

TENTATIVE
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2021-XXXX

FOR

THOMAS ALEXANDER
CALIFORNIA CONCENTRATES COMPANY
SAN JOAQUIN COUNTY

This Monitoring and Reporting Program (MRP) for the California Concentrates Company (Discharger) is issued pursuant to Water Code section 13267. A glossary of terms used in this MRP is included on the last page.

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*, 1 March 1991 ed. (SPRRs). Field test instruments (such as those used to measure pH, electrical conductivity, dissolved oxygen, wind speed, and precipitation) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments.
2. The instruments are field calibrated at the frequency recommended by the manufacturer.
3. The instruments are serviced and/or calibrated at the manufacturer's recommended frequency.
4. Field calibration reports are submitted as described in the "Reporting" section of the MRP.

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

1. Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater (EPA).
2. Test Methods for Evaluating Solid Waste (EPA).
3. Methods for Chemical Analysis of Water and Wastes (EPA).
4. Methods for Determination of Inorganic Substances in Environmental Samples (EPA); Standard Methods for the Examination of Water and Wastewater (APHA/AWWA/WEF).

5. Soil, Plant, and Water Reference Methods for the Western Region (WREP 125).

Approved editions shall be those that are approved for use by the U.S. Environmental Protection Agency or the State Water Resources Control Board’s Environmental Laboratory Accreditation Program (ELAP). The Discharger may propose alternative methods for approval by the Executive Officer. Where technically feasible, laboratory reporting limits shall be lower than concentrations that implement applicable water quality objectives/limits for the constituents to be analyzed.

Source Water Monitoring

Samples of source water shall be collected from each source of water used for processing. At a minimum, the Discharger shall sample the source water beginning in **2022** prior to the start of the processing season and analyze the samples for the parameters listed in the table below. Data shall be reported in the corresponding annual monitoring report. At a minimum, standard mineral analysis will include dissolved iron, dissolved manganese, dissolved arsenic, alkalinity, hardness, chloride, and sodium.

Constituent	Units	Sample Type	Sampling and Reporting Frequency
Electrical Conductivity	µmhos/cm	Grab	Every three years
Total Dissolved Solids	mg/L	Grab	Every three years
Nitrate as Nitrogen	mg/L	Grab	Every three years
Standard Minerals	mg/L	Grab	Every three years

Precipitation Monitoring

Constituent	Units	Measurement	Measurement Frequency	Reporting Frequency
Precipitation	0.1 inch	Rain Gauge	Daily	Quarterly

Note: Precipitation data obtained from the nearest National Weather Service rain gauge is acceptable.

Flow Monitoring

Wastewater flows shall be measured at the flow meter location shown on Attachment C of Order R5-2021-XXXX.

Flow Source	Units	Sample Type	Sampling Frequency	Reporting Frequency
Flow Meter	Gallons	Meter	Daily (total daily flow)	Quarterly

Treatment and Percolation Pond Monitoring

The Discharger shall monitor the treatment and percolation ponds in accordance with the following. Sampling and monitoring shall be conducted from permanent locations that will provide reasonable samples and observations of the ponds. Freeboard shall be measured vertically from the water surface to the lowest elevation of pond berms (or spillway/overflow pipe invert) and shall be measured to the nearest 0.10 feet. Samples shall be collected at a depth of one foot, opposite the inlet. If any pond is dry, the monitoring report shall so state. Pond monitoring shall include, at a minimum, the following:

Constituent/ Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Presence/Absence of Water	--	Observation	Weekly	Quarterly
Freeboard	0.1 feet	Measurement	Weekly	Quarterly
Odors	--	Observation	Weekly	Quarterly
Berm Condition	--	Observation	Weekly	Quarterly
Dissolved Oxygen ¹	mg/L	Grab	Weekly	Quarterly
pH ¹	pH units	Grab	Weekly	Quarterly
BOD ₅ Loading ²	lb/ac/day/cycle	Calculated	Monthly	Quarterly

Note 1 = pH and DO monitoring are only required for the treatment ponds (when wastewater is present).

Note 2 = BOD loading calculations are only required for the percolation ponds. BOD loading shall be calculated using the daily applied volume of wastewater, actual application area, and most recent BOD results for the wastewater. Calculations and assumptions shall be clearly documented.

Wastewater Effluent Monitoring

Wastewater samples shall be collected from the treatment pond T-2 (or the last pond in the treatment system prior to discharging to the percolation ponds) and shall be considered representative of wastewater quality that is discharged to the percolation ponds. Sampling is only required when wastewater is discharged to the treatment ponds. If no discharges occur, the monitoring report so shall state. At a minimum, wastewater monitoring shall include the following (standard mineral analysis, at a minimum, will include dissolved iron, dissolved manganese, dissolved arsenic, alkalinity, hardness, chloride, and sodium).

Constituents	Units	Sample Type	Sample Frequency	Reporting Frequency
Electrical Conductivity	µmhos/cm	Grab	Monthly	Quarterly
BOD ₅	mg/L	Grab	Monthly	Quarterly
FDS	mg/L	Grab	Monthly	Quarterly

Constituents	Units	Sample Type	Sample Frequency	Reporting Frequency
TKN	mg/L	Grab	Monthly	Quarterly
Nitrate as Nitrogen	mg/L	Grab	Monthly	Quarterly
Dissolved Iron	mg/L	Grab	Monthly	Quarterly
Dissolved Manganese	mg/L	Grab	Monthly	Quarterly
Sodium	mg/L	Grab	Monthly	Quarterly
Chloride	mg/L	Grab	Monthly	Quarterly
ORP	mV	Grab	Monthly	Quarterly
Standard Minerals	mg/L	Grab	Monthly	Annually

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 to the Central Valley Water Board a workplan and proposed time schedule for its replacement, and the well shall be replaced following approval of the workplan.

Prior to construction of any additional groundwater monitoring wells, the Discharger shall submit plans and specifications to the Central Valley Water Board for review and approval. Once installed, all new monitoring wells shall be appropriately incorporated into monitoring conducted under this MRP and shall be monitored on a semiannual basis.

The groundwater monitoring program applies to groundwater monitoring wells tabulated below and any wells subsequently installed under approval of the Central Valley Water Board. All downgradient wells are compliance monitoring wells.

Monitoring Well	Well Classification
MW-3	Upgradient
MW-4	Downgradient - Compliance well
MW-5	Downgradient - Compliance well

Prior to sampling, depth to groundwater measurements shall be measured in each monitoring well to the nearest 0.01 feet. Groundwater elevations shall then be calculated to determine groundwater gradient and flow direction. Sampling activities shall be conducted in accordance with an approved Sampling and Analysis Plan. Samples shall be collected and analyzed using standard EPA methods. Groundwater monitoring shall include, at a minimum, the parameters and constituents listed in the table below. Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation. Samples shall be filtered with a 0.45-micron filter prior to sample

preservation for standard mineral analysis and will include dissolved iron, dissolved manganese, dissolved arsenic, alkalinity, chloride, and sodium.

Constituent/ Parameter	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Depth to Groundwater	0.01 feet	Measurement	Semi-Annually	Annually
Groundwater Elevation	feet	Calculated	Semi-Annually	Annually
Gradient	feet/feet	Calculated	Semi-Annually	Annually
Gradient Direction	degrees	Calculated	Semi-Annually	Annually
EC	µmhos/cm	Grab	Semi-Annually	Annually
TDS	mg/L	Grab	Semi-Annually	Annually
Total Nitrogen	mg/L	Grab	Semi-Annually	Annually
Nitrate Nitrogen	mg/L	Grab	Semi-Annually	Annually
Total Organic Carbon	mg/L	Grab	Semi-Annually	Annually
Standard Minerals	mg/L	Grab	Quarterly ¹	Annually

Note 1: Groundwater samples shall be collected quarterly and analyzed for standard minerals for a minimum of 8 quarters. If monitoring consistently shows no significant variation in a constituent concentration or parameter after at least eight consecutive groundwater monitoring events, the Discharger may request a reduction in sampling frequency to no less than semi-annually for standard minerals. The proposal must include adequate technical justification for a reduction in monitoring frequency. 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.

Groundwater Limitations

The Groundwater Limitations set forth in Section F of WDRs Order R5-2021-XXXX shall apply to the specific compliance monitoring wells identified above. Groundwater quality and compliance with Groundwater Limitations will be conducted using intrawell evaluations. For the current groundwater quality limit, concentration trends shall be evaluated. If exceedances of numerical limitations or increasing concentration trends are occurring, upgradient wells shall also be evaluated. This table is subject to revision by the Executive Officer following construction of any new monitoring wells.

Constituent	Groundwater Limitation	Compliance Wells
EC	Current Groundwater Quality	MW-4, MW-5
TDS	1,000 mg/L (Secondary Maximum Contaminant Upper Level)	MW-4, MW-5
Total Nitrogen	Current Groundwater Quality	MW-4, MW-5

Constituent	Groundwater Limitation	Compliance Wells
Nitrate as Nitrogen	Current Groundwater Quality	MW-4, MW-5
Sodium	Current Groundwater Quality or 69 mg/L (Lowest agricultural water quality goal), whichever is greater	MW-4, MW-5
Iron	Current Groundwater Quality	MW-4, MW-5
Manganese	Current Groundwater Quality	MW-4, MW-5

Current groundwater quality will be defined using approved statistical methods described in an approved *Groundwater Limitation Compliance Assessment Plan* (Provision I.1.a).

As required per Provision I.2 of WDRs Order **R5-2021-XXXX**,

“If groundwater monitoring results show that the discharge of waste is causing groundwater to contain any waste constituents in concentrations statistically greater than the Groundwater Limitations of this Order based on intrawell evaluations, within 120 days of the request of the Executive Officer, the Discharger shall submit a BPTC Evaluation Workplan that sets forth the scope and time schedule for a systematic and comprehensive technical evaluation of each component of the Facility’s waste treatment and disposal system to determine best practicable treatment and control for each waste constituent that exceeds a Groundwater Limitation. The schedule to complete the evaluation shall be as short as practicable and shall not exceed one year. Alternatively, if it can be shown that the increase is the result of activities outside the Discharger’s control, a technical report shall be submitted that justifies and supports that determination.”

Groundwater Trigger Concentrations

The following groundwater trigger concentration is intended only to serve as a means of assessing whether the discharge might potentially cause a violation of one or more of the Groundwater Limitations of WDRs Order **R5-2021-XXXX**.

Constituent	Trigger Concentration (mg/L)	Compliance Wells
Nitrate as N	5	MW-4, MW-5

If the annual evaluation of groundwater quality performed pursuant to this MRP shows that the running annual average of four consecutive monitoring results has been exceeded in a compliance well listed above, the Discharger shall submit the following technical report by 1 May of the following calendar year (i.e., if the trigger concentration is exceeded for calendar year 2022, the appropriate report is due by 1 May 2023):

- a. A technical evaluation of the reason[s] for the concentration increase[s] and a technical demonstration that, although the concentration has increased more than expected in one or more compliance wells, continuing the discharge without additional treatment or control will not result in exceedance of the applicable groundwater limitation (i.e., 10 mg/L for nitrate as nitrogen). If groundwater monitoring results show that the discharge of waste is causing groundwater to contain any waste constituents in concentrations greater than the Groundwater Limitations of this Order, see Provision I.2 in Order **R5-2021-XXXX**.

Solids Monitoring

The Discharger shall monitor volumes of residual solids generated and disposed of and reported in annual monitoring reports:

1. Estimated Volume of Solids Generated. Solids may include pomace, seeds, stems, screenings, and sump solids, or other material.
2. 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. The volume of pond sediments shall be reported when sediments are removed to maintain adequate capacity in the pond.

Reporting

All regulatory documents, submissions, materials, data, monitoring reports, and correspondence should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to centralvalleysacramento@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
11020 Sun Center Drive, Suite 200
Rancho Cordova, California 95670

To ensure that your submittals are routed to the appropriate staff, the following information block should be included in any correspondence used to transmit documents to this office:

County: San Joaquin
Facility: California Concentrates Company
Program: Non-15 Compliance
Order Number: R5-2021-XXXX
CIWQS Place ID: 227789

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 MRP shall be reported to the Central Valley Water Board.

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

A. Quarterly Monitoring Reports

Daily, weekly, and monthly monitoring data shall be reported in the quarterly monitoring report. Quarterly reports shall be submitted to the Central Valley Water Board on the **1st day of the second month following the quarter** (i.e. the January - March quarterly report is due by 1 May). At a minimum, the report shall include:

1. Results of Wastewater Effluent Monitoring in tabular format for each week and month during the reported quarter.
2. Results of Flow Monitoring in tabular format for each month during the reported quarter, including calculated values for the total flow and average daily flow for each month and total annual flow to date.
3. Results of pond monitoring.
4. Results of Percolation Pond Monitoring, including:
 - a. Calculated **discharge cycle average BOD loading rate** for each LAA using the following formula:

$$M = \frac{8.345(CV) + M_x}{AT}$$

Where:

- M = mass of BOD applied to each percolation pond in lb/ac/day/discharge cycle
C = concentration of BOD in mg/L based on the most recent monitoring result

V = volume of wastewater applied to the percolation pond in millions of gallons during the discharge cycle

A = area of the discharge in acres

T = Discharge cycle length in days (from the first day water was applied to the last day of the drying time)

Mx = BOD mass from other sources (e.g., cattle manure, pond solids, and residual solids) in pounds

8.345 = Unit conversion factor

5. A comparison of monitoring data to the flow limitations, effluent limitations, and discharge specifications and an explanation of any violation of those requirements.
6. A calibration log verifying calibration of all handheld monitoring instruments and devices used to comply with the prescribed monitoring program.
7. Copies of the laboratory analytical data reports shall be maintained by the Discharger and submitted to the Central Valley Water Board.

B. Annual Monitoring Reports

An Annual Monitoring Report shall be submitted to the Central Valley Water Board by **1 February** each year and shall include the following:

Flow Monitoring

1. Total annual flow discharged to LAAs and determination of compliance with the annual flow limitation of the WDRs.

Process Supply Water Monitoring

1. Analytical data table showing historical and current results. A narrative description of changes in water quality over time, if any, and the potential impact on the wastewater quality.

Groundwater Monitoring

1. A narrative description of all preparatory, monitoring, sampling, handling, and analytical testing for groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDRs Order **R5-2021-XXXX**, this MRP, and the SPRRs.
2. 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. Low or no-purge sampling methods are acceptable if described in an approved Sampling and Analysis Plan.

3. Summary data tables of historical and current water table elevations and analytical results, comparison with previous flow direction and gradient data, and discussion of seasonal trends if any.
4. 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 an appropriate datum (e.g., NGVD).
5. An evaluation of the groundwater quality beneath the site and determination of compliance with the Groundwater Limitations per WDRs Order **R5-2021-XXXX**, based on statistical analysis for each constituent monitored for each compliance well in accordance with the approved Groundwater Limitations Compliance Assessment Plan. Include all calculations and data input/analysis tables derived from use of statistical software, as applicable.
6. Copies of the laboratory analytical data reports shall be maintained by the Discharger and submitted to the Central Valley Water Board.

Additional Reporting

1. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the WDRs.
2. Monitoring equipment maintenance and calibration records, as described in Section C.4 of the SPRRs, shall be maintained by the Discharger and provided upon request by the Central Valley Water Board.
3. A discussion of the following:
 - a. Waste constituent reduction efforts implemented in accordance with any required workplan.
 - b. Other treatment or control measures implemented during the calendar year either voluntarily or pursuant to the WDRs, this MRP, or any other Order.
 - c. Based on monitoring data, an evaluation of the effectiveness of the treatment or control measures implemented to date.
4. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring network or reporting program.

A letter transmitting the self-monitoring reports shall accompany each report. The 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 submitting 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 submitting Discharger, or its

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CALIFORNIA CONCENTRATES COMPANY
SAN JOAQUIN COUNTY

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authorized agent, as described in the Section B.3 of the SPRRs (General Reporting Requirements).

I, PATRICK PULUPA, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of the Monitoring and Reporting Program issued by the California Regional Water Quality Control Board, Central Valley Region on XX June 2021.

PATRICK PULUPA, Executive Officer

Glossary

BOD ₅	Five-day biochemical oxygen demand
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
TKN	Total Kjeldahl nitrogen
TDS	Total dissolved solids
Daily	Every day except weekends or holidays
Weekly	Once per week
Monthly	Once per calendar month
Quarterly	Once per calendar quarter
Semiannually	Once every six calendar months (i.e., two times per year) during non-consecutive quarters
Annually	Once per year
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
gpd	Gallons per day
mgd	Million gallons per day