CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM ORDER NO. R5-2010-XXXX
FOR
CITY OF ORLAND
CLASS II SURFACE IMPOUNDMENTS
AND DOMESTIC WASTEWATER TREATMENT FACILITY
GLENN COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring the industrial and domestic wastewater treatment facility influent, wastewater ponds and surface impoundments, groundwater, and biosolids disposal. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

Central Valley Water Board staff shall approve specific sampling locations prior to any sampling activities. 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 sample shall be recorded on the sample chain of custody form.

Field test instruments (such as those used to test dissolved oxygen, pH, and electrical conductivity) 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. 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 this MRP.

Domestic Wastewater Influent Monitoring (INF-001)

The Discharger shall monitor influent domestic wastewater (INF-001) in accordance with the following schedule:

Domestic Wastewater Influent – INF-001

Constituent	Units	Frequency
Flow	gallons	Daily
Electrical Conductance (EC)	µmhos/cm	Weekly
Total Dissolved Solids (TDS)	mg/L	Quarterly
pH	S.U.	Weekly
Temperature	°C or °F	Weekly
Biological Oxygen Demand ($BOD_{5\text{-}day}$)	mg/L	Quarterly

Class II Surface Impoundments (SI-001 and SI-002)

The Discharger shall monitor each Class II industrial surface impoundment according to the following schedule:

Constituent	Units	Frequency
Flow	gallons	Daily
Electrical Conductance (EC)	µmhos/cm	Weekly
Total Dissolved Solids (TDS)	mg/L	Quarterly
pH	S.U.	Weekly
Temperature	°C or °F	Weekly
Chemical Oxygen Demand (COD)	mg/L	Quarterly
Suspended Solids (SS)	mg/L	Quarterly
Nitrate as N	mg/L	Quarterly
Chloride	mg/L	Quarterly
Sulfate	mg/L	Quarterly
Total Hardness	mg/L	Quarterly

Domestic Wastewater Ponds (POND-001 – POND-004)

The Discharger shall monitor each domestic wastewater pond according to the following schedule:

Constituent	Units	Frequency
EC	µmhos/cm	Quarterly
Dissolved Oxygen (DO)	mg/L	Quarterly
Freeboard	ft	Monthly
TDS	mg/L	Quarterly
pH	S.U.	Monthly
Temperature	°C or °F	Monthly

Irrigation Area (IRR-001)

The date and quantity of treated domestic wastewater applied to the irrigation field shall be recorded (in gallons) and reported with each quarterly monitoring report. The irrigation area shall be inspected for standing water following periods of irrigation.

Biosolids (BIO-001)

The Discharger shall keep records regarding biosolids generated by the treatment processes, including any analytical test results; the quantity of biosolids removed from the ponds and temporarily stored on site; and steps taken to prevent nuisance conditions. Records shall be stored onsite and available for review during inspections.

If biosolids are transported off-site for disposal, then the Discharger shall submit records identifying the hauling company, the amount of biosolids transported, the date removed from the facility, the disposal facility name and address, and copies of all analytical data required by the entity accepting the waste. These records shall be submitted as part of the Annual Monitoring Report.

A composite sample of sludge (BIO-001) shall be collected prior to disposal in accordance with EPA's *POTW Sludge Sampling and Analysis Guidance* document, August 1989 and tested for the following:

Constituent	Units	Type of Sample
moisture content	% moisture	Grab
Title 22, CCR or California Assessment Manual (CAM-17) Heavy Metals	µg/kg	Grab
Volatile Organic Compounds (VOCs)	µg/kg	Grab

Groundwater

The current groundwater detection monitoring network includes 12 monitoring wells and at least 5 domestic and/or irrigations wells. The initial groundwater monitoring network includes monitoring wells W-A through W-E around the class II surface impoundments, and W-1 through W-4 downgradient of the facility. W-5 (Vlasoff), a private well, is considered the upgradient (background) well. A number of additional private wells have been included into the monitoring

network; however the majority of these wells are located over 2,000 feet from the facility. Additionally, a number of monitoring wells are consistently dry and/or no longer in use due to mechanical failures.

The Discharger shall amend the groundwater detection and evaluation monitoring system to evaluate the magnitude and extent of industrial wastewater pollution, and better determine effects of the domestic wastewater stabilization ponds and irrigation field. Prior to construction of any additional groundwater monitoring wells, the Discharger shall submit plans and specifications to the Regional Water Board for review and approval. Once installed, all new monitoring wells shall be added to the MRP, and shall be sampled and analyzed according to the schedule below.

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 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:

Constituent	Units	Type of Sample	Frequency
Groundwater Elevation	0.01 feet MSL	Measurement	Quarterly
Groundwater Gradient	feet/foot	Calculated	Quarterly
Groundwater Gradient Direction	degrees	Calculated	Quarterly
pH	S.U.	Grab	Quarterly
EC	µmhos/cm	Grab	Quarterly
Nitrogen	mg/L	Grab	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly
Total Coliform	MPN/100 mL	Grab	Quarterly
General Minerals[1]	mg/L	Grab	Quarterly
Title 22 Heavy Metals	µg/L	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly
Chemical Oxygen Demand (COD)	mg/L	Grab	Quarterly

[1]General Minerals shall include, at a minimum, boron, bromide, calcium, chloride, fluoride, magnesium, phosphate, potassium, sodium, sulfate, total alkalinity, and hardness as $CaCO_3$.

Leachate Collection and Recovery System (LCRS-001)

The Industrial Class II Surface Impoundment Leachate Collection and Recovery System (LCRS) sump shall be inspected monthly for leakage. Upon detection of a leak in the previously dry LCRS, the Discharger shall immediately sample the liquid and continue to sample the liquid at the following frequency:

Constituent	Units	Frequency
Flow	gallons	Daily
EC	µmhos/cm	Weekly
TDS	mg/L	Weekly
pH	S.U.	Weekly
Temperature	°C or °F	Weekly
COD	mg/L	Quarterly
Nitrate as N	mg/L	Quarterly
Chloride	mg/L	Quarterly
Sulfate	mg/L	Quarterly
Suspended Solids	mg/L	Quarterly
Total Hardness	mg/L	Quarterly

Reporting

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type, and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with Waste Discharge Requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the MRP shall be reported to the Regional Water Board.

The Discharger shall submit quarterly monitoring reports to the Regional Water Board by the **1st day of the second month after the quarter** (i.e. the January – March quarter is due by 1st May) each year.

As required by the California Business and Professions Code Section 6735, 7835, and 7835.1, all quarterly monitoring reports shall be prepared under the direct supervision of a registered Professional Engineer or Geologist and signed by the registered professional.

A letter transmitting the self-monitoring reports shall accompany each report. The letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting 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 agents, 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.

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PAMELA C. CREEDON, Executive Officer

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Date