CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISED MONITORING AND REPORTING PROGRAM NO. 5-00-088

FOR
CALIFORNIA DEPARTMENT OF CORRECTIONS
PRESTON YOUTH CORRECTIONAL FACILITY
CALIFORNIA DEPARTMENT OF FORESTRY FIRE TRAINING ACADEMY
MULE CREEK STATE PRISON
AMADOR COUNTY

This Monitoring and Reporting Program (MRP) presents requirements for (a) monitoring of the treatment, storage, and disposal processes for the Mule Creek State Prison wastewater treatment plant, (b) monitoring the operation and maintenance of the wastewater conveyance facilities for the Preston Youth Correctional Facility, and for (c) monitoring the operation and maintenance of the wastewater conveyance facilities for the California Department of Forestry. This MRP is issued pursuant to California Water Code Section 13267. The Dischargers shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

Section 13267 of the California Water Code states, in part:

> *"In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."*

Section 13268 of the California Water Code states, in part:

> *"(a) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of Section 13399.2, or falsifying and information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b).*
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> *(b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs."*

The Dischargers own and operate the facilities that are subject to the WDRs cited herein (Order No. 5-00-088). The reports are necessary to ensure that the California Department of

Corrections (CDC), Preston Youth Correctional Facility, and California Department of Forestry comply with the WDRs.

Pursuant to Section 13267 of the California Water Code, the Dischargers shall implement this MRP and shall submit the monitoring reports described herein.

Regional Water Board staff shall approve specific sampling locations. All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each sample shall be recorded on the sample chain of custody form.

Field test instruments (such as those used to test dissolved oxygen, pH, and electrical conductivity) may be used provided that:

1. The user is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

COLLECTION SYSTEM & PUMP STATION MONITORING

The Preston Youth Correctional Facility (PYCF) shall monitor the collection system and pump stations on its property on a monthly basis for pipe anomalies, cracks, overflows, or leaks. A copy of all monitoring inspections shall be submitted monthly to the Regional Water Board.

WASTEWATER TRANSMISSION LINE

The California Department of Forestry (CDF) shall monitor the collection system and wastewater pipeline on its property on a monthly basis for pipe anomalies, cracks, overflows, or leaks. A copy of all monitoring inspections shall be submitted monthly to the Regional Water Board.

INFLUENT MONITORING

The CDC shall collect influent wastewater samples at the same frequency and at approximately the same time as effluent samples and should be representative of the influent at the headworks prior to treatment. Influent monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow[1]	gpd	Metered	Continuous	Monthly
BOD_5[2]	mg/l	Grab	Monthly	Monthly
Total VOCs[3]	ug/l	Grab	Monthly	Monthly

[1] Influent flow meter measurements shall begin starting 1 April 2008
[2] 5-day biochemical oxygen demand
[3] EPA Method 8260 or equivalent

EFFLUENT MONITORING

CDC shall collect effluent samples downstream from the last connection through which wastes can be admitted to the storage reservoir and/or spray disposal fields, but prior to these facilities. Effluent samples shall be representative of the volume and nature of the discharge. The time, date, and location of each sample shall be recorded on the sample chain of custody. At a minimum, effluent monitoring shall consist of the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flows[1]	gpd	Metered	Continuous	Monthly
Total Coliform Organisms[2]	MPN[4]/100 ml	Grab	Weekly	Monthly
BOD[3]	mg/l	Grab	Weekly	Monthly
pH	Standard Units	Grab	Weekly	Monthly
Total Dissolved Solids	mg/l	Grab	Weekly	Monthly
Nitrate as Nitrogen	mg/l	Grab	Weekly	Monthly
Total Kjeldahl Nitrogen	mg/l	Grab	Monthly	Monthly
Total Suspended Solids	mg/l	Grab	Monthly	Monthly
Total Settleable Solids	ml/l	Grab	Monthly	Monthly
Sodium	mg/l	Grab	Monthly	Monthly
Chloride	mg/l	Grab	Monthly	Monthly
Total VOCs[5]	ug/l	Grab	Monthly	Monthly
Standard Minerals [6]	mg/l	Grab	Annually	Annually

[1] Total flows sent to the effluent storage reservoir and spray disposal fields (separate flows for each)
[2] Using a minimum of 15 tubes or three dilutions
[3] 5-day Biochemical Oxygen Demand
[4] Most Probable Number
[5] EPA Method 8260 or equivalent
[6] Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness. Include verification that the analysis is complete (i.e., cation/anion balance).

EFFLUENT STORAGE RESERVOIR MONITORING

CDC shall collect samples from an established sampling station located in an area that will provide a sample representative of the wastewater in the effluent storage reservoir. Freeboard

shall be measured vertically from the surface of the pond water to the lowest elevation of the surrounding berm and shall be measured to the nearest 0.1 feet. Monitoring of the storage reservoir shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Dissolved Oxygen[1]	mg/L	Grab	Weekly	Monthly
pH	Standard units	Grab	Weekly	Monthly
Freeboard	0.1 feet	Measurement	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Levee condition[2]	--	Observation	Weekly	Monthly

[1] Samples shall be collected at a depth of one foot, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.

[2] Containment levees shall be observed for signs of seepage or surfacing water along the exterior toe of the levees. If surfacing water is found, then a sample shall be collected and tested for total coliform organisms, chloride, MBAS, and total dissolved solids.

SPRAY DISPOSAL AREA MONITORING

CDC shall monitor the spray disposal areas on an **hourly basis** when the spray disposal areas are used, and the results shall be included in the monthly monitoring report. Evidence of erosion, field saturation, irrigation runoff, or the presence of nuisance conditions shall be noted in the report. Effluent monitoring results shall be used in calculations to ascertain loading rates at the spray disposal areas. Monitoring of the spray disposal areas shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flows to each sprayfield[1]	gal/day	metered	Continuous	Monthly
Rainfall[3]	inches	Observation	Daily	Monthly
Acreage Applied [1]	acres	Calculated	Daily	Monthly
Water Application Rate [2]	gal/acre/day	Calculated	Daily	Monthly
Total Nitrogen Loading Rate [2]	lbs/ac/month	Calculated	Monthly	Monthly
Total Dissolved Solids Loading Rate [2]	lbs/ac/month	Calculated	Monthly	Monthly

[1] Specific disposal fields shall be identified.

[2] Calculated average for each disposal field area.

[3] Rainfall data to be collected from the weather station that is nearest to the disposal fields. Alternatively, a rain gauge may be installed at the site.

At least **once per week** when the spray disposal areas are being used, the entire sprayfield area shall be inspected to identify any equipment malfunction or other circumstances that might allow irrigation runoff to leave the irrigation area and/or create ponding conditions that violate the Waste Discharge Requirements. A daily log of each inspection shall be kept at the facility and be submitted with the monthly monitoring reports. Photocopies of entries into an

operator's field log are acceptable. If the spray disposal areas are not used, then the monthly monitoring reports shall state so.

GROUNDWATER MONITORING

CDC shall conduct the following groundwater monitoring program. This groundwater sampling and analysis program is effective with the 2ND quarter 2007 and applies to all groundwater monitoring wells installed at the site. Prior to sampling, groundwater elevations shall be measured and the wells shall be purged at least three well volumes until pH and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Water table elevations shall be calculated and used to determine groundwater gradient and direction of flow. Samples shall be collected using approved EPA methods. Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling and Reporting Frequency
Groundwater Elevation[1]	0.01 Feet	Measurement	Quarterly
Depth to Groundwater	0.01 Feet	Calculated	Quarterly
Gradient	Feet/Feet	Calculated	Quarterly
Gradient Direction	Degrees	Calculated	Quarterly
Total Coliform Organisms[2]	MPN/100 ml	Grab	Quarterly
pH	S.U.	Grab	Quarterly
Total Dissolved Solids	mg/l	Grab	Quarterly
Nitrate as Nitrogen	mg/l	Grab	Quarterly
Total Kjeldahl Nitrogen	mg/l	Grab	Quarterly
Volatile Organic Compounds[3,4,5]	ug/l	Grab	Quarterly
Total Trihalomethanes[6]	ug/l	Grab	Quarterly
Standard Minerals[7]	mg/l	Grab	Quarterly

1 Groundwater elevation shall be based on depth-to-water using a surveyed measuring point elevation on the well and a surveyed reference elevation.
2 Using a minimum of 15 tubes or three dilutions
3 EPA Method 8260 or equivalent. Report all peaks, along with any explanation provided by the laboratory
4 VOC samples only need to be collected at monitoring wells R-2, S-1, and S-7.
5 Monitoring Wells S-2 and S-6 shall be sampled quarterly for VOCs through the 3rd quarter 2008.
6 Samples collected for Trihalomethanes analysis shall be collected from all groundwater monitoring wells.
7 Standard Minerals shall include, at a minimum, the following elements and compounds: boron, calcium, chloride, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness. Verification that the analysis is complete (i.e., cation/anion balance).

SURFACE WATER MONITORING

CDC shall conduct the following surface water monitoring program. The surface water monitoring program shall apply only when water is visibly present in the surface watercourses or stormwater channels surrounding the prison. If water is not present at any of the sampling points, then the monthly monitoring report shall state so. The Discharger shall establish six

sampling stations (as shown on the Attachment to this revised MRP): Sampling station S-1 shall be 50 feet upstream of where Mule Creek enters Mule Creek State Prison property, S-2 shall be in one of the pools in Mule Creek that exists year round adjacent to Sprayfield Nos. 5 and 6, S-3 shall be under the Highway 104 bridge where Mule Creek exits the prison property, S-4 shall be from the surface drainage course where it exits the prison property approximately 1,200 east of the Highway 104 bridge that crosses Mule Creek, S-5 shall be from where storm water runoff from the stormwater channel south of the prison discharges into Mule Creek (near the Highway 104 bridge), and S-6 shall be from the storm water channel outfall located east of the prison. Samples of the surface water shall be analyzed for the following:

Constituent	Units	Type of Sample	Sampling and Reporting Frequency[1]
Electrical Conductivity	µmhos/cm	Grab	Monthly
Total Dissolved Solids	mg/l	Grab	Monthly
Ammonia as Nitrogen	mg/l	Grab	Monthly
Nitrate as Nitrogen	mg/l	Grab	Monthly
Chloride	mg/l	Grab	Monthly
MBAS	mg/l	Grab	Monthly
Total Chlorine Residual[1]	mg/l	Grab	Monthly
pH	Standard units	Grab	Monthly
Dissolved Oxygen	mg/l	Grab	Monthly
Temperature	F^0	Grab	Monthly
Total Coliform Organisms[2]	MPN/100 ml	Grab	Monthly
Total Fecal Coliform Organisms	MPN/100 ml	Grab	Monthly

[1] Field test kits may be used for total chlorine monitoring.
[2] Using a minimum of 15 tubes or three dilutions.

SLUDGE MONITORING

CDC shall keep records regarding the quantity of biosolids and residual sludge generated by the treatment processes; any sampling and analytical data; the quantity of biosolids and residual sludge stored on site; and the quantity removed for disposal. The records shall also indicate the steps taken to reduce odor and other nuisance conditions. Records shall be stored onsite and available for review during inspections.

If biosolids are transported off-site for disposal, then the Discharger shall submit records identifying the hauling company, the amount of biosolids transported, the date removed from the facility, the location of disposal, and copies of all analytical data required by the entity accepting the waste.

All records shall be submitted as part of the Annual Monitoring Report.

WATER SUPPLY MONITORING

CDC, PYCF, and CDF shall complete the following water supply monitoring. Sampling station shall be established where a representative sample of the municipal water supply can be obtained. Water supply monitoring shall include at least the following for each water source used during the previous year. As an alternative to annual water supply monitoring, the Discharger may submit results of the most current DHS water supply monitoring data.

Constituents	Units	Sampling Frequency	Reporting Frequency
Total Dissolved Solids	mg/l	Annually	Annually
pH	standard units	Annually	Annually
Standard Minerals [1]	mg/l	Annually	Annually

[1] Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness. Include verification that the analysis is complete (i.e., cation/anion balance).

REPORTING

The Dischargers shall submit one monitoring report for all three Dischargers. In reporting monitoring data, the Dischargers shall arrange the data in tabular form so that the date, sample type (e.g., influent, effluent, reservoir, sprayfield, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer or Geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board by the **1st day of the second month** following the end of the reporting period (i.e. the January monthly report is due by 1 March). At a minimum, the reports shall include:

1. Results of the, collection system, pump stations, wastewater transmission line, influent, effluent, storage reservoir, spray disposal area, and surface water monitoring;
2. Copies of inspection logs;

3. A comparison of the monitoring data to the discharge specifications and an explanation of any violation of those requirements;
4. If requested by staff, copies of laboratory analytical report(s);
5. Date(s) on which the monitoring instruments were calibrated; and
6. Monthly maximums, minimums, and averages for each monitored constituent/parameter.

B. Quarterly Report

CDC shall establish a quarterly sampling schedule for groundwater, monitoring such that samples are obtained approximately every three months. Quarterly monitoring reports shall be submitted to the Board by the **1st day of the second month after the quarter** (i.e. the January-March quarter is due by May 1st) each year. The Quarterly Report shall include the following:

1. Results of groundwater monitoring. The results of regular monthly monitoring reports for March, June, September and December may be incorporated into their corresponding quarterly monitoring report;

2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;

3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any;

4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);

5. A comparison of the monitoring data to the groundwater limitations and an explanation of any violation of those requirements;

6. Summary data tables of historical and current water table elevations and analytical results;

7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours

referenced to mean sea level datum; and

8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

An Annual Report shall be prepared as the fourth quarter monitoring report. The Annual Report will include all monitoring data required in the monthly and quarterly schedules. The Annual Report shall be submitted to the Regional Water Board by **1 February** each year. In addition to the data normally presented, the Annual Report shall include the following:

1. The contents of the regular December monitoring report for the last sampling event of the year;

2. If requested by staff, tabular and graphical summaries of all data collected during the year;

3. An evaluation of the performance of the domestic wastewater treatment system, as well as a forecast of the flows anticipated in the next year;

4. An evaluation of the groundwater quality beneath the WWTP (i.e., effluent storage reservoir, sprayfields, sludge drying facilities, etc);

5. Summary of information on the disposal of biosolids as described in the “Sludge Monitoring” section;

6. A discussion of whether CDC anticipates removing biosolids in the coming year, and if so, the anticipated schedule for cleaning, drying, and disposal;

7. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;

8. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;

9. A copy of the certification for each certified wastewater treatment plant operator working at the facility and a statement about whether the Discharger is in compliance with Title 23, CCR, Division 3, Chapter 26.

10. The results from annual monitoring of the water supply;

11. A forecast of influent flows, as described in Standard Provision No. E.4; and

12. A statement of when the Operation and Maintenance Manual was last reviewed for adequacy, and a description of any changes made during the year.

D. Background Groundwater Quality Study Report

By **30 August 2009**, the CDC shall submit a *Background Groundwater Quality Study Report*. For each groundwater monitoring parameter/constituent identified in the MRP, the report shall present a summary of monitoring data, calculate the concentration in background monitoring wells, and compare background groundwater quality to that in wells used to monitor the facility. Determination of background quality shall be made using the methods described in Title 27, Section 20415(e)(10) or equivalent, and shall be based on data from at least eight consecutive quarterly (or more frequent) groundwater monitoring events. For each monitoring parameter/constituent, the report shall compare measured concentrations for compliance monitoring wells with the calculated background concentration.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

The Discharger shall implement the above monitoring program as of 1 May 2007.

Ordered by: _____
Pamela C. Creedon, Executive Officer

_____
(Date)

JSK: 4/3/07