

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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[Regional Board Website](https://www.waterboards.ca.gov/centralvalley) (https://www.waterboards.ca.gov/centralvalley)

**[TENTATIVE] MONITORING & REPORTING PROGRAM
R5-2022-00XX**



ORDER INFORMATION

Order Type(s): Monitoring & Reporting Program (MRP)
Status: TENTATIVE
Program: Non-15 Discharges to Land
Region 5 Office: Redding
Discharger(s): City of Redding
Facility: Redding Power Plant
Address: 17120 Clear Creek Road
County: Shasta County
Parcel Nos.: 208-170-025
CIWQS ID: 252171
Prior Order(s): Order 94-267

CERTIFICATION

I, PATRICK PULUPA, Executive Officer, hereby certify that the following is a full, true, and correct copy of the order adopted by the California Regional Water Quality Control Board, Central Valley Region, on XX February 2022.

PATRICK PULUPA
Executive Officer

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GLOSSARY

bgs	Below Ground Surface
BOD	Biological Oxygen Demand
DO	Dissolved Oxygen
EC	Electrical Conductivity
FDS	Fixed Dissolved Solids
µg/L	Micrograms per Liter
µmhos/cm	Micromhos per Centimeter
mg/L	Milligrams per Liter
MRP	Monitoring and Reporting Program
MW	Monitoring Well
Standard Provisions	Standard Provisions and Reporting Requirements
TDS	Total Dissolved Solids
Title 22	California Code of Regulations, Title 22
Title 23	California Code of Regulations, Title 23
TKN	Total Kjeldahl Nitrogen
Unified Guidance	<i>Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (USEPA, 2009)</i>
USEPA	United States Environmental Protection Agency
WDRs	Waste Discharge Requirements

(findings begin on next page)

PREFACE

Separately issued pursuant to Water Code section 13267, subdivision (b)(1), this Order establishes a Monitoring and Reporting Program (MRP) for waste discharges regulated under Waste Discharge Requirements Order R5-2022-00XX (WDRs Order). Each of the Findings set forth in the WDRs Order, including those pertaining to the need for submission of reports, are hereby incorporated as part of this Order.

This Order is issued pursuant to Water Code section 13267. The Discharger shall not implement any changes to the MRP herein unless a revised MRP is issued by the Executive Officer or Central Valley Water Board.

REQUIREMENTS

IT IS HEREBY ORDERED, pursuant to Water Code section 13267, that the Discharger shall comply with the following Monitoring and Reporting Program (MRP).

A. General Monitoring Requirements

1. Flow Monitoring

Hydraulic flow rates shall be measured at the monitoring points specified in this MRP. Central Valley Water Board staff shall approve any proposed changes to flow monitoring locations prior to implementation of the change. All flow monitoring systems shall be appropriate for the conveyance system (i.e., open channel flow or pressure pipeline) and liquid type. Unless otherwise specified, each flow meter shall be equipped with a flow totalizer to allow reporting of cumulative volume as well as instantaneous flow rate. Flow meters shall be calibrated at the frequency recommended by the manufacturer; typically, at least once per year and records of calibration shall be maintained for review upon request.

2. Monitoring and Sampling Locations

Samples shall be obtained at the monitoring points specified in this MRP. Central Valley Water Board staff shall approve any proposed changes to sampling locations prior to implementation of the change. The Discharger shall monitor the following locations to demonstrate compliance with the requirements of this Order:

Table 1—Monitoring and Sampling Locations

Location	Description
INF	Influent Flow Meter
POND	Where representative sample of percolation pond water can be obtained
OB-1 OB-2 OB-3A	Groundwater monitoring sample locations

3. Sampling and Sample Analysis

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. Except as specified otherwise in this MRP, grab samples will be considered representative of water, wastewater, soil, solids/sludges and groundwater.

The time, date, and location of each sample shall be recorded on the sample chain of custody form. All analyses shall be performed in accordance with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991 (Standard Provisions).

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

- The operator is trained in proper use and maintenance of the instruments;
- The instruments are field calibrated at the frequency recommended by the manufacturer;
- The instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
- Field calibration reports are submitted as described in the “Reporting” section of this MRP.

Laboratory analytical procedures shall comply with the methods and holding times specified in the following (as applicable to the medium to be analyzed):

- *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater (USEPA);*
- *Test Methods for Evaluating Solid Waste (USEPA);*
- *Methods for Chemical Analysis of Water and Wastes (USEPA);*
- *Methods for Determination of Inorganic Substances in Environmental Samples (USEPA);*
- *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 USEPA or the State Water Resources Control Board's (State Water Board) Environmental Laboratory Accreditation Program (ELAP). The Discharger may propose alternative methods for approval. Where technically feasible, laboratory reporting limits shall be lower than the applicable water quality objectives for the constituents to be analyzed.

If monitoring consistently shows no significant variation in 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.

B. Specific Monitoring Requirements

1. Influent Monitoring

Influent flow rates shall be monitored upstream of the percolation pond. At a minimum, influent shall be monitored as specified below:

Table 2—Influent Monitoring Requirements

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Flow	gallons per day	Meter	Continuous	Quarterly

2. Pond Monitoring

Percolation pond samples shall be collected in the pond opposite pond intake. At a minimum, the percolation pond shall be monitored as specified below:

Table 3—Pond Monitoring Requirements

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Freeboard	0.1 feet	Measurement	Monthly	Quarterly
Berm Condition	--	Observation	Monthly	Quarterly
pH	Std. Units	Grab	Monthly	Quarterly
Total Dissolved Solids	mg/L	Grab	Monthly	Quarterly
Electrical Conductivity	µmhos/cm	Grab	Monthly	Quarterly
Chloride	mg/L	Grab	Quarterly	Quarterly
Sulfate	mg/L	Grab	Quarterly	Quarterly
Molybdenum	µg/L	Grab	Quarterly	Quarterly
Standard Minerals	µg/L	Grab	Annually	Annually
Title 22 Dissolved Metals	µg/L	Grab	Annually	Annually

3. Groundwater Monitoring

The Discharger shall maintain the groundwater monitoring well network. If a groundwater monitoring well is dry for more than four consecutive sampling events or is damaged, the Discharger shall submit a work plan and proposed time schedule to replace the well. The well shall be replaced following approval of the work plan.

Prior to construction of any groundwater monitoring wells, the Discharger shall submit plans and specifications for approval. Once installed, all new wells shall be added to the groundwater monitoring network.

Prior to purging or sampling, the groundwater depth shall be measured in each well to the nearest 0.01 feet. Groundwater elevations shall then be calculated to determine groundwater gradient and flow direction.

Low or no-purge sampling methods are acceptable, if described in an approved Sampling and Analysis Plan. Otherwise, each monitoring well shall be purged of at least 3 to 5 casing volumes until pH, electrical conductivity and turbidity have stabilized prior to sampling. Groundwater monitoring for all monitoring wells shall include, at a minimum, the following:

Table 4—Groundwater Monitoring Requirements

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Depth to Groundwater	0.01 feet	Measurement	Quarterly	Quarterly
Groundwater Elevation	0.01 feet	Calculation	Quarterly	Quarterly
Gradient	feet/feet	Calculation	Quarterly	Quarterly
Gradient Direction	degrees	Calculation	Quarterly	Quarterly
pH	Std. Units	Grab	Quarterly	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly
Electrical Conductivity	µmhos/cm	Grab	Quarterly	Quarterly
Chloride	mg/L	Grab	Quarterly	Quarterly
Sulfate	mg/L	Grab	Quarterly	Quarterly
Molybdenum	µg/L	Grab	Quarterly	Quarterly
Standard Minerals	µg/L	Grab	Annually	Annually
Title 22 Dissolved Metals	µg/L	Grab	Annually	Annually

4. Residual Solids Monitoring

The Discharger shall monitor the residual solids generated and disposed of on a monthly basis. The following shall be monitored and reported:

- a. Volume of Solids Generated. Solids include grit and screenings generated during cooling tower cleaning.
- b. Volume Disposed of off-site. Describe the disposal method (e.g. animal feed, land application, off-site composting, landfill, etc.); the amount disposed (tons); and the name of the hauling company.

C. Reporting Requirements

1. General Reporting Provisions

All monitoring reports should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to: centralvalleyredding@waterboards.ca.gov.

Documents that are 50 MB or larger should be transferred to a CD, DVD, or flash drive and mailed to the following address:

Central Valley Regional Water Quality Control Board
ECM Mailroom
364 Knollcrest Drive, Suite 205
Redding, California 96002

To ensure that your submittal is routed to the appropriate staff person, the following information should be included in the body of the email or transmittal sheet:

Redding Power Plant
Shasta County
Place ID: 252171

A transmittal letter shall accompany each monitoring report. The letter shall include a discussion of all violations of the WDRs and this MRP during the reporting period and actions taken or planned for correcting each violation. If the Discharger has previously submitted a report describing corrective actions taken and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. Pursuant to Section B.3 of the Standard Provisions and General Reporting Requirements (Standard Provisions), the transmittal letter shall contain a statement by the Discharger or the Discharger's authorized agent certifying under penalty of perjury that the report is true, accurate and complete to the best of the signer's knowledge.

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, 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.

Laboratory analysis reports do not need to be included in the monitoring reports; however, all laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3. For a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

In addition to the requirements of 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.

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 Business and Professions Code sections 6735, 7835, and 7835.1.

2. Quarterly Monitoring Reports

Quarterly monitoring reports shall be submitted by the 1st day of the 2nd month after the end of the quarter (i.e. the January-March quarterly report is due by May 1st). Each Quarterly Monitoring Report shall include the following:

- a. Results of Influent Monitoring, including calculated values for total flow and average daily flow for each month, and total annual flow to date
- b. Results of Effluent Monitoring
- c. Results of Pond Monitoring
- d. Results of Groundwater Monitoring including:
 - i. A narrative description of all preparatory, monitoring, sampling, and sample handling for groundwater monitoring.

- ii. A field log for each well documenting depth to groundwater; method of purging; parameters measured before, during, and after purging; sample preparation (e.g., filtering); and sample preservation.
 - iii. Calculation of the groundwater elevation at each monitoring well, and determination of groundwater flow direction and gradient on the date of measurement.
 - iv. Summary data tables of historical and current water table elevations and analytical results.
 - v. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells, surface waters, and groundwater elevation contours referenced to an appropriate datum (e.g., NGVD).
- e. Results of Residual Solids Monitoring if disposal occurred during the quarter.
 - f. A copy of inspection log page(s) documenting inspections completed during the quarter.
 - g. A copy of calibration log page(s) verifying calibration of all hand-held monitoring instruments performed during the quarter.

3. Annual Reporting (4th Qtr. Reports)

The Quarterly Monitoring Report for the 4th Quarter of each year shall serve as an annual report (though it need not be separately titled as such), and shall include the following.

- a. Total annual influent flow, average monthly flows for each month of the year, and the average dry weather flow compared to the flow limitations of the WDRs.
- b. Concentration v. time graphs for each monitored constituent using all historic groundwater monitoring data. Each graph shall show the background groundwater concentration range and the Groundwater Limitation as horizontal lines at the applicable concentration.
- c. An evaluation of the groundwater quality beneath the site and determination of compliance with WDRs based on statistical analysis for each constituent monitored for each compliance well (OB-2 and OB-3A).

Include all calculations and data input/analysis tables derived from use of statistical software, as applicable.

- d. An evaluation of the performance of the percolation pond, including discussion of capacity issues, infiltration and inflow rates, nuisance conditions, and a forecast of the flows anticipated in the next year, as described in Standard Provision E.4
- e. 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.
- f. Monitoring equipment maintenance and calibration records, as described in Standard Provision C.4.
- g. A discussion of any data gaps and potential deficiencies or redundancies in the monitoring system or reporting program.

ENFORCEMENT

If, in the opinion of the Executive Officer, the Dischargers fail to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

ADMINISTRATIVE REVIEW

Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. To be timely, the petition must be received by the State Water Board by 5:00 pm on the 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday or state holiday, the petition must be received by the State Water Board by 5:00 pm on the next business day. The law and regulations applicable to filing petitions are available on the [State Water Board website](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) (http://www.waterboards.ca.gov/public_notices/petitions/water_quality). Copies will also be provided upon request.