



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

25 September 2018

Adam Orandi
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REVISED MONITORING AND REPORTING PROGRAM R5-2016-0052; ARO PISTACHIOS, INC AND MEHDI ORANDI; TERRA BELLA PROCESSING FACILITY; TULARE COUNTY

On 30 August 2018, the Central Valley Water Board sent you a tentative Revised Monitoring and Reporting Program (MRP) for ARO Pistachios, Inc and Mehdi Orandi, Terra Bella Processing Facility. On 30 August 2018, Craig Hartman with Hartman Engineering, Inc., provided comments on the tentative revised MRP. Central Valley Water Board staff has made changes to the revised MRP in response to the comments received.

The final Revised MRP R5-2016-0052 is enclosed. ARO Pistachios, Inc and Mehdi Orandi shall implement the Revised MRP beginning **1 October 2018**.

If you have questions, please contact Denise Soria at (559) 444-2488 or by email at dsoria@waterboards.ca.gov.

A handwritten signature in blue ink that reads "Alex S. Mushegan".

ALEXANDER S. MUSHEGAN
Senior Engineer

Enclosures: Revised Monitoring and Reporting Program R5-2016-0052
Standard Provisions and Reporting Requirements for Waste Discharge
Requirements, 1 March 1991

cc: Craig Hartman, Hartman Engineering, Inc., Visalia (via email)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISED MONITORING AND REPORTING PROGRAM R5-2016-0052
FOR
ARO PISTACHIOS, INC AND MEHDI ORANDI
TERRA BELLA PROCESSING FACILITY
TULARE COUNTY

This Monitoring and Reporting Program (MRP) supersedes the MRP issued on 24 June 2016 and is required pursuant to Water Code section 13267.

ARO Pistachios, Inc and Mehdi Orandi (ARO or Dischargers) shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts or the Executive Officer issues a revised MRP. Changes to sample location shall be established with concurrence of Central Valley Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer. All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. All analyses shall be performed in accordance with **Standard Provisions and Reporting Requirements for Waste Discharge Requirements**, dated 1 March 1991 (Standard Provisions).

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

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

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

A glossary of terms used within this MRP is included on [page 12](#).

The Dischargers shall monitor the following locations to demonstrate compliance with the requirements of this Order.

Monitoring Location Name	Monitoring Location Description
EFF-001	The location after the concrete sump and before wastewater is discharged to the lined 130 ac-ft pond
EFF-002	The location after the lined 130 ac-ft pond and before wastewater is discharged to the land application areas (LAA's)
PND-001	At the lined 130 ac-ft pond
SPL-001	Location where a representative sample of the source water from the onsite supply well can be obtained.
SIW-001	Location where a representative sample of the supplemental irrigation water can be obtained.
LAA-001 through LAA-003	Ranch 1 (LAA-001), Ranch 2 (LAA-002), and Ranch 7 (LAA-003)
GWM-001 through GWM-00X	Groundwater monitoring wells established after the completion of Provision G.12 of Waste Discharge Requirements Order R5-2016-0052.

EFFLUENT MONITORING

The Dischargers fill the lined 130 ac-ft pond from approximately August to October each year (harvest season). Effluent samples shall be collected at EFF-001 during the harvest season. Time of collection of the sample shall be recorded. Effluent monitoring shall include the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Effluent Flow	mgd	Meter
1/Harvest Season ¹	pH	pH Units	Grab
Weekly	Electrical Conductivity	umhos/cm	Grab
1/Harvest Season ¹	Biochemical Oxygen Demand ²	mg/L	Grab
1/Harvest Season ¹	Total Suspended Solids	mg/L	Grab
1/Harvest Season ¹	Total Dissolved Solids	mg/L	Grab
1/Harvest Season ¹	Fixed Dissolved Solids	mg/L	Grab
1/Harvest Season ¹	Total Kjeldahl Nitrogen	mg/L	Grab
1/Harvest Season ¹	Nitrate as Nitrogen	mg/L	Grab
1/Harvest Season ¹	Nitrite as Nitrogen	mg/L	Grab
1/Harvest Season ¹	Ammonia as Nitrogen	mg/L	Grab
1/Harvest Season ¹	Total Nitrogen	mg/L	Computed
1/Harvest Season ¹	General Minerals ³	mg/L	Grab

¹ Sampling is required once per season. The sample shall be representative of the Facility's discharge (i.e., collected after the first week of the harvest season, but before the last week of the harvest season).

² Five-day, 20°C biochemical oxygen demand (BOD)

- 3 General mineral analysis shall include, alkalinity (as CaCO₃), bicarbonate (as CaCO₃), boron, calcium, carbonate (CaCO₃), chloride, hardness, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, and TDS.

The Dischargers apply wastewater from the lined 130 ac-ft pond to the land application areas from approximately March to August each year (irrigation season). Effluent samples shall be collected at EFF-002 during the irrigation season. Time of collection of the sample shall be recorded. Effluent monitoring shall include the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Effluent Flow	mgd	Meter
2/Irrigation Season ²	pH	pH Units	Grab
Weekly	Electrical Conductivity	umhos/cm	Grab
2/Irrigation Season ²	Biochemical Oxygen Demand ¹	mg/L	Grab
2/Irrigation Season ²	Total Suspended Solids	mg/L	Grab
2/Irrigation Season ²	Total Dissolved Solids	mg/L	Grab
2/Irrigation Season ²	Fixed Dissolved Solids	mg/L	Grab
2/Irrigation Season ²	Total Kjeldahl Nitrogen	mg/L	Grab
2/Irrigation Season ²	Nitrate as Nitrogen	mg/L	Grab
2/Irrigation Season ²	Nitrite as Nitrogen	mg/L	Grab
2/Irrigation Season ²	Ammonia as Nitrogen	mg/L	Grab
2/Irrigation Season ²	Total Nitrogen	mg/L	Computed
2/Irrigation Season ²	General Minerals ³	mg/L	Grab

1 Five-day, 20°C biochemical oxygen demand (BOD)

2 Sampling is required twice per irrigation season. The initial sample shall be collected prior to the start of the irrigation season. The second sample shall be collected when approximately half of the volume of the wastewater in the lined 130 ac-ft pond has been applied to the LAAs.

3 General mineral analysis shall include, alkalinity (as CaCO₃), bicarbonate (as CaCO₃), boron, calcium, carbonate (CaCO₃), chloride, hardness, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, and TDS.

POND MONITORING

The Dischargers shall monitor the lined 130 ac-ft pond (PND-001) while wastewater is in the pond. Monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Weekly	Freeboard	Feet ¹	Observation
Weekly	Odor	mg/L	Observation
Weekly	Berm Condition	---	Observation
Monthly	Liner Condition	---	Observation
Weekly ²	Dissolved Oxygen (DO)	mg/L	Grab
<u>Pan Lysimeter³</u>			
Annually	Volume	gallons	Meter
Annually	Electrical Conductivity	umhos/cm	Grab

1 To the nearest tenth of a foot.

- 2 DO shall be measured between 8:00 am and 10:00 am and shall be taken opposite the pond inlet at a depth of approximately one-foot below the pond surface. If there is less than one foot of water in the pond no sample shall be collected and the reason shall be noted in the applicable monitoring report.
- 3 The Dischargers shall conduct annual performance monitoring of the pond liner in accordance with the April 2018 Pond Liner Construction Operation, Maintenance, and Monitoring Plan or subsequently approved plan. Within 30 days of filling the pond from the harvest season, the Dischargers shall purge the pan lysimeter and note the volume purged as well as collect an electrical conductivity reading of the purged water. After the initial pumping, the Dischargers shall pump the pan lysimeter again (at least 24 hours after the initial purge) and note the volume pumped as well as collect an electrical conductivity reading from the second purge.

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

SOURCE WATER MONITORING

The Dischargers shall collect samples of the source water at SPL-001 and supplemental irrigation water SIW-001, and analyze them for the constituents specified below. If the source water is from more than one source, the results shall be presented as a flow-weighted average of all sources.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
<u>Supply Water (SPL-001)</u>			
Quarterly	Electrical Conductivity	umhos/cm	Grab
Annually	General Minerals ^{1,2}	mg/L	Grab
<u>Supplemental Irrigation Water (SIW-001)</u>			
Annually ³	Volume	gallons	Meter
Annually ³	Electrical Conductivity	umhos/cm	Grab
Annually ³	Nitrate as nitrogen	mg/L	Grab
Annually ³	Potassium	mg/L	Grab
Annually ³	Total Dissolved Solids	mg/L	Grab
Annually ³	Fixed Dissolved Solids	mg/L	Grab

1 With the exception of wastewater samples, samples must be filtered. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.

2 General mineral analysis shall include, alkalinity (as CaCO₃), bicarbonate (as CaCO₃), boron, calcium, carbonate (CaCO₃), chloride, hardness, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, and TDS.

3 Sample to be collected annually from March to August.

LAND APPLICATION AREA MONITORING

The Dischargers shall perform the following routine monitoring and loading calculations for Ranch 1 (LAA-001), Ranch 2 (LAA-002), and Ranch 7 (LAA-003). In addition, the Dischargers shall keep a log of routine monitoring observations (e.g. areas of ponding, broken irrigation pipes, odors and/or flies within the LAA's, etc.). Data shall be collected and presented in tabular format and shall include the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Daily	Application Location	n/a	n/a
Daily	Application Area	acres	n/a

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Daily	Wastewater Flow	gallons	Metered
Daily	Wastewater Loading	inches/day ¹	Calculated
Daily	Supplemental Irrigation	inches/day ¹	Calculated
Daily	Precipitation ²	inches/day ¹	Rain gage ²
<u>BOD Loading Rates:</u>			
Daily	On Day of Application ³	lbs/acre	Calculated
Daily	Cycle Average ⁴	lbs/acre-day	Calculated
<u>Nitrogen Loading Rates:</u>			
Monthly	From Wastewater ⁵	lbs/acre-month	Calculated
Monthly	From Fertilizer and supplemental irrigation water ⁶	lbs/acre-month	Calculated
<u>Salt Loading Rates:</u>			
Monthly	From Wastewater ⁵	lbs/acre-month	Calculated
Annually	Cumulative Salt Loading	lbs/acre-year	Calculated

1 Report to the nearest 0.01 inch.

2 National Weather Service data from the nearest weather station is acceptable.

3 Loading rates to be calculated using the applied volume of wastewater, applied acreage, and the most recent BOD result collected at EFF-002 as specified in the Reporting Section (pages 6-11).

4 The cycle average BOD loading rates shall be calculated using applied volume of wastewater, applied acreage, and the most recent BOD result collected at EFF-002 divided by the number of days between applications as specified in the Reporting Section (pages 6-11).

5 Nitrogen and salt shall be calculated using the applied volume of wastewater, applied acreage, and average of the total nitrogen and fixed dissolved solids results collected during the irrigation season at EFF-002 as specified in the Reporting Section (pages 6-11).

6 Additional nitrogen loading to the land application area from other sources (i.e. organic matter and manure).

GROUNDWATER MONITORING

The Dischargers shall monitor groundwater in accordance with Provision G.12, and any subsequent additional wells.

After measuring water levels and prior to collecting samples, each monitoring well shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically 3 to 5 volumes of the standing water within the well casing and screen, or additionally the filter pack pore volume.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Semi-Annual	Depth to groundwater	feet	Measured
Semi-Annual	Groundwater elevation	feet	Computed
Semi-Annual	pH	pH units	Grab
Semi-Annual	Electrical Conductivity	umhos/cm	Grab
Semi-Annual	Total Dissolved Solids	mg/L	Grab
Semi-Annual	Total Kjeldahl Nitrogen	mg/L	Grab

Semi-Annual	Nitrate as Nitrogen	mg/L	Grab
Semi-Annual	Nitrite as Nitrogen	mg/L	Grab
Semi-Annual	Ammonia as Nitrogen	mg/L	Grab
Semi-Annual	Total Nitrogen	mg/L	Computed
Semi-Annual	General Minerals ¹	mg/L	Grab

¹ General mineral analysis shall include, alkalinity (as CaCO₃), bicarbonate (as CaCO₃), boron, calcium, carbonate (CaCO₃), chloride, hardness, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, and TDS. Samples collected for metals shall be filtered with a 0.45 micron filter prior to preservation, digestion, and analysis.

REPORTING

All monitoring results shall be reported in **Semi-Annual Monitoring Reports** which are due by the first day of the second month after the calendar quarter. Therefore, monitoring reports are due as follows:

First Semi-Annual Monitoring Report (August through January): **1 March**

Second Semi-Annual Monitoring Report (February through July): **1 September**

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

The Central Valley Water Board has gone to a Paperless Office System. All regulatory documents, submissions, materials, data, monitoring reports, and correspondence shall be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be mailed to: centralvalleyfresno@waterboards.ca.gov. Documents that are 50MB or larger should be transferred to a disc and mailed to the appropriate regional water board office, in this case 1685 E Street, Fresno, CA, 93706.

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

Program: Non-15, WDID: 5C54NC00323, Facility Name: ARO Pistachios, Inc., Order: R5-2016-0052

In reporting monitoring data, the Dischargers shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Dischargers complies with waste discharge requirements, and shall discuss any violations that occurred during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Dischargers have previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory.

In addition to the details specified in Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that

constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

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

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3.

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

A. All Semi-Annual Monitoring Reports shall include the following:

Wastewater and Pond Reporting

1. The results of Effluent Monitoring and Pond Monitoring specified on pages 2 through 4.
2. For each month of the processing season, calculation of the maximum daily flow, monthly average flow, and cumulative annual flow.
3. A summary of both the maintenance conducted on the 130-acre pond liner and the monitoring conducted to evaluate the integrity of the pond liner, in accordance with the Facility's Pond Liner Construction, Operation, Maintenance, and Monitoring Plan.

Source Water Reporting

1. The results of Source Water Monitoring specified on page 4.

Land Application Area Reporting

1. The results of the routine monitoring and loading calculations specified on pages 4 and 5.
2. Calculation of the hydraulic load for wastewater and fresh irrigation water to the land application areas in gallons and/or acre-inches.
3. A summary of the notations made in the log book during each quarter. The entire contents of the log do not need to be submitted.
4. Calculate daily and cycle average BOD₅ loading rates for each land application area;
 - a. The mass of BOD₅ applied to each land application area on a daily basis shall be calculated using the following formula:

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

Where: M = Mass of BOD applied to the LAA in lbs/ac/day
C = Concentration of BOD₅ in mg/L based on the most recent monitoring result
V = Volume of wastewater applied to the LAA in millions of gallons per day
A = Area of LAA irrigated in acres
8.345 = Unit conversion factor

- b. The mass of BOD₅ applied to each land application area on a cycle average basis shall be calculated using the following formula:

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

Where: M = Mass of BOD applied to the LAA in lbs/ac/day
C = Concentration of BOD₅ in mg/L based on the most recent monitoring result
V = Volume of wastewater applied to the LAA in millions of gallons per day
A = Area of LAA irrigated in acres
T = Irrigation cycle length in days (From first day water was applied to the last day of drying time)
8.345 = Unit conversion factor

5. Provide a Site Map of the LAA's showing predominant features, and include field numbers (if applicable) and acreage where wastewater was applied.

Groundwater Reporting

1. The results of Groundwater Monitoring specified on pages 5 and 6. If there is insufficient water in the well(s) for sampling, the monitoring well(s) shall be reported as dry for that quarter.
2. For each monitoring well, a table showing groundwater depth, elevation, and constituent concentration for the five previous years, up through the present quarter.
3. A groundwater contour map based on groundwater elevation for that quarter. The map shall show the gradient and direction of groundwater flow. The map shall also include locations of all monitoring wells and wastewater storage and application areas.

- B. Annual Reports**, shall be submitted on **1 February of each year**, and shall include the following:

Facility Information

1. The names and general responsibilities of all persons in charge of wastewater management.
2. The names and telephone numbers of persons to contact regarding the facility for emergency and routine situations.

3. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).
4. A summary of any changes in processing that might affect waste characterization and/or discharge flow rates.
5. A discussion and summary of the compliance record for the reporting period. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with this Order.

Solids Reporting

1. Annual production total solids (excluding trash and recyclables) in dry tons or cubic yards.
2. A description of disposal methods, including the following information related to the disposal methods used. If more than one method is used, include the percentage disposed of by each method.
 - a. For landfill disposal, include: the name and location of the landfill, and the Order number of WDRs that regulate it.
 - b. For land application, include: the location of the site, and the Order number of any WDRs that regulate it.
 - c. For incineration, include: the name and location of the site where incineration occurs, the Order number of WDRs that regulate the site, the disposal method of ash, and the name and location of the facility receiving ash (if applicable).
 - d. For composting, include: the location of the site, and the Order number of any WDRs that regulate it.
 - e. For beneficial reuse at locations and by entities not operating under a WDRs, and as approved by the Executive Officer, include: the name and location of the site where the beneficial reuse occurs and/or solids are sent for beneficial reuse.

Land Application Area Reporting

1. The type of crop(s) grown in the LAA's, planting and harvest dates, and the quantified nitrogen and fixed dissolved solids uptakes (as estimated by technical references or, preferably, determined by representative plant tissue analysis).
2. The monthly and annual discharge volume of wastewater and irrigation water applied to the LAA's during the reporting year expressed in million gallons and acre-inches.
3. A monthly balance for the reporting year that includes:

- a. Monthly average ET_o (observed evapotranspiration) – Information sources include California Irrigation Management Information System (CIMIS)
<http://www.cimis.water.ca.gov/>
 - b. Monthly crop uptake
 - i. Crop water utilization rates are available from a variety of publications available from the local University of California Davis extension office.
 - ii. Irrigation efficiency – Frequently, engineers include a factor for irrigation efficiency such that the application rate is slightly greater than the crop utilization rate. A conservative design does not include this value.
 - c. Monthly average precipitation – this data is available at
<http://www.cimis.water.ca.gov/> or at
<http://www.ncdc.noaa.gov>
 - d. Monthly average and annual average discharge flow rates.
 - e. Monthly estimates of the amount of wastewater percolating below the root zone (i.e., amount of wastewater applied in excess of crop requirements).
4. The total pounds of nitrogen applied to each LAA for each month and on an annual basis in lbs/acre-year, shall be calculated using the following formula:

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

Where:	M	=	Mass of nitrogen applied to the LAA in lbs/ac/day
	C_i	=	Average concentration of total nitrogen for the month in mg/L
	V_i	=	Volume of wastewater applied to LAA for the month in millions of gallons
	A	=	Area of LAA irrigated in acres
	i	=	Number of the month (e.g., January = 1, February = 2, etc)
	C_i	=	Average concentration
	M_x	=	Nitrogen mass from other sources (e.g., fertilizer, irrigation water, etc)
	8.345	=	Unit conversion factor

5. The total pounds of fixed dissolved solids that have been applied to the LAA's in lbs/acre-year, as calculated from the sum of the monthly loadings.

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

- 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_{Pi} = Monthly average process wastewater FDS concentration for calendar month i in mg/L
 - C_{Si} = 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 LAA during calendar month i in million gallons
 - V_{Si} = Volume of supplemental irrigation water applied to LAA during calendar month i in million gallons (considering each supplemental source separately)

Annual Pond Liner Performance Evaluation

1. The Annual Report shall also include an annual pond liner performance evaluation certified by a licensed Civil Engineer as required by the April 2018 Pond Liner Construction Operation, Maintenance, and Monitoring Plan or subsequently approved plan.

The Dischargers shall implement the above monitoring program on the first day of the month following the issuance of this revised Monitoring and Reporting Program (1 October 2018).

Ordered by: Clay L. Rodgers
 for PATRICK PULUPA, Executive Officer
9/25/2018
 (Date)

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
NTU	Nephelometric turbidity unit
TKN	Total Kjeldahl nitrogen
TDS	Total dissolved solids
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
24-Hour Composite	Samples shall be a flow-proportioned composite consisting of at least eight aliquots.
Daily	Samples shall be collected at least every day.
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.
Weekly	Samples shall be collected at least once per week.
2/Monthly	Samples shall be collected at least twice per month during non-consecutive weeks.
Monthly	Samples shall be collected at least once per month.
Bimonthly	Samples shall be collected at least once every two months (i.e., six times per year) during non-consecutive months.
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise specified or approved, samples shall be collected in January, April, July, and October.
Semiannually	Samples shall be collected at least once every six months (i.e., two times per year). Unless otherwise specified or approved, samples shall be collected in April and October.
Annually	Samples shall be collected at least once per year. Unless otherwise specified or approved, samples shall be collected in October.
mg/L	Milligrams per liter
mL/L	milliliters [of solids] per liter
ug/L	Micrograms per liter
umhos/cm	Micromhos per centimeter
mgd	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

STANDARD PROVISIONS AND REPORTING REQUIREMENTS
FOR
WASTE DISCHARGE REQUIREMENTS

1 March 1991

A. General Provisions:

1. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, or protect the Discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.
2. The provisions of this Order are severable. If any provision of this Order is held invalid, the remainder of this Order shall not be affected.
3. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - a. Violation of any term or condition contained in this Order;
 - b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;
 - c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge;
 - d. A material change in the character, location, or volume of discharge.
4. Before making a material change in the character, location, or volume of discharge, the discharger shall file a new Report of Waste Discharge with the Regional Board. A material change includes, but is not limited to, the following:
 - a. An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements.
 - b. A significant change in disposal method, location or volume, e.g., change from land disposal to land treatment.
 - c. The addition of a major industrial, municipal or domestic waste discharge facility.
 - d. The addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

Waste Discharge to Land

5. Except for material determined to be confidential in accordance with California law and regulations, all reports prepared in accordance with terms of this Order shall be available for public inspection at the offices of the Board. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.
6. The discharger shall take all reasonable steps to minimize any adverse impact to the waters of the state resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.
7. The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.
8. The discharger shall permit representatives of the Regional Board (hereafter Board) and the State Water Resources Control Board, upon presentations of credentials, to:
 - a. Enter premises where wastes are treated, stored, or disposed of and facilities in which any records are kept,
 - b. Copy any records required to be kept under terms and conditions of this Order,
 - c. Inspect at reasonable hours, monitoring equipment required by this Order, and
 - d. Sample, photograph and video tape any discharge, waste, waste management unit, or monitoring device.
9. For any electrically operated equipment at the site, the failure of which would cause loss of control or containment of waste materials, or violation of this Order, the discharger shall employ safeguards to prevent loss of control over wastes. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.
10. The fact that it would have been necessary to halt or reduce the permitted activity in Order to maintain compliance with this Order shall not be a defense for the discharger's violations of the Order.
11. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the California Water Code, Section 13050.
12. The discharge shall remain within the designated disposal area at all times.

B. General Reporting Requirements:

1. In the event the discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the discharger shall notify the Board by telephone at **(916) 464-3291** *[Note: Current phone numbers for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us.]* as soon as it or its agents

Waste Discharge to Land

have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing within **two weeks**. The written notification shall state the nature, time and cause of noncompliance, and shall include a timetable for corrective actions.

2. The discharger shall have a plan for preventing and controlling accidental discharges, and for minimizing the effect of such events.

This plan shall:

- a. Identify the possible sources of accidental loss or leakage of wastes from each waste management, treatment, or disposal facility.
- b. Evaluate the effectiveness of present waste management/treatment units and operational procedures, and identify needed changes of contingency plans.
- c. Predict the effectiveness of the proposed changes in waste management/treatment facilities and procedures and provide an implementation schedule containing interim and final dates when changes will be implemented.

The Board, after review of the plan, may establish conditions that it deems necessary to control leakages and minimize their effects.

3. All reports shall be signed by persons identified below:
 - a. For a corporation: by a principal executive officer of at least the level of senior vice-president.
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor.
 - c. For a municipality, state, federal or other public agency: by either a principal executive officer or ranking elected or appointed official.
 - d. A duly authorized representative of a person designated in 3a, 3b or 3c of this requirement if;
 - (1) the authorization is made in writing by a person described in 3a, 3b or 3c of this provision;
 - (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a waste management unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - (3) the written authorization is submitted to the Board

Any person signing a document under this Section shall make the following certification:

“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 the 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.”

4. Technical and monitoring reports specified in this Order are requested pursuant to Section 13267 of the Water Code. Failing to furnish the reports by the specified deadlines and falsifying information in the reports, are misdemeanors that may result in assessment of civil liabilities against the discharger.
5. The discharger shall mail a copy of each monitoring report and any other reports required by this Order to:

California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Note: Current addresses for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us or the current address if the office relocates.

C. Provisions for Monitoring:

1. All analyses shall be made in accordance with the latest edition of: (1) *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA 600 Series) and (2) *Test Methods for Evaluating Solid Waste* (SW 846-latest edition). The test method may be modified subject to application and approval of alternate test procedures under the Code of Federal Regulations (40 CFR 136).
2. Chemical, bacteriological, and bioassay analysis shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Board staff. The Quality Assurance-Quality Control Program must conform to EPA guidelines or to procedures approved by the Board.

Unless otherwise specified, all metals shall be reported as Total Metals.

3. The discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to

Waste Discharge to Land

complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Record of monitoring information shall include:

- a. the date, exact place, and time of sampling or measurements,
 - b. the individual(s) who performed the sampling of the measurements,
 - c. the date(s) analyses were performed,
 - d. the individual(s) who performed the analyses,
 - e. the laboratory which performed the analysis,
 - f. the analytical techniques or methods used, and
 - g. the results of such analyses.
4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated at least yearly to ensure their continued accuracy.
 5. The discharger shall maintain a written sampling program sufficient to assure compliance with the terms of this Order. Anyone performing sampling on behalf of the discharger shall be familiar with the sampling plan.
 6. The discharger shall construct all monitoring wells to meet or exceed the standards stated in the State Department of Water Resources *Bulletin 74-81* and subsequent revisions, and shall comply with the reporting provisions for wells required by Water Code Sections 13750 through 13755.22

D. Standard Conditions for Facilities Subject to California Code of Regulations, Title 23, Division 3, Chapter 15 (Chapter 15)

1. All classified waste management units shall be designed under the direct supervision of a California registered civil engineer or a California certified engineering geologist. Designs shall include a Construction Quality Assurance Plan, the purpose of which is to:
 - a. demonstrate that the waste management unit has been constructed according to the specifications and plans as approved by the Board.
 - b. provide quality control on the materials and construction practices used to construct the waste management unit and prevent the use of inferior products and/or materials which do not meet the approved design plans or specifications.
2. Prior to the discharge of waste to any classified waste management unit, a California registered civil engineer or a California certified engineering geologist must certify that the waste management unit meets the construction or prescriptive standards and performance goals in Chapter 15, unless an engineered alternative has been approved by the Board. In the case of an engineered alternative, the registered civil engineer or a certified engineering geologist must

Waste Discharge to Land

certify that the waste management unit has been constructed in accordance with Board-approved plans and specifications.

3. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the waste management units.
4. Closure of each waste management unit shall be performed under the direct supervision of a California registered civil engineer or a California certified engineering geologist.

E. Conditions Applicable to Discharge Facilities Exempted from Chapter 15 Under Section 2511

1. If the discharger's wastewater treatment plant is publicly owned or regulated by the Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to California Code of Regulations, Title 23, Division 4, Chapter 14.
2. By-pass (the intentional diversion of waste streams from any portion of a treatment facility, except diversions designed to meet variable effluent limits) is prohibited. The Board may take enforcement action against the discharger for by-pass unless:
 - a. (1) By-pass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a by-pass. Severe property damage does not mean economic loss caused by delays in production); and
 - (2) There were no feasible alternatives to by-pass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a by-pass that would otherwise occur during normal periods of equipment downtime or preventive maintenance; or
 - b. (1) by-pass is required for essential maintenance to assure efficient operation; and
 - (2) neither effluent nor receiving water limitations are exceeded; and
 - (3) the discharger notifies the Board ten days in advance.

The permittee shall submit notice of an unanticipated by-pass as required in paragraph B.1. above.

3. A discharger that wishes to establish the affirmative defense of an upset (see definition in E.6 below) in an action brought for noncompliance shall demonstrate, through properly signed, contemporaneous operating logs, or other evidence, that:

Waste Discharge to Land

- a. an upset occurred and the cause(s) can be identified;
- b. the permitted facility was being properly operated at the time of the upset;
- c. the discharger submitted notice of the upset as required in paragraph B.1. above; and
- d. the discharger complied with any remedial measures required by waste discharge requirements.

In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof.

4. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Board by **31 January**.
5. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to disposal. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
6. Definitions
 - a. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action.
 - b. The monthly average discharge is the total discharge by volume during a calendar month divided by the number of days in the month that the facility was discharging. This number is to be reported in gallons per day or million gallons per day.

Where less than daily sampling is required by this Order, the monthly average shall be determined by the summation of all the measured discharges by the number of days during the month when the measurements were made.
 - c. The monthly average concentration is the arithmetic mean of measurements made during the month.
 - d. The "daily maximum" **discharge** is the total discharge by volume during any day.

Waste Discharge to Land

- e. The “daily maximum” **concentration** is the highest measurement made on any single discrete sample or composite sample.
- f. A “grab” sample is any sample collected in less than 15 minutes.
- g. Unless otherwise specified, a composite sample is a combination of individual samples collected over the specified sampling period;
 - (1) at equal time intervals, with a maximum interval of one hour
 - (2) at varying time intervals (average interval one hour or less) so that each sample represents an equal portion of the cumulative flow.

The duration of the sampling period shall be specified in the Monitoring and Reporting Program. The method of compositing shall be reported with the results.

7. Annual Pretreatment Report Requirements:

Applies to dischargers required to have a Pretreatment Program as stated in waste discharge requirements.)

The annual report shall be submitted **by 28 February** and include, but not be limited to, the following items:

- a. A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the influent and effluent for those pollutants EPA has identified under Section 307(a) of the Clean Water Act which are known or suspected to be discharged by industrial users.

The discharger is not required to sample and analyze for asbestos until EPA promulgates an applicable analytical technique under 40 CFR (Code of Federal Regulations) Part 136. Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling analysis. The sludge analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period. Wastewater and sludge sampling and analysis shall be performed at least annually. The discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto.

- b. A discussion of Upset, Interference, or Pass Through incidents, if any, at the treatment plant which the discharger knows or suspects were caused by industrial users of the system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the industrial user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any

Waste Discharge to Land

additional limitations, or changes to existing requirements, may be necessary to prevent Pass Through, Interference, or noncompliance with sludge disposal requirements.

- c. The cumulative number of industrial users that the discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.
- d. An updated list of the discharger's industrial users including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The discharger shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to federal categorical standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent than the federal categorical standards. The discharger shall also list the noncategorical industrial users that are subject only to local discharge limitations. The discharger shall characterize the compliance status through the year of record of each industrial user by employing the following descriptions:
 - (1) Complied with baseline monitoring report requirements (where applicable);
 - (2) Consistently achieved compliance;
 - (3) Inconsistently achieved compliance;
 - (4) Significantly violated applicable pretreatment requirements as defined by 40 CFR 403.8(f)(2)(vii);
 - (5) Complied with schedule to achieve compliance (include the date final compliance is required);
 - (6) Did not achieve compliance and not on a compliance schedule;
 - (7) Compliance status unknown.

A report describing the compliance status of any industrial user characterized by the descriptions in items (d)(3) through (d)(7) above shall be **submitted quarterly from the annual report date** to EPA and the Board. The report shall identify the specific compliance status of each such industrial user. This quarterly reporting requirement shall commence upon issuance of this Order.

- e. A summary of the inspection and sampling activities conducted by the discharger during the past year to gather information and data regarding the industrial users. The summary shall include but not be limited to, a tabulation of categories of dischargers that were inspected and sampled; how many and how often; and incidents of noncompliance detected.

Waste Discharge to Land

- f. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:
- (1) Warning letters or notices of violation regarding the industrial user's apparent noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the federal categorical standards or local discharge limitations;
 - (2) Administrative Orders regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;
 - (3) Civil actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;
 - (4) Criminal actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.
 - (5) Assessment of monetary penalties. For each industrial user identify the amount of the penalties;
 - (6) Restriction of flow to the treatment plant; or
 - (7) Disconnection from discharge to the treatment plant.
- g. A description of any significant changes in operating the pretreatment program which differ from the discharger's approved Pretreatment Program, including, but not limited to, changes concerning: the program's administrative structure; local industrial discharge limitations; monitoring program or monitoring frequencies; legal authority of enforcement policy; funding mechanisms; resource requirements; and staffing levels.
- h. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.
- i. A summary of public participation activities to involve and inform the public.
- j. A description of any changes in sludge disposal methods and a discussion of any concerns not described elsewhere in the report.

Duplicate signed copies of these reports shall be submitted to the Board and:

Regional Administrator
U.S. Environmental Protection Agency W-5
75 Hawthorne Street
San Francisco, CA 94105

and

State Water Resource Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812

Revised January 2004 to update addresses and phone numbers