall be located at given sites for periods of up to six months and then moved to different locations in order to more fully define water quality in the receiving waters. Two of the stations will be located first between RSW-MC013D and RSW-MC04D in order to better define the shifts in nutrient, coliform and parameters metered or visually observed (temperature, pH, dissolved oxygen, algae coverage, etc.) in Malibu Canyon below the discharge. Another floating station will be located at the site previously designated as "R-6" (Las Virgenes Creek, 100 feet upstream of Discharge Point No. 002; Latitude 34° 07' 57", Longitude 118° 42' 35"). Las Virgenes shall submit a proposal for shifting the station locations, after consultation with the Malibu Creek Watershed Advisory Council or other appropriate stakeholder group, for approval by the Executive Officer every six months.
	RSW-LA001U	Dry Canyon Creek (tributary to Los Angeles River) – at the intersection of Old Topanga Road and Mulholland Hwy, 50 meters upstream of the Discharge Point 005. Latitude 34° 09' 01", Longitude 118° 38' 54" (formerly known as station RL-1)
	RSW-LA002D	Dry Canyon Creek – downstream of the Discharge Point 005, adjacent to the intersection of Valmar Road and Vicassa Drive. Latitude 34° 09' 17", Longitude 118° 38' 51" (formerly known as station RL-2)
	RSW-LA003D	Los Angeles River Metals TMDL Wet Weather Flow Monitoring Station at the County of Los Angeles Department of Public Works' Wardlow Gage Station No. F319-R, in the Los Angeles River, just below Wardlow River Road.

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III. INFLUENT MONITORING REQUIREMENTS

Influent monitoring is required to:

- Determine compliance with NPDES permit conditions.
- Assess treatment plant performance.
- Assess effectiveness of the Pretreatment Program
- As a requirement of the Pollution Minimization

A. Monitoring Location INF-001

a. The Discharger shall monitor influent to the facility at INF-001 as in Table E-2.

b. Samples for influent $BOD_5$20°C and suspended solids analysis shall be obtained on the same day that the effluent $BOD_5$20°C and suspended solids samples are obtained to demonstrate percent removal. Similarly, sampling for other constituents shall also be coordinated with effluent sampling

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	recorder	Continuous[1]	[1]
pH	pH unit	grab	weekly	[3]
Suspended solids	mg/L	24-hour composite	weekly	[3]
BOD_5 20°C	mg/L	24-hour composite	weekly	[3]
Arsenic	µg/L	24-hour composite	quarterly	[3]
Cadmium	µg/L	24-hour composite	quarterly	[3]
Copper		24-hour composite	quarterly	[3]
Lead	µg/L	24-hour composite	quarterly	[3]
Mercury	µg/L	24-hour composite	quarterly	[3]
Selenium	µg/L	24-hour composite	quarterly	[3]
Zinc	µg/L	24-hour composite	quarterly	[3]
Perchlorate	µg/L	24-hour composite	quarterly	[3]
Aldrin	µg/L	24-hour composite	quarterly	[3]
Alpha-BHC	µg/L	24-hour composite	quarterly	[3]
Bis(2-ethylhexyl)phthalate	µg/L	24-hour composite	quarterly	[3]
Total trihalomethanes[4]	µg/L	Calculated sum	semiannually	[3]
Barium	µg/L	24-hour composite	semiannually	[3]
Iron	µg/L	24-hour composite	semiannually	[3]
Ammonia as Nitrogen	mg/L	24-hour composite	quarterly	[3]
Nitrate + Nitrite as Nitrogen	mg/L	24-hour composite	quarterly	[3]
Total Phosphorus	mg/L	24-hour composite	quarterly	
Remaining USEPA Priority Pollutants (excluding asbestos) [2]	µg/L	24-hour composite/ grab for VOCs, cyanide, and Chromium VI	semiannually	[3]

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Footnotes

[1] Total daily flow and instantaneous peak daily flow (24-hr basis). Actual monitored flow shall be reported (not the maximum flow, i.e., design capacity).

[2] Priority pollutants are those constituents referred to in 40 C.F.R. 401.15; a list of these pollutants is provided as Appendix A to 40 C.F.R. 423.

[3] Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or State Water Resources Control Board. For any pollutant whose effluent limitation is lower than all the minimum levels (MLs) specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

[4] Total trihalomethanes is the sum of concentrations of the trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane. This limitation isbased on the Basin Plan WQO incorporation of MCLs by reference.

IV. EFFLUENT MONITORING REQUIREMENTS

Effluent monitoring is required to:

- Determine compliance with NPDES permit conditions and water quality standards.

- Assess plant performance, identify operational problems and improve plant performance.
- Provide information on wastewater characteristics and flows for use in interpreting water quality and biological data; and,
- Determine Reasonable Potential Analysis for toxic pollutants.

A. Monitoring Location EFF-001 and EFF-005

1. The Discharger shall monitor EFF-001 and EFF-005 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Total waste flow	MGD	recorder	continuous[1]	
Turbidity [8]	NTU	recorder	continuous[1]	[6]
Total residual chlorine	mg/L	recorder	Continuous[3]	[6]
Total residual chlorine	mg/L	grab	daily[4]	[6]
Total coliform [8]	CFU/100 mL or MPN/100 mL	grab	daily[4]	[6]
Fecal coliform [8]	CFU/100 mL or MPN/100 mL	grab	daily[4]	[6]
E.coli [7,8]	CFU or MPN/100 mL	grab	weekly[4]	[6]
Temperature[9]	°F	grab/recorder	monthly	[6]
pH[9]	pH units	grab	weekly	[6]
Settleable solids	mL/L	grab	weekly	[6]
Suspended solids	mg/L	24-hour composite	weekly	[6]
BOD_5 20°C	mg/L	24-hour composite	Weekly[5]	[6]
Oil and Grease	mg/L	grab	monthly	[6]
Dissolved oxygen	mg/L	grab	monthly	[6]
Total dissolved solids	mg/L	24-hour composite	monthly	[6]
Chloride	mg/L	24-hour composite	monthly	[6]
Sulfate	mg/L	24-hour composite	monthly	[6]
Boron	mg/L	24-hour composite	monthly	[6]
Fluoride	mg/L	24-hour composite	monthly	[6]
Ammonia nitrogen	mg/L	24-hour composite	monthly	[6]
Nitrate plus nitrate as nitrogen[9]	mg/L	24-hour composite	monthly	[6]
Nitrate nitrogen[9]	mg/L	24-hour composite	monthly	[6]
Nitrite nitrogen[9]	mg/L	24-hour composite	monthly	[6]
Organic nitrogen[9]	mg/L	24-hour composite	monthly	[6]
Total kjeldahl nitrogen (TKN) [9]	mg/L	24-hour composite	monthly	[6]
Total nitrogen[9]	mg/L	24-hour composite	monthly	[6]
Total phosphorus	mg/L	24-hour composite	monthly	[6]
Orthophosphate-P	mg/L	24-hour composite	monthly	[6]
Surfactants (MBAS) [10]	mg/L	24-hour composite	monthly	[6]
Surfactants (CTAS) [10]	mg/L	24-hour composite	monthly	[6]
Total hardness ($CaCO_3$)	mg/L	24-hour composite	monthly	[6]
Salinity	mg/L	24-hour composite	monthly	[6]
Chronic toxicity	TUc	24-hour composite	monthly	[6]
Acute toxicity	% Survival	24-hour composite	quarterly	[6]
Perchlorate	µg/L	24-hour composite	monthly	[6]
1,4-Dioxane	µg/L	24-hour composite	semiannually	[6]

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Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
1,2,3-Trichloropropane	µg/L	grab	semiannually	[6]
Bromodichloromethane	µg/L	grab	monthly	[6]
methyl tert-butyl ether (MTBE) [15]	µg/L	24-hour composite	semiannually	[6]
Barium	µg/L	24-hour composite	semiannually	[6]
Iron	µg/L	24-hour composite	semiannually	[6]
Arsenic	µg/L	24-hour composite	monthly	[6]
Cadmium	µg/L	24-hour composite	monthly	[6]
Chromium III	µg/L	calculated	semiannually	[6]
Chromium VI	µg/L	grab	semiannually	[6]
Total Chromium	µg/L	grab	semiannually	[6]
Copper	µg/L	24-hour composite	monthly	[6]
Lead	µg/L	24-hour composite	monthly	[6]
Mercury	µg/L	24-hour composite	monthly	[6]
Selenium	µg/L	24-hour composite	monthly	[6]
Zinc	µg/L	24-hour composite	monthly	[6]
Total trihalomethanes[15]	µg/L	calculated sum	monthly	[6]
2,3,7,8-TCDD[11]	µg/L	24-hour composite	semiannually	[6]
Aldrin	µg/L	grab	monthly	[6]
Tetrachloroethylene	µg/L	grab	quarterly	[6]
Bis(2-ethylhexyl)phthalate	µg/L	grab.	monthly	[6]
Alpha-BHC (Lindane)	µg/L	24-hour composite	monthly	
Remaining USEPA Priority Pollutants (excluding asbestos)[2]	µg/L	24-hour composite/grab for VOCs, cyanide, and chromium VI	semiannually	[6]
Methoxychlor	µg/L	24-hour composite	semiannually	[6]
Mirex	µg/L	24-hour composite	semiannually	[6]
2,4-D	µg/L	24-hour composite	semiannually	[6]
2,4,5-TP (Silvex)	µg/L	24-hour composite	semiannually	[6]
Diazinon[12]	µg/L	24-hour composite	semiannually	[6]
Pesticide[14]	µg/L	24-hour composite	semiannually	[6]
Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 and uranium)	PCi/L	24-hour composite	semiannually	[13]

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Footnotes:

[1] Where continuous monitoring of a constituent is required, the following shall be reported:
Total waste flow – Total daily flow and peak daily flow (24-hr basis);
Turbidity - Maximum daily value, total amount of time each day the turbidity exceeded five turbidity units, flow-proportioned average daily value.

[2] Priority pollutants are those constituents referred to in 40 C.F.R. 401.15; a list of these pollutants is provided as Appendix A to 40 C.F.R. 423.

[3] Total residual chlorine shall be recorded continuously. The recorded data shall be maintained by the Permittee for at least five years. The Permittee shall extract the maximum daily peak, minimum daily peak, and average daily from the recorded media and shall be made available upon request of the Regional Water Board. The continuous monitoring data are not intended to be used for compliance determination purposes.

[4] Daily grab samples shall be collected at monitoring location EFF-001 and EFF-005 Monday through Friday only, except for holidays. Analytical results of daily grab samples will be used to determine compliance with total residual chlorine effluent limitation. Furthermore, additional monitoring requirements specified in section IV.A.2. shall be followed.

[5] If the result of the weekly BOD analysis yields a value greater than the 30-day average limitation, 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.

[6] Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or State Water Resources Control Board. For any pollutant whose effluent limitation is lower than all the minimum levels (MLs) specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

[7] E. coli testing shall be conducted only if fecal coliform testing is positive. If the fecal coliform analysis results in no detection, a result of less than (<) the reporting limit for fecal coliform will be reported for E. coli.

[8] 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.

[9] Nitrate nitrogen, nitrite nitrogen, ammonia nitrogen, organic nitrogen, total kjeldahl nitrogen, pH, and temperature sampling shall be conducted concurrently.

[10] MBAS is Methylene blue active substances and CTAS is cobalt thiocyanate active substances. Reaches of the Los Angeles River 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 Basin Plan Water Quality Objectives, based on the incorporation by reference of the MCLs contained in Title 22 of the California Code of Regulations, for the protection of the underlying groundwater quality with the MUN beneficial use.

[11] In accordance with the SIP, the Discharger shall conduct effluent monitoring for the seventeen 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD or dioxin) congeners in the effluent and in the receiving water Station RSW-002D, located downstream 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:

$$\text{Dioxin concentration in effluent} = \sum_{1}^{17}(TEQ_i) = \sum_{1}^{17}(C_i)(TEF_i)$$

[12] Diazinon sampling shall be conducted concurrently with the receiving water chronic toxicity sampling.

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[13] Analyze these radiochemicals by the following USEPA methods: method 900.0 for gross alpha and gross beta, method 903.0 or 903.1 for radium-226, method 904.0 for radium-228, method 906.0 for tritium, method 905.0 for strontium-90, and method 908.0 for uranium. Analysis for combined Radium-226 & 228 shall be conducted only if gross alpha results for the same sample exceed 15 pCi/L or beta greater than 50 pCi/L. If Radium-226 & 228 exceeds the stipulated criteria, analyze for Tritium, Strontium-90 and uranium.

[14] Pesticides are, for the purposes of this Order, the six constituents referred to in 40 CFR, Part 125.58(p) (demeton, guthion, malathion, mirex, and parathion).

[15] Total trihalomethanes is the sum of concentrations of the trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane. This limitation isbased on the Basin Plan WQO incorporation of MCLs by reference.

2. Total Residual Chlorine Additional Monitoring

Continuous monitoring of total residual chlorine at EFF-001 and EFF-005 shall serve as an internal trigger for the increased grab sampling at EFF-001 and EFF-005, respectively, if either of the following occurs, except as noted in item c:

a. Total residual chlorine concentration excursions of up to 0.3 mg/L lasting greater than 15 minutes; or

b. Total residual chlorine concentration peaks in excess of 0.3 mg/L lasting greater than 1 minute.

c. Additional grab samples need not be taken if it can be demonstrated that a stoichiometrically appropriate amount of dechlorination chemical has been added to effectively dechlorinate the effluent to 0.1 mg/L or less for peaks in excess of 0.3 mg/L lasting more than 1 minute, but not for more than five minutes.

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V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity

1. Definition of Acute Toxicity

Acute toxicity is a measure of primarily lethal effects that occur over a 96-hour period. Acute toxicity shall be measured in percent survival measured in undiluted (100%) effluent.

a. The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and

b. No single test shall produce less than 70% survival.

2. Acute Toxicity Effluent Monitoring Program

a. **Method.** The Discharger shall conduct acute toxicity tests on 100% effluent and receiving water grab samples by methods specified in 40 C.F.R. 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. **Test Species.** 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), the Discharger may have the option of using the inland silverslide, *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. **Alternate Reporting.** 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 96 hours of the chronic toxicity test as the results of the acute toxicity test, but only if the Discharger uses USEPA's October 2002 protocol (EPA-821-R-02-013) and fathead minnow is used to conduct the chronic toxicity test.

d. **Acute Toxicity Accelerated Monitoring.** If either of the effluent or receiving water toxicity requirements in Section IV.A.1.h.(i) and (ii), and Section V.A.17.c., respectively, of this Order is not met, the Discharger shall conduct six additional tests approximately every two weeks, over a twelve-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 5 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 extent of the acute toxicity of the receiving water upstream of the discharge is greater than the downstream and the results of the effluent acute toxicity test comply with acute toxicity limitation, the accelerated monitoring need not be implemented for the receiving water.

e. **Toxicity Identification Evaluation (TIE).**

   1. 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.

2. 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 the 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

1. Definition of Chronic Toxicity

   Chronic toxicity is a measure of adverse sub-lethal effects in plants, animals, or invertebrates in a long-term test. The effects measured may include lethality or decreases in fertilization, growth, and reproduction.

2. Chronic Toxicity Effluent Monitoring Program

   a. **Test Methods**. The Discharger shall conduct critical life stage chronic toxicity tests on 24-hour composite 100 % effluent samples or receiving water samples in accordance with USEPA'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 USEPA'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. **Frequency**

      1. **Screening and Monitoring**. The Discharger shall conduct the first chronic toxicity test screening for three consecutive months beginning from the date of initial discharge. 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.

      2. **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 uncertainty as to whether the same species is still the most sensitive based on the test results, then the Discharger shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites.

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3. Regular toxicity tests - After the screening period, monitoring shall be conducted monthly using the most sensitive species.

c. **Toxicity Units.** The chronic toxicity of the effluent shall be expressed and reported in Chronic Toxic Units, TUc, where,

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

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.

3. Accelerated Monitoring

If the chronic toxicity of the effluent or the receiving water downstream the discharge exceeds the monthly median trigger of 1.0 TU_c, the Discharger shall conduct six additional tests of the water source that exceeded the 1.0 TUc trigger (effluent or downstream receiving water), approximately every two weeks, over a 12-week period. 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 5 business days of the receipt of the result. However, if the chronic toxicity of the receiving water upstream of the discharge is greater than the downstream and the TUc of the effluent chronic toxicity test is less than or equal to a monthly median of 1 TU_c trigger, then accelerated monitoring need not be implemented for the receiving water.

a. 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 TRE workplan. Otherwise, the Discharger may return to normal sampling.

b. 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 Table 3 and Table 4 of this MRP.

c. If all of the six additional tests required above do not exceed 1 TUc, then the Discharger may return to the normal sampling frequency.

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.

C. Quality Assurance

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1. 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.).

2. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the test methods manual (EPA-821-R-02-012 and/or EPA-821-R-02-013), then the Discharger must re-sample and retest within 14 days.

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

D. Preparation of an Initial Investigation TRE Workplan

The Discharger shall prepare and submit a copy of the Discharger's initial investigation Toxicity Reduction Evaluation (TRE) workplan to the Executive Officer of the Regional Water Board for approval within 90 days of the effective date of this permit. If the Executive Officer does not disapprove the workplan within 60 days, the workplan shall become effective. The Discharger shall use USEPA manual EPA/833B-99/002 (municipal) as guidance, or most current version. At a minimum, the TRE Workplan must contain the provisions in Attachment G. This workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at a minimum:

1. 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.

2. A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the facility; and,

3. If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor). See MRP section V.E.3. for guidance manuals.

E. Steps in Toxicity Reduction Evaluation (TRE) and Toxicity Identification Evaluation (TIE)

1. If results of the implementation of the facility's initial investigation TRE workplan indicate the need to continue the TRE/TIE, the Discharger shall expeditiously develop a more detailed TRE workplan for submittal to the Executive Officer within 15 days of completion of the initial investigation TRE. The detailed workplan shall include, but not be limited to:

   a. Future actions to investigate and identify the cause of toxicity;

b. Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and,

c. A schedule for these actions.

2. The following section summarizes the stepwise approach used in conducting the TRE:

a. Step 1 includes basic data collection.

b. Step 2 evaluates optimization of the treatment system operation, facility housekeeping, and selection and use of in-plant process chemicals.

c. If Steps 1 and 2 are unsuccessful, Step 3 implements a Toxicity Identification Evaluation (TIE) and employment of all reasonable efforts using current available TIE methodologies. The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity.

d. Assuming successful identification or characterization of the toxicant(s), Step 4 evaluates final effluent treatment options.

e. Step 5 evaluates in-plant treatment options.

f. Step 6 consists of confirmation once a toxicity control method has been implemented. Many recommended TRE elements parallel source control, pollution prevention best management practices (BMPs). To prevent duplication of efforts, evidence of compliance with those requirements may be sufficient to comply with TRE requirements. By requiring the first steps of a TRE to be accelerated testing and review of the facility's TRE workplan, 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 indicates there are no longer toxicity violations.

3. The Discharger shall initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. The Discharger shall use the USEPA acute manual, chronic manual, EPA/600/R-96-054 (Phase I), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III), as guidance.

4. If a TRE/TIE is initiated prior to completion of the accelerated testing required in Section V.B.3. of this program, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer.

5. Toxicity tests conducted as part of a TRE/TIE may also be used for compliance, if appropriate.

6. The Regional Water 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 Regional Water Board will be based, in part, on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

   a. If all the results of the six additional tests are in compliance with the chronic toxicity limitation, the Discharger may resume regular monthly testing.

   b. If the results of any of the six accelerated tests exceed the acute toxicity limitation, or the chronic toxicity trigger, then 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.

   c. If the results of two of the six tests exceed the 1 TUc trigger, the Discharger shall initiate a TRE.

   d. If implementation of the initial investigation TRE workplan (see item B.3.b. above) indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger shall return to the regular testing frequency.

F. Ammonia Removal

1. Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from 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 that the toxicity is caused by ammonia and not other toxicants before the Executive Officer would allow for control of pH in the test.

   a. There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.

   b. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.

   c. Conduct 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.

   d. 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.

2. When it has been demonstrated that toxicity is due to ammonia because of increasing test pH, 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 Water Board, and receiving written permission expressing approval from the Executive Officer of the Regional Water Board.

G. Reporting

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 percent survival (% Survival) for acute toxicity or Chronic Toxicity Units (TUc), as required, with the self-monitoring report (SMR) for the month in which the test is conducted. If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, pursuant to Section V.A.2.d. and V.B.3., then those results shall be submitted with the SMR for the period in which the Investigation occurred.

1. The full report shall be received by the Regional Water Board by the 15th day of the third month following sampling.

2. The full report shall consist of (1) the results; (2) the dates of sample collection and initiation of each toxicity test; (3) the toxicity limitation; and, (4) printout of the toxicity program (ToxCalc or CETIS).

3. Test results for toxicity tests also shall be reported according to the appropriate manual chapter on Report Preparation and shall be attached to the SMR. Routine reporting shall include, at a minimum, as applicable, for each test, as appropriate:

   a. sample date(s)

   b. test initiation date

   c. test species

   d. end point value(s) for each dilution (e.g. number of young, growth rate, percent survival)

   e. NOEC values in percent effluent

   f. TUc value(s), where $TU_c = \frac{100}{NOEC}$

   g. Mean percent mortality (+standard deviation) after 96 hours in 100% effluent (if applicable)

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h. NOEC and LOEC (Lowest Observable Effect Concentration) values for reference toxicant test(s)

i. Available water quality measurements for each test (e.g., pH, D.O., temperature, conductivity, hardness, salinity, ammonia).

4. The Discharger shall provide a compliance summary that includes a summary table of toxicity data from at least eleven of the most recent samples.

5. The Discharger shall notify this Regional Water Board immediately of any toxicity trigger exceedance and in writing 14 days after the receipt of the results of the exceedance. 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.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

Not Applicable.

VII. RECLAMATION MONITORING REQUIREMENTS

Not Applicable.

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

A. Monitoring Location

1. The Discharger shall monitor at RSW-MC001U; RSW-MC002D, RSW-MC003D, RSW-MC004D, RSW-MC007D, RSW-MC009D, RSW-MC011D, RSW-MC013D, RSW-MC001F, RSW-MC002F, RSW-MC003F, RSW-LR001U, and RSW-LR002D, as follows:

Table E-7a. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total flow	MGD	grab	monthly	[1]
pH	pH units	grab	monthly	[1]
Temperature	°F	grab	monthly	[1]
Dissolved Oxygen	mg/L	grab	monthly	[1]
Total residual chlorine	mg/L	grab	monthly	[1]
Total coliform	CFU/100mL or MPN/100 mL	grab	monthly	[1]
Fecal coliform	CFU/100mL or MPN/100 mL	grab	monthly	[1]
E. coli	CFU/100mL or	grab	monthly	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
	MPN/100 mL			
Turbidity	NTU	grab	monthly	[1]
BOD_5 20°C	mg/L	grab	monthly	[1]
Total dissolved solids	mg/L	grab	monthly	[1]
Conductivity	µmho/cm	grab	monthly	[1]
Chloride	mg/L	grab	monthly	[1]
Sulfates	mg/L	grab	monthly	[1]
Boron	mg/L	grab	monthly	[1]
Fluoride	mg/L	grab	monthly	[1]
Ammonia nitrogen	mg/L	grab	monthly	[1]
Nitrate plus nitrite as nitrogen	mg/L	grab	monthly	[1]
Nitrate nitrogen	mg/L	grab	monthly	[1]
Nitrite nitrogen	mg/L	grab	monthly	[1]
Organic nitrogen	mg/L	grab	monthly	[1]
Total kjeldahl nitrogen (TKN) [new]	mg/L	grab	monthly	[1]
Total nitrogen	mg/L	grab	monthly	[1]
Total phosphorus	mg/L	grab	monthly	[1]
Orthophosphate-P	mg/L	grab	monthly	[1]
Algal biomass as chlorophyll a [2]	mg/cm^2	grab	monthly	[1]
Surfactants (MBAS)[1]	mg/L	grab	monthly	[1]
Surfactants (CTAS)	mg/L	grab	monthly	[1]
Chemical oxygen demand (COD)	mg/L	grab	monthly	[1]
Oil and grease	mg/L	grab	monthly	[1]
Settleable solids	ml/L	grab	monthly	[1]
Suspended solids	mg/L	grab	monthly	[1]
Total hardness ($CaCO_3$)	mg/L	grab	monthly	[1]
Salinity	mg/L	grab	monthly	[1]
Chronic toxicity	TUc	grab	quarterly	[1]
Acute toxicity	% Survival	grab	semiannually	[1]
Iron	µg/L	grab	semiannually	[1]
Perchlorate	µg/L	grab	semiannually	[1]
1,4-Dioxane	µg/L	grab	semiannually	[1]
1,2,3-Trichloropropane	µg/L	grab	semiannually	[1]
MTBE	µg/L	grab	semiannually	[1]
Arsenic	µg/L	grab	semiannually	[1]
Cadmium	µg/L	grab	monthly	[1]

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Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chromium III	µg/L	Calculated sum	semiannually	[1]
Chromium VI	µg/L	grab	semiannually	[1]
Total chromium	µg/L	grab	semiannually	[1]
Copper	µg/L	grab	monthly	[1]
Lead	µg/L	grab	monthly	[1]
Mercury	µg/L	grab	monthly	[1]
Selenium	µg/L	grab	monthly	[1]
Zinc	µg/L	grab	monthly	[1]
2,3,7,8-TCDD (Dioxin) [4]	µg/L	grab	semiannually	[1]
Aldrin	µg/L	grab	monthly	[1]
Bromodichloromethane	µg/L	grab	monthly	[1]
Total trihalomethanes	µg/L	Calculated sum	semiannually	[1]
Tetrachloroethylene	µg/L	grab	quarterly	[1]
Bis(2-Ethylhexyl) Phthalate	µg/L	grab	monthly	[1]
alpha-BHC (aka Lindane)	µg/L	grab	monthly	[1]
Remaining USEPA Priority Pollutants[3] (except asbestos)	µg/L	grab	semiannually	[1]
Barium	µg/L	grab	semiannually	[1]
Methoxychlor	µg/L	grab	semiannually	[1]
Mirex	µg/L	grab	semiannually	[1]
2,4-D	µg/L	grab	semiannually	[1]
2,4,5-TP (Silvex)	µg/L	grab	semiannually	[1]
Diazinon[5]	µg/L	grab	semiannually	[1]

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Footnotes:

[1] Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or State Water Resources Control Board. For any pollutant whose effluent limitation is lower than all the minimum levels (MLs) specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

[2] Algal biomass or Chlorophyll *a* samples shall be collected by obtaining scrapings from the substrate. This will be a measure of benthic algae, rather than algae in the water column. Percent cover shall also be reported.

[3] Priority pollutants are those constituents referred to in 40 C.F.R. 401.15; a list of these pollutants is provided as Appendix A to 40 C.F.R. 423.

[4] In accordance with the SIP, the Discharger shall conduct effluent monitoring for the seventeen 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD or dioxin) congeners in the effluent and in the receiving water Station RSW-002D, located downstream 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:

$$\text{Dioxin concentration in effluent} = \sum_{1}^{17}(TEQ_i) = \sum_{1}^{17}(C_i)(TEF_i)$$

[5] Diazinon sampling shall be conducted concurrently with the receiving water chronic toxicity sampling.

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2. In the event of a spill or bypass of raw or partially treated sewage from the Tapia Water Reclamation Facility into Malibu Creek or the Los Angeles River, 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.

3. 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,

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

   B. 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 in cubic feet per second, cfs);

      d. exact sampling location;

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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).

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

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4. Tapia WRF shall monitor the receiving water downstream of the discharge, during any day that the filters are bypassed, for BOD, suspended solids, settleable solids, and oil and grease, until it is demonstrated that the filter "bypass" has not caused an adverse impact on the receiving water. Tapia WRF shall submit a written report to the Regional Water Board, according to the corresponding monthly self monitoring report schedule. The report shall include, the results from the daily receiving water monitoring. However, if the results are not available in time to be submitted with the corresponding monthly report, then, the results shall be submitted to the Regional Water Board as soon as the results become available.

5. Receiving water samples shall not be taken during or within 48 hours following the flow of rainwater runoff into Malibu Creek or the Los Angeles River.

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

7. The Discharger shall report the maximum daily flow in the Los Angeles River, downstream of the discharge, at the LA County Department of Public Works' Gage Station No. F319R Los Angeles River below Wardlow. For the purposes of this Order, this station is also known as RSW-LA003D. This information is necessary to determine the wet-weather condition of the river, as defined in the Los Angeles River Metals TMDL. If the gauging station is not operational, an estimated maximum daily flow may be submitted.

8.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	cfs	recorder	daily	N/A

B. Monitoring Location RGW-001 – Not applicable.

Table E-7b. Receiving Ground Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
N/A	--	--	--	--

IX. OTHER MONITORING REQUIREMENTS

A. Special Study – Constituents of Emerging Concern in Effluent

CEC Special Study Requirements

1. The Discharger shall initiate an investigation of CECs by conducting a special study. Specifically, within 6 months of the effective date of this Order, the Discharger shall develop a CEC Special Study Work Plan (Work Plan) and submit for approval by the Executive Officer of this Regional Water Board. Immediately upon approval of the Work Plan, the Discharger shall fully implement the Special Study.

   This Special Study Work Plan shall include, but not limited to, the following:

   iv. Identification of CECs to be monitored in the effluent, sample type (e.g. 24-hour composite), sampling frequency, and sampling methodology. Table E-8 identifies the minimum parameters to be monitored.

Table E-8 – Effluent Monitoring of CECs

Parameter	Units	Sample Type	Minimum Sampling Frequency	Analytical Test Method and (Minimum Level, units)
17α-Ethinyl Estradiol	ng/L	To be proposed	Annually	To be proposed
17β-Estradiol	ng/L	To be proposed	Annually	To be proposed
Estrone	ng/L	To be proposed	Annually	To be proposed
Bisphenol A	ng/L	To be proposed	Annually	To be proposed
Nonylphenol and nonylphenol polyethoxylates	ng/L	To be proposed	Annually	To be proposed
Octylphenol and octylphenol polyethoxylates	ng/L	To be proposed	Annually	To be proposed
Polybrominated diphenyl ethers	ng/L	To be proposed	Annually	To be proposed
Acetaminophen	ng/L	To be proposed	Annually	To be proposed
Amoxicillin	ng/L	To be proposed	Annually	To be proposed
Azithromycin	ng/L	To be proposed	Annually	To be proposed
Carbamazepine	ng/L	To be proposed	Annually	To be proposed
Caffeine	ng/L	To be proposed	Annually	To be proposed
Ciprofloxacin	ng/L	To be proposed	Annually	To be proposed
DEET	ng/L	To be proposed	Annually	To be proposed
Dilantin	ng/L	To be proposed	Annually	To be proposed
Gemfibrozil	ng/L	To be proposed	Annually	To be proposed
Ibuprofen	ng/L	To be proposed	Annually	To be proposed
Lipitor	ng/L	To be proposed	Annually	To be proposed

Parameter	Units	Sample Type	Minimum Sampling Frequency	Analytical Test Method and (Minimum Level, units)
Primidone	ng/L	To be proposed	Annually	To be proposed
Sulfamethoxazole	ng/L	To be proposed	Annually	To be proposed
Trimethoprim	ng/L	To be proposed	Annually	To be proposed
Salicylic acid	ng/L	To be proposed	Annually	To be proposed
TCEP	ng/L	To be proposed	Annually	To be proposed
Triclosan	ng/L	To be proposed	Annually	To be proposed
Parameter	**Units**	**Sample Type**	**Minimum Sampling Frequency**	**Analytical Test Method and (Minimum Level, units)**
17α-Ethinyl Estradiol	ng/L	To be proposed	Annually	To be proposed
17β-Estradiol	ng/L	To be proposed	Annually	To be proposed

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Once the SCCWRP's recommended list of CEC monitoring in ambient waters, including ocean waters, is finalized, the above list of minimum parameters to be monitored by the Discharger and the sampling frequency may be re-evaluated and modified by the Executive Officer. At such time, upon request by the Executive Officer, the Discharger shall monitor the requested CEC parameters at the specified frequency. In the Special Study Work Plan, the Discharger may also propose, for consideration and approval by the Executive Officer, surrogate or indicator CECs that may contribute towards a better understanding of CECs in its effluent.

Sample Method – The Discharger shall propose in the Work Plan the appropriate sample method for each type of constituent.

Sampling Period – At minimum, the Discharger shall monitor the specified CECs once per year. The Work Plan shall propose the appropriate sampling month or quarter for each year, consistent with the goals of the analyses. The rationale for selecting the particular sampling month or quarter shall be explained in the Work Plan.

Analytical Test Methodology – The Discharger shall review and consider all available analytical test methodologies, including but not limited to those listed in USEPA Methods 1694 and 1698, and methodologies approved or utilized by U.S. Geologic Survey, California Department of Public Health, and other federal or state agencies. Based on its review, the Discharger shall propose the most sensitive analytical methodology available.

v. Characterization of existing CEC data (data collected previous to Special Study). The Discharger shall propose a characterization of all existing CEC data (associated with its effluent or receiving water) that have been

collected for various purposes in the past. At minimum, the characterization shall include:

- an identification of all CECs monitored to date (outside of this Special Study);
- monitoring duration, frequency, and date(s) (for example, from 2000-present, annually);
- analytical methodologies employed;
- RL, MLs and MDLs achieved for each methodology used; and
- Temporal and seasonal trend analyses (using both statistical and graphical demonstration) of CECs, over time and by season.

vi. Evaluation of CEC data collected as part of this Special Study. The Discharger shall propose an evaluation of CEC data (associated with its effluent) to be collected as part of this special study. At minimum, the characterization shall include:

- an identification of CECs that have been monitored;
- monitoring duration, frequency, and date(s);
- RL, MLs and MDLs achieved for each methodology used;
- a brief update on any improvements (or change) in the analytical methodologies and associated RL, MLs and MDLs achieved for each methodology used; and
- temporal/seasonal trend analyses (using both statistical and graphical demonstration) of cumulative CEC data collected as part of this special study.

2. Reporting – By April 15th of each year (starting April 15, 2012), the Discharger shall submit to the Executive Officer of this Regional Water Board, an annual report summarizing the monitoring results from the previous year. For example, the annual report due April 15, 2012 shall include CEC monitoring data from January to December 2011. Each annual report shall include a compilation of effluent monitoring data of CECs listed in the approved Work Plan, MLs, sample type, analytical methodology used, sampling date/time, QA/QC information, and an evaluation of cumulative CEC data collected to date as part of this special study (see above for further details on CEC data evaluation). In addition, the first annual report due April 15, 2012 shall include a characterization of existing CEC data- i.e. all data collected outside of this special study (see above for further details on existing CEC data characterization).

B. Watershed Monitoring

The goals of the Watershed-wide Monitoring Program for the Malibu Creek and Los Angeles River Watersheds are to:

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- Determine compliance with receiving water limits;
- Monitor trends in surface water quality;
- Ensure protection of beneficial uses;
- Provide data for modeling contaminants of concern;
- Characterize water quality including seasonal variation of surface waters within the watershed;
- Assess the health of the biological community; and
- Determine mixing dynamics of effluent and receiving waters in the estuary.

1. To achieve the goals of the Watershed-wide Monitoring Program, the Discharger shall participate in the implementation of the Watershed-wide Monitoring Program. The LVMWD'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 Water Board. The LVMWD has participated with stakeholders in the Malibu Creek and Los Angeles River Watersheds, to develop a watershed-wide monitoring program. The Discharger shall implement the watershed-wide monitoring program and shall submit quarterly progress reports detailing ongoing efforts towards the implementation of the Watershed-wide Monitoring Program. The first report should be received in the Regional Water Board office by October 15, 2010.

2. In coordination with the Los Angeles County Public Works and other interested stakeholders in the Malibu Creek and Los Angeles River Watersheds, the Discharger shall conduct instream bioassessment monitoring once a year, during the spring/summer period (unless an alternate sampling period is approved by the Executive Officer). 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 RSW-MC001U; RSW- MC 002D, and RSW-MC003D, RSW-MC004D, RSW-MC007D, RSW-MC009D, RSW- MC011D, RSW-MC013D for Malibu Creek and RSW-LR001U and RSW-LR002D for Los Angeles River.

      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

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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 Water 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) or more recently established sampling protocols, such as used by the Surface Water Ambient Monitoring Program (SWAMP). 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 Water 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 may be arranged through the California Department of Fish and Game's Aquatic Bioassessment Laboratory located in Rancho Cordova, California.

3. The Executive Officer of the Regional Water Board may modify the Monitoring and Reporting Program to accommodate the watershed-wide monitoring.

B. Tertiary Filter Treatment Bypasses

A. During any day that the filters are bypassed (also see Section VIII.2 of this MRP), LVMWD shall monitor the effluent for BOD, suspended solids, settleable solids, coliform, and oil and grease, on a daily basis, until it is demonstrated

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that the filter "bypass" has not caused an adverse impact on the receiving water.

B. LVMWD shall maintain a chronological log of tertiary filter treatment process bypasses, to including the following:

1. Date and time of bypass start and end;
2. Total duration time; and,
3. Estimated total volume bypassed.

C. LVMWD shall notify Regional Water Board staff by telephone within 24 hours of the filter bypass event.

D. LVMWD shall submit a written report to the Regional Water 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 B.1 above, shall be submitted to the Regional Water Board in the Discharger's self-monitoring report as soon as the results become available.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

2. If there is no discharge during any reporting period, the report shall so state.

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. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web

site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order (other than for process/operational control, start up, research, or equipment testing), the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

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

Table E-9. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	**Permit effective date**	**All**	**Submit with monthly SMR**
Daily	**Permit effective date**	**(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.**	**Submit with monthly SMR**
Weekly	**Sunday following permit effective date or on permit effective date if on a Sunday**	**Sunday through Saturday**	**Submit with monthly SMR**
Monthly	**First day of calendar month following permit effective date or on permit effective date if that date is first day of the month.**	**1st day of calendar month through last day of calendar month**	**By the 15th day of the third month after the month of sampling**
Quarterly	**Closest of January 1, April 1, July 1, or October 1 following permit effective date.**	**January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31**	**June15 September 15 December 15 March 15**
Semiannually	**Closest of January 1 or July 1 following permit effective date.**	**January 1 through June 30 July 1 through December 31**	**September 15 March 15**
Annually	**January 1 following permit effective date**	**January 1 through December 31**	**April 15**
Biennially	**August 1, 2010**	**August 1, every other year**	**November 15**

4. Reporting Protocols. The Discharger shall report with each sample result the applicable *Reporting Level* (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

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The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (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.

5. The Discharger shall submit SMRs in accordance with the following requirements:

a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

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(Reference the reports to Compliance File No. **4760** to facilitate routing to the appropriate staff and file.)

California Regional Water Quality Control Board
320 West 4th Street, Suite 200
Los Angeles, CA 90013
Attention: Information Technology Unit

C. Discharge Monitoring Reports (DMRs)

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

STANDARD MAIL	FEDEX/UPS/ OTHER PRIVATE CARRIERS
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of EPA Form 3320-1.

D. Other Reports

1. Annual Summary Report

By April 15 of each year, the Discharger shall submit an annual report containing a discussion of the previous year's influent/effluent analytical results and receiving water bacterial monitoring data. The annual report shall contain graphical and tabular summaries of the monitoring analytical data. The annual report shall also contain an overview of any plans for upgrades to the treatment plant's collection system, the treatment processes, or the outfall system. The Discharger shall submit a hard copy annual report to the Regional Water Board in accordance with the requirements described in subsection B.5 above.

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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.

2. The Discharger shall submit to the Regional Water Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect this waste discharge, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly.

3. The Regional Water Board requires the Discharger to file with the Regional Water Board, within 90 days after the effective date of this Order, a technical report on preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. The technical report should:

   a. Identify the possible sources of accidental loss, untreated waste bypass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks, and pipes should be considered.

   b. Evaluate the effectiveness of present facilities and procedures and state when they become operational.

   c. Describe facilities and procedures needed for effective preventive and contingency plans.

   d. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule contingent interim and final dates when they will be constructed, implemented, or operational.