

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISED MONITORING AND REPORTING PROGRAM NO. 5-01-250 (REV. 2)

FOR
COLUSA INDUSTRIAL PROPERTIES, INCORPORATED
COLUSA COUNTY

This Monitoring and Reporting Program (MRP) replaces and rescinds the previous Revised MRP No. 5-01-250, which was issued by the Executive Officer on 14 July 2004. The Discharger shall comply with this MRP, which prescribes requirements for monitoring industrial process wastewater, wastewater ponds, land application areas, process water supply and groundwater. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

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

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

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

“(a) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of Section 13399.2, or falsifying and information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b).

(b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs.”

The Discharger owns and operates the facility that is subject to the WDRs cited herein, the reports are necessary to ensure that Colusa Industrial Properties, Inc. complies with the WDRs. Pursuant to Section 13267 of the California Water Code, the Discharger shall implement this MRP and shall submit the monitoring reports described herein.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the

sample chain of custody form. Field test instruments (such as those used to measure pH and dissolved oxygen) may be used provided that:

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

GENERAL POND MONITORING

The domestic wastewater process wastewater ponds shall be monitored as follows. Samples shall be collected from an established sampling station located in an area that will provide a sample representative of the water in each pond. Freeboard shall be measured vertically from the surface of the pond water to the lowest elevation of the surrounding berm and shall be measured to the nearest 0.1 feet.

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Dissolved Oxygen ¹	mg/L	Grab	Weekly	Monthly
Freeboard	0.1 feet	Measurement	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Berm condition	--	Observation	Monthly	Monthly

¹ Samples shall be collected opposite the inlet at a depth of one foot from each pond in use between 0700 and 0900 hours.

DOMESTIC WASTEWATER POND MONITORING

The domestic wastewater pond shall be monitored in accordance with the following:

<u>Constituent</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Influent Flow	gpd	Continuous	Daily	Monthly
Sludge Depth	inches	Measurement	Annually	Annually

PROCESS WASTEWATER MONITORING

The Discharger shall monitor process wastewater in accordance with the following. Grab samples shall be obtained from each active processing facility and from the process wastewater

storage pond near the outlet to the Designated Disposal Area. Process wastewater monitoring shall only be performed during periods when process wastewater is generated or stored in the pond. If the pond is dry and/or no wastewater was generated, the monitoring report shall so note. Process wastewater monitoring shall include, at a minimum, the following:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency by Waste Type</u>		<u>Reporting Frequency</u>
			<u>High Strength</u> ²	<u>Low Strength</u> ³	
pH	pH units	Grab	Weekly	Monthly ⁴	Monthly
Electrical conductivity	umhos/cm	Grab	Weekly	Monthly ⁴	Monthly
BOD ₅ ¹	mg/L	Grab	Weekly	Monthly ⁴	Monthly
Fixed dissolved solids	mg/L	Grab	Weekly	Monthly ⁴	Monthly
Total I nitrogen	mg/L	Grab	Weekly	Monthly ⁴	Monthly
Sodium	mg/L	Grab	Weekly	Monthly ⁴	Monthly
Chloride	mg/L	Grab	Weekly	Monthly ⁴	Monthly

¹ 5-day, 20°C Biochemical Oxygen Demand.

² High strength waste is any waste that exhibits a BOD₅ greater than 300 mg/L or FDS greater than 700 mg/L or total nitrogen greater than 50 mg/L.

³ Low strength waste is any non-designated waste that does not meet the above criteria for high strength waste.

⁴ At least two samples shall be analyzed per processing season.

PROCESS WASTEWATER FLOW MONITORING

The Discharger shall monitor daily process wastewater flows as follows:

<u>Flow Source</u>	<u>Units</u>	<u>Type of Measurement</u>	<u>Monitoring Frequency</u>	<u>Reporting Frequency</u>
Discharge to storage pond from each industrial facility)	gpd	Meter Observation	Daily ¹	Monthly
Discharge from storage pond to land application areas	gpd	Meter Observation	Daily ²	Monthly
Daily subtotal to each irrigation field or check	gpd and inches	Calculation	Daily ²	Monthly

¹ Report as total daily flow from each flow source to the pond.

² Calculated based on total daily flows, flow rates, checks in use, and length of set time for each check.

DESIGNATED DISPOSAL AREA MONITORING

A. Daily Inspections

The Discharger shall inspect the land application areas at least **once daily** prior to and during irrigation events, and observations from those inspections shall be documented for inclusion in the monthly monitoring reports. The following items shall be documented for each check or field to be irrigated on that day:

1. Evidence of erosion;
2. Berm condition;
3. Condition of each standpipe and flow control valve;
4. Proper use of valves;
5. Soil saturation;
6. Ponding;
7. Potential runoff to off-site areas;
8. Potential and actual discharge to surface water;
9. Accumulation of organic solids at soil surface;
10. Soil clogging;
11. Odors that have the potential to be objectionable at or beyond the property boundary;
and
12. Insects.

Temperature; wind direction and relative strength; and other relevant field conditions shall be also be observed and recorded. The notations shall also document any corrective actions taken based on observations made. A copy of entries made in the log during each month shall be submitted as part of the Monthly Monitoring Report.

B. Routine Monitoring

The Discharger shall perform the following routine monitoring and loading calculations and shall present the data in the Monthly and Annual Reports.

<u>Parameter</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Precipitation	inches	Rain Gauge	Daily	Monthly
Checks receiving wastewater ¹	--	Observation	Daily	Monthly
Hydraulic loading rate	inches/acre	Calculated ²	Daily	Monthly
BOD ₅ loading rate	lb/acre	Calculated ^{2,3}	Daily	Monthly
Total nitrogen loading rate	lb/acre	Calculated ^{2,4}	Daily	Monthly

<u>Parameter</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Fertilizer loading rates	lb/acre	Calculated ^{2,5}	Monthly	Monthly

- ¹ Designate identification numbers for discrete checks within each disposal site or area.
- ² Rate shall be calculated for each discrete check.
- ³ BOD₅ shall be calculated using the applied volume of wastewater, actual application area, and the average of the three most recent results of effluent BOD₅.
- ⁴ Total nitrogen loading rates shall be calculated using the applied volume of wastewater, actual application area, and the average of the three most recent results of effluent total nitrogen.
- ⁵ Loading rates for fertilizer constituents (i.e. nitrogen and phosphorous) shall be calculated using the actual load and the application area.

GROUNDWATER MONITORING

The Discharger shall monitor groundwater in accordance with the following schedule.

Monitoring Well ID ¹	<u>Sampling and Reporting Frequency</u>	
	<u>Low Discharge Years²</u>	<u>High Discharge Years³</u>
MW-1	Annually ⁴	Semiannually
MW-3	Semiannually ⁵	Semiannually
MW-4	Semiannually	Semiannually
MW-5	Semiannually	Semiannually
MW-6	Semiannually	Semiannually
MW-7	Annually	Semiannually
MW-8	Annually	Semiannually
MW-9	Semiannually	Semiannually
MW-10	Annually	Semiannually

- ¹ Monitoring well locations are shown on the attached Facility Plan.
- ² A low discharge year is defined as a calendar year during which the tomato cannery does not operate.
- ³ A high discharge year is defined as a calendar year during which the tomato cannery operates.
- ⁴ Annual monitoring shall be conducted during the 4th quarter.
- ⁵ Semiannual monitoring shall be conducted in the 2nd and 4th quarters.

Prior to construction of any new groundwater monitoring wells, the Discharger shall submit a *Monitoring Well Installation Workplan* for review and approval.

Prior to well purging, groundwater elevations shall be measured. Depth to groundwater shall be measured to the nearest 0.01 feet. Water table elevations shall be calculated and used to

determine groundwater gradient and direction of flow. The monitoring wells shall be purged of at least three well volumes or until temperature, pH, and electrical conductivity have stabilized. Samples shall be collected and analyzed using approved EPA methods. Groundwater monitoring shall include, at a minimum, the following:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Depth to groundwater	0.01 feet	Measurement
Groundwater elevation ¹	0.01 feet	Calculated
Gradient magnitude	feet/feet	Calculated
Gradient direction	degrees	Calculated
pH	pH Units	Grab
Electrical conductivity	umhos/cm	Grab
Total dissolved solids	mg/L	Grab
Fixed dissolved solids	mg/L	Grab
Ammonia nitrogen	mg/L	Grab
Nitrate nitrogen	mg/L	Grab
Iron	mg/L	Grab
Manganese	mg/L	Grab
Chloride	mg/L	Grab
Standard minerals ²	mg/L	Grab

¹ Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed elevation reference point on the well casing.

² Standard Minerals shall include at least the following: barium, calcium, magnesium, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and total hardness as CaCO₃.

WATER SUPPLY MONITORING

The Discharger shall monitor the process water supply and shall report the following minimum monitoring data for each water supply well:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Volume pumped to distribution system	MG	--	--	Annually
Total dissolved solids	mg/L	Grab	Annually	Annually

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Electrical conductivity	umhos/cm	Grab	Annually	Annually
Nitrate nitrogen	mg/L	Grab	Annually	Annually
Standard minerals ¹	mg/L	Grab	Annually	Annually
Metals ²	ug/L	Grab	Annually	Annually

¹ Standard Minerals shall include, at a minimum, the following elements/compounds: boron, bromide, calcium, chloride, fluoride, magnesium, phosphate, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness as CaCO₃.

² At a minimum, the following metals shall be included: arsenic, copper, lead, iron, manganese, nickel, and zinc. Analytical methods shall be selected to provide reporting limits below the applicable water quality limit for each constituent.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., influent, effluent, groundwater) and the reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report. The results of all monitoring performed by the industrial dischargers, or other parties, which are reported to the Discharger, shall be included in the next regularly scheduled monitoring report.

A. Monthly Monitoring Reports

Monthly Monitoring Reports for shall be submitted to the Central Valley Water Board by the **1st day of the second month following sampling** (i.e. the January Report is due by 1 March). **Each report shall bear the certification and signature of the Discharger's authorized representative.** Monthly Monitoring Reports shall be submitted regardless of whether there is any process wastewater generated. At a minimum, the monthly monitoring reports shall include:

1. Results of pond, domestic wastewater, process wastewater, process wastewater flow, and designated disposal area monitoring. Data shall be presented in tabular format.
2. Daily precipitation data in tabular form accompanied by starting and ending dates of irrigation for each field or check.
3. Daily pre-application inspection reports.
4. Calibration log(s) verifying calibration of any field monitoring instruments (e.g., DO, pH, and EC meters) used to obtain data.

5. Daily discharge volumes and acres irrigated shall be tabulated, and the report shall include a discussion of the discharge volumes and irrigation practices used (method of application, application period/duration, drying times, etc.) for each check or group of checks utilized during the month. Hydraulic loading rates (inches/acre/month) shall be calculated.
6. Maximum daily BOD₅ loading rates (lbs/acre/day) shall be calculated for each irrigation check using the total volume applied on the day of application, estimated application area, and a running average of the three most recent results of BOD₅ for the applicable source water, which also shall be reported along with supporting calculations. Average BOD₅ loading rates shall be calculated using the total volume applied on the day of application, the total application period (i.e.: day of application and drying time), estimated application area on the day of application, and a running average of the three most recent results of BOD₅ for the applicable source water.
7. Total nitrogen loading rates (lbs/acre/month) shall be calculated for each irrigation check on monthly basis using the daily applied volume of wastewater, estimated daily application area, and the most recent monitoring results, which shall also be reported along with supporting calculations.
8. Nitrogen loading rates for other sources (i.e., fertilizers) shall be calculated for each irrigation check on a monthly basis using the daily applied load and the estimated daily application area.
9. Cumulative nitrogen loading rates for each irrigation check for the calendar year to date shall be calculated as a running total of monthly loadings to date from all sources.
10. A comparison of monitoring data to the discharge specifications and effluent limitations, disclosure of any violations of the WDRs, and an explanation of any violation of those requirements. Copies of laboratory analytical report(s).

B. Semiannual Monitoring Reports

Semiannual groundwater monitoring reports shall be submitted to the Central Valley Water Board by the **1st day of the second month** after sampling (e.g. the first semiannual report is due July 1st) each year.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all groundwater monitoring reports shall be prepared under the direct supervision of a registered professional engineer or geologist and signed by the registered professional.

At a minimum, the report shall contain:

1. Results of groundwater monitoring.
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to

verify compliance with the WDRs, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged.

3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any.
4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable).
5. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements.
6. Summary data tables of historical and current water table elevations and analytical results.
7. A scaled map showing relevant structures and features of the facility, the land application area and irrigation check boundaries, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum.
8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

An Annual Report shall be submitted to the Central Valley Water Board by **1 February** of each year. The Annual Report may also include the contents of the 4th Quarter Monitoring Report as described above. The Annual Report shall present a summary of all monitoring data obtained during the previous calendar year and shall include the following:

1. Type of crop and planting and harvest dates for each field, including those that did not receive wastewater during the previous year.
2. Tabular and graphical summaries of historical monthly total loading rates for water (hydraulic loading in gallons and inches), BOD, total nitrogen, and total dissolved solids.
3. A mass balance relative to constituents of concern and hydraulic loading along with supporting data and calculations.
4. An evaluation of the groundwater quality beneath the wastewater ponds and land application areas.
5. A comprehensive evaluation of the effectiveness of the past year's wastewater application operation based on current and historical data including evidence of waste

constituent migration, the effectiveness of land treatment, potential for groundwater degradation, and recommendations for operational modifications to reduce waste constituent migration and prevent nuisance conditions.

6. A narrative description of solids disposal practices, including the name and contact information for each disposal facility and the quantity disposed.
7. 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 waste discharge requirements.
8. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

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

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: _____
- Original signed by Kenneth Landau for -
PAMELA C. CREEDON, Executive Officer

26 October 2009

(Date)