CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2008-xxxx
FOR
LAND O' LAKES, INC.
ORLAND CHEESE PROCESSING PLANT
GLENN COUNTY

The Discharger shall comply with this Monitoring and Reporting Program (MRP), issued pursuant to California Water Code Section 13267, which describes requirements for monitoring industrial flows, wastewater ponds, groundwater, and solids. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All samples should 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 test pH and dissolved oxygen) may be used, provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated prior to each monitoring event;
3. Instruments are serviced and/or calibrated per the manufacturer's recommended frequency; and
4. A statement is provided annually, certifying when the flow meters and other monitoring instruments and devices were last calibrated (Standard Provision C.3).

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

DISCHARGE MONITORING

24-hour composite samples of the discharge shall be collected at a point immediately adjacent to the Palmer Bowlus Flume in the discharge line to the lower pond. The Discharger shall monitor the discharge for the constituents and frequencies specified below:

Constituent/Parameter	Units	Type	Frequency
Daily Flow	gal/day	Continuous	Daily
Electrical Conductivity	µmhos/cm	24 hr – Composite	Monthly
Sodium	mg/L	24 hr – Composite	Monthly
Potassium	mg/L	24 hr – Composite	Monthly
Calcium	mg/L	24 hr – Composite	Monthly

Constituent/Parameter	Units	Type	Frequency
Magnesium	mg/L	24 hr – Composite	Monthly
Chloride	mg/L	24 hr – Composite	Monthly
Sulfate	mg/L	24 hr – Composite	Monthly
Total Nitrogen	mg/L	24 hr – Composite	Monthly
COD	mg/L	24 hr – Composite	Monthly
Total Dissolved Solids (combined)[1]	mg/L	24 hr – Composite	Monthly
Dissolved Solids (inorganic)[1]	mg/L	24 hr – Composite	Monthly
BOD_5	mg/L	24 hr – Composite	Monthly
pH	pH units	24 hr – Composite	Monthly

[1] Total (combined)TDS shall be determined using EPA Test Method No. 160.1 for combined organic and inorganic TDS. Inorganic TDS shall be determined by EPA Method No.160.4 for inorganic TDS.

GROUNDWATER MONITORING

Prior to collecting samples and after measuring the water level, 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 from 3 to 5 volumes of the standing water within the well casing and screen, or additionally the filter pack pore volume.

Prior to the installation of MW-7, and after the completion of 8 quarters of sampling as required in Provision E.1.b., the Discharger shall monitor groundwater for the constituents and frequencies specified below. During the 8 quarters required of the report in Provision E.1.b., the Discharger shall analyze all constituents quarterly.

Constituent/Parameter	Units	Type of Sample	Frequency
Depth to groundwater	Feet[1]	Measured	Quarterly[2]
Groundwater elevation	Feet above mean sea level	Calculated	Quarterly[2]
pH	pH units	Grab	Quarterly[2]
Electrical Conductivity	µmhos/cm	Grab	Quarterly[2]

Constituent/Parameter	Units	Type of Sample	Frequency
Total Dissolved Solids[3]	mg/L	Grab	Quarterly[2]
Total Organic Carbon	mg/L	Grab	Semiannually [6] (Quarterly [7])
COD	mg/L	Grab	Semiannually [6] (Quarterly [7])
Ammonia (as NH_3-N)	mg/L	Grab	Semiannually [6] (Quarterly [7])
Nitrate (as NO_3-N)	mg/L	Grab	Semiannually [6] (Quarterly [7])
Total Nitrogen	mg/L	Calculated	Semiannually [6] (Quarterly [7])
Ca[4]	mg/L	Grab	Semiannually [6] (Quarterly [7])
Mg[4]	mg/L	Grab	Semiannually [6] (Quarterly [7])
Na[4]	mg/L	Grab	Semiannually [6] (Quarterly [7])
K[4]	mg/L	Grab	Semiannually [6] (Quarterly [7])
Chloride[4]	mg/L	Grab	Semiannually [6] (Quarterly [7])
Sulfate[4]	mg/L	Grab	Semiannually [6] (Quarterly [7])
Bicarbonate[4]	mg/L	Grab	Semiannually [6] (Quarterly [7])
Cu[4]	mg/L	Grab	Semiannually [6] (Quarterly [7])
Zn[4]	mg/L	Grab	Semiannually [6] (Quarterly [7])
Iron [4,5]	mg/L	Grab	Semiannually [6] (Quarterly [7])
Manganese [4,5]	mg/L	Grab	Semiannually [6] (Quarterly [7])

1 To the nearest hundredth of a foot.

2 January, April, July and October.

3 If Total Organic Carbon in any sample is greater than 10 mg/L that sample should also be analyzed for Inorganic Dissolved Solids using EPA Method No. 160.4

4 The Discharger may, in the interest of cost savings, be able to combine some or all of these analytes into a

Constituent/Parameter	Units	Type of Sample	Frequency

single laboratory category such as standard minerals or general minerals.

5 Samples must be filtered prior to preservation.

6 To be taken in January and October and reported in February and November.

7 During the eight quarter period in which data is being collected for the report referenced in ProvisionE.1.b.

SOIL MONITORING

The Discharger shall take composite soil samples from the top six inches of soil from each of the six fields and monitor for the following:

Constituent/Parameter	Units	Measurement	Frequency
Sodium Absorption Ratio	Dimensionless	Grab	Annually[1]
Soluble Salts	umhos/cm	Grab	Annually[1]

1 To be taken In May and reported in June.

SOURCE AND IRRIGATION WATER MONITORING

The Discharger's facility supply water and irrigation water from the Orland-Artois Irrigation District line shall be monitored for the following:

Constituent/Parameter	Units	Measurement	Frequency
Electrical Conductivity	µmhos/cm	Grab	Annually[1]
Total Dissolved Solids			Annually[1]
General Minerals[2]			Annually[1]
Nitrate (as NO_3-N)	mg/L	Grab	Annually[1]

1 To be taken In July and reported in August.

2 Must include at a minimum the following : Na, K, Mg, Ca, NO_3, SO_4, bicarbonate, Cu, Zn, Fe, and Mn.

SPRAYFIELD AREA MONITORING

The Discharger shall monitor the spray field daily for the following during periods of irrigation or discharge of effluent. Results should be submitted monthly:

Constituent/Parameter	Units	Type	Frequency
Wastewater application field number	N/A	N/A	Daily
Precipitation	inches[1]	Rain gauge[2]	Daily

Wastewater application area	acres	N/A	Daily
Wastewater flow	mgd	Continuous	Daily
Supplemental irrigation flow	mgd	Estimated	Daily
Crops being grown	N/A	N/A	Daily
Presence of runoff	N/A	N/A	Daily

[1] Report to the nearest 0.1 inch.
[2] National Weather Service data from the nearest weather station is acceptable.

SOLIDS MONITORING

The Discharger shall record and report **quarterly** the quantity, disposal location, and method of disposal of any solids disposed of, if applicable. If solid waste is shipped offsite, then a description of the quantity of each type of waste shipped offsite and the location of the disposal area(s) shall be included with the report.

Solids applied to the spray field area should be analyzed for Na, K, Cl, Ca, Mg, SO 4, Total N, % moisture and loss on ignition (EPA Method No. 160.4).

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., flow, pond, groundwater, solids, etc.), sample location, and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate whether discharge is occurring in compliance with waste discharge requirements and whether there are any 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 Board.

Reports shall be submitted as follows:

Monthly reports shall be submitted to the Central Valley Water Board by the **first day of the second month after the month of sampling** (i.e., the March report is due by 1 May).

Quarterly reports shall be submitted to the Central Valley Water Board by the **first day of the second month following the end of the calendar quarter** (i.e., the January-March quarterly report is due by 1 May) and may be combined with the monthly report due at the same time.

An **annual** report shall be submitted to the Central Valley Water Board by **1 February** each year and may be combined with other reports.

At a minimum the reports shall include:

1. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format.

2. If requested by staff, copies of laboratory analytical report(s).

3. 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 a 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: _____
PAMELA C. CREEDON, Executive Officer

xx March 2008
(Date)