

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2009-_____

FOR
CITY OF FRESNO
SURFACE WATER TREATMENT PLANT
FRESNO COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to California Water Code (CWC) section 13267.

The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts, or the Executive Officer issues, a revised MRP. Changes to sample location shall be established with concurrence of Central Valley Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. All analyses shall be performed in accordance with **Standard Provisions and Reporting Requirements for Waste Discharge Requirements**, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as pH) may be used provided that the operator is trained in the proper use of the instrument and each instrument is serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions.

Analytical procedures shall comply with the methods and holding times specified in the following: *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA); *Test Methods for Evaluating Solid Waste* (EPA); *Methods for Chemical Analysis of Water and Wastes* (EPA); *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA); *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125). Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health's Environmental Laboratory Accreditation Program. The Discharger may propose alternative methods for approval by the Executive Officer.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration or parameter after at least 12 months of monitoring, the Discharger may request this MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

A glossary of terms used within this MRP is included on [page 6](#).

RAW WATER MONITORING

The Discharger shall monitor the quantity and quality of the raw water from the Enterprise Canal. The Discharger shall establish permanent monitoring stations within the SWTP as needed to ensure that all samples are representative of these streams. At a minimum, the Discharger shall monitor the raw water as follows:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Weekly	pH	pH Units	Grab
Weekly	EC	µmhos/cm	Grab

SUPERNATANT WASTEWATER MONITORING

Samples of the supernatant return water shall be collected just prior to the return flow entering the treatment train. Wastewater monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Weekly	pH	pH Units	Grab
Weekly	EC	µmhos/cm	Grab
Quarterly	Dissolved metals ^{1,2}	µg/L	Grab
Quarterly	General minerals	mg/L	Grab
Quarterly	Bromoform	µg/L	Grab
Quarterly	Bromodichloromethane	µg/L	Grab
Quarterly	Chloroform	µg/L	Grab
Quarterly	Dibromochloromethane	µg/L	Grab
Quarterly	Total Trihalomethanes	µg/L	Grab

1. Samples shall be filtered through a 0.45-micron filter prior to preservation

2. At a minimum, the following metals shall be included: aluminum, arsenic, cadmium, chromium, copper, iron, lead, magnesium, manganese, mercury, molybdenum, nickel, silver, thallium, vanadium, and zinc.

POND MONITORING

Permanent markers (e.g., staff gages) shall be placed in all ponds. The markers shall have calibrations indicating the water level at design capacity and available operational freeboard. Pond monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Weekly	Freeboard	Feet ¹	Grab

¹. To nearest tenth of a foot

POND LINER INSPECTION

The condition of the liner in each settling/evaporation pond shall be inspected following the excavation and removal of the settled sludge. The location of any punctures, tears, or other damage shall be recorded along with specific recommendations for repairs as needed to prevent pond leakage.

SLUDGE DISPOSAL MONITORING

The Discharger shall maintain a written log of all sludge disposal activities. For each discrete quantity of sludge removed from the facility, the log shall contain the following information:

Date.

Name and signature of the recorder of entry.

Volume or weight of sludge removed.

Name and address of permitted disposal facility.

Analytical results for any sludge monitoring conducted at the request of the disposal facility.

Transport method and name of transporter.

REPORTING

All monitoring results shall be reported in an **Annual Monitoring Report**, due by the **first day of the second month following the calendar year (i.e., 1 February)**.

A transmittal letter shall accompany each monitoring report. The transmittal letter shall discuss any violations that occurred during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory.

The following information is to be included on all monitoring and annual reports, as well as any report transmittal letters, submitted to the Central Valley Water Board:

Discharger name
Facility Name
MRP Number
Contact Information (telephone number and email)

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly whether the Discharger complies with waste discharge requirements.

In addition to the details specified in Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the Reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

Laboratory analysis reports do not need to be included in the monitoring reports; however, the laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3.

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3. Monitoring data or discussions submitted concerning WWTP performance must also be signed and certified by the chief plant operator. If the chief plant operator is not in direct line of supervision of the laboratory function for a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

All monitoring reports that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1.

A. All Annual Monitoring Reports, shall include the following:

1. The results of all water, wastewater, pond, and sludge disposal monitoring performed during the year, including all daily, monthly, and quarterly sampling data. The data should be presented in tabular and/or graphical form with data arranged to confirm compliance with the WDRs.
2. A detailed listing of any violations that occurred within the quarter and measures to correct or prevent further occurrences.
3. If requested by staff, copies of laboratory analytical report(s); and a calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program.

4. The names, certificate grades, and general responsibilities of all persons in charge of the treatment plant.
5. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).
6. Volume of raw water treated during the previous year.
7. A detailed description of any operational changes, new, or proposed systems for sludge handling or dewatering.
8. A summary of pond liner inspection reports and documentation of all liner repairs recommended and completed.
9. A summary of sludge disposal practices for the year, including volume (in cubic yards or tons) removed for the year, and tabulation of all sludge disposal monitoring data.
10. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.
11. A forecast of influent flows for the coming year, as described in Standard Provision E.4.

Ordered by: _____

PAMELA C. CREEDON, Executive Officer

(Date)

KC/DKP: 10/27/09

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand		
CBOD	Carbonaceous BOD		
DO	Dissolved oxygen		
EC	Electrical conductivity at 25° C		
FDS	Fixed dissolved solids		
NTU	Nephelometric turbidity unit		
TKN	Total Kjeldahl nitrogen		
TDS	Total dissolved solids		
TSS	Total suspended solids		
Continuous	The specified parameter shall be measured by a meter continuously.		
24-Hour Composite	Samples shall be a flow-proportioned composite consisting of at least eight aliquots.		
Daily	Samples shall be collected every day.		
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.		
Weekly	Samples shall be collected at least once per week.		
Twice Monthly	Samples shall be collected at least twice per month during non-consecutive weeks.		
Monthly	Samples shall be collected at least once per month.		
Bimonthly	Samples shall be collected at least once every two months (i.e., six times per year) during non-consecutive months.		
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise specified or approved, samples shall be collected in January, April, July, and October.		
Semiannually	Samples shall be collected at least once every six months (i.e., two times per year). Unless otherwise specified or approved, samples shall be collected in April and October.		
Annually	Samples shall be collected at least once per year. Unless otherwise specified or approved, samples shall be collected in October.		
mg/L	Milligrams per liter		
mL/L	Milliliters [of solids] per liter		
µg/L	Micrograms per liter		
µmhos/cm	Micromhos per centimeter		
mgd	Million gallons per day		
MPN/100 mL	Most probable number [of organisms] per 100 milliliters		
General Minerals	Analysis for General Minerals shall include at least the following:		
	Alkalinity	Chloride	Phosphorous
	Bicarbonate	Hardness	Sodium
	Calcium	Magnesium	Sulfate
	Carbonate	Potassium	TDS
	General Minerals analyses shall be accompanied by documentation of cation/anion balance.		