

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2024-00XX  
FOR  
ZAMORA PISTACHIO, LLC  
ZAMORA PISTACHIO FACILITY  
YOLO COUNTY

This Monitoring and Reporting Program (MRP) for Zamora Pistachio, LLC (Discharger) is issued pursuant to Water Code section 13267. This MRP establishes monitoring and reporting requirements related to the waste discharges regulated under Waste Discharge Requirements Order R5-2024-00xx (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 MRP.

Zamora Pistachio, LLC (Discharger) owns and operates the Zamora Pistachio Facility (Facility), a new pistachio hulling and processing facility, which is subject to WDRs Order R5-2024-00XX. The Discharger shall not implement any changes to this MRP unless and until the Central Valley Regional Water Quality Control Board (Central Valley Water Board) adopts, or the Executive Officer issues, a revised MRP.

A glossary of terms used in this MRP is included on the last page.

This MRP may be separately revised by the Executive Officer, in accordance with their delegated authority under Water Code section 13223.

## **I. GENERAL MONITORING REQUIREMENTS**

### **A. FLOW MONITORING**

Hydraulic flow rates shall be measured at the monitoring points specified in this MRP. All flow monitoring systems shall be appropriate for the conveyance system (i.e., open channel flow or pressure pipeline) and liquid type. The measurements may be based on flow meter readings or pump run time estimate. The method of measurement must be specified. 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.

### **B. MONITORING AND SAMPLING LOCATIONS**

Samples and measurements 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 MRP as shown in **Table 1** below.

**Table 1 – Monitoring Location Designations**

<b>Monitoring Location</b>	<b>Monitoring Location Description</b>
INF-001	Location where a representative sample of the waste stream can be obtained prior to discharge to the Wastewater Pond. Flow measurements shall be made at the flow meter as shown in Attachment C of the WDRs.
INF-002	Location where a representative sample of the equipment wash down water can be obtained prior to discharge to the storm water pond.
INF-003	Location where a representative sample of the pasteurization water can be obtained prior to discharge to the LAAs. Flow measurements shall be made at the flow meter as shown in Attachment C of the WDRs.
EFF-001	Location where a representative sample can be obtained after treatment (i.e., screening and filtering) and prior to discharge to the LAAs.
LAAs	Land Application Areas (LAAs) Monitoring.
PND-1	Wastewater Pond Monitoring.
MW-1, MW-2, and MW-3	Groundwater monitoring wells used to evaluate groundwater quality near the wastewater pond and LAAs.
SI-2A, SI-2B, and SI-3	Location where a representative sample of supplemental irrigation if different from source water or irrigation well water (i.e., equipment and plant washdown water and pasteurization water) can be obtained prior to discharge to the LAAs.
SW-001	Source water monitoring.

**C. SAMPLING AND SAMPLE ANALYSIS**

All samples and measurements 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 supply water, wastewater, soil, solids, and groundwater. 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 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; and
4. Field calibration reports are submitted as described in the "Reporting" section of the MRP.

All analyses shall be performed in accordance with the Standard Provisions and Reporting Requirements for Waste Discharge Requirements, 1 March 1991 ed. ([1 March 1991 SPRRs](#))

[[https://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/std\\_provisions/wdr-mar1991.pdf](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/std_provisions/wdr-mar1991.pdf)].

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 (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 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.

## II. SPECIFIC MONITORING REQUIREMENTS

### A. SOURCE WATER MONITORING (SW-001)

1. Source water used for Facility operations shall be monitored. Samples shall be representative of the source water supplied to the Facility. If the source water is from more than one source, the results shall be presented as a flow-weighted average of all sources. Samples shall be collected **once per year in September during the processing season** and analyzed for the parameters listed in **Table 2** below. Data shall be reported in the corresponding Annual Monitoring Report.

**Table 2. Source Water Monitoring**

Constituent	Units	Sample Type	Sampling Frequency	Reporting Frequency
EC	µmhos/cm	Grab	1/Year (see Note 1 below)	Annual
TDS	mg/L	Grab	1/Year (see Note 1 below)	Annual
Nitrate as N	mg/L	Grab	1/Year (see Note 1 below)	Annual
Total Nitrogen	mg/L	Grab	1/Year (see Note 1 below)	Annual
Standard Minerals (see Note 2 and 3 below)	mg/L	Grab	1/Year (see Note 1 below)	Annual

Table Note:

1. Starting in 2026, samples shall be collected once every 5 years.
2. Standard minerals shall include, at a minimum, the following: chloride, sodium, dissolved iron, and dissolved manganese. Samples for metals shall be filtered prior to preservation.
3. For constituents with Secondary MCLs listed in California Code of Regulations Title 22 Table 64449-A (e.g., iron, and manganese), samples shall be filtered with a 1.5-micron filter prior to preservation, digestion, and analysis. For all other constituents, samples shall be filtered with a 0.45-micron filter prior to preservation, digestion, and analysis.

**B. PRECIPITATION MONITORING**

1. Precipitation data obtained from the nearest National Weather Service rain gauge or CIMIS weather station is acceptable.

**Table 3. Precipitation Monitoring**

Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Local Rainfall	0.1 inches	Rain gauge	Daily	Quarterly

**C. FLOW MONITORING (INF-001, INF-002, INF-003)**

1. Wastewater influent flows shall be measured as shown on Attachment C of WDRs Order No. R5-2024-0xxx.

**Table 4. Flow Monitoring**

Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Hulling wastewater flow to wastewater pond (INF-001)	gallons	Meter	Daily	Quarterly
Equipment and plant washdown to storm water pond (INF-002)	gallons	Meter	Daily	Quarterly
Pasteurization condensate water to LAAs (INF-003)	gallons	Meter	Daily	Quarterly

**D. WASTEWATER POND MONITORING (PND 1)**

Pond monitoring shall include, at a minimum, the following:

1. Pond(s) used for treatment, storage, or disposal of wastewater shall be monitored for the parameters listed in **Table 5** below and meet the following conditions.
  - a. Sampling and monitoring shall be conducted from permanent locations that will provide reasonable samples and observations of the pond(s).
  - b. 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.

- c. Samples shall be collected at a depth of one foot, opposite the inlet. If the pond is dry, the monitoring report shall so state.
- d. Dissolved Oxygen (DO) shall be measured at a depth of one foot, opposite the inlet. If offensive odors are detected by or brought to the attention of the Discharger, the Discharger shall monitor the potential source pond at least daily for DO and pH until the DO in the pond is greater than 1.0 mg/L.
- e. Containment levees shall be observed for signs of seepage or surfacing water along the exterior toe of the levees.

**Table 5. Wastewater Pond Monitoring**

Constituent/ Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Presence/Absence of Water	--	Observation	1/Weekly (see Note 1 below)	Quarterly
Freeboard	0.1 feet	Measurement	1/Week (see Note 1 below)	Quarterly
Odors	--	Observation	1/Week (see Note 1 below)	Quarterly
Berm Condition	--	Observation	1/Week (see Note 1 below)	Quarterly
DO	mg/L	Grab	1/Week (see Note 1 below)	Quarterly
pH	mg/L	Grab	1/Week (see Note 1 below)	Quarterly

Table Note:

1. Monitoring shall be monthly during the non-processing season (1 November through 30 July).

**E. EFFLUENT MONITORING (EFF-001)**

Effluent samples shall be collected after treatment (i.e., screening and filtering) and prior to discharge to the LAAs, as shown on Attachment C of the WDRs Order R5-2024-00XX and shall be representative of wastewater quality that is applied to land.

1. Effluent samples shall be collected during the processing season and at any time wastewater is discharged from the Facility to the LAAs. Effluent monitoring shall include at least the following:

**Table 6. Effluent Monitoring**

Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
EC	mg/L	Grab	1/week	Quarterly
BOD <sub>5</sub> (see Note 1 below)	mg/L	Grab	1/week	Quarterly
FDS	mg/L	Grab	2/Month	Quarterly
Potassium	mg/L	Grab	2/Month	Quarterly
Nitrate as N	mg/L	Grab	2/Month	Quarterly
TKN	mg/L	Grab	2/Month	Quarterly
Total Nitrogen	mg/L	Grab	2/Month	Quarterly
TDS	mg/L	Grab	1/Year (see Note 2 below)	Annual
General Minerals (see Note 3 and 4 below)	mg/L	Grab	1/Year (see Note 2 below)	Annual

Table Note:

1. Samples for BOD shall be collected once per week. After a minimum of two years of sampling, the Discharger may submit a request to reduce the sampling frequency.
2. Samples shall be collected once per year in September during the processing season.
3. See the Glossary for the definition of General Minerals.
4. For constituents with Secondary MCLs listed in California Code of Regulations Title 22 Table 64449-A (e.g., iron, and manganese), samples shall be filtered with a 1.5-micron filter prior to preservation, digestion, and analysis. For all other constituents, samples shall be filtered with a 0.45-micron filter prior to preservation, digestion, and analysis.

**F. SUPPLEMENTAL IRRIGATION MONITORING (SI-2A, SI-2B, AND SI-3)**

1. The Discharger shall collect samples of the supplemental irrigation water if different from source water or irrigation well water (i.e. equipment and plant washdown water and pasteurization condensate water) used to irrigate the LAAs. Samples of supplemental irrigation water shall be collected once during the processing season each year. Irrigation monitoring shall include at least the following:

**Table 7. Supplemental Irrigation Monitoring**

Constituent	Units	Sample Type	Sampling Frequency	Reporting Frequency
EC	µmhos/cm	Grab	1/year	Annually
FDS	mg/L	Grab	1/year	Annually
Potassium	mg/L	Grab	1/year	Annually
TKN	mg/L	Grab	1/year	Annually
Nitrate as N	mg/L	Grab	1/year	Annually
Total Nitrogen	mg/L	Grab	1/year	Annually

**G. LAND APPLICATION AREA MONITORING**

1. The Discharger shall inspect the LAAs at least once daily within one week prior to and during irrigation events. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions (i.e., odors beyond property boundary, flies, ponding, etc.) shall be included as part of the annual monitoring report. In addition, the Discharger shall perform the following routine monitoring and loading calculations (see Quarterly Monitoring Reports Section B.5 below) for each block within the LAAs each day when wastewater is applied. The data shall be collected and presented in graphical (map) and/or tabular format and shall include the following:

**Table 8. Land Application Area Monitoring**

Constituent/ Parameter	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Acreage Applied	acres	N/A	Daily	Quarterly
Irrigation Flow (see Note 1 below)	gpd or mgd	Meter	Daily	Quarterly
Irrigation Loading (See Note 1 below)	Inches/day	Calculated	Daily	Quarterly
<b>BOD Loading:</b> (see Note 2 below)				
Cycle Average BOD	lbs/acre/day	Calculated	Daily	Quarterly
<b>Nitrogen Loading:</b> (see Note 2 below)				
From Effluent	lbs/acre	Calculated	1/Year	Annually



<b>Constituent/ Parameter</b>	<b>Units</b>	<b>Type of Sample</b>	<b>Sampling Frequency</b>	<b>Reporting Frequency</b>
From Supplemental Irrigation (see Note 3 below)	lbs/acre	Calculated	1/Year	Annually
From Fertilizers	lbs/acre	Calculated	1/Year	Annually
<b>Salts and Potassium Loading Rate:</b> (see Note 2 below)				
From Effluent	lbs/acre	Calculated	1/Year	Annually
From Supplemental Irrigation (see Note 3 below)	lbs/acre	Calculated	1/Year	Annually

Table Note:

1. Irrigation flow and irrigation loading will be the combined flow of wastewater and supplemental irrigation water if different from source water or irrigation well water discharged to the LAA.
2. BOD, nitrogen, salt, and potassium loading shall be calculated as specified in Section III of this MRP.
3. Supplemental irrigation water if different from source water or irrigation well water (i.e., equipment and plant wash down water and pasteurization condensate water).

**H. GROUNDWATER MONITORING**

1. The Discharger shall maintain the groundwater monitoring well network. If a groundwater monitoring well is dry or has insufficient water for sampling 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. Alternatively, the Discharger shall submit a report with supporting evidence that a replacement well is not needed.
2. 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.
3. The groundwater monitoring program applies to groundwater monitoring wells MW-1, MW-2, and MW-3 and any wells subsequently installed under approval of the Central Valley Water Board.
4. 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. 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.

5. Sampling activities shall be conducted in accordance with the Discharger’s Sampling and Analysis Plan. Samples shall be collected and analyzed using standard EPA methods.
6. Groundwater monitoring shall include, at a minimum, the parameters and constituents listed in **Table 9** below.

**Table 9 – Groundwater Monitoring**

<b>Constituent/ Parameter</b>	<b>Units</b>	<b>Type of Sample</b>	<b>Sampling Frequency</b>	<b>Reporting Frequency</b>
Depth to Groundwater	0.01 feet	Measurement	1/Quarter	Quarterly
Groundwater Elevation	feet	Calculated	1/Quarter	Quarterly
Gradient	feet/feet	Calculated	1/Quarter	Quarterly
Gradient Direction	degrees	Calculated	1/Quarter	Quarterly
EC	µmhos/cm	Grab	1/Quarter	Quarterly
TDS	mg/L	Grab	1/Quarter	Quarterly
Nitrate as N	mg/L	Grab	1/Quarter	Quarterly
TKN	mg/L	Grab	1/Quarter	Quarterly
Potassium	mg/L	Grab	1/Quarter	Quarterly
TOC	mg/L	Grab	1/Quarter	Quarterly
General Minerals (see Note 1 and 3 below)	mg/L	Grab	1/Quarter (see Note 2 below)	Annual

Table Note:

1. See the Glossary for the definition of General Minerals.
2. Samples shall be collected for General Minerals once per quarter for a minimum of two years. After two years of sampling, the Discharger may submit a request to reduce the sampling frequency.
3. For constituents with Secondary MCLs listed in California Code of Regulations Title 22 Table 64449-A (e.g., iron, and manganese), samples shall be filtered with a 1.5-micron filter prior to preservation, digestion, and analysis. For all other constituents, samples shall be filtered with a 0.45-micron filter prior to preservation, digestion, and analysis.

7. 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 this MRP be revised to reduce monitoring frequency, constituent analyses, or monitoring parameters. 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.

### **I. SOLIDS MONITORING**

1. The Discharger shall maintain detailed records for disposal and/or recycling of residual solids removed during the hulling operations. The record should include information on quantity, storage (including location and measures implemented to prevent leachate generation or control and disposal of any leachate generated), method of disposal (i.e., livestock feed, soil amendment, composting, etc.) and receipts (if applicable). A summary of the information shall be included in the Annual Report.

### **III. REPORTING REQUIREMENTS**

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](mailto: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:

Facility: Zamora Pistachios, LLC Yolo County  
Program: Non-15 Compliance  
Order Number: R5-2024-00XX  
CIWQS Place ID: 886054

**A transmittal letter shall accompany each monitoring report.** The letter shall include a discussion of all violations of 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. The transmittal letter shall contain the following penalty of perjury statement and shall be signed by the Discharger or the Discharger's authorized agent:

*I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.*

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.

Laboratory analysis reports shall be included in the monitoring reports. All laboratory reports must be retained for a minimum of three years in accordance with Section C.3 of the 1 March 1991 SPRRs. 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 Section C.3 of the 1 March 1991 SPRRs, 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 under the direction of persons registered to practice in California pursuant to California Business and Professions Code Business and Professions Code sections 6735, 7835, and 7835.1.

### A. MONITORING REPORT DUE DATES

Monitoring reports are due as described in the table below.

**Table 10. Monitoring Report Due Dates**

<b>Monitoring Report</b>	<b>Monitoring Period</b>	<b>Report Due Date</b>
First Quarter	1 January to 31 March	1 May
Second Quarter	1 April to 30 June	1 August
Third Quarter	1 July to 30 September	1 November
Fourth Quarter	1 October to 31 December	1 February
Annual	1 January to 30 December	1 February

### B. QUARTERLY MONITORING REPORTS

Daily, weekly, monthly, and quarterly monitoring data shall be reported in the quarterly monitoring report. At a minimum, the quarterly report shall include:

1. Results of the Precipitation Monitoring in tabular format for each month during the reported quarter.
2. Results of the Flow Monitoring in tabular format for each month during the reported quarter including calculation of the average daily flow for each month and total monthly flow, and annual flow to date.
3. Results of the Pond Monitoring in tabular format for each month during the reported quarter
4. Results of the Effluent Monitoring in tabular format for each month during the reported quarter.
5. Results of the Land Application Area Monitoring, including:
  - a. A site map of the LAAs showing predominant features, and LAAs acreage where wastewater was applied.
  - b. Total monthly precipitation.
  - c. A summary of the LAA's inspection activities.
  - d. Monthly process water and supplemental irrigation water volumes applied to the LAAs.
  - e. Calculated hydraulic loading rate for each month during the reported quarter and cumulative annual loading.

- f. Cycle average BOD<sub>5</sub> loading rate applied to the LAAs. Include the number of days in each irrigation cycle. The mass of BOD<sub>5</sub> applied to the irrigation area within the LAA on a daily basis shall be calculated using the following formula.

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

Where:

- M = Mass of BOD<sub>5</sub> for a given field in pounds per acre per cycle (lbs/ac/cycle).  
C = Concentration of BOD<sub>5</sub> in mg/L based on the average concentration for the month.  
V = Total volume of wastewater applied to the LAAs during the irrigation cycle, in millions of gallons (MG).  
A = Area of the LAA's irrigated with wastewater in acres (ac).  
T = Irrigation cycle length in days (from the first day wastewater was applied to the last day of the drying time)  
8.345 = Unit conversion factor for mg/L and MG to lbs.

- g. Total nitrogen, FDS, and potassium loading rate applied to the LAAs as calculated from the sum of the monthly loading. The total mass loading for total nitrogen, FDS, and potassium applied to the LAA shall be calculated using the following formula and compared to published crop demand for the crops actually grown.

$$M = \sum_{i=1}^{12} \frac{(8.345(C_i V_i) + M_x)}{A}$$

Where:

- M = Mass of total nitrogen, FDS, or potassium applied to the LAA in lbs/acre/year.
- $C_1$  = Average concentration of total nitrogen, FDS, or potassium for the month  $i$  in mg/L.
- $V_i$  = Volume of wastewater applied to the LAA's during the calendar month  $i$  in MG.
- A = Area of the LAA's irrigated with wastewater in acres
- $i$  = The number of the month (e.g., January = 1, February = 2, etc.)
- $M_x$  = Total nitrogen, FDS, and potassium from other sources (e.g., fertilizer and compost) in lbs.
- 8.345 = Unit conversion factor for mg/L and MG to lbs.

- h. Type of crop(s) grown, planting and harvest dates, and the quantified nitrogen and FDS uptakes (as estimated by technical references or defined by representative plant tissue analysis).

6. Results of the Groundwater Monitoring:

- a. A narrative description of all preparatory, monitoring, sampling, handling, and analytical testing for groundwater monitoring.
- b. 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.
- c. Data in tabular format during the reported quarter.
- d. 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.
- e. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable).
- f. 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).

7. A summary of any changes in processing that might affect waste characterization and/or discharge flow rates.
8. Copies of the laboratory analytical data reports shall be included in the monitoring reports. All laboratory reports must be retained by the Discharger for a minimum of three years in accordance with Section C.3 of the 1 March 1991 SPRRs.

### C. FOURTH QUARTER MONITORING REPORT

In addition to the above information, the fourth quarter monitoring report shall include the following annual reporting:

1. Source Water Monitoring.
2. Flow Monitoring – Total wastewater volume (hulling wastewater, equipment and plant washdown water, and pasteurization condensate water) applied to the LAAs over the calendar year.
3. Effluent Monitoring – Annual TDS analysis, annual General Minerals analysis, and flow-weighted average annual concentration of FDS in effluent (EFF-001) and comparison to the performance-based salinity limit.
  - a. The flow-weighted average annual FDS concentrations shall be calculated using the following formula.

$$C_a = \frac{\sum_{i=1}^{12} [(C_{P_i} \times V_{P_i}) + (C_{S_i} \times V_{S_i})]}{\sum_{i=1}^{12} (V_{P_i} + V_{S_i})}$$

Where:

- |           |   |   |
|-----------|---|---|
| $C_a$     | = | Flow-weighted average annual FDS concentration in mg/L.   |
| $i$       | = | The number of the month (e.g., January = 1, February = 2, etc.).  |
| $C_{P_i}$ | = | Monthly average process wastewater FDS concentration for calendar month $i$ in mg/L.  |
| $C_{S_i}$ | = | Monthly average supplemental irrigation water FDS concentration for calendar month $i$ in mg/L (considering each supplemental source separately). |



- $V_{Pi}$  = Volume of process wastewater applied to LAAs during calendar month  $i$  in million gallons.
- $V_{Si}$  = Volume of supplemental irrigation water applied to LAAs during calendar month  $i$  in million gallons (considering each supplemental source separately).

4. Supplemental Irrigation Monitoring – Analysis of supplemental irrigation water if different from source water or irrigation well water, including but not limited to equipment and plant washdown water and pasteurization condensate water.
5. Land Application Monitoring – Annual nitrogen, salts, and potassium loading.
6. Groundwater Monitoring – Annual General Minerals analysis.
7. Solids Monitoring.
8. Additional Reporting
  - a. A comparison of monitoring data to the flow limitations, effluent limitations, and discharge specifications and an explanation of any violation of those requirements
  - b. 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.
  - c. Monitoring equipment maintenance and calibration records, as described in Section C.4 of the 1 March 1991 SPRRs, shall be maintained by the Discharger and provided upon request by the Central Valley Water Board. Calibration records shall verify calibration of all handheld monitoring instruments and devices used to comply with the prescribed monitoring program.
  - d. A discussion of the following:
    - i. Waste constituent reduction efforts implemented in accordance with any required workplan.
    - ii. Other treatment or control measures implemented during the calendar year either voluntarily or pursuant to the WDRs, this MRP, or any other Order.
    - iii. Based on monitoring data, an evaluation of the effectiveness of the treatment or control measures implemented to date.

- e. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring network or reporting program.

### **Enforcement**

If, in the opinion of the Executive Officer, the Discharger fails 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 \$1,000 per violation, per day, depending on the violation, pursuant to the Water Code section 13268. The Central Valley Water Board reserves the right to take any enforcement actions authorized by law.

### **Administrative Review**

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board for administrative review in accordance with Water Code section 13320, and California Code of Regulations, title 23, section 2050 et seq. To be timely, the State Water Board must receive the petition by 5pm on the 30th day after the date of this Order, except that if the 30th day falls on a Saturday, Sunday or State Holiday, the petition must be received by the State Water Board by 5pm on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the [Internet on the Water Boards Public Notice](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) web page ([http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality)).

I, PATRICK PULUPA, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of the Monitoring and Reporting Program adopted by the California Regional Water Quality Control Board, Central Valley Region on xx Month 2024.

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PATRICK PULUPA, Executive Officer

## GLOSSARY

BOD <sub>5</sub>	Five-day Biochemical Oxygen Demand
CIMIS	California Irrigation Management Information System
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
EPA	Environmental Protection Agency
ELAP	State Water Resources Control Board's Environmental Laboratory Accreditation Program
FDS	Fixed Dissolved Solids
MRP	Monitoring and Reporting Program
MW	Monitoring Well
MCL	Maximum Contaminant Level per Title 22
N	Nitrogen
N/A	Not Applicable
TKN	Total Kjeldahl Nitrogen
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
TSS	Total Suspended 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
gpd	Gallons per day
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter
MG[D]	Million gallons [per day]
MGY	Million gallons per year

General Minerals      Analysis shall include alkalinity (as CaCO<sub>3</sub>), bicarbonate (asCaCO<sub>3</sub>), carbonate (as CaCO<sub>3</sub>), hardness, dissolved arsenic, boron, calcium, chloride, dissolved arsenic, dissolved iron, magnesium, dissolved manganese, nitrate as N, phosphate, potassium, sodium, sulfate, and verification that the analysis is complete (i.e., cation/anion balance)