

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2016-XXXX
FOR
CALIFORNIA DEPARTMENT OF CORRECTIONS AND
CALIFORNIA PRISON INDUSTRY AUTHORITY
CORCORAN STATE PRISON AND
CALIFORNIA SUBSTANCE ABUSE TREATMENT FACILITY
WASTEWATER TREATMENT FACILITY AND DAIRY
KINGS COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to California Water Code (CWC) section 13267.

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. 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).

This MRP requires the Discharger to keep and maintain records for five years of the monitoring activities for the production and land application areas and to prepare and submit reports containing the results of specified monitoring as indicated below.

Field test instruments (such as pH) 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 or 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 California Department of Public Health's Environmental Laboratory Accreditation Program. The Discharger 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 Discharger may request

this MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

A glossary of terms used within this MRP is included on page 20.

WASTEWATER TREATMENT FACILITY AND DAIRY MONITORING POINTS

The Discharger shall monitor the following locations to demonstrate compliance with the requirements of this Order:

WWTF Monitoring Points

Monitoring Location Name	Monitoring Location Description
INF-001	Location where a representative sample of the WWTF's influent can be obtained prior to any additives, treatment processes, and plant return flow.
EFF-001	Location where a representative sample of the WWTF's effluent can be obtained prior to discharge into the effluent storage ponds.
TD-001	Location where a representative sample of the groundwater discharged from the tile drains underlying the land application area can be collected.
SPL-001	Location where a representative sample of the Prison's water supply can be obtained.

Dairy Monitoring Points

Monitoring Location Name	Monitoring Location Description
EFF-002	Location where a representative sample of the Dairy's pond discharge can be obtained prior to discharge to the land application areas.
MW-1 through MW-9	Groundwater Monitoring Wells MW-1 through MW-9 and any other wells added to the groundwater monitoring network.

WWTF INFLUENT MONITORING

Influent samples shall be collected at the inlet of the headworks at INF-001. Influent monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units¹</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Weekly	pH	s.u.	Grab
Twice Monthly	Electrical Conductivity	umhos/cm	24-hour composite

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units¹</u>	<u>Sample Type</u>
Twice Monthly	Biochemical Oxygen Demand	mg/L	24-hour composite
Twice Monthly	Total Suspended Solids	mg/L	24-hour composite
Monthly	Monthly Average Daily Flow	Mgd	Computed

1. mgd = million gallons per day; s.u. = standard pH units; umhos/cm = micromhos per centimeter; mg/L = milligrams per liter.

WWTF EFFLUENT MONITORING

The Discharger shall monitor treated effluent at EFF-001 as follows. Effluent samples shall be representative of the volume and nature of the discharges. Time of collection of the samples shall be recorded. Effluent monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units¹</u>	<u>Sample Type</u>
Continuous	Flow	Mgd	Meter
Weekly	pH	s.u.	Grab
Twice Monthly	Electrical Conductivity	umhos/cm	24-hour composite
Twice Monthly	Biochemical Oxygen Demand	mg/L	24-hour composite
Twice Monthly	Total Suspended Solids	mg/L	24-hour composite
Twice Monthly	Nitrate as nitrogen	mg/L	24-hour composite
Twice Monthly	Total Kjeldahl Nitrogen	mg/L	24-hour composite
Twice Monthly	Total Nitrogen	mg/L	Computed
Twice Monthly	Ammonia	mg/L	24-hour composite
Annually	Iron	ug/L	24-hour composite
Annually	Arsenic	ug/L	24-hour composite
Annually	Manganese	ug/L	24-hour composite
Annually	General Minerals ²	Varies ³	24-hour composite

1 mgd = million gallons per day; s.u. = standard pH units; umhos/cm = micromhos per centimeter; mg/L = milligrams per liter; ug/L = micrograms per liter.

2 Analysis for general minerals shall include at least the list of constituents listed in the Glossary that is presented on page 19.

3 Varies based on laboratory and constituent. Use mg/L or micrograms per liter (ug/L), whichever is appropriate.

WWTF POND MONITORING

Effluent pond monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units¹</u>	<u>Sample Type</u>
Weekly ²	Dissolved Oxygen ³	mg/L	Grab
Weekly	Freeboard	Feet ⁴	Observation

1. mg/L = milligrams per liter.

2. Measured between 8:00 and 9:00 am on the day of sample collection

3. Dissolved oxygen sample collected from within the upper one foot of all wastewater ponds containing effluent opposite the pond inlets.

4. To nearest tenth of a foot

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

The Discharger shall inspect the condition of the storage ponds once per week and write visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether dead algae, vegetation, scum, or debris are accumulating on the storage pond surface and their location; whether burrowing animals or insects are present; and the color of the reservoirs (e.g., dark green, dull green, yellow, gray, tan, brown, etc.).

WWTF SLUDGE/BIOSOLIDS MONITORING

Sludge and/or biosolids shall be sampled for the following constituents:

Arsenic	Lead	Nickel
Cadmium	Mercury	Selenium
Copper	Molybdenum	Zinc
Organic Nitrogen	Ammonia Nitrogen	Total Solids

Monitoring shall be conducted as required in Title 40 of the Code of Federal Regulations (40 CFR), Part 503.8(b)(4). The constituents listed above shall be monitored at the following frequency, depending on volume of sludge generated:

<u>Volume Generated (dry metric tons/year)</u>	<u>Frequency</u>
0 to 290	Annually
290 to 1,500	Quarterly
1,500 to 15,000	Bimonthly (six samples per year)
Greater than 15,000	Monthly

The Discharger shall demonstrate that treated sludge (i.e., biosolids) meets Class A or Class B pathogen reduction levels by one of the methods listed in 40 CFR, Part 503.32.

The Discharger shall track and keep records of the operational parameters used to achieve Vector Attraction Reduction requirements in 40 CFR, Part 503.33(b).

WWTF LAND APPLICATION AREA MONITORING

The Discharger shall perform routine monitoring and loading calculations for each discrete irrigation area within the Land Application Area. Data shall be collected and presented in tabular format in accordance with Table 1 on page 20.

In addition, the Discharger shall inspect the Land Application Area on a weekly basis. Evidence of erosion, field saturation, runoff, of the presence of nuisance conditions (i.e., flies, ponding, etc.) shall be noted in field logs and included as part of the quarterly monitoring reports.

DAIRY PRODUCTION AND LAND APPLICATION AREA MONITORING REQUIREMENTS

VISUAL INSPECTIONS

The Discharger shall conduct and record the inspections specified in the table below and maintain records of the results on-site for a period of five years.

Visual Inspections – Dairy Production Area

<u>Frequency</u>	<u>Inspection</u>
Weekly during the wet season (1 October to 30 April) and monthly between 1 May and 30 September.	Inspect all waste storage areas and note any conditions or changes that could result in discharges to surface water and/or from property under control of the Discharger. Note whether freeboard within each liquid storage structure is less than, equal to, or greater than the minimum required (two feet for above ground ponds and one foot for below ground ponds).
<u>Frequency</u>	<u>Inspection</u>
During and after each significant storm event ¹ .	Visual inspections of storm water containment structures for discharge, freeboard, berm integrity, cracking, slumping, erosion, excess vegetation, animal burrows, and seepage.
Monthly on the 1st day of each month.	Photograph each pond showing the height of wastewater relative to the depth marker and the current freeboard on that date. All photos shall be dated and maintained as part of the discharger's record.

1. A significant storm event is defined as a storm event that results in continuous runoff of storm water for a minimum of one hour, or intermittent runoff for a minimum of three hours in a 12-hour period.

Visual Inspections - Land Application Areas

<u>Frequency</u>	<u>Inspection</u>
Prior to each wastewater application.	Inspect the land application area and note the condition of land application berms including rodent holes, piping, and bank erosion. Verify that any field valves are correctly set to preclude off-property or accidental discharges of wastewater.
Daily when process wastewater is being applied.	Inspect the land application area and note the condition of land application berms including rodent holes, piping, and bank erosion; the presence (or lack) of field saturation, ponding, erosion, runoff (including tailwater discharges from the end of fields, pipes, or other conveyances), and nuisance conditions; and the conditions of any vegetated buffers or alternative conservation practices.

DAIRY NUTRIENT MONITORING

The Discharger shall monitor process wastewater, manure, and plant tissue produced at the facility, soil in each land application area, and irrigation water used on each land application area for the constituents and at the frequency as specified in the table below. This information is for use in conducting nutrient management on the individual land application areas and at the facility on the whole. It must be used to develop and implement the Nutrient Management Plan. The Discharger is encouraged to collect and use additional data, as necessary, to refine nutrient management.

Dairy Nutrient Monitoring - Process Wastewater

<u>Frequency</u>	<u>Task</u>
Each application.	Record the volume (gallons or acre-inches) and date of process wastewater application to each land application area.
Quarterly during one application event.	Field measurement of electrical conductivity. Laboratory analyses for nitrate-nitrogen (only when retention pond is aerated), un-ionized ammonia-nitrogen, total Kjeldahl nitrogen, total phosphorus, total potassium, and total dissolved solids.
Once every two years (biennially).	Laboratory analyses for general minerals (calcium, magnesium, sodium, bicarbonate, carbonate, sulfate, and chloride).
Annually	Laboratory analyses of liquid process wastewater, prior to blending with irrigation water, for pH, total dissolved solids, electrical conductivity, nitrate-nitrogen, ammonium-nitrogen, total Kjeldahl nitrogen, total phosphorus, and total potassium.

Dairy Nutrient Monitoring - Manure

<u>Frequency</u>	<u>Task</u>
Once every two years (biennially).	Laboratory analyses for general minerals (calcium, magnesium, sodium, sulfur, chloride) and fixed solids (ash).
Twice per year.	Laboratory analyses for total nitrogen, total phosphorus, total potassium, and percent moisture.
Each application to each land application area.	Record the percent moisture and total weight (tons) applied.
Each offsite export of manure.	Record the percent moisture and total weight (tons) exported. Laboratory analyses for percent moisture.
Annually.	Record the total dry weight (tons) of manure applied annually to each land application area and the total dry weight (tons) of manure exported offsite.

Dairy Nutrient Monitoring – Irrigation Water

Frequency

Task

Each irrigation event for each land application area:	Record volume (gallons or acre-inches) ² and source (well or canal) of irrigation water applied and dates applied.
One irrigation event during each irrigation season during actual irrigation events:	For each irrigation water source (well and canal): Electrical conductivity, total dissolved solids, and total nitrogen. ³ Data collected to satisfy the groundwater monitoring requirements (below) can be used to satisfy this requirement

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1. The Discharger shall monitor irrigation water (from each water well source and canal) that is used on all land application areas.
 2. Initial volume measurements may be the total volume for all land application areas.
 3. In lieu of sampling the irrigation water, the Discharger may provide equivalent data from the local irrigation district.

1. If conditions are not safe for sampling, the Discharger must provide documentation of why samples could not be collected and analyzed. For example, the Discharger may be unable to collect samples during dangerous weather conditions (such as local flooding, high winds, tornados, electrical storms, etc.). However, once the dangerous conditions have passed, the Discharger shall collect a sample of the discharge or, if the discharge has ceased, from the waste management unit from which the discharge occurred.
2. Discharge and sample analyses shall be conducted by a laboratory certified for such analyses by the California Department of Health Services. These laboratory analyses shall be conducted in accordance with the Title 40 Code of Federal Regulations Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants) or other test methods approved by the Executive Officer.
3. All discharges shall be reported as specified in the Reporting Requirements (Priority Reporting of Significant Events and Annual Reporting) below, as appropriate.
4. The rationale for all discharge sampling locations shall be included in the Annual Report (in the Storm Water Report for storm water discharges from land application areas).

DAIRY GENERAL MONITORING REQUIREMENTS

1. The Discharger shall comply with all the “Requirements Specifically for Monitoring Programs and Monitoring Reports” as specified in the Standard Provisions and Reporting Requirements.
2. Approved sampling procedures are listed on the Central Valley Water Board’s web site at http://www.waterboards.ca.gov/centralvalley/available_documents/index.html#confined.
When special procedures appear to be necessary at an individual dairy, the Discharger may request approval of alternative sampling procedures for nutrient management. The

Executive Officer will review such requests and if adequate justification is provided, may approve the requested alternative sampling procedures.

3. The Discharger shall use clean sample containers and sample handling, storage, and preservation methods that are accepted or recommended by the selected analytical laboratory or, as appropriate, in accordance with approved United States Environmental Protection Agency analytical methods.
4. All samples collected shall be representative of the volume and nature of the material being sampled.
5. All sample containers shall be labeled and records maintained to show the time and date of collection as well as the person collecting the sample and the sample location.
6. All samples collected for laboratory analyses shall be preserved and submitted to the laboratory within the required holding time appropriate for the analytical method used and the constituents analyzed.
7. All samples submitted to a laboratory for analyses shall be identified in a properly completed and signed Chain of Custody form.
8. Field test instruments used for temperature, pH, electrical conductivity, ammonia nitrogen, un-ionized ammonia nitrogen, and dissolved oxygen may be used provided:
 - a. The operator is trained in the proper use and maintenance of the instruments;
 - b. The instruments are field calibrated prior to each monitoring event; and
 - c. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency.

DAIRY RECORD-KEEPING REQUIREMENTS

Dischargers shall maintain on-site for a period of five years, from the date they are created, all information as follows (Owners must maintain their own copies of this information):

1. All information necessary to document implementation and management of the Nutrient Management Plan, including the information described in Items 2 through 6 below;
2. All records for the production area including:
 - a. Records documenting the inspections required under the Monitoring Requirements above;
 - b. Records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Requirements above.

- Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction;
- c. Records of the date, time, and estimated volume of any overflow or bypass of the wastewater storage or conveyance structures;
 - d. Records of mortality management and practices;
 - e. Steps and dates when action is taken to correct unauthorized releases as reported in accordance with Priority Reporting of Significant Events below; and
 - f. Records of monitoring activities and laboratory analyses conducted as required in Standard Provisions and Reporting Requirements D.5.
3. All records for the land application area including:
- a. Expected and actual crop yields;
 - b. Identification of crop, acreage, and dates of planting and harvest for each field;
 - c. Dates, locations, and approximate weight and moisture content of manure applied to each field;
 - d. Dates, locations, and volume of process wastewater applied to each field;
 - e. Whether precipitation occurred, or standing water was present, at the time of manure and process wastewater applications and for 24 hours prior to and following applications;
 - f. Dates, locations, and test methods for soil, manure, process wastewater, irrigation water, and plant tissue sampling;
 - g. Results from manure, process wastewater, irrigation water, soil, plant tissue, discharge (including tailwater), and storm water sampling;
 - h. Explanation for the basis for determining manure or process wastewater application rates, as provided in the Technical Standards for Nutrient Management established by the Order (Attachment C of Order No. R5-2007-0035);
 - i. Calculations showing the total nitrogen, total phosphorus, and potassium to be applied to each field, including sources other than manure or process wastewater (Nutrient Budget);
 - j. Total amount of nitrogen, phosphorus, and potassium actually applied to each field, including documentation of calculations for the total amount applied (Nutrient Application Calculations);
 - k. The method(s) used to apply manure and/or process wastewater;
 - l. Records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Requirements above.

Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction; and

- m. Records of monitoring activities and laboratory analyses conducted as required in Standard Provisions and Reporting Requirements D.5.
- 4. A copy of the Discharger's site-specific Nutrient Management Plan;
- 5. Tracking Manifest forms (Attachment D of Order No. R5-2007-0035) for off-site exports of manure or process wastewater which includes information on the manure hauler, destination of the manure, dates hauled, amount hauled, and certification; and
- 6. All analyses of manure, process wastewater, irrigation water, soil, plant tissue, discharges (including tailwater discharges), surface water, storm water, subsurface (tile) drainage, and groundwater.

WWTF AND DAIRY GROUNDWATER MONITORING

The land application areas are underlain by a tile drain network at depths from seven to nine feet bgs. The discharge outlet is at the northwest corner of the land application area. The Discharger shall collect samples at the frequency listed in the following table.

Additionally, nine groundwater monitoring wells that are in the vicinity of the dairy ponds (MW-1 through MW-9) are monitored to record the depth to water and quality of the groundwater around the dairy. MW-1 and MW-4 have been dry since 2007, but should remain in place in case water levels rise in the future. MW-1 through MW-4 should be monitored for the presence of water during the quarterly groundwater monitoring events for MW-5 through MW-9. After measuring water levels and prior to collecting samples, each monitoring well (MW-5 through MW-9) 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 from 3 to 5 volumes of the standing water within the well casing and screen, or additionally the filter pack pore volume.

The Discharger shall monitor the tile drain and the all wells in its Groundwater Monitoring Network, and any additional wells installed pursuant to this MRP, for the following:

The Discharger shall monitor the tile drain discharge for the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units¹</u>	<u>Sample Type</u>
Quarterly	Depth to Groundwater	Feet ²	Measured
Quarterly	Groundwater Elevation	Feet ³	Computed
Quarterly	pH	s.u.	Grab
Quarterly	Electrical Conductivity	umhos/cm	Grab
Quarterly	Nitrate as nitrogen	mg/L	Grab

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units¹</u>	<u>Sample Type</u>
Quarterly	Total Kjeldahl Nitrogen	mg/L	Grab
Quarterly	Ammonia	mg/L	Grab
Quarterly	Total Nitrogen	mg/L	Computed
Quarterly	Arsenic	ug/L	Grab
Quarterly	Iron	ug/L	Grab
Quarterly	Manganese	ug/L	Grab
Annually	General Minerals ⁴	Varies ⁵	Grab

1. s.u. = Standard pH units; umhos/cm = micromhos per centimeter; mg/L = milligrams per liter; ug/L=micrograms per liter.
2. To the nearest hundredth of a foot.
3. To the nearest hundredth of a foot above Mean Sea Level.
4. Analysis for general minerals shall include at least the list of constituents listed in the Glossary that is presented on page 19.
5. Varies based on laboratory and constituent. Use mg/L or micrograms per liter (ug/L), as appropriate.

SOURCE WATER MONITORING

For each source, the Dischargers shall calculate the flow-weighted average concentrations for the specified constituents utilizing monthly flow data and the most recent chemical analysis conducted in accordance with Title 22 drinking water requirements. Publically available data (such as Drinking Water Consumer Confidence Report) may be used in lieu of collecting samples of each water source.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units¹</u>	<u>Sample Type</u>
Quarterly	Electrical Conductivity	umhos/cm	Computed average
Annually	General Minerals ²	Varies ³	Computed average

1. umhos/cm = micromhos per centimeter;
2. Analysis for general minerals shall include at least the list of constituents listed in the Glossary that is presented on page 19.
3. Varies based on laboratory and constituent. Use mg/L or micrograms per liter (ug/L), as appropriate.

WWTF REPORTING

All WWTF monitoring results shall be reported in **Quarterly 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 Quarter Monitoring Report: **1 May**
- Second Quarter Monitoring Report: **1 August**
- Third Quarter Monitoring Report: **1 November**
- Fourth Quarter and Annual Monitoring Report: **1 February.**

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 Discharger 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 following information is to be included on all monitoring reports, as well as report transmittal letters:

Discharger Name
Facility Name
Monitoring and Reporting Program Number
Contact Information (telephone number and email)

In reporting monitoring data, the Discharger 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 Discharger complies with waste discharge requirements.

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. Monitoring data or discussions submitted concerning WWTF performance must also be signed and certified by the chief plant operator. If the chief plant operator is not in direct line of supervision of the laboratory function for a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

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 Quarterly Monitoring Reports shall include the following:

Wastewater Reporting:

1. The results of influent and effluent monitoring specified on pages 2 and 3.
2. For each month of the quarter, calculation of the maximum daily flow and the monthly average flow.

3. For each month of the quarter, calculation of the 12-month rolling average EC of the discharge using the EC value for that month averaged with the EC values for the previous 11 months.
4. For each month of the quarter, calculation of the monthly average effluent BOD and TSS concentrations, and calculation of the percent removal of BOD and TSS compared to the influent.
5. A summary of the notations made in the pond monitoring log during each quarter. The entire contents of the log for the reporting period do not need to be submitted.

Pond Monitoring Reporting

1. The results of the monitoring specified on pages 3 and 4.

Groundwater Reporting:

1. The results of groundwater monitoring specified on pages 10 and 11.
2. For groundwater monitoring, a table showing constituent concentrations for the last five quarters, up through the current quarter.

Source Water Reporting

1. For each quarter, calculation of average EC of the source water for the most recent four quarters.

B. WWTF Fourth Quarter Monitoring Reports, in addition to the above, shall include the following:

Wastewater Treatment Facility Information:

1. The names, certificate grades, and general responsibilities of all persons in charge of wastewater treatment and disposal.
2. The names and telephone numbers of persons to contact regarding the WWTF 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 statement whether the current operation and maintenance manual, sampling plan, nutrient management plan, and contingency plan, reflect the WWTF as currently constructed and operated, and the dates when these documents were last reviewed for adequacy.

Sludge/Biosolids

Sampling records shall be retained for a minimum of five years. A log shall be kept of sludge quantities generated and of handling, application, and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis to report sludge monitoring. Sludge reporting shall include:

1. The results of sludge monitoring specified on page 4.
2. The amount of sludge generated that year, in dry metric tons, and the amount accumulated from previous years.
3. Demonstrations of pathogen reduction methods and vector attraction reduction methods, as described in 40 CFR Parts 503.17 and 503.27, and certifications.
4. A description of disposal methods, including the following information related to the disposal methods used at the WWTF. If more than one method is used, include the percentage of sludge production disposed of by each method.
 - a. For landfill disposal, include: the name and location of the landfill receiving the sludge, 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 sludge 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.

Land Application Area Reporting

1. The type of crop(s) grown in the Land Application Area, and the quantified hydraulic and nitrogen loading rates in accordance with Table 1 on page 20.
2. A summary of the notations made in the Land Application Area monitoring log during each quarter. The entire contents of the log do not need to be submitted.
3. In accordance with Provision G. 15 of WDR Order R5-2016-XXXX, the Discharger shall submit an updated copy of the Nutrient Management Plan once every two years from the adoption of the Order.

DAIRY REPORTING REQUIREMENTS

Priority Reporting of Significant Events (Prompt action required).

The Discharger shall report any noncompliance that endangers human health or the environment or any noncompliance with this Order, **within 24 hours** of becoming aware of its occurrence. The incident shall be reported to the Central Valley Water Board office, local environmental health department, and to the California Emergency Management Agency (CalEMA). During non-business hours, the Discharger shall leave a message on the Central Valley Water Board's voice mail. The message shall include the time, date, place, and nature of the noncompliance, the name and number of the reporting person, and shall be recorded in writing by the Discharger. CalEMA is operational 24 hours a day. A written report shall be submitted to the Central Valley Water Board office **within two weeks** of the Discharger becoming aware of the incident. The report shall contain a description of the noncompliance, its causes, duration, and the actual or anticipated time for achieving compliance.

The report shall include complete details of the steps that the Discharger has taken or intends to take, in order to prevent recurrence. All intentional or accidental spills shall be reported as required by this provision. The written submission shall contain:

1. The approximate date, time, and location of the noncompliance including a description of the ultimate destination of any unauthorized discharge and the flow path of such discharge to a receiving water body;
2. A description of the noncompliance and its cause;
3. The flow rate, volume, and duration of any discharge involved in the noncompliance;
4. The amount of precipitation (in inches) the day of any discharge and for each of the seven days preceding the discharge;
5. A description (location; date and time collected; field measurements of pH, temperature, dissolved oxygen and electrical conductivity; sample identification; date submitted to laboratory; analyses requested) of noncompliance discharge samples and/or surface water samples taken to comply with the Monitoring Requirements above for *Discharges (Including Off-Property Discharges) of Manure or Process Wastewater or Other Dairy Waste from the Production Area or Land Application Area and Storm Water Discharges to Surface Water from the Production Area*;
6. The period of noncompliance, including dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue;
7. A time schedule and a plan to implement corrective actions necessary to prevent the recurrence of such noncompliance; and

8. The laboratory analyses of the noncompliance discharge sample and/or upstream and downstream surface water samples shall be submitted to the Central Valley Water Board office within 45 days of the discharge.

DAIRY ANNUAL REPORTING

An annual monitoring report is due by **1 February of each year**. It will consist of a General Section, Groundwater Reporting Section, and a Storm Water Reporting Section as described below.

General Section

The General section of the annual report shall be completed on an annual report form provided by the Executive Officer (available on the Central Valley Water Board website at http://www.waterboards.ca.gov/centralvalley/available_documents/index.html#confined) and shall include all the information as specified below. This section of the annual report shall cover information on crops harvested during the previous calendar year, whether or not the crop was planted prior to this period.

1. Identification of the beginning and end dates of the annual reporting period;
2. Maximum and average number and type of animals, whether in open confinement or housed under roof during the reporting period;
3. Estimated amount of total manure (tons) and process wastewater (gallons or acre-inches) generated by the facility during the annual reporting period; a calculation of the total nitrogen, total phosphorus, total potassium, and total salt content measured as fixed solids of the solid waste; and total dissolved solids of the liquid waste;
4. Estimated amount of total manure (tons) and process wastewater (gallons or acre-inches) applied to each land application area during the annual reporting period and a calculation of the total nitrogen, total phosphorus, total potassium, and total salt content measured as fixed solids (ash) of the solid waste and total dissolved solids of the liquid waste;
5. Quantify the ratio of total nitrogen applied to land application areas and total nitrogen removed by crop harvest (nitrogen uptake).
6. Estimated amount of total manure (tons) and process wastewater (gallons or acre-inches) transferred to other persons by the facility during the annual reporting period; a calculation of the total nitrogen, total phosphorus, total potassium, and total salt content measured as fixed solids of the solid waste; and total dissolved solids of the liquid waste;
7. Total number of acres and the Assessor Parcel Numbers for all land application areas that were not used for application of manure or process wastewater during the reporting period;

8. Total number of acres and the Assessor Parcel Numbers of properties that were used for land application of manure and process wastewater during the annual reporting period;
9. Summary of all manure and process wastewater discharges from the production area to surface water or to land areas (land application areas or otherwise) when not in accordance with the facility's Nutrient Management Plan that occurred during the annual reporting period, including date, time, location, and approximate volume; a map showing discharge and sample locations; rationale for sample locations; and method of measuring discharge flows;
10. Summary of all storm water discharges from the production area to surface water during the annual reporting period, including the date, time, approximate volume, duration, and location; a map showing the discharge and sample locations; rationale for sample locations; and method of measuring discharge flows;
11. Summary of all discharges from the land application area to surface water that have occurred during the annual reporting period, including the date, time, approximate volume, location, and source of discharge (i.e., tailwater, process wastewater, or blended process wastewater); a map showing the discharge and sample locations; rationale for sample locations; and method of measuring discharge flows;
12. A statement indicating if the Nutrient Management Plan has been updated and whether the current version of the facility's Nutrient Management Plan was developed or approved by a certified nutrient management specialist as specified in Attachment C of Order No. R5-2007-0035;
13. Copies of all manure/process wastewater tracking manifests for the reporting period;
14. A statement indicating if there were any changes to third party agreements to receive manure or process wastewater. If there were any changes, submit copies of all new or revised written agreements with each third party that receives solid manure or process wastewater from the Discharger for its own use;
15. Copies of laboratory analyses of all discharges (manure, process wastewater, or tailwater), surface water (upstream and downstream of a discharge), and storm water, including Chain of Custody forms and laboratory quality assurance/quality control (QA/QC) results;
16. Tabulated analytical data for samples of manure, process wastewater, irrigation water, soil, and plant tissue. The data shall be tabulated to clearly show sample dates, constituents analyzed, constituent concentrations, and detection limits;
17. Results of the Record-Keeping Requirements for the production and land application areas specified in Record-Keeping Requirements 2.b, 2.c, 3.a, 3.b, 3.c, 3.d, 3.e, 3.j, and 3.l above.

Dairy Groundwater Reporting Section

Groundwater monitoring results shall be included with the annual reports.

1. Dischargers that monitor supply wells and subsurface (tile) drainage systems only shall submit information on the location of sample collection and all field and laboratory data, including all laboratory analyses (including Chain of Custody forms and laboratory QA/QC results).
2. Dischargers that have monitoring well systems shall include all laboratory analyses (including Chain of Custody forms and laboratory QA/QC results) and tabular and graphical summaries of the monitoring data. Data shall be tabulated to clearly show the sample dates, constituents analyzed, constituent concentrations, detection limits, depth to groundwater, and groundwater elevations. Due to the variable nature of the shallow groundwater quality of the region, the typical comparison of upgradient groundwater quality to downgradient groundwater quality is not valid. Rather, the data should be evaluated on an intra-well basis to establish trends of the constituents of concern. Should the data indicate the discharge of WWTF effluent and dairy wastewater is causing the exceedance of a water quality objective, then the Order can be re-opened to address the discharge.
3. Graphical summaries of groundwater gradients and flow directions shall also be included. A groundwater contour map based on groundwater elevations for that quarter. The map shall show the gradient and direction of groundwater flow under/around the facility and/or effluent disposal area(s). The map shall also include the locations of monitoring wells and wastewater storage and discharge areas. Each groundwater monitoring report shall include a summary data table of all historical and current groundwater elevations and analytical results. The groundwater monitoring reports shall be certified by a California registered professional as specified in General Reporting Requirements C.9 of the Standard Provisions and Reporting Requirements of Order No. R5-2007-0035.

Storm Water Reporting Section

Storm water monitoring results will be included in the annual report. The report shall include a map showing all sample locations for all land application areas, rationale for all sampling locations, a discussion of how storm water flow measurements were made, the results (including the laboratory analyses, Chain of Custody forms, and laboratory QA/QC results) of all samples of storm water, and any modifications made to the facility or sampling plan in response to pollutants detected in storm water.

The annual report must also include documentation if no significant discharge of storm water occurred from the land application area(s) or if it was not possible to collect any of the required samples or perform visual observations due to adverse climatic conditions. If the storm water monitoring for any land application area indicates pollutants have not been detected in storm water samples, the Discharger may propose to the Executive Officer to reduce the constituents and/or sampling frequency for that area.

MONITORING AND REPORTING PROGRAM R5-2016-XXXX
CALIFORNIA DEPARTMENT OF CORRECTIONS AND
CALIFORNIA PRISON INDUSTRY AUTHORITY
CORCORAN STATE PRISON AND CALIFORNIA SUBSTANCE ABUSE TREATMENT FACILITY
WASTEWATER TREATMENT FACILITY AND DAIRY
KINGS COUNTY

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The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by:

PAMELA C. CREEDON, Executive Officer

(Date)

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand												
CBOD	Carbonaceous BOD												
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	Unless otherwise specified or approved, samples shall be a flow-proportioned composite consisting of at least eight aliquots.												
Daily	Samples shall be collected 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.												
Twice 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												
µg/L	Micrograms per liter												
µmhos/cm	Micromhos per centimeter												
mgd	Million gallons per day												
MPN/100 mL	Most probable number [of organisms] per 100 milliliters												
General Minerals	Analysis for General Minerals shall include at least the following:												
	<table border="0" style="width: 100%;"> <tr> <td style="width: 33%;">Alkalinity</td> <td style="width: 33%;">Chloride</td> <td style="width: 33%;">Sodium</td> </tr> <tr> <td>Bicarbonate</td> <td>Hardness</td> <td>Sulfate</td> </tr> <tr> <td>Calcium</td> <td>Magnesium</td> <td>TDS</td> </tr> <tr> <td>Carbonate</td> <td>Potassium</td> <td></td> </tr> </table>	Alkalinity	Chloride	Sodium	Bicarbonate	Hardness	Sulfate	Calcium	Magnesium	TDS	Carbonate	Potassium	
Alkalinity	Chloride	Sodium											
Bicarbonate	Hardness	Sulfate											
Calcium	Magnesium	TDS											
Carbonate	Potassium												

General Minerals analyses shall be accompanied by documentation of cation/anion balance.

Table 1. WWTF Reclamation Area Monitoring

Recycled Water Monitoring Data For Year: _____								
Parcel No. _____ of _____ acres								
		Water application				Nitrogen application		
		Water required	Effluent used	Other water used	Total irrigation water	As fertilizer	As effluent*	Total nitrogen applied
Month	Crop	(AF)	(AF)	(AF)	(AF)	(lbs/acre)	(lbs/acre)	(lbs/acre)
October								
November								
December								
Subtotal:								
January								
February								
March								
Subtotal:								
April								
May								
June								
Subtotal:								
July								
August								
September								
Subtotal:								
Annual Total:								
* calculated as (AF effluent/acre) x (2.72) x (X mg/l total nitrogen) = lbs nitrogen/acre								