ORDER R1-2014-0026
NPDES NO. CA0005584
WDID No. 1B80185OHUM

WASTE DISCHARGE REQUIREMENTS
FOR THE
FOSTER DAIRY FARMS DBA HUMBOLDT CREAMERY
FERNBRIDGE FACILITY

HUMBOLDT COUNTY

The following Permittee is subject to waste discharge requirements (WDRs) set forth in this Order:

Table 1. Permittee Information

Permittee	**Foster Dairy Farms dba Humboldt Creamery**
Name of Facility	**Humboldt Creamery, Fernbridge**
Facility Address	**572 Highway 1**
	Fortuna, California 95540-9711
	Humboldt County
Type of Facility	**Dairy Products Processing, Industrial**
Treatment Facility Design Flow (001 and 004)	**Facility Design Flow – 450,000 gallons per day (gpd)**
Facility Design Flow (002)	**63,000 gpd**
Domestic Sewerage Facility Design Flow (003)	**2,500 gpd**

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Industrial Process Wastewater	40° 36’ 52” N	124° 12” 09” W	Groundwater
002	Condensate and Non-Contact Cooling Water	40° 36’ 56” N	124° 12” 09” W	Eel River
003	Domestic Wastewater	40° 36’ 54” N	124° 12” 09” W	Groundwater
004	Condensate and Non-Contact Cooling Water	40° 36’ 53” N	124° 12” 09” W	Groundwater

Table 3. Administrative Information

This Order was adopted on:	**November 20, 2014**
This Order shall become effective on:	**February 1, 2015**
This Order shall expire on:	**January 31, 2020**
The Permittee shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	**180 days prior to the Order expiration date (August 4, 2019)**
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, North Coast Region, have classified this discharge as follows:	**Minor discharge**

IT IS HEREBY ORDERED, that Waste Discharge Requirements (WDRs) Order No. R1-2008-0020 and Monitoring and Reporting Program (MRP) No. R1-2008-0020, are rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the California Water Code (Water Code) (commencing with section 13000) and regulations and guidelines adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Permittee shall comply with the requirements of this Order. This action in no way prevents the North Coast Regional Water Quality Control Board (Regional Water Board) from taking enforcement action for past violations of the previous permit.

I, Matthias St. John, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, North Coast Region, on the date indicated above.

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Matthias St. John, Executive Officer

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I. FACILITY INFORMATION

Information describing the Humboldt Creamery, Fernbridge (Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

The California Regional Water Quality Control Board, North Coast Region (hereinafter Regional Water Board), finds:

A. Legal Authorities. This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this Facility to surface waters.

B. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E are also incorporated into this Order.

C. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections IV.B, IV.C, and V.B are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

D. Notification of Interested Parties. The Regional Water Board has notified the Permittee and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

E. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

III. DISCHARGE PROHIBITIONS

A. The discharge of any waste not specifically regulated by this permit, not disclosed by the Discharger, or not within the reasonable contemplation of the Regional Water Board is prohibited.

B. Creation of pollution, contamination, or nuisance, as defined by section 13050 of the California Water code is prohibited.

C. The discharge or reclamation use of untreated or partially treated waste (receiving a lower level of treatment than described in II.B. of the Fact Sheet) from anywhere within the collection, treatment, or disposal systems is prohibited, except as provided for in Prohibition III.D and in Attachment D, Standard Provision I.G (Bypass).

D. The discharge of waste to land that is not owned by or under agreement to use by the Discharger is prohibited, except for use for fire suppression as provided in title 22, sections 60307(a) and (b) of the California Code of Regulations.

E. Discharge to the Eel River or its tributaries of domestic wastewater and/or process water other than noncontact cooling water or condensate from evaporated milk processing is prohibited.

F. The discharge of noncontact cooling water and condensate from evaporated milk processing to the Eel River and its tributaries is prohibited during the period from May 15 through September 30 of each year.

G. The discharge of waste at any point not described in Finding II.B of the Fact Sheet or authorized by a permit issued by the State Water Board or another Regional Water Board is prohibited.

H. During the period of October 1 through May 14, discharges of wastewater shall not exceed one percent of the flow of the receiving water as measured in the Eel River at the Scotia gauging station (USGS Station 11477000). The total volume discharged to the Eel River in a calendar month shall not exceed, in any circumstances, one percent of the total volume of the Eel River passing the Scotia gauging station in the same calendar month.

I. Discharge from Discharge Point 002 that results in a measureable change in receiving water temperature is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 002

1. Final Effluent Limitations – Discharge Point (Discharge to the Eel River)

a. The Permittee shall maintain compliance with the following effluent limitations at Discharge Point 002, with compliance measured at Monitoring Location EFF-002 as described in the Monitoring and Reporting Program (MRP), Attachment E:

Table 4. Effluent Limitations

Parameter	Units	Effluent Limitations			
		Average Monthly[1]	Maximum Daily[1]	Instantaneous Minimum[1]	Instantaneous Maximum[1]
Biochemical Oxygen Demand 5-day @ 20°C (BOD_5)	lbs/day[2]	41	102	---	---
Total Suspended Solids (TSS)	lbs/day[2]	62	153	---	---
pH	standard units	---	---	6.5	8.5
Settleable Solids	mL/L-hr	0.1	---	---	---
Nitrite	mg/L	1.0	--	---	---
Aluminum	µg/L	1000	--	---	---

Table Notes:
1. See Definitions in Attachment A and Compliance Determination discussion in section VII of this Order.
2. See Attachment G.

b. **Flow:** The mean daily flow of waste through Discharge Point 002 shall not exceed 63,000 gallons per day, measured over a calendar month.

c. **Acute Toxicity:** There shall be no acute toxicity in treated wastewater discharged to the Eel River and its tributaries. The Discharger will be considered compliant with this limitation when the survival of aquatic organisms in a 96-hour bioassay of undiluted effluent complies with the following.

i. Minimum for any one bioassay: 70 percent survival.

ii. Median for any three or more consecutive bioassays: at least 90 percent survival.

Compliance with the acute toxicity effluent limitation shall be determined in accordance with section V of the Monitoring and Reporting Program (Attachment E) of this Order.

B. Land Discharge Specifications – Discharge Points 001, 003, and 004

1. The Permittee shall maintain compliance with the following limitations at Discharge Points 001 and 004, with compliance measured at Monitoring Locations LND-001 and LND-004 as described in the attached MRP.

Table 5. Land Discharge Specifications

Parameter	Units	Discharge Specifications
		Average Monthly
BOD_5	lbs/acre/day	60
TSS	lbs/acre/day	500
Nitrite	mg/L	1.0
Total Dissolved Solids	mg/L	450
Sodium	µg/L	60,000
Aluminum	µg/L	1,000

2. The discharge of domestic wastewater shall be kept underground at all times.
3. The mean daily flow of domestic wastewater shall not exceed 2,500 gallons per day averaged over a calendar month.
4. Irrigation of industrial process water in the leachfield area is prohibited.
5. Leachfield replacement area equivalent to 100 percent of the existing leachfield area shall be available for future leachfield repair. Incompatible uses of the existing disposal area and/or the replacement area are prohibited.

C. Recycling Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required to be addressed as part of this Order. However, a receiving water condition not in conformance with the limitation is not necessarily a violation of this Order. Compliance with receiving water limitations shall be measured at monitoring locations described in the MRP (Attachment E). The Regional Water Board may require an investigation to determine cause and culpability prior to asserting a violation has occurred.

A. Surface Water Limitations

1. The discharge shall not cause the dissolved oxygen concentration of the receiving water to be depressed below 7.0 mg/L. Additionally, the discharge shall not cause the dissolved oxygen content of the receiving water to fall below 10.0 mg/L more than 50 percent of the time, or below 7.5 mg/L more than 10 percent of the time in a calendar year. In the event that the receiving waters are determined to have a dissolved oxygen concentration of less than 7.0 mg/L, the discharge shall not depress the dissolved oxygen concentration below the existing level.

2. The discharge shall not cause the pH of receiving waters to be depressed below 6.5 nor raised above 8.5. Within this range, the discharge shall not cause the pH of the receiving waters to be changed at any time more than 0.5 units from which occurs naturally.

3. The discharge shall not cause the turbidity of receiving waters to be increased more than 20 percent above naturally occurring background levels.

4. The discharge shall not cause receiving waters to contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.

5. The discharge shall not cause receiving waters to contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

6. The discharge shall not cause receiving waters to contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.

7. The discharge shall not cause coloration of receiving waters that causes nuisance or adversely affects beneficial uses.

8. The discharge shall not cause bottom deposits in receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses.

9. The discharge shall not cause receiving waters to contain concentrations of biostimulatory substances that promote objectionable aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

10. The discharge shall not cause receiving waters to contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in humans, plants, animals, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods, as specified by the Regional Water Board.

11. The discharge shall not cause a measurable temperature change in the receiving water at any time.

12. The discharge shall not cause an individual pesticide or combination of pesticides to be present in concentrations that adversely affect beneficial uses. The discharge shall not cause bioaccumulation of pesticide, fungicide, wood treatment chemical, or other toxic pollutant concentrations in bottom sediments or aquatic life.

13. The discharge shall not cause receiving waters that are designated for use as domestic or municipal supply to contain concentrations of pesticides in excess of the limiting concentrations set forth in Table 3-2 of the Basin Plan or in excess of more stringent Maximum Contaminant Levels (MCLs) established for these pollutants in Title 22, Division 4, Chapter 15, Articles 4, and section 64444.5 (Table 5) of the CCR.

14. The discharge shall not cause receiving waters to contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise affect beneficial uses.

15. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board, as required by the federal Clean Water Act and regulations adopted thereunder. If more

stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Clean Water Act, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

16. The discharge shall not cause concentrations in receiving waters of chemical constituents to occur in excess of limits specified in Table 3-2 of the Basin Plan or in excess of more stringent MCLs established for these pollutants in Title 22, Division 4, Chapter 15, Articles 4 and 5.5 of the CCR.

17. The discharge shall not cause receiving waters to contain radionuclides in concentrations which are deleterious to human, plant, animal or aquatic life, nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal or indigenous aquatic life.

B. Groundwater Limitations

1. The collection, treatment, storage, and disposal of wastewater shall not cause a statistically significant degradation of groundwater quality unless a technical evaluation is performed that demonstrates that any degradation that could reasonably be expected to occur, after implementation of all regulatory requirements (e.g., title 27) and reasonable best management practices (BMPs), will not violate groundwater quality objectives or cause impacts to beneficial uses of groundwater.

2. The collection, treatment, storage, and disposal of treated wastewater shall not cause alterations of groundwater that result in chemical concentrations in groundwater in excess of limits specified in Title 22, Division 4, Chapter 15, Article 4, sections 64431 (Tables 2 and 3) and 64444, and the Basin Plan.

3. The collection, treatment, storage and disposal of the treated wastewater shall not cause levels of radionuclides in groundwater in excess of the limits specified in Title 22, Division 4, Chapter 15, Article 5, section 64443 of the CCR.

4. The collection, treatment, storage, and disposal of wastewater or recycled water shall not cause groundwater to contain taste- or odor-producing substances or chemical constituents in concentrations that cause nuisance or adversely affect beneficial uses.

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Permittee shall comply with all Standard Provisions included in Attachment D.

2. **Regional Water Board Standard Provisions.** The Permittee shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:

a. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this Facility, may subject the Permittee to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Permittee to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

b. In the event the Permittee does not comply or will be unable to comply for any reason, with any prohibition, interim or final effluent limitation, land discharge specification, recycling specification, other specification, or receiving water limitation or provision of

this Order that may result in a significant threat to human health or the environment, such as inundation of treatment components, breach of pond containment, recycled water main break or equivalent release, irrigation runoff, etc., that results in a discharge to a drainage channel or a surface water, the Permittee shall notify Regional Water Board staff within 24 hours of having knowledge of such noncompliance. Spill notification and reporting shall be conducted in accordance with section V.E. of Attachment D and X.E. of the Monitoring and Reporting Program.

B. Monitoring and Reporting Program (MRP) Requirements

The Permittee shall comply with the MRP, and future revisions thereto, in Attachment E.

C. Special Provisions

1. Reopener Provisions

a. Standard Revisions. If applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board may reopen this Order and make modifications in accordance with such revised standards.

b. Reasonable Potential. This Order may be reopened for modification to include an effluent limitation, if monitoring establishes that the discharge causes, or has the reasonable potential to cause or contribute to, an excursion above a water quality criterion or objective applicable to the receiving water.

c. Whole Effluent Toxicity. As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on that objective.

d. 303(d)-Listed Pollutants. The Regional Water Board plans to develop and adopt total maximum daily loads (TMDLs) for nitrogen, phosphorus, dissolved oxygen, sediment, and temperature that will specify wasteload allocations (WLAs) for point sources and load allocations (LA) for non-point sources, as appropriate. Following the adoption of these TMDLs by the Regional Water Board, this Order will be reopened and modified to include final WQBELs based on applicable WLAs.

e. Salt and Nutrient Management Plans (SNMPs). The Recycled Water Policy adopted by the State Water Board on February 3, 2009, and effective May 14, 2009, recognizes the fact that some groundwater basins in the State contain salts and nutrients that exceed or threaten to exceed water quality objectives in the applicable Basin Plans, and that not all Basin Plans include adequate implementation procedures for achieving or ensuring compliance with the water quality objectives for salt or nutrients. The Recycled Water Policy finds that the appropriate way to address salt and nutrient issues is through the development of regional or subregional SNMPs rather than through imposing requirements solely on individual recycled water projects. This Order may be reopened to incorporate provisions consistent with any SNMP(s) adopted by the Regional Water Board.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

i. Whole Effluent Toxicity. For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Permittee to conduct acute and chronic whole effluent toxicity (WET) testing, as specified in MRP section V. Furthermore, this Provision requires the Permittee to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the numeric toxicity monitoring trigger during accelerated monitoring established in this Provision, the Permittee is required to initiate a Toxicity Reduction Evaluation (TRE) in accordance with an approved TRE Work Plan, and take actions to mitigate the impact of the discharge and prevent recurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes requirements for the Permittee to develop and submit a TRE Work Plan and includes procedures for accelerated chronic toxicity monitoring and TRE initiation.

ii. TRE Work Plan. Within 180 days of the effective date of this Order, the Permittee shall submit to the Regional Water Board a TRE Work Plan for approval by the Executive Officer. The TRE Work Plan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Work Plan must be developed in accordance with U.S. EPA guidance and be of adequate detail to allow the Permittee to immediately initiate a TRE as required in this Provision.

iii. Accelerated Monitoring and TRE Initiation. When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Permittee shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. The Permittee shall initiate a TRE to address effluent toxicity if any WET testing results exceed the numeric toxicity monitoring trigger during accelerated monitoring.

iv. Numeric Toxicity Monitoring Trigger. The numeric toxicity monitoring trigger to initiate a TRE is > 1 TUc (where TUc = 100/NOEC). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Permittee is required to begin accelerated monitoring and initiate a TRE.

v. Accelerated Monitoring Specifications. If the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity testing, the Permittee shall initiate accelerated monitoring within 14-days of notification by the laboratory of the exceedance. Accelerated monitoring shall consist of four chronic toxicity tests conducted once every two weeks using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:

(a) If the results of four consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Permittee may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of

effluent toxicity, the Executive Officer may require that the Permittee initiate a TRE.

(b) If the source(s) of the toxicity is easily identified (e.g., temporary plant upset), the Permittee shall make necessary corrections to the Facility and shall continue accelerated monitoring until four consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Permittee may cease accelerated monitoring and resume regular chronic toxicity monitoring.

(c) If the result of any accelerated toxicity test exceeds the monitoring trigger, the Permittee shall cease accelerated monitoring and begin a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of any test result exceeding the monitoring trigger during accelerated monitoring, the Permittee shall submit a TRE Action Plan to the Regional Water Board including, at minimum:

(i) Specific actions the Permittee will take to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;

(ii) Specific actions the Permittee will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and

(iii) A schedule for these actions.

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program (PMP)

i. The Permittee shall, as required by the Executive Officer, develop and conduct a PMP as further described below when there is evidence (e.g., sample results reported as detected, but not quantified (DNQ) when the effluent limitation is less than the method detection limit (MDL), sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

(a) A sample result is reported as DNQ and the effluent limitation is less than the RL; or

(b) A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section X.B.4.

ii. The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

(a) An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;

(b) Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;

(c) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

(d) Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

(e) An annual status report that shall be submitted as part of the Annual Facility Report due March 1st to the Regional Water Board and shall include:

(i) All PMP monitoring results for the previous year;

(ii) A list of potential sources of the reportable priority pollutant(s);

(iii) A summary of all actions undertaken pursuant to the control strategy; and

(iv) A description of actions to be taken in the following year.

4. Construction, Operation and Maintenance Specifications

a. This Order (Attachment D, Standard Provision I.D) requires that the Permittee at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Permittee to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory quality control and appropriate quality assurance procedures.

b. The Permittee shall maintain an updated Operation and Maintenance (O&M) Manual for the Facility. The Permittee shall update the O&M Manual, as necessary, to conform to changes in operation and maintenance of the Facility. The O&M Manual shall be readily available to operating personnel onsite and for review by state or federal inspectors. The O&M Manual shall include the following:

i. Description of the Facility's organizational structure showing the number of employees, duties and qualifications and plant attendance schedules (daily, weekends and holidays, part-time, etc.). The description should include documentation that the personnel are knowledgeable and qualified to operate the treatment Facility so as to achieve the required level of treatment at all times.

ii. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.

iii. Description of laboratory and quality assurance procedures.

iv. Process and equipment inspection and maintenance schedules.

v. Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Permittee will be able to comply with requirements of this Order.

vi. Description of preventive (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.

5. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

6. Other Special Provisions

a. **Storm Water.** For the control of storm water discharge from the site of the wastewater treatment Facility, the Permittee shall continue separate authorization to discharge under the requirements of the State Water Board's Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (or subsequent renewed versions of the NPDES General Permit CAS000001), which is not incorporated by reference in this Order. As of July 1, 2015, Order 2014-0057-DWQ shall supersede Order 97-03-DWQ except for Order 97-03-DWQ's requirement to submit annual reports by July 1, 2015, and except for enforcement purposes.

7. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below.

A. General

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Permittee shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

B. Multiple Sample Data

When determining compliance with an average monthly effluent limitation for priority pollutants, and more than one sample result is available, the Permittee shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Permittee shall compute the median in place of the arithmetic mean in accordance with the following procedure.

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

C. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Permittee will be considered out of compliance

for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Permittee will be considered out of compliance for that calendar month. The Permittee will only be considered out of compliance for days when the discharge occurs.

D. Average Weekly Effluent Limitation (AWEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar week exceeds the AWEL for a given parameter, this will represent a single violation, though the Permittee will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Permittee will be considered out of compliance for that calendar week. The Permittee will only be considered out of compliance for days when the discharge occurs.

E. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge (or when applicable, the median determined by subsection B, above, for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, the Permittee will be considered out of compliance for that parameter for that 1 day only within the reporting period.

F. Instantaneous Minimum Effluent Limitation

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Permittee will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

If the Permittee monitors pH continuously, pursuant to 40 C.F.R. section 401.17, the Permittee shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (1) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes.

G. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Permittee will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

If the Permittee monitors pH continuously, pursuant to 40 C.F.R. section 401.17, the Permittee shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (1) the total time during which the pH values are outside the required

range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes.

H. Bacteriological Limitations (Total Coliform)

1. **Median.** The median is the central tendency concentration of the pollutant. The data set shall be ranked from low to high, ranking the ND concentrations lowest, DNQ determinations next, followed by quantified values. The order of the individual ND and DNQ determinations is not important. The median value is determined based on the number of data points in the set. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, the median is the average of the two middle values, unless one or both points are ND or DNQ, in which case the median value shall be the lower of the two middle data points. DNQ is lower than a detected value, and ND is lower than DNQ.

2. Compliance with the 7-day median will be determined as a rolling median during periods when sampling occurs more frequently than weekly. During periods when sampling is weekly, this requirement shall apply to each weekly sample.

I. Acute Toxicity Limitations.

Compliance with the three-sample median acute toxicity effluent limitation shall be determined when there is a discharge, by calculating the median percent survival of the three most recent consecutive samples meeting all test acceptability criteria collected from Monitoring Location EFF-002.

J. Chronic Toxicity Triggers

1. When a single chronic toxicity test result is available in a monthly monitoring period, the need for accelerated monitoring will be determined by comparing the single result to the monthly median chronic toxicity trigger of 1.0 TUc.

2. If two or more chronic toxicity test results are available in a monthly monitoring period, the need for accelerated monitoring will be determined by calculating the median of the test results and comparing the calculated median to the monthly median chronic toxicity trigger of 1.0 TUc, and the individual sample results will be compared to the single sample chronic toxicity trigger of 1.6 TUc. If the first monthly chronic toxicity result is greater than 1.6 TUc, a minimum of three chronic toxicity test results would be needed to determine the need for accelerated monitoring based on the monthly median chronic toxicity trigger of 1.0 TUc.

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ): also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative Pollutants: substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic Pollutants: substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV): a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass; or (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ): sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit: the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effective Concentration (EC): a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Karber. EC25 is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.

Effluent Concentration Allowance (ECA): a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of

variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays: indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration: the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries: waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inhibition Concentration (IC): the IC25 is typically calculated as a percentage of effluent. It is the level at which the organisms exhibit 25 percent reduction in biological measurement such as reproduction or growth. It is calculated statistically and used in chronic toxicity testing.

Inland Surface Waters: all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Lowest Observed Effect Concentration (LOEC): the lowest concentration of an effluent or toxicant that results in adverse effects on the test organism (i.e., where the values for the observed endpoints are statistically different from the control).

Maximum Daily Effluent Limitation (MDEL): the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median: the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL): the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML): the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone: a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

No Observed Effect Concentration (NOEC): the highest tested concentration of an effluent or a test sample at which the effect is no different from the control effect, according to the statistical test used (see LOEC). The NOEC is usually the highest tested concentration of an effluent or toxicant that causes no observable effects on the aquatic test organisms (i.e., the highest concentration of toxicity at which the values for the observed responses do not statistically differ from the controls). It is determined using hypothesis testing.

Not Detected (ND): those sample results less than the laboratory's MDL.

Persistent Pollutants: substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP): waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention: any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Publicly Owned Treatment Works (POTW): a treatment works as defined in section 212 of the Clean Water Act (CWA), which is owned by a State or municipality as defined by section 502(4) of the CWA. [Section 502(4) of the CWA defines a municipality as a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes). This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Clean Water Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

Reporting Level (RL): the ML (and its associated analytical method) used for reporting and compliance determination. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System: the portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Source of Drinking Water: any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

Standard Deviation (σ): a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

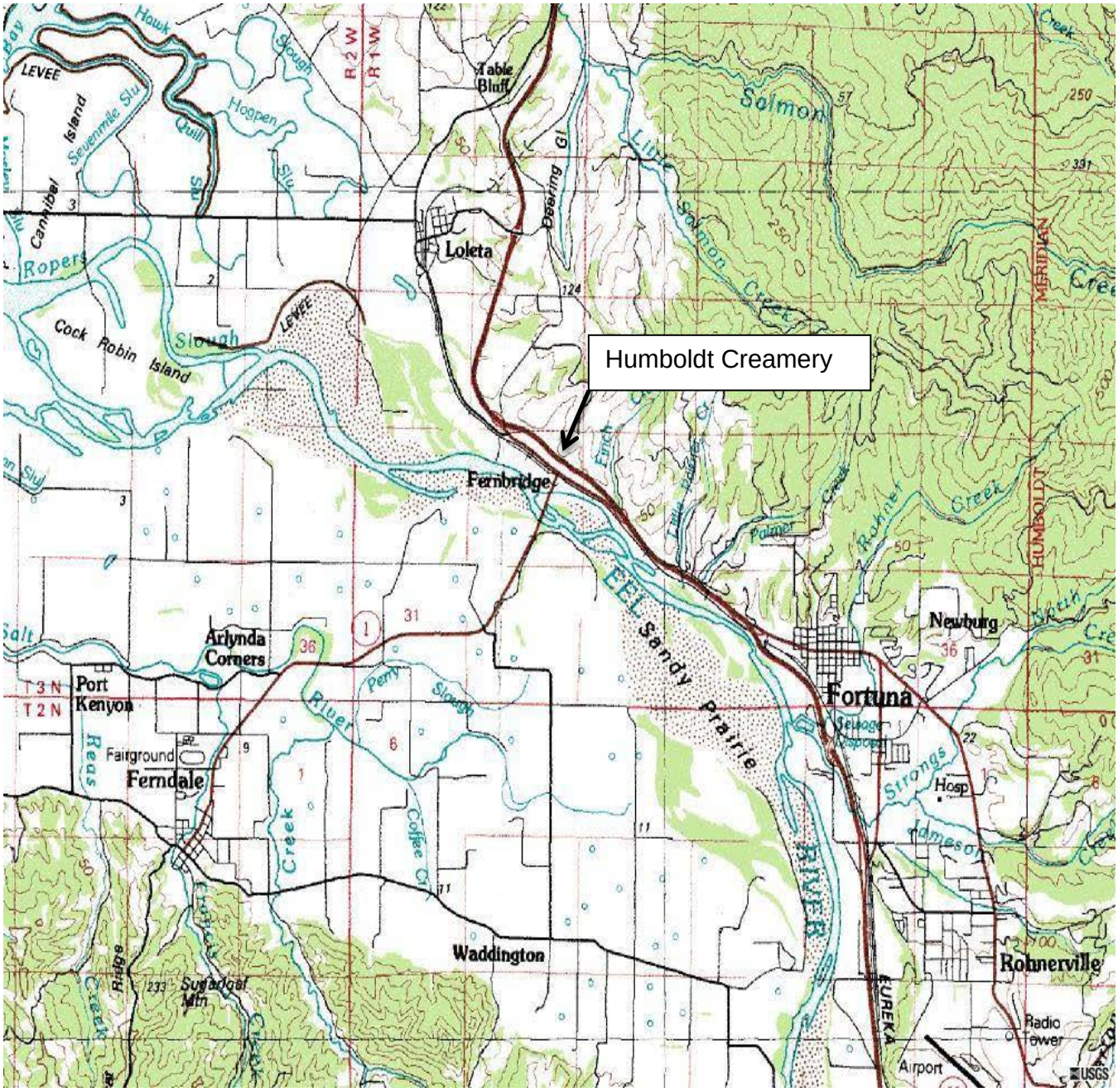
x is the observed value;

μ is the arithmetic mean of the observed values; and

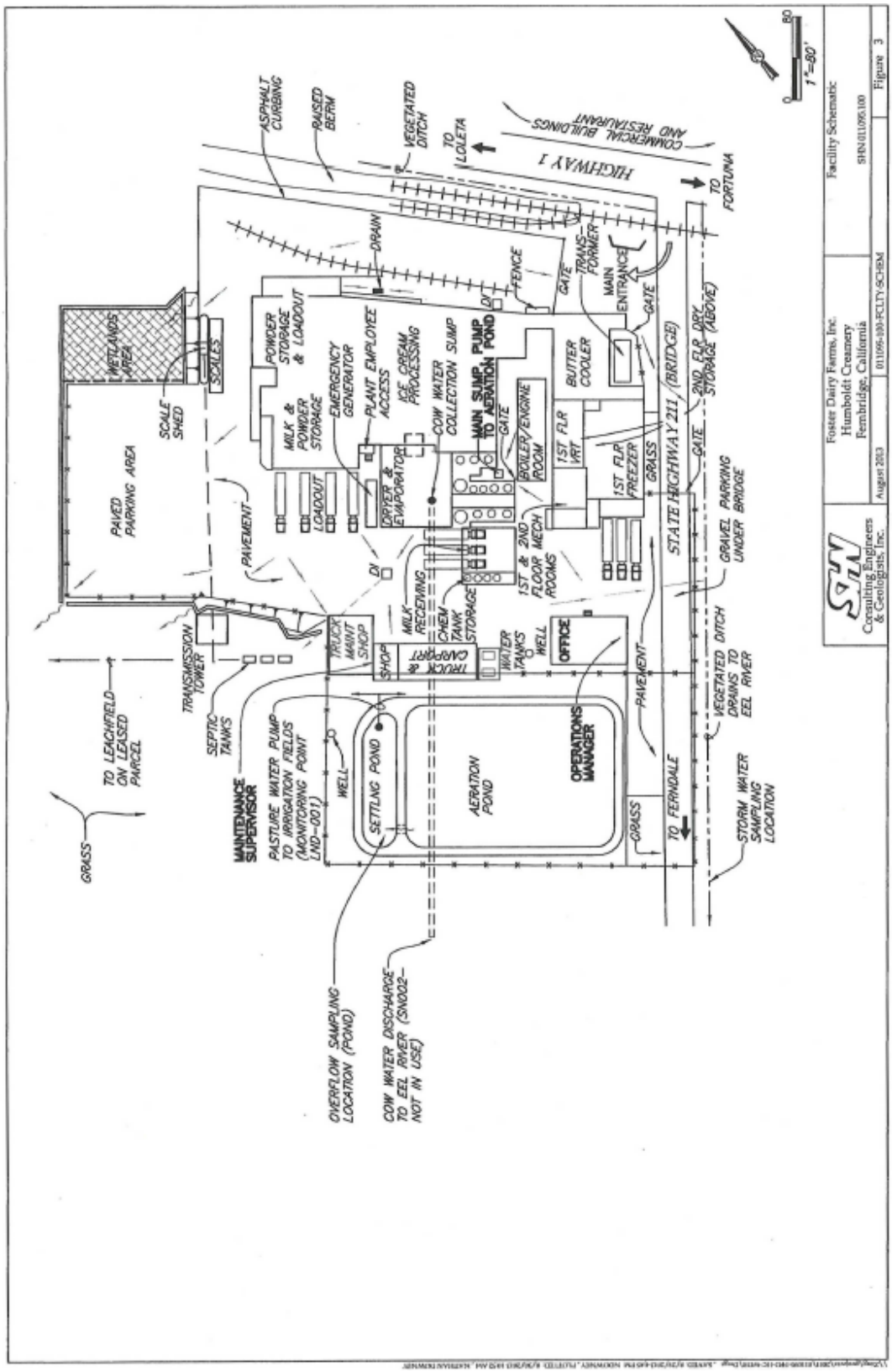
n is the number of samples.

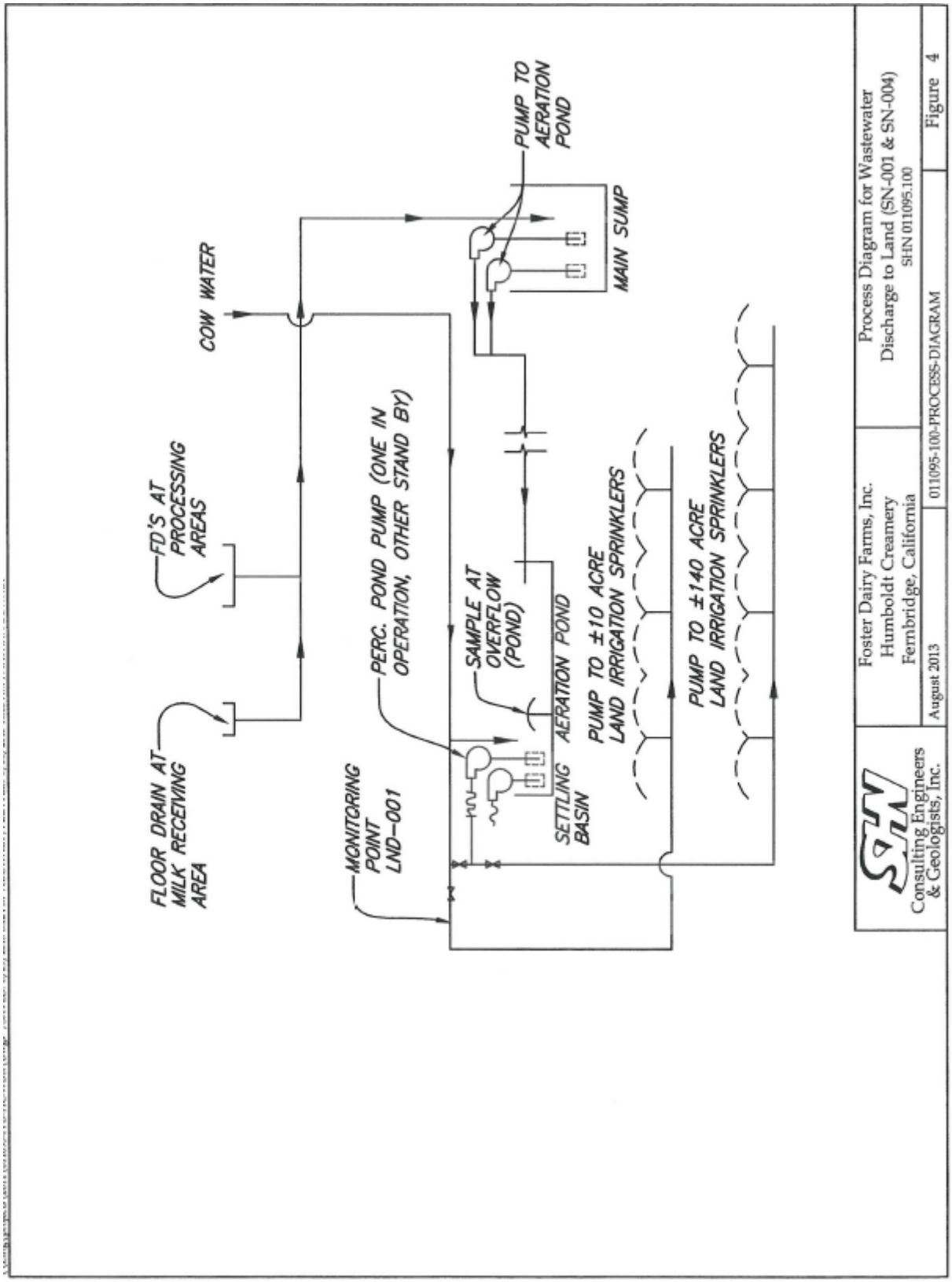
Toxicity Reduction Evaluation (TRE): a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

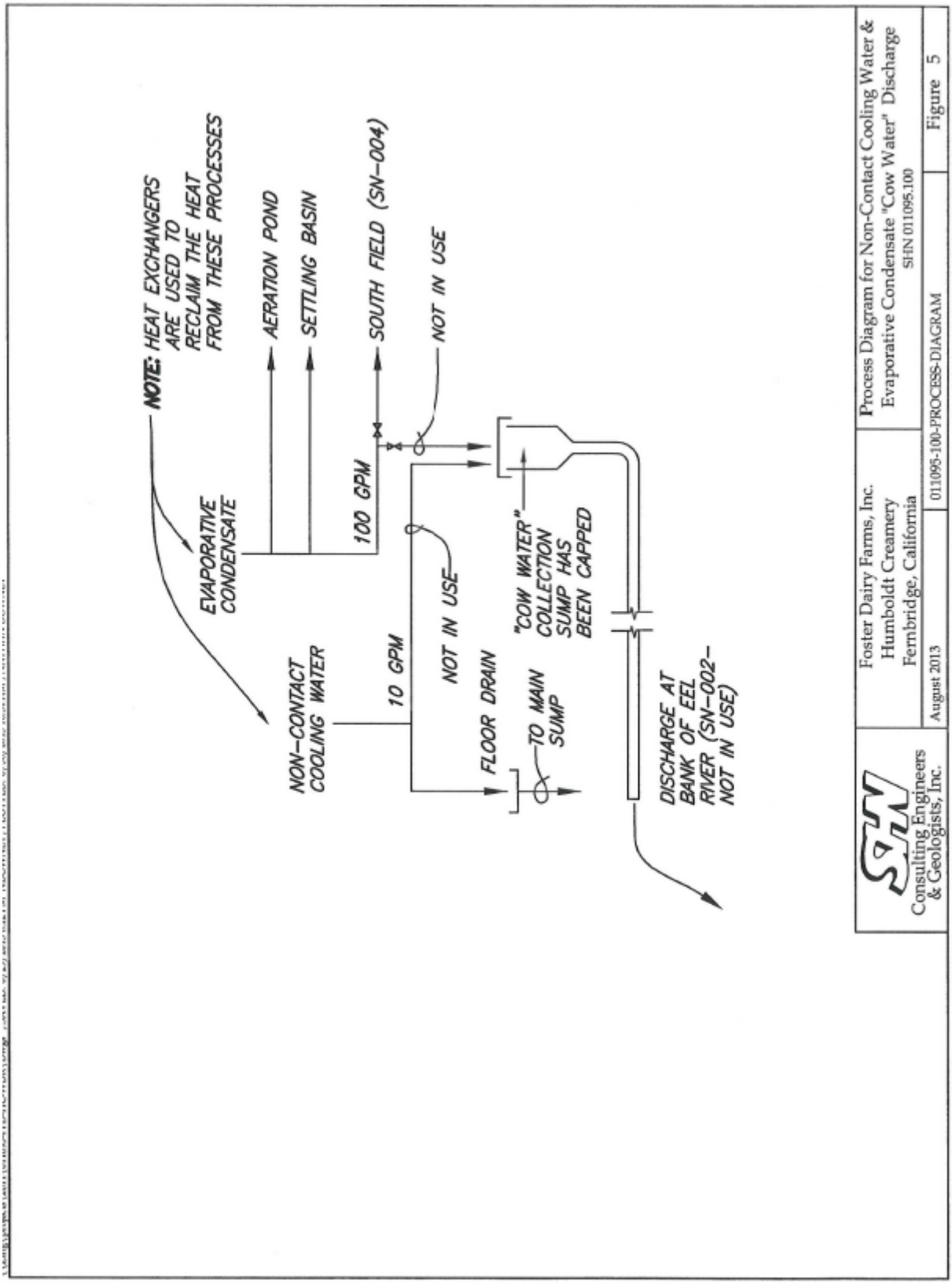
ATTACHMENT B – MAP



ATTACHMENT C – FLOW SCHEMATIC




COW WATER
PUMP TO AERATION POND
MAIN SUMP
FD'S AT PROCESSING AREAS
FLOOR DRAIN AT MILK RECEIVING AREA
PERC. POND PUMP (ONE IN OPERATION, OTHER STAND BY)
SAMPLE AT OVERFLOW (POND)
AERATION POND
SETTLING BASIN
MONITORING POINT LND-001
PUMP TO ±10 ACRE LAND IRRIGATION SPRINKLERS
PUMP TO ±140 ACRE LAND IRRIGATION SPRINKLERS
Consulting Engineers & Geologists, Inc.
Foster Dairy Farms, Inc.
Humboldt Creamery
Fernbridge, California
August 2013
011095-100-PROCESS-DIAGRAM
Process Diagram for Wastewater
Discharge to Land (SN-001 & SN-004)
SHN 011095.100
Figure 4


NOTE: HEAT EXCHANGERS ARE USED TO RECLAIM THE HEAT FROM THESE PROCESSES
AERATION POND
SETTLING BASIN
SOUTH FIELD (SN-004)
NOT IN USE
EVAPORATIVE CONDENSATE
100 GPM
NOT IN USE
"COW WATER" COLLECTION SUMP HAS BEEN CAPPED
NON-CONTACT COOLING WATER
10 GPM
FLOOR DRAIN
TO MAIN SUMP
DISCHARGE AT BANK OF EEL RIVER (SN-002- NOT IN USE)
Consulting Engineers & Geologists, Inc.
Foster Dairy Farms, Inc.
Humboldt Creamery
Fernbridge, California
August 2013
011095-100-PROCESS-DIAGRAM
Process Diagram for Non-Contact Cooling Water & Evaporative Condensate "Cow Water" Discharge
SHN 011095.100
Figure 5

FIELD | AREA
1 | 11.41 ACRES
2 | 10.78 ACRES
3 | 7.82 ACRES
4 | 12.81 ACRES
5 | 8.22 ACRES
6 | 15.28 ACRES
7 | 9.48 ACRES
8 | 13.00 ACRES
10 | 11.80 ACRES
11 | 15.47 ACRES
12 | 11.81 ACRES
13 | 14.59 ACRES
14 | 13.06 ACRES
15 | 3.91 ACRES
US HWY 101
FERNBRIDGE
DRIVE
BARN ROAD
BARN
EEL RIVER
TO PACIFIC OCEAN
PASTURELAND DISTRIBUTION SYSTEM
LEACHFIELDS
SEPTIC TANKS
HUMBOLDT CREAMERY FACILITY
SETTLING POND
AERATION POND
GWR-1
GWR-2
GWR-3
GWR-4
GWR-5
EXPLANATION
RISER (APPROXIMATE LOCATION)
EXISTING MONITORING WELL LOCATION AND DESIGNATION
FIELD NUMBER (SEE TABLE FOR AREAS)
NOTE: ALL LOCATIONS ARE APPROXIMATE
Figure 2

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Permittee must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 C.F.R. § 122.41(a).)

2. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

C. Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

D. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Permittee only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

F. Inspection and Entry

The Permittee shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 C.F.R. § 122.41(i); Wat. Code, § 13383):

1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 C.F.R. § 122.41(i)(1));
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 C.F.R. § 122.41(i)(2));
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 C.F.R. § 122.41(i)(3)); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 C.F.R. § 122.41(i)(4).)

G. Bypass

1. **Definitions**
   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
   b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which 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 bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Permittee may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Permittee for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
   c. The Permittee submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
4. **Burden of Proof.** In any enforcement proceeding, the Permittee seeking to establish the bypass defense has the burden of proof.
5. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

6. **Notice**

   a. **Anticipated bypass.** If the Permittee knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i).)

   b. **Unanticipated bypass.** The Permittee shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. 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 operation. (40 C.F.R. § 122.41(n)(1).)

1. **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)

2. **Conditions necessary for a demonstration of upset.** A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):

   a. An upset occurred and that the Permittee can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));

   b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));

   c. The Permittee submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and

   d. The Permittee complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)

3. **Burden of proof.** In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

B. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the Permittee must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Permittee and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 122.41(l)(3); § 122.61.)

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)

B. Monitoring results must be conducted according to test procedures under 40 C.F.R. part 136 or, in the case of sludge use or disposal, approved under 40 C.F.R. part 136 unless otherwise specified in 40 C.F.R. part 503 unless other test procedures have been specified in this Order. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. part 503), the Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and

6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

1. The name and address of any permit applicant or Permittee (40 C.F.R. § 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Permittee shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Regional Water Board**,** State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Permittee shall also furnish to the Regional Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)

2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));

b. 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 well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting

V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)

3. If the Permittee monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Permittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):

a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)

b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

The Permittee shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R.§ 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Permittee shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

The Permittee shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 C.F.R. § 122.41(l)(7).)

I. Other Information

When the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board**,** State Water Board, or U.S. EPA, the Permittee shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Permittees shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):

a. 100 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(1)(i));

b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or

d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels" (40 C.F.R. § 122.42(a)(2)):

a. 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));

b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or

d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (40 C.F.R. § 122.48) requires that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. Wastewater Monitoring Provision. Composite samples may be taken by a proportional sampling device approved by the Executive Officer or by grab samples composited in proportion to flow. In compositing grab samples, the sampling interval shall not exceed one hour.

B. Supplemental Monitoring Provision. If the Permittee monitors any pollutant more frequently than required by this Order, using test procedures approved by 40 C.F.R. Part 136 or as specified in this Order, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the monthly and annual discharge monitoring reports.

C. Data Quality Assurance Provision. Laboratories analyzing monitoring samples shall be certified by the California Department of Public Health (CDPH), in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports.

D. Instrumentation and Calibration Provision. All monitoring instruments and devices used by the Permittee to fulfill the prescribed monitoring program shall be properly installed, calibrated, operated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device.

E. Minimum Levels (ML) and Reporting Levels (RL) Provision. Compliance and reasonable potential priority pollutant monitoring analyses shall be conducted using commercially available and reasonably achievable detection limits that are lower than the applicable effluent limitation and or water quality criteria. If no ML value is below these levels, the lowest ML shall be selected as the RL. Applicable MLs for all priority pollutants can be referenced in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP).

II. MONITORING LOCATIONS

The Permittee shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
002	EFF-002	Effluent from non-contact cooling water and evaporative condensate processes, prior to discharge to the Eel River
001	LND-001	Treated wastewater downstream of the settling pond, prior to discharge to land irrigation disposal system
004	LND-004	Effluent from non-contact cooling water and evaporative condensate processes, prior to discharge to land irrigation disposal system
---	GWR-1	Groundwater within the influence of the land disposal irrigation system
---	GWR-2	Groundwater outside the influence of the land disposal irrigation system representing background conditions

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
---	GWR-3	Groundwater within the influence of the land disposal irrigation system
---	GWR-4	Groundwater within the influence of the land disposal irrigation system
---	GWR-5	Groundwater within the influence of the land disposal irrigation system
---	RSW-001	Eel River surface water upstream of the Humboldt Creamery facility beyond the influence of the discharge
---	RSW-002	Eel River surface water at the point of discharge or other location approved by the Executive Officer
---	INT-North[1]	Septic system effluent within the north leachfield
---	INT-South	Septic system effluent within the south leachfield
---	GWR-North[2]	Groundwater beneath the north leachfield
---	GWR-South	Groundwater beneath the south leachfield

Abbreviations:
INF- Influent; INT- Internal; EFF- Effluent; RSW-Receiving Surface Water; LND- Land Disposal; GWR - Groundwater

Table Notes:
1. This monitoring location refers to the three foot deep piezometer location installed within the corresponding leachfield to measure function of the leachfield trench distribution system.
2. This monitoring location refers to the nine foot deep monitoring well location installed within the corresponding leachfield to measure groundwater beneath the leachfield trench distribution system.

III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-002

1. The Permittee shall monitor effluent from non-contact cooling water and evaporative condensate processes at EFF-002 as follows. If more than one analytical test method is listed for a given parameter, the Permittee must select from the listed methods and corresponding Minimum Level:

Table E-2. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Effluent Flow[1]	MGD	Continuous	Daily	Meter
BOD_5	mg/L	24-hour composite[2]	Weekly	Standard Methods[3]
TSS	mg/L	24-hour composite	Weekly	Standard Methods

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
pH	pH units	Grab	Weekly	Standard Methods
Acute Toxicity Bioassay	Percent Survival	Grab	Once per discharge season	See Section V.A
Settleable Solids	mL/L-hr	Grab	Weekly	Standard Methods[3]
Nitrite	mg/L	24-hour composite	Weekly	Standard Methods[3]
Aluminum	µg/L	24-hour composite	Weekly	Standard Methods[3]
Chronic Toxicity Bioassay	TU_c	Grab	Once per discharge season	See Section V.B
CTR Pollutants	µg/L	Grab	Once per permit term	Standard Methods

Table Notes:
1. Each month, the Permittee shall report average daily and average monthly flows.
2. 24-hour composite samples shall be collected, except for those pollutants that are volatile and/or require grab sampling for other reasons (e.g., ultraclean sample collection methods required). The priority pollutant monitoring report shall document the sampling method used for each constituent and justify the use of grab sampling for specific constituents (e.g., volatile, ultraclean method required, etc.).
3. In accordance with the current edition of Standard Methods for Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in 40 C.F.R. Part 136.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity Testing

The Permittee shall conduct acute whole effluent toxicity testing (WET) to determine compliance with the effluent limitation for acute toxicity established by section IV.A.1 of the Order.

1. **Test Frequency.** The Permittee shall conduct acute WET testing in accordance with the schedule established by this MRP while discharging at Discharge Point 002, as summarized in Table E-2, above.

2. **Sample Type.** For 96-hour static renewal or 96-hour static non-renewal testing, the effluent samples shall be grab samples collected at Monitoring Location EFF-002.

3. **Test Species.** Test species for acute WET testing shall be with an invertebrate, the water flea (*Ceriodaphnia dubia*) and a vertebrate, the rainbow trout (*Oncorhynchus mykiss*).

4. **Test Methods.** The presence of acute toxicity shall be estimated as specified in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (U.S. EPA Report No. EPA-821-R-02-012, 5th edition or subsequent editions), or other methods approved by the Executive Officer.

   Test procedures related to pH control, sample filtration, aeration, temperature control and sample dechlorination shall be performed in accordance with the U.S. EPA method and fully explained and justified in each acute toxicity report submitted to the Regional Water Board. The control of pH in acute toxicity tests is allowed, provided the test pH is maintained at the effluent pH measured at the time of sample collection, and the control of pH is done in a

manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide and cyanide.

5. **Test Dilutions.** The acute toxicity test shall be conducted using 100 percent effluent collected at Monitoring Location EFF-002.

6. **Test Failure.** If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Permittee shall re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

7. **Accelerated Monitoring.** If the result of any acute toxicity test fails to meet the single test minimum limitation (70 percent survival), and the testing meets all test acceptability criteria, the Permittee shall take two more samples, one within 14 days and one within 21 days following receipt of the initial sample result. If any one of the additional samples do not comply with the three sample median minimum limitation (90 percent survival), the Permittee shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with section VI.C.2.a.ii of the Order. If the two additional samples are in compliance with the acute toxicity requirement and testing meets all test acceptability criteria, then a TRE will not be required. If the discharge stops before additional samples can be collected, the Permittee shall contact the Executive Officer within 21 days with a plan to demonstrate compliance with the effluent limitation.

8. **Notification.** The Permittee shall notify the Regional Water Board verbally within 72 hours and in writing 14 days after receipt of test results exceeding the acute toxicity effluent limitation during regular or accelerated monitoring. The notification shall describe actions the Permittee has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by this Order, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

9. **Reporting.** The acute toxicity test results shall include the contracting laboratory's complete report provided to the Permittee and shall be in accordance with section 12 (Report Preparation) of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (U.S. EPA Report No. EPA-821-R-02-012, 5th edition or subsequent editions). The submitted report shall clearly identify test results and the Permittee's status with regard to compliance with effluent limitations and other permit requirements.

10. **Ammonia Toxicity.** The acute toxicity test shall be conducted without modifications to eliminate ammonia toxicity.

B. Chronic Toxicity Testing

The Permittee shall conduct chronic toxicity testing to demonstrate compliance with the Basin Plan's water quality objective for toxicity. The Permittee shall meet the following chronic toxicity testing requirements:

1. **Test Frequency.** The Permittee shall conduct chronic WET testing in accordance with the schedule established by this MRP while discharging at Discharge Point 002, as summarized in Table E-2, above.

2. **Sample Type.** Effluent samples for chronic toxicity testing shall be grab samples collected at EFF-002. For toxicity tests requiring renewals, grab samples collected on consecutive days are required. When tests are conducted off-site, a minimum of three samples shall be collected, in accordance with U.S. EPA test methods.

3. **Test Species.** Test species for chronic WET testing shall be a vertebrate, the fathead minnow, *Pimephales promelas* (larval survival and growth Test Method 1000.0), an invertebrate, the water flea, *Ceriodaphnia dubia* (survival and reproduction Test Method 1002.01), and a plant, the green algae, *Selanastrum capricornutum* (also named *Raphidocelis subcapitata*) (growth Test Method 1003.0).

4. **Test Methods.** The presence of chronic toxicity shall be estimated as specified in U.S. EPA's *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms* (U.S. EPA Report No. EPA-821-R-02-013, or subsequent editions).

   Test procedures related to pH control, sample filtration, aeration, temperature control and sample dechlorination shall be performed in accordance with the U.S. EPA method and fully explained and justified in each acute toxicity report submitted to the Regional Water Board. The control of pH in chronic toxicity tests is allowed, provided the test pH is maintained at the pH of the receiving water measured at the time of sample collection, and the control of pH is done in a manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide and cyanide.

5. **Test Dilutions.** The chronic toxicity test shall be conducted using a series of at least five dilutions and a control. The series shall consist of the following dilution series: 12.5, 25, 50, 75, and 100 percent, and a control. Effluent dilution and control water may be receiving water or standard synthetic laboratory water as described in the U.S. EPA test methods manual. Where toxicity or biostimulatory issues are not a concern in the receiving water, receiving water is preferred for control and dilution water. If the dilution water used is different from the culture water, a second control using culture water shall be used.

6. **Reference Toxicant.** If organisms are not cultured in-house, concurrent testing with a reference toxicant shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests also shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc.).

7. **Test Failure.** If either the reference toxicant test or the chronic toxicity test does not meet all test acceptability criteria, as specified in the test method, the Permittee shall re-sample and re-test as soon as possible, not to exceed 14 days following notification of test failure.

8. **Notification.** The Permittee shall notify the Regional Water Board verbally within 72 hours and in writing within 14 days after the receipt of test results exceeding the chronic toxicity monitoring trigger during regular or accelerated monitoring.

9. **Accelerated Monitoring Requirements.** If the result of any chronic toxicity test exceeds the chronic toxicity monitoring trigger of 1.6 TUc as a single sample result or 1.0 TUc as a monthly median, as specified in section VI.C.2.a. of the Order, and the testing meets all test acceptability criteria, the Permittee shall initiate accelerated monitoring. Accelerated monitoring shall consist of four additional effluent samples and dilution series (specified in

number 5 above) – with one test for each test species showing toxicity results exceeding the toxicity trigger. Accelerated monitoring tests shall be conducted approximately every week over a four week period.

Testing shall commence within 14 days of receipt of initial sample results which indicated an exceedance of the chronic toxicity trigger. If the discharge will cease before the additional samples can be collected, the Permittee shall contact the Executive Officer within 21 days with a plan to address elevated levels of chronic toxicity in effluent and/or receiving water. The following protocol shall be used for accelerated monitoring and TRE implementation:

a. If the results of any accelerated toxicity testing exceed 1.0 TUc as a monthly median, the Permittee shall cease accelerated monitoring, and within 30 days of the date of completion of the accelerated monitoring, initiate the TRE Workplan developed in accordance with section VI.C.2.a.ii of the Order to investigate the cause(s) and identify actions to reduce or eliminate the chronic toxicity. Within 30 days of completing the TRE Workplan implementation, the Permitttee shall submit a report to the Regional Water Board that shall include, at a minimum:

i. Specific actions the Permittee took to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;

ii. Specific actions the Permittee took to mitigate the impact of the discharge and prevent the recurrence of toxicity;

iii. Recommendations for further actions to mitigate continued toxicity, if needed; and

iv. A schedule for implementation of recommended actions.

b. If the results of four consecutive accelerated monitoring tests do not exceed the chronic toxicity trigger of 1.0 TUc, as a monthly median, the Permittee may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, if there is adequate evidence of a pattern of effluent toxicity, the Regional Water Board's Executive Officer may require that the Permittee initiate a TRE.

c. If the source(s) of the toxicity is easily identified (i.e. temporary plant upset), the Permittee shall make necessary corrections to the Facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the chronic toxicity has been removed, the Permittee may cease accelerated monitoring and resume regular chronic toxicity monitoring.

C. Chronic Toxicity Reporting

1. **Routine Reporting.** Chronic toxicity monitoring results shall be submitted with the monthly self-monitoring report for the month that chronic toxicity monitoring was performed. Routine reporting shall include the following in order to demonstrate compliance with permit requirements:

a. WET test reports shall include the contracting laboratory's complete report provided to the Permittee and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals and this MRP. The WET test report shall contain a narrative report that includes details about WET test procedures and results, including the following:

i. receipt and handling of the effluent sample that includes a tabular summary of initial water quality characteristics;

ii. the source and make-up of the lab control/diluent water used for the test;

iii. any manipulations done to lab control/diluent and effluent such as filtration, nutrient addition, etc.;

iv. identification of any reference toxicant testing performed;

v. tabular summary of test results for control water and each effluent dilution and statistics summary to include calculation of the NOEC, TUc and IC25;

vi. identification of any anomalies or nuances in the test procedures or results; and

vii. summary and conclusions section.

viii. WET test results shall include, at a minimum, for each test:

(a) Sample date(s);

(b) Test initiation date;

(c) Test species;

(d) End point values for each dilution (e.g., number of young, growth rate, percent survival);

(e) NOEC value(s) in percent effluent;

(f) IC15, IC25, IC40, and IC50 values (or EC15, EC25…etc.) in percent effluent;

(g) TUc values (100/NOEC);

(h) Mean percent mortality (±s.d.) after 96 hours in 100 percent effluent (if applicable);

(i) NOEC and LOEC values for reference toxicant test(s);

(j) IC50 or EC50 value(s) for reference toxicant test(s);

(k) Available water quality measurements for each test (e.g., pH, DO, temperature, conductivity, hardness, salinity, ammonia);

(l) Statistical methods used to calculate endpoints;

(m) The statistical output page, which includes the calculation of percent minimum significant difference (PMSD); and

(n) Results of applicable reference toxicant data with the statistical output page identifying the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD and dates tested; the reference toxicant control

charts for each endpoint, to include summaries of reference toxicant tests performed by the contracting laboratory; and any information on deviations from standard test procedures or problems encountered in completing the test and how the problems were resolved.

b. Compliance Summary. In addition to the WET report, the Permittee shall submit a compliance summary that includes an updated chronology of chronic toxicity test results expressed in NOEC and TUc for tests conducted during the permit term, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency (routine, accelerated, or TRE). Each compliance summary report shall clearly identify whether or not the effluent discharge is below the chronic toxicity monitoring triggers and, in the event that the effluent discharge exceeds a single sample or median chronic toxicity trigger, the status of efforts (e.g., accelerated monitoring, TRE, TIE, etc.) to identify the source of chronic toxicity as required by section V.B.9 of this MRP.

2. Quality Assurance Reporting. Because the permit requires sublethal hypothesis testing endpoints from methods 1000.0, 1002.0, and 1003.0 in the test methods manual titled *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (U.S. EPA Report No. EPA-821-R-02-013, 2002, or subsequent editions), with-in test variability must be reviewed for acceptability and variability criteria (upper and lower PMSD bounds) must be applied, as directed under section 10.2.8 – *Test Variability* of the test methods manual. Under section 10.2.8, the calculated PMSD for both reference toxicant test and effluent toxicity test results must be compared with the upper and lower PMSD bounds variability criteria specified in Table 6 – *Variability Criteria (Upper and Lower PMSD Bounds) for Sublethal Hypothesis Testing Endpoints Submitted Under NPDES Permits*, following the review criteria in paragraphs 10.2.8.2.1 through 10.2.8.2.5 of the test methods manual. Based on this review, only accepted effluent toxicity test results shall be reported.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

A. Monitoring Locations LND-001 and LND-004

1. The Permittee shall monitor treated wastewater downstream of the settling pond at LND-001 and non-contact cooling water and evaporative condensate process water at LND-004 as follows:

Table E-3. Land Discharge Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Visual Observations	---	---	Daily	Visual
BOD_5	mg/L	24-hour composite[1]	Monthly	Standard Method 5210B
	lbs/acre/day	Calculation		---
TSS	mg/L	24-hour composite[1]	Monthly	40 C.F.R. 136
	lbs/acre/day	Calculation		---
Total Dissolved Solids	mg/L	24-hour composite	Monthly	Standard Method 2540C
Sodium	µg/L	24-hour composite	Monthly	ICPMS[1]
Aluminum	µg/L	24-hour composite	Monthly	ICPMS

Nitrite Nitrogen, Total (as N)	mg/L	24-hour composite	Quarterly	40 C.F.R. 136
Table Notes: 1. Inductively Coupled Plasma/Mass Spectrometry				

VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Surface Water Monitoring Location SWR-001

1. The Permittee shall monitor upstream conditions in the Eel River at SWR-001 as follows:

Table E-4. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	cfs or mgd	Data	Daily	USGS Gauge Station 11477000
pH	pH units	Grab	Monthly	Standard Methods[1]
Dissolved Oxygen	mg/L	Grab	Monthly	40 C.F.R. 136
Temperature	^{0}C	Grab	Monthly	Standard Methods
Specific Conductance	mg/L	Grab	Monthly	40 C.F.R. 136
Total Dissolved Solids	mg/L	Grab	Monthly	Standard Methods 2540C
Turbidity	mg/L	Grab	Monthly	Standard Methods 2130B
Visual Observations	mg/L	Grab	Monthly	Visual
CTR Priority Pollutants[2]	µg/L[3]	Grab	Once per permit term[4]	Standard Methods
Hardness	mg/L	Grab	Concurrent with priority pollutant sampling	Standard Methods

Table Notes:
1. In accordance with the current edition of Standard Methods for Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in 40 C.F.R. Part 136.
2. Those pollutants identified as Compound Nos. 1 – 126 by the California Toxics Rule at 40 C.F.R. 131.38(b)(1). Samples shall be collected on the same day as effluent samples are collected for analysis of the priority pollutants. Analyses for the priority pollutants shall be conducted in accordance to methods established at 40 C.F.R. Part 136, or if no method is specified for a pollutant at 40 C.F.R. Part 136, in accordance to methods approved by the State Water Resources Control Board or the Regional Water Board.
3. Or other units as appropriate.
4. Surface water monitoring required when discharging at Discharge Point 002.

B. Surface Water Monitoring Location SWR-002

1. The Permittee shall monitor downstream conditions in the Eel River at SWR-002 as follows:

Table E-5. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency[2]	Required Analytical Test Method
pH	pH units	Grab	Monthly	Standard Methods[1]
Dissolved Oxygen	mg/L	Grab	Monthly	40 C.F.R. 136
Temperature	^{0}C	Grab	Monthly	Standard Methods
Specific Conductance	mg/L	Grab	Monthly	40 C.F.R. 136
Total Dissolved Solids	mg/L	Grab	Monthly	Standard Methods 2540C
Turbidity	mg/L	Grab	Monthly	Standard Methods 2130B
Visual Observations	mg/L	Grab	Monthly	Visual

Table Notes:
1. In accordance with the current edition of Standard Methods for Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in 40 C.F.R. Part 136.
2. See #4 previous table.

C. Groundwater Monitoring Locations GWR-001 to GWR-005

1. The Permittee shall monitor groundwater at GWR-001 through GWR-005 as follows:

Table E-6. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Nitrite Nitrogen, Total (as N)	mg/L	Grab	Quarterly	40 C.F.R. 136
Total Dissolved Solids	mg/L	Grab	Quarterly	Standard Method 2540C
Sodium	µg/L	Grab	Quarterly	ICPMS[2]
Aluminum	µg/L	Grab	Quarterly	ICPMS
Iron	µg/L	Grab	Quarterly	ICPMS
Depth to Groundwater	0.01 feet	Measurement	Quarterly	Measurement

IX. OTHER MONITORING REQUIREMENTS

A. Leachfield Monitoring (Monitoring Locations INT-North, INT-South, GWR-North, GWR-South)

2. The Permittee shall monitor groundwater at INT-North, INT-South, GWR-North, and GWR-South as follows:

Table E-7. Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Depth to Groundwater	0.01 feet	Measurement	Quarterly	Measurement

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

The Permittee shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

B. Self-Monitoring Reports (SMRs)

1. The Permittee shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS Web site will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.
2. The Permittee shall maintain sufficient staffing and resources to ensure it submits eSMRs that are complete and timely. This includes provision of training and supervision of individuals (e.g., Permittee personnel or consultant) on how to prepare and submit eSMRs.
3. The Permittee shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Permittee shall submit monthly and annual summary SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Permittee monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
4. All monitoring results reported shall be supported by the inclusion of the complete analytical report from the laboratory that conducted the analyses.
5. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	First day of second calendar month following month of sampling
Daily	Permit effective date	Midnight through 11:59 PM	First day of second calendar month following month of sampling
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is	1st day of calendar month through last day of calendar month	First day of second calendar month following month of

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
	first day of the month		sampling
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	First day of second calendar month following month of sampling
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	First day of second calendar month following month of sampling
Annually	January 1 following (or on) permit effective date	January 1 through December 31	First day of second calendar month following month of sampling
Once / Permit Term	Permit effective date	First discharge at EFF-002	With application for permit renewal

6. **Reporting Protocols.** The Permittee shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

   The Permittee shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

   For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

   c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

   d. Permittees are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

7. The Permittee shall submit SMRs in accordance with the following requirements:

a. The Permittee shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the Facility is operating in compliance with interim and/or final effluent limitations. The reported data shall include calculation of all effluent limitations that require averaging, taking of a median, or other computation. The Permittee is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Permittee shall electronically submit the data in a tabular format as an attachment. The Permittee's reports shall clearly identify the Discharge or Distribution Points that were utilized during the monitoring period. During periods when there is no discharge to one more Discharge or Distribution Points, the reports shall certify "No Discharge".

b. The Permittee shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify:

i. Facility name and address;

ii. WDID number;

iii. Applicable period of monitoring and reporting;

iv. Noncompliance of the WDRs, including a description of any requirement not complied with and a description of the event, and the reason for the violation;

v. Corrective actions taken or planned; and

vi. The proposed time schedule for corrective actions.

c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the CIWQS Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). In the event that an alternate method for submittal of SMRs is required, the Permittee shall submit the SMR to the address listed below:

NorthCoast@waterboards.ca.gov

C. Discharge Monitoring Reports (DMRs) – Not Applicable

D. Other Reports

1. Annual Report. The Permittee shall submit an annual report to the Regional Water Board for each calendar year through the CIWQS Program web site. In the event that an alternate copy of the annual report is required, the Permittee shall submit the report to the address in section X.B.6.c., above. The report shall be submitted by March 1 of the following year. The report shall, at a minimum, include the following:

a. Both tabular and, where appropriate, graphical summaries of the monitoring data and disposal records from the previous year. If the Permittee monitors any pollutant more frequently than required by this Order, using test procedures approved under 40 C.F.R. section 136 or as specified in this Order, the results of this monitoring shall be included in the calculation and report of the data submitted SMR.

b. A comprehensive discussion of the Facility's compliance (or lack thereof) with all effluent limitations and other WDRs, and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the Order.

c. The names and telephone numbers of persons to contact regarding the wastewater treatment Facility for emergency and routine situations.

d. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.

E. Spill Notification

1. **Spills and Unauthorized Discharges.** Information regarding all spills and unauthorized discharges (except SSOs and recycled water) that may endanger health or the environment shall be provided orally to the Regional Water Board[1] within 24 hours from the time the Permittee becomes aware of the circumstances and a written report shall also be submitted within five (5) days of the time the Permittee becomes aware of the circumstances, in accordance with Section V.E. of Attachment D.

   Information to be provided verbally to the Regional Water Board includes:

   a. Name and contact information of caller;
   b. Date, time and location of spill occurrence;
   c. Estimates of spill volume, rate of flow, and spill duration, if available and reasonably accurate;
   d. Surface water bodies impacted, if any;
   e. Cause of spill, if known at the time of the notification;
   f. Cleanup actions taken or repairs made at the time of the notification; and
   g. Responding agencies.

[1] The contact number of the Regional Water Board during normal business hours is (707) 576-2220. After normal business hours, spill reporting to CalEMA will satisfy the 24 hour spill reporting requirement for the Regional Water Board. The contact number for spill reporting for the CalEMA is (800) 852-7550.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section I, the Regional Water Board incorporates this Fact Sheet as findings of the Regional Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Permittee. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Permittee.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	1B801850HUM
Permittee	Foster Dairy Farms dba Humboldt Creamery
Name of Facility	Humboldt Creamery, Fernbridge
Facility Address	572 Highway 1
	Fortuna, California 95540
	Humboldt County
Facility Contact, Title and Phone	Mike Callihan, Plant Manager, (707) 725-6182
Authorized Person to Sign and Submit Reports	Mike Callihan, Plant Manager, (707) 725-6182
Mailing Address	SAME
Billing Address	SAME
Type of Facility	Dairy Products Processing Facility Fluid Milk: SIC 2026 Dry Milk Powders and Evaporated Products: SIC 2023 Ice Cream and Frozen Desserts: SIC 2024
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Pretreatment Program	NA
Recycling Requirements	NA
Facility Permitted Flow	Discharge to Eel River Average 0.063 million gallons per day (mgd)
Watershed	Eel River Hydrogeologic Unit, Ferndale Hydrologic Subarea
Receiving Water	Eel River/Groundwater
Receiving Water Type	Inland surface water, groundwater

A. The Foster Farms Dairy doing business as Humboldt Creamery (hereinafter Permittee) is the owner and operator of the Humboldt Creamery (hereinafter Facility), a dairy products processing plant. For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Permittee herein.

B. The Facility discharges wastewater to the Eel River, a water of the United States. The Permittee was previously regulated by Order R1-2008-0020 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0005584 adopted on January 29, 2009 and expired on March 1, 2014 and has been administratively extended until adoption of this permit renewal. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. The Permittee filed a report of waste discharge and submitted an application for reissuance of its WDRs and NPDES permit on September 2, 2013. The application was deemed complete.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment and Controls

Foster Dairy Farms owns and operates Humboldt Creamery, a dairy processing facility (Facility). The Facility produces dry milk powders and evaporated products, ice cream and frozen desserts, and fluid milk. Process wastewater generated includes milk tanker truck washout, acidic and caustic rinse water, boiler blowdown, washdown processes (cleaning of dairy processing equipment), and evaporated milk condensate and non-contact cooling water. The wastewater treatment system consists of aeration and settling ponds.

Originally constructed in the early 1970s, the wastewater treatment facility (WWTF) consists of an aeration pond, settling pond, and approximately 150 acres of grazed pasture. The Facility is authorized to discharge evaporated milk condensate (condensate of whey (COW) water) and non-contact cooling water to the Eel River. The Facility land applies process wastewater, and COW water. Domestic wastewater is treated through an onsite septic and leachfield system. Three 1,800 gallon septic tanks are connected in series. The first two tanks are used for collecting solids and grease. The third is designed to function as a dosing tank for the distribution of effluent to the pressurized leachfield. There are two alternating 1,800 linear foot leachfields.

B. Discharge Points and Receiving Waters

From October 1 through May 14, condensate from the dry condensed milk manufacturing process and non-contact cooling water may be discharged directly from the Facility at Discharge point EFF-002 to the Eel River, a water of the United States, within the Ferndale hydrologic subarea of the Eel River watershed. Alternatively, the condensate from the dry condensed milk and non-contact cooling water may be discharged directly via irrigation at Discharge Point LND-004 or treated with the rest of the process wastewater generated at the Facility. The treated process wastewater is discharged from Discharge Point LND-001 via irrigation to approximately 150 acres of grazed pasture land adjacent to the facility and bordering the Eel River. Recognition of Discharge Point LND-004 allows the Discharger to divert condensate from the dry condensed milk and non-contact cooling water away from the rest of the process wastewater generated at the Facility, but does not allow any increase or alteration in the overall Facility's waste discharge.

From May 15 through September 30, the condensate from the dry condensed milk and non-contact cooling water cannot be discharged to the Eel River and must either be discharged directly via irrigation at Discharge Point LND-004 or treated with the rest of the process wastewater generated at the Facility. The treated process wastewater is discharged from Discharge Point LND-001 via irrigation to approximately 150 acres of grazed pasture land adjacent to the facility and bordering the Eel River.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

The Facility is not currently discharging to surface waters. Discharge Specifications contained in the existing Order for discharges from Discharge Points LND-001 and LND-004 (Monitoring Location LND-001) and representative monitoring data from the term of the previous Order are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation	Monitoring Data (From October 2011 – To February 2014)	
		Average Monthly	Highest Average Monthly Discharge	Number of Violations
BOD_5	lbs/acre/day	60	169	8
Ammonia Nitrogen, Total (as N)	mg/L	1.5	0.71	0
Nitrate Nitrogen, Total (as N)	mg/L	1.0	ND	0
Nitrite Nitrogen, Total (as N)	mg/L	1.0	2.3	1
Total Dissolved Solids	mg/L	450	1,100	28
Sodium	µg/L	60,000	290,000	19
Aluminum	µg/L	1,000	1,700	7

D. Compliance Summary

Monitoring data from land discharge point LND-001 between October 2011 and February 2014 indicates effluent violations for BOD_5, nitrite, total dissolved solids, sodium, and aluminum. Regional Water Board staff is evaluating enforcement options to address compliance concerns at the Facility.

E. Recent and Planned Changes

The Permittee has implemented numerous changes to the Facility and WWTF including:

- Retrofitting irrigation sprinklers with a global positioning system (GPS) to record daily irrigation patterns;
- Installed a containment basin around garbage receptacles to collect runoff and then pump it to the WWTF;
- Upgraded the treatment pond overflow system;
- Reoriented the floating aerators in the aeration pond to improve dissolved oxygen concentrations;
- Replaced flow meters for the influent to the treatment pond and the land discharge effluent; and
- Substituted a potassium hydroxide cleaning product in lieu of sodium-based cleaning products. Additional product substitutions are planned to further reduce sodium concentrations in the effluent.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this Facility to surface waters.

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code.

For the portion of the permit that addresses WDRs for discharges to land, the project is categorically exempt from CEQA pursuant to section 15301 of title 14 of the California Code of Regulations. Because the Regional Water Board is issuing the WDRs for discharges from an existing facility for which no expansion is being permitted, this project meets the requirements of the categorical exemption, including the requirements set forth in section 15300.2 that the project not have any significant effects or result in cumulative impacts.

C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The Regional Water Board adopted *a Water Quality Control Plan for the North Coast Region* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the Ferndale Hydrologic Subarea of the Eel River Hydrologic Unit are as follows:

Table F-3. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
002	Eel River	Existing: Municipal and domestic water supply (MUN); Agricultural Supply (AGR); Industrial Service Supply (IND); Groundwater Recharge (GWR); Freshwater Replenishment (FRESH); Navigation (NAV); Water Contact Recreation (REC-1); Non-Contact water Recreation (REC-2); Commercial and Sport Fishing (COMM); Cold Freshwater Habitat (COLD); Wildlife Habitat (WILD), Preservation or Rare, Threatened or Endangered Species (RARE); Migration of Aquatic Organisms (MIGR); Spawning, Reproduction, and/or early Development (SPWN); Shellfish Harvesting (SHELL); Estuarine Habitat (EST); Native American Culture (CUL); and Subsistence Fishing (FISH). Potential: Industrial Process Supply (PRO); Hydropower Generation (POW); Marine Habitat (MAR); and Aquaculture (AQUA).
001, 003 and 004	Groundwater	Existing: Municipal and domestic water supply (MUN); Agricultural Supply (AGR); Industrial Service Supply (IND); and Native American Culture (CUL). Potential: Industrial Process Supply (PRO) and Aquaculture (AQUA).

In addition to the beneficial uses, in the Basin Plan, contains several implementation plans that include actions intended to meet water quality objectives and protect beneficial uses of the North Coastal Basin. For the Eel River and its tributaries, no point source waste discharges are allowed from May 15 through September 30 and during all other periods when the waste discharge flow is less than 100 times greater than the waste flow.

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.

3. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the

Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

4. **Antidegradation Policy.** Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16. Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16. As discussed in detail in section IV.D.2 of this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 C.F.R 131.12 and State Water Board Resolution No. 68-16.

5. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. Effluent limitations contained in this Order are at least as stringent as the previous Order (Order No. R1-2008-0020).

6. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare, threatened, or endangered species. The Permittee is responsible for meeting all requirements of the applicable Endangered Species Act.

D. Impaired Water Bodies on CWA 303(d) List

Section 303(d) of the federal CWA requires states to identify waterbodies that do not meet water quality standards and are not supporting their beneficial uses after implementation of technology-based effluent limitations on point sources. Each state must submit an updated list, the 303 (d) List of Impaired Waterbodies, to USEPA by April of each even numbered year. In addition to identifying the waterbodies that are not supporting beneficial uses, the 303 (d) list also identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. The USEPA requires the Regional Water Board to develop total maximum daily loads (TMDLs) for each 303 (d) listed pollutant and water body contaminant. TMDLs establish the maximum quantity of a given pollutant that can be added to a water body from all sources without exceeding the applicable water quality standard for that pollutant and determine wasteload allocations (the portion of a TMDL allocated to existing and future point sources) for point sources and load allocations (the portion of a TMDL attributed to existing and future nonpoint sources) for nonpoint sources.

In June 2007, the USEPA provided final approval of the 303 (d) list of impaired water bodies prepared by the State. The list identifies the Eel River Delta within the Lower Eel Hydrologic Area as impaired by sedimentation/siltation and temperature. On December 18, 2007, USEPA approved a TMDL addressing sediment and temperature in the Lower Eel River and its tributaries. Regarding temperature, the TMDL concludes that most sources of heat in the Lower Eel River watershed are from diffuse, nonpoint sources and result from such factors as removal of stream shade, longer travel time, changes in timing and volume of natural streamflow due to water diversions and impoundments, and increased sediment loads that cause widening of streams. As the critical time period for temperature is in the summer, the TMDL was established for that critical time period, which is also the time period when point source discharges from area wastewater treatment facilities are prohibited. The TMDL concludes that, because of the summer discharge prohibition, area discharges from facilities, such as the Humboldt Creamery, do not contribute to temperature loadings to the Lower Eel River Watershed, and therefore, the TMDL establishes a "zero" wasteload allocation for all current and future wastewater treatment facilities that discharge to the Lower Eel River Watershed. The Regional Water Board interprets this wasteload allocation to mean that, as long as the Humboldt Creamery adheres to the summer discharge prohibition, it will be in compliance with the approved TMDL for temperature.

Regarding sediment, the TMDL establishes a maximum loading of 125 percent of the natural sediment loading for the watershed and further defines that loading rate as 2.5 tons of sediment per square mile of watershed per day on a long term basis. Although nonpoint sources were found to be primarily responsible for excessive sediment loadings to the Lower Eel River, the TMDL establishes wasteload allocations for area wastewater treatment facilities at levels corresponding to existing permit limitations for suspended and settleable solids. To satisfy the requirements of the TMDL, this Order therefore retains the monthly average limitations for settleable solids from Order No. R1-2008-0020 of 0.1 mL/L-hr and total suspended solids of 30 mg/L.

E. Other Plans, Polices and Regulations

1. Storm water that falls within the confines of the Facility is not returned to the headworks. Therefore, coverage under the State Water Board Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (Industrial Storm Water General Permit) is required.

2. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Permittee must file a petition with the State Water Resources Control Board (State Water Board), Division of Water Rights, and receive approval for such a change. The State Water Board retains the jurisdictional authority to enforce such requirements under Water Code section 1211.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and

standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where a reasonable potential to exceed those criteria exists.

This Order serves as Waste Discharge Requirements (WDRs) for discharges to land issued pursuant to section 13263 of the California Water Code (Water Code). As required by Water Code section 13263(a), these WDRs are crafted to implement the Water Quality Control Plan for the North Coast Region (Basin Plan), and in so doing, the Regional Water Board has taken into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other (including previous) waste discharges, the need to prevent nuisance, and the provisions of Water Code section 13241.

A. Discharge Prohibitions

1. **Prohibition III.A.** The discharge of any waste not specifically regulated by this permit, not disclosed by the Discharger or not within the reasonable contemplation of the Regional Water Board is prohibited. This prohibition is based on the Basin Plan, the previous Order (Order No. R1-2008-0020), and State Water Board Order WQO 2002-0012 regarding the petition of WDRs Order No. 01-072 for the East Bay Municipal Utility District and Bay Area Clean Water Agencies. In State Water Board Order WQO 2002-0012, the State Water Board found that this prohibition is acceptable in Orders, but should be interpreted to apply only to constituents that are either not disclosed by the Discharger or are not reasonably anticipated to be present in the discharge, but have not been disclosed by the Discharger. It specifically does not apply to constituents in the discharge that do not have "reasonable potential" to exceed water quality objectives.

   The State Water Board has stated that the only pollutants not covered by this prohibition are those which were "disclosed …and...can be reasonably contemplated." (In re the Petition of East Bay Municipal Utilities District et al., (State Water Board 2002) Order No. WQ 2002-0012, p. 24) In that Order the State Water Board cited a case that held the Discharger is liable for discharge of pollutants not "within the reasonable contemplation of the permitting authority"..., (Piney Run Preservation Assn. v. County Commissioners of Carroll County, Maryland (4th Cir. 2001) 368 F .3d 255, 268.) Thus, State Water Board authority provides that, to be permissible, the constituent discharged (1) must have been disclosed by the Discharger and (2) can be reasonably contemplated by the Regional Water Board. Whether or not the Discharger reasonably contemplates the discharge of a constituent is not relevant. What matters is whether the Discharger disclosed the constituent to the Regional Water Board or whether the presence of the pollutant in the discharge can otherwise be reasonably contemplated by the Regional Water Board at the time of Order adoption.

2. **Prohibition III.B.** Creation of pollution, contamination, or nuisance, as defined by section 13050 of the California Water code is prohibited. This prohibition is based on section 13050 of the Water Code. It has been retained from Order No. R1-2008-0020.

3. **Prohibition III.C.** The discharge or reclamation use of untreated or partially treated waste (receiving a lower level of treatment than described in section II. A of the Fact Sheet) from anywhere within the collection, treatment, or disposal systems is prohibited, except as provided for in Prohibition III. E and in Attachment D, Standard Provision G (Bypass).

   This Prohibition is based on the Basin Plan, to protect beneficial uses of the receiving water from unpermitted discharges, and the intent of Water Code sections 13260 through 13264

relating to the discharge of waste to waters of the State without filing for and being issued an Order. This prohibition applies to spills not related to sanitary sewer overflows (SSOs) and other unauthorized discharges of wastewater within the collection, treatment, and disposal facilities. The discharge of untreated or partially treated wastewater from the collection, treatment, or disposal facility represents an unauthorized bypass pursuant to title 40, section 122.41(m) or an unauthorized discharge which poses a threat to human health and/or aquatic life, and therefore, is explicitly prohibited by this Order.

4. **Prohibition III.D.** The discharge of waste to land that is not owned by or under agreement to use by the Discharger is prohibited, except for use for fire suppression as provided in title 22, sections 60307 (a) and (b) of the Cal. Code of Regs. This prohibition is retained from Order No. R1-2008-0020. Land used for the application of wastewater must be owned by the Discharger or be under control of the Discharger by contract so that the Discharger maintains a means for ultimate disposal of treated wastewater.

5. **Prohibition III.E.** Discharge to the Eel River or its tributaries of domestic wastewater and/or process water other than noncontact cooling water or condensate from evaporated milk processing is prohibited. This prohibition is retained from Order No. R1-2008-0020. This Prohibition is based on the Basin Plan, to protect beneficial uses of the receiving water from unpermitted discharges, and the intent of Water Code sections 13260 through 13264 relating to the discharge of waste to waters of the State without filing for and being issued an Order.

6. **Prohibition III.F.** The discharge of noncontact cooling water and condensate from evaporated milk processing to the Eel River and its tributaries is prohibited during the period from May 15 through September 30 of each year. This prohibition is retained from Order No. R1-2008-0020. This prohibition is required by the Basin Plan. The Basin Plan prohibits discharges to the Eel River and its tributaries during the period May 15 through September 30 (Chapter 4, Waste Discharge prohibitions for the North Coastal Basin)

7. **Prohibition III.G.** The discharge of waste at any point not described in Finding II. B or authorized by a permit issued by the State Water Board or another Regional Water Board is prohibited. This Prohibition is based on the Basin Plan, to protect beneficial uses of the receiving water from unpermitted discharges, and the intent of Water Code sections 13260 through 13264 relating to the discharge of waste to waters of the State without filing for and being issued an Order.

8. **Prohibition III.H.** During the period of October 1 through May 14, discharges of wastewater shall not exceed one percent of the flow of the receiving water as measured in the Eel River at the Scotia gauging station (USGS Station 11477000). The total volume discharged in a calendar month shall not exceed, in any circumstances, one percent of the total volume of the Eel River passing the Scotia gauging station in the same calendar month. This prohibition is retained from Order No. R1-2008-0020 and is a restatement of a Waste Discharge Prohibition established in Chapter 4 of the Basin Plan. The prohibition is intended to protect water quality and beneficial uses during critical low flow periods of the year.

9. **Prohibition III.I.** Discharge from Discharge Point 002 that results in a measureable change in receiving water temperatures is prohibited. This prohibition is retained from Order No. R1-2008-0020. This prohibition implements requirements of the Basin Plan. The Basin Plan

establishes temperature objectives for surface waters. This prohibition implements Basin Plan requirements applicable to the Eel River.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Effluent Limitations Guidelines and Standards for the Dry Milk Subcategory in 40 C.F.R. Part 405.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. section 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Regional Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

2. Applicable Technology-Based Effluent Limitations

The Permittee owns and operates a dairy processing facility and is subject to the requirements contained in 40 C.F.R. Part 405. The facility is only authorized to discharge process wastewater from the drying plant, therefore, the effluent limitations found in 40 C.F.R. § 405.102, Dry Milk Subcategory, are applicable to the surface water discharge.

The effluent limitations are production based and are derived by multiplying the values in the regulation by BOD input values. As defined in the National Effluent Limitations Guidelines and Standards (ELG):

"The term "BOD_5 input" shall mean the biochemical oxygen demand of the materials entered into process. It can be calculated by multiplying the fats, proteins and carbohydrates by factors of 0.890, 1.031 and 0.691 respectively. Organic acids (e.g., lactic acids) should be included as carbohydrates. Composition of input materials may be based on either direct analysis or generally accepted published values."

Information provided by the Permittee indicate an average of 62,811 lbs BOD_5 input values per day from 2001 to 2013. Composition of the input materials was derived from published values from Cornell University's Department of Food Science. Calculations are shown in Appendix G.

Technology-based effluent limitations are as follows:

Table F-4. Technology-Based Effluent Limitations

Pollutant	Average Monthly Effluent Limit (lbs/day)	Daily Maximum Effluent Limit (lbs/day)
BOD_5	41	102
TSS	62	153
pH within the range of 6.0 to9.0		

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

CWA Section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 C.F.R. requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard.

Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. Beneficial Uses. Beneficial use designations for receiving waters for discharges from the Facility are presented in section III.B.1 of this Fact Sheet.

b. Basin Plan Water Quality Objectives. In addition to the specific water quality objectives indicated above, the Basin Plan contains narrative objectives for agricultural supply, color, tastes and odors, floating material, suspended material, settleable material, oil and grease, biostimulatory substances, sediment, turbidity, pH, dissolved oxygen, bacteria, temperature, toxicity, pesticides, chemical constituents, and radioactivity that apply to inland surface waters, enclosed bays, and estuaries, including the Eel River. For waters designated for use as domestic or municipal supply (MUN), the Basin Plan establishes as minimum applicable water quality criteria the Maximum Contaminant Levels (MCLs) established by CDPH for the protection of public water supplies at title 22 of the CCR section 64431 (Inorganic Chemicals) and section 64444 (Organic Chemicals).

c. SIP, CTR and NTR. Water quality criteria and objectives applicable to inland surface receiving water are established by the California Toxics Rule (CTR), established by the U.S. EPA at 40 C.F.R. section 131.38; and the National Toxics Rule (NTR), established by the U.S. EPA at 40 C.F.R. section 131.36. Criteria for most of the 126 priority pollutants are contained within the CTR and the NTR.

Aquatic life freshwater and saltwater criteria are identified as criterion maximum concentrations (CMC) and criterion continuous concentrations (CCC). The CTR defines the CMC as the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without deleterious effects and the CCC as the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects. The CMC is used to calculate an acute or 1-hour average numeric effluent limitation and the CCC is used to calculate a chronic or 4-day average numeric effluent limitation. Aquatic life freshwater criteria were used for the RPA.

Human health criteria are further identified as “water and organisms” and “organisms only.” “Water and organism” criteria are designed to address risks to human health from multiple exposure pathways. The criteria from the “water and organisms” column of CTR were used for the RPA because the Basin Plan identifies that the receiving water, the Eel River, has the beneficial use designation of municipal and domestic supply.

The SIP, which is described in section III.B.3 of this Fact Sheet, includes procedures for determining the need for, and the calculation of, WQBELs and requires dischargers to submit data sufficient to do so.

At title 22, division 4, chapter 15 of the CCR, CDPH has established MCLs for certain pollutants for the protection of drinking water. Chapter 3 of the Basin Plan establishes these MCLs as water quality objectives applicable to receiving waters with the beneficial use designation of municipal and domestic supply.

Attachment F-1 includes a summary of RPA results for all priority toxic pollutants and ammonia, nitrate, nitrite, and aluminum with water quality criteria/objectives that are applicable to discharge to groundwater or the Eel River.

3. Determining the Need for WQBELs

NPDES regulations at 40 C.F.R. section 122.44 (d) require effluent limitations to control all pollutants which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard.

a. Non-Priority Pollutants

1. **pH.** The effluent limitation for pH of 6.5 to 8.5 is retained from WDRs Order No. R1-2008-0020. This limitation is based on the water quality objective for all surface waters of the North Coast Region established in Chapter 3 of the Basin Plan. Federal technology-based requirements prescribed in 40 C.F.R. section 133 are not sufficient to meet these Basin Plan water quality standards.

2. **Nitrite.** For waters designated as domestic or municipal supply, the Basin Plan (Chapter 3) adopts the MCLs, established by CDPH for the protection of public water supplies at title 22 of the CCR, sections 64431 (Inorganic Chemicals) and 64444 (Organic Chemicals), as applicable water quality criteria. The MCL for nitrite (1.0 mg/L as N) is therefore applicable as a water quality criterion for the Eel River. Land discharge monitoring results from October 2011 to June 2013, showed a maximum concentration of 2.3 mg/L as N.

   Using the methodology described in the SIP for determining reasonable potential, because nitrite levels in effluent have been measured at concentrations greater than 1.0 mg/L as N, the Regional Water Board concludes that discharges from the Facility have a reasonable potential to cause or contribute to exceedances of applicable water quality criteria for the receiving water, therefore an effluent limitation for nitrite is required.

3. **Aluminum.** For waters designated as domestic or municipal supply, the Basin Plan (Chapter 3) adopts the MCLs, established by CDPH for the protection of public water supplies at title 22 of the CCR, sections 64431 (Inorganic Chemicals) and 64444 (Organic Chemicals), as applicable water quality criteria. The MCL for aluminum (1.0 mg/L) is therefore applicable as a water quality criterion for the Eel River. Land discharge monitoring results from October 2011 to June 2013, showed a maximum concentration of 1.7 mg/L.

   Using the methodology described in the SIP for determining reasonable potential, because aluminum levels in effluent have been measured at concentrations greater than 1.0 mg/L, the Regional Water Board concludes that discharges from the Facility have a reasonable potential to cause or contribute to exceedances of applicable water quality criteria for the receiving water, therefore an effluent limitation for aluminum is required.

b. Priority Pollutants

The SIP establishes procedures to implement water quality criteria from the NTR and CTR and for priority, toxic pollutant objectives established in the Basin Plan. The implementation procedures of the SIP include methods to determine reasonable potential (for pollutants to cause or contribute to excursions above State water quality standards) and to establish numeric effluent limitations, if

necessary, for those pollutants showing reasonable potential.

Section 1.3 of the SIP requires the Regional Water Board to use all available, valid, relevant, and representative receiving water and effluent data and information to conduct an RPA. No discharges to surface water occurred during the term of the previous permit. Samples of wastewater applied to land were collected monthly and analyzed for aluminum, ammonia, BOD, manganese, nitrate (as N), nitrite (as N), sodium, and TDS. In the absence of surface water discharges, a sample collected in 2008 was determined by Regional Water Board staff to be representative of discharges to surface water, had they occurred. Regional Water Board staff conducted the RPA using combined data from the land application sampling and the representative surface water sample. For this RPA, effluent hardness was not available. A conservative value of 100 mg/L was used calculate hardness dependent criteria. No ambient receiving water data was available, consequently all ambient concentrations were assumed to be zero.

To conduct each RPA, Regional Water Board staff identified the maximum effluent concentration (MEC) and maximum background (B) concentration for each priority, toxic pollutant from effluent and receiving water data provided by the Permittee, and compared this information to the most stringent applicable water quality criterion (C) for each pollutant with applicable water quality criteria from the NTR, CTR, and the Basin Plan. Section 1.3 of the SIP establishes three triggers for a finding of reasonable potential.

Trigger 1. If the MEC is greater than C, there is reasonable potential, and an effluent limitation is required.

Trigger 2. If B is greater than C, and the pollutant is detected in effluent (MEC > ND), there is reasonable potential, and an effluent limitation is required.

Trigger 3. After a review of other available and relevant information, a permit writer may decide that a WQBEL is required. Such additional information may include, but is not limited to: the facility type, the discharge type, solids loading analyses, lack of dilution, history of compliance problems, potential toxic impact of the discharge, fish tissue residue data, water quality and beneficial uses of the receiving water, CWA 303 (d) listing for the pollutant, and the presence of endangered or threatened species or their critical habitat.

c. Reasonable Potential Determination for Priority Pollutants

Based on available effluent data from monitoring location EFF-002, the RPA demonstrated no reasonable potential for discharges from Humboldt Creamery to cause or contribute to exceedances of applicable water quality criteria for priority pollutants. Reasonable potential could not be determined for all pollutants, as there are not applicable water quality criteria for all pollutants. The RPA determined that there is either no reasonable potential or there was insufficient information to conclude affirmative reasonable potential for the 126 priority pollutants.

The following tables summarize the RPA results for each priority pollutant that was reported in detectable concentrations in the effluent. The MECs and most stringent water quality objectives/water quality criteria (WQO/WQCs) used in the RPA are

presented, along with the RPA results for each toxic pollutant analyzed. No background concentrations (B) were available for the receiving water. No other pollutants with applicable, numeric water quality criteria from the NTR, CTR, and the Basin Plan were measured above detectable concentrations during the monitoring events conducted by the Permittee.

Table F-5. Summary of Reasonable Potential Analysis Results for Discharge Point 002

CTR #	Pollutant	Most Stringent WQO/WQC (µg/L)	MEC (µg/L) [1]	Background (µg/L)	RPA Results [2]
8	Mercury	0.05	0.0007	---	No
13	Zinc	120	15	---	No

1. The Maximum Effluent Concentration (MEC). Only detected pollutants with WQO/WQC are shown.
2. RPA Results:
   = Yes, if MEC > WQO/WQC, or B > WQO/WQC and MEC is detected;
   = No, if MEC and B are < WQO/WQC or all effluent data are undetected;
   = Undetermined (Ud), if insufficient data are available or if the quality of the data is questionable.

4. Whole Effluent Toxicity (WET)

Effluent limitations for whole effluent, acute and chronic toxicity, protect the receiving water from the aggregate effect of a mixture of pollutants that may be present in effluent. There are two types of WET tests – acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic test is conducted over a longer period of time and may measure mortality, reproduction, and/or growth.

WET requirements are derived from the CWA and the Basin Plan. The Basin Plan establishes a narrative water quality objective for toxicity that states "All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, or aquatic life." Detrimental responses may include, but are not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Permittee to conduct WET testing for acute and chronic toxicity, as specified in the MRP (Attachment E, section V).

a. Acute Aquatic Toxicity

Consistent with WDRs Order No. R1-2008-0020, this Order includes an effluent limitation for acute toxicity in accordance with the Basin Plan, which requires that the average survival of test organisms in undiluted effluent for any three consecutive 96-hour bioassay tests be at least 90 percent, with no single test having less than 70 percent survival.

The Order also implements federal guidelines (Regions 9 and 10 Guidelines for Implementing Whole Effluent Toxicity Testing Programs) by requiring dischargers to conduct acute toxicity tests on a fish species and on an invertebrate to determine the most sensitive species. According to the U.S. EPA manual, Methods for Estimating the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (EPA/600/4-90/-27F), the acceptable vertebrate species for the acute toxicity test are

the fathead minnow, Pimephales promelas and the rainbow trout, Oncorhynchus mykiss. The acceptable invertebrate species for the acute toxicity test are the water flea, Ceriodaphnia dubia, Daphnia magna, and D. pulex. The Permittee tests its effluent for acute toxicity using the rainbow trout, Oncorhynchus mykiss. The Permittee did not discharge to surface waters and therefore has not conducted acute toxicity monitoring.

b. Chronic Aquatic Toxicity

The SIP requires the use of short-term chronic toxicity tests to determine compliance with the narrative toxicity objectives for aquatic life in the Basin Plan. The SIP requires that the Permittee demonstrate the presence or absence of chronic toxicity using tests on the fathead minnow, Pimephales promelas, the water flea, Ceriodaphnia dubia, and the freshwater alga, Selenastrum capricornutum (also named Raphidocelis subcapitata). Attachment E of this Order requires annual chronic WET monitoring during periods of discharge at Discharge Point 002 to demonstrate compliance with the narrative toxicity objective.

Chronic toxicity effluent limitations have not been included in the Order for consistency with the SIP, which implements narrative toxicity objectives in Basin Plans and specifies use of a numeric trigger for accelerated monitoring and implementation of a Toxicity Reduction Evaluation (TRE) in the event that persistent toxicity is detected. The SIP contains implementation gaps regarding the appropriate form and implementation of chronic toxicity limits. This has resulted in the petitioning of a NPDES permit in the Los Angeles Region that contained numeric chronic toxicity effluent limitations. To address the petition, the State Water Board adopted WQO 2003-0012 directing its staff to revise the toxicity control provisions in the SIP. The State Water Board states the following in WQO 2003-012, "In reviewing this petition and receiving comments from numerous interested persons on the propriety of including numeric effluent limitations for chronic toxicity in NPDES permits for publicly-owned treatment works, that discharge to inland waters, we have determined that this issue should be considered in a regulatory setting, in order to allow for full public discussion and deliberation. We intend to modify the SIP to specifically address the issue. We anticipate that review will occur within the next year. We therefore decline to make a determination here regarding the propriety of the final numeric effluent limitations for chronic toxicity contained in these permits." The process to revise the SIP is underway. Proposed changes include clarifying the appropriate form of effluent toxicity limits in NPDES permits and general expansion and standardization of toxicity control implementation related to the NPDES permitting process. Since the toxicity control provisions in the SIP are under revision, it is infeasible to develop numeric effluent limitations for chronic toxicity at this time. The SIP revision may require a permit modification to incorporate new statewide toxicity criteria established by the upcoming SIP revision.

However, the State Water Board found in WQO-2003-012 that, while it is not appropriate to include final numeric effluent limitations for chronic toxicity in NPDES permits for POTWs, permits must contain a narrative effluent limitation, numeric benchmarks for triggering accelerated monitoring, rigorous Toxicity Reduction Evaluation (TRE)/Toxicity Identification Evaluation (TIE) conditions, and a reopener to establish numeric effluent limitations for either chronic toxicity or the chemical(s) causing toxicity. This Order includes a reopener that allows the Regional Water Board to

reopen the permit and include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE.

To ensure compliance with the narrative effluent limitation and the Basin Plan's narrative toxicity objective, the Permittee is required to conduct chronic WET testing at Discharge Point 002, as specified in the MRP (Attachment E, section V). Furthermore, Special Provision IV.C.2.a of this Order requires the Permittee to investigate the causes of, and identify and implement corrective actions to reduce or eliminate effluent toxicity. If the discharge demonstrates a pattern of toxicity exceeding the numeric toxicity monitoring trigger, the Permittee is required to initiate a Toxicity Reduction Evaluation (TRE) in accordance with an approved TRE workplan. The numeric toxicity monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Permittee is required to perform accelerated chronic toxicity monitoring, as well as the threshold to initiate a TRE if a pattern of effluent toxicity has been demonstrated.

Section V.B.9 of the MRP defines the chronic toxicity monitoring trigger as 1.6 TUc as a single sample result or 1.0 TUc as a monthly median and section V.C.1.g of the MRP requires TUc to be calculated as 100/NOEC for purposes of determining if the Permittee's effluent exceeds the chronic toxicity monitoring trigger. Although the federal requirements may provide for flexibility in determining how to calculate TUc for compliance purposes (e.g., 100/NOEC, 100/IC25, 100/EC25), U.S. EPA Region 9 recommends that effluent limitations and triggers be based on the no observed effect concentration (NOEC) when the permit language and chronic toxicity testing methods incorporate important safeguards that improve the reliability of the NOEC. These safeguards include the use of a dilution series (testing of a series of effluent concentrations) to verify and quantify a dose-response relationship and a requirement to evaluate specific performance criteria in order to determine the sensitivity of each chronic toxicity test. The goal is to demonstrate that each test is sensitive enough to determine whether or not the effluent is toxic or not.

The use of 100/IC25 or 100/EC25 as methods for calculating chronic toxicity are point estimates that automatically allow for a 25 percent effect before calling an effluent toxic. The Basin Plan has a narrative objective for toxicity that requires that "all waters be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life." Allowance of a possible 25 percent effect would not meet the Basin Plan's narrative toxicity requirement. In addition, California has historically used the NOEC to regulate chronic toxicity for ocean discharges, thus it is fitting that the same method be used to regulate chronic toxicity in inland surface water discharges.

Because no dilution has been granted for the chronic condition, chronic toxicity testing results exceeding 1.6 TUc as a single sample result and 1.0 TUc as a monthly median triggers the need for accelerated monitoring. Accelerated monitoring is necessary to confirm the continued presence or absence of effluent toxicity and the magnitude of that toxicity, and to determine whether a TRE or other action is needed in response to the initial occurrence of toxicity.

If accelerated sampling of the discharge demonstrates a pattern of toxicity exceeding the chronic toxicity trigger, the permit requires the Permittee to initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved TRE work plan to

determine whether the discharge is contributing chronic toxicity to the receiving water. Special Provision VI.C.2.a.ii of the Order requires the Permittee to maintain the TRE Work Plan to ensure the Permittee has a plan to immediately move forward with the initial tiers of a TRE, in the event effluent toxicity is encountered in the future. The provision also includes a numeric toxicity monitoring trigger and requirements for accelerated monitoring, as well as requirements for TRE initiation if a pattern of toxicity is demonstrated.

Chronic WET limitations will be established if future monitoring results demonstrate that discharges from the Facility are causing or contributing to chronic toxicity in the receiving water.

c. Ammonia-related Toxicity

The chronic toxicity test shall be conducted without modifications to eliminate ammonia toxicity. Ammonia toxicity in water is due mostly to its unionized fraction which is primarily a function of the temperature and the pH of the water being tested. As the pH and temperature increase so does the toxicity of a given concentration of ammonia. In static WET tests, the pH in the test concentrations often increases (drifts) due to the loss of carbon dioxide (CO2) from the test concentrations as the test chambers are incubated over the test period. This upward drift results in pH values in the test concentrations that often exceed those pH values that could reasonably be expected to be found in the effluent or in the mixing zone under ambient conditions. Unionized ammonia toxicity caused by pH drift is considered to be an artifact of test conditions and is not a true measure of the ammonia toxicity likely to occur as the discharge enters the receiving waters. In order to reduce the occurrence of artifactual unionized ammonia toxicity, it may be necessary to control the pH in toxicity tests, provided the control of pH is done in a manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide and cyanide. This Order authorizes the use of pH control procedures where the procedures are consistent with U.S. EPA methods and do not significantly alter the test water chemistry so as to mask other sources of toxicity.

D. Final Effluent Limitation Considerations

1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

2. Antidegradation Policies

This Order is consistent with applicable federal and State antidegradation policies, as it does not authorize the discharge of increased concentrations of pollutants or increased volumes of treated wastewater.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on

BOD_5 and TSS. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. These limitations are not more stringent than required by the CWA.

Water quality-based effluent limitations have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR implemented by the SIP, which was approved by U.S. EPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by U.S. EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 C.F.R. section 131.21(c)(1).

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications

1. Scope and Authority

Section 13263 of the Water Code requires the Regional Water Board to prescribe requirements for proposed discharges, existing discharges, or material change in an existing discharge based upon the conditions of the disposal area or receiving waters upon or into which the discharge is made or proposed. The prescribed requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Water Code section 13241. In prescribing requirements, the Regional Water Board is not obligated to authorize the full waste assimilation capacities of the receiving water.

Water Code section 13241 requires the Regional Board to establish water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and prevention of nuisance, recognizing that it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses. The Basin Plan establishes water quality objectives specific to the North Coast Region for the protection of past, present, and probable future beneficial uses of water. Factors required for consideration during development of applicable water quality objectives, such as the characteristics of the hydrographic unit under consideration, economic considerations, and other factors required in accordance with section 13241 were considered during the Basin Planning and adoption process.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. **Beneficial Uses**. Beneficial use designations for receiving waters for discharges from the facility are discussed in Finding II. H of the Order and section III. C. 1 of this Fact Sheet.

b. **Basin Plan Water Quality Objectives.** The Basin Plan contains narrative objectives for tastes and odors, bacteria, radioactivity, and chemical constituents (including those chemicals that adversely affect agricultural water supply) that apply to groundwater.

3. **Applicable Land Discharge Specifications**

a. **Biochemical Oxygen Demand (BOD).** The Order establishes an effluent limitation for BOD of 60 lbs per acre per day. This limitation is based on literature values cited in the Handbook for Disposal of Non-Designated Waste to Land systems, 2004 for BOD loading in land disposal systems and is applicable to food processing systems. Consequences of BOD overloading may result in pollution or nuisance as defined by Water Code section 13050 including production of objectionable odors, increased risk of mosquito and fly breeding, plugging of the soil surface, and lowering of the oxidation/reduction potential in the underlying soil resulting in potential mobilization of naturally present contaminants in soil such as iron and manganese.

b. **Total Suspended Solids (TSS).** The Order establishes an effluent limitation for TSS of 500 lbs per acre per day. This limitation is based on literature values cited in the Manual of Good Practice for Land Application of Food Processing/Rinse Water, 2007 for TSS loading in land disposal systems for food processing systems. Consequences of TSS overloading may result in pollution or nuisance as defined by Water Code section 13050 including plugging of the soil surface.

c. **Nitrite**. For waters designated as domestic or municipal supply, the Basin Plan (Chapter 3) adopts the MCLs, established by CDPH for the protection of public water supplies at title 22 of the CCR, sections 64431 (Inorganic Chemicals) and 64444 (Organic Chemicals), as applicable water quality criteria. The MCL for nitrite (1.0 mg/L as N) is therefore applicable as a water quality criterion for groundwater**.**

d. **Total Dissolved Solids.** The Order establishes effluent limitations for total dissolved solids at 450 mg/l. Total dissolved solids is a direct measure of salinity. Overall salinity affects underlying groundwater quality as it relates to drinking water and agricultural supply beneficial uses. This limitation is based on the water quality objective for the protection of agricultural water supply.

e. **Sodium.** The Order establishes effluent limitations for sodium at 60,000 mg/l. This limitation is based on the secondary maximum contaminant level (MCL) for taste and odor in drinking water.

f. **Aluminum.** The Order establishes effluent limitations for aluminum at 1,000 ug/l. This limitation is based on the State primary MCL for protection of health in drinking water.

g. **Domestic Waste Surfacing.** The Order requires that domestic wastewater discharges be kept underground at all times. This requirement has been adapted from a prohibition and retained from Order No. R1-2008-0020. This discharge specification is based on the Basin Plan, to protect beneficial uses of the receiving water from unpermitted discharges, and the intent of Water Code sections 13260 through 13264 relating to the discharge of waste to waters of the State without filing for and being issued an Order. Domestic wastewater is not disinfected and could pose a threat to public health if allowed to surface.

h. **Domestic Waste Flow.** The Order requires that the mean daily flow of domestic wastewater not exceed 2,500 gallons per day averaged over a calendar month. This requirement has been adapted from a prohibition and retained from Order No. R1-2008-0020. This discharge specification is based on the septic system design criteria submitted with the report of waste discharge to conform to the Basin Plan criteria for onsite wastewater disposal systems.

i. **Irrigation of Waste.** Irrigation of industrial process water in the leachfield area is prohibited. This requirement has been adapted from a prohibition and retained from Order No. R1-2008-0020. This discharge specification is based on the septic system design criteria submitted with the report of waste discharge to conform to the Basin Plan criteria for onsite wastewater disposal systems. Deposition of additional water in the leachfield area could result in system failures.

j. **Leachfield Replacement Area.** Leachfield replacement area equivalent to 100 percent of the existing leachfield area shall be available for future leachfield repair. Incompatible uses of the existing disposal area and/or the replacement area are prohibited. This requirement has been adapted from a prohibition and retained from Order No. R1-2008-0020. This discharge specification is based on the septic system design criteria submitted with the report of waste discharge to conform to the Basin Plan criteria for onsite wastewater disposal systems.

G. Changes Requested by the Permittee

1. **Flow Criteria for Land Application.** The Permittee has requested that the basis to control land discharge be based on the BOD application rate of 60 lbs/acre/day and not on a flow basis.

   The Permittee is not currently limited in the volume of wastewater that can be land applied, but is limited on the loading rate of BOD. No change to the permit is necessary since the BOD loading rate is not being revised.

2. **Removal/Modification of Effluent Limitations**. The Permittee has requested effluent limitations be removed for nitrate, nitrite, and ammonia. In addition, the Permittee requested an increase in effluent limitations for manganese and total dissolved solids (TDS).

   The Permittee conducted a special study to evaluate threats to first-encountered groundwater in the primary discharge application area (GWR-2, GWR-3, and GWR-4) from manganese and TDS. The study states that vadose zone attenuation combined with other environmental attenuation factors reduce manganese and TDS concentrations in the effluent prior to contact with first-encountered groundwater below concentrations necessary for the protection of beneficial uses.

   Based upon review of the special study for manganese and a comparison to groundwater quality in the primary area of discharge, Regional Water Board staff have determined the effluent limitations for manganese are not necessary as the evaluation of information contained in the study combined with review of groundwater data indicates no reasonable potential to exceed values protective of the most sensitive beneficial use and therefore manganese limitations will be removed from this Order. However, despite the presence of environmental attenuation factors for TDS, groundwater monitoring in GWR-2, GWR-3, and

GWR-4 do not support the conclusions of the special study. Therefore, the effluent limitation of 450 mg/L will be retained for TDS.

Land discharge monitoring results showed a maximum concentration of nitrite at 2.3 mg/L as N. Because nitrite levels in effluent have been measured at concentrations greater than the water quality criterion of 1.0 mg/L as N, the Regional Water Board concludes that discharges from the Facility have a reasonable potential to cause or contribute to exceedances of applicable water quality criteria for the receiving water. Effluent limitations are established when necessary to protect the beneficial uses of the receiving water. Regional Water Board staff have determined the effluent limitations for nitrite are necessary based upon a reasonable potential analysis and therefore will be retained in this Order.

H. Recycling Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

CWA section 303(a-c) requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Regional Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that "[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional [Water] Board will apply to regional waters in order to protect the beneficial uses." The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains Receiving Surface Water Limitations based on the Basin Plan numerical and narrative water quality objectives for biostimulatory substances, bacteria, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, agricultural supply, and turbidity.

B. Groundwater

1. The beneficial uses of the underlying ground water are municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, and freshwater replenishment to surface waters.
2. Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.
3. Discharges from the Permittee's Facility shall not cause exceedance of applicable water quality objectives or create adverse impacts to beneficial uses of groundwater.
4. The Basin Plan requires that waters designated for use as MUN shall not contain concentrations of chemical constituents in excess of the limits specified in the California Code of Regulations, title 22, division 4, chapter 15, article 4.1, section 64435, and article 5.5, section 64444, and listed in Table 3-2 of the Basin Plan.

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

1. Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D. The Permittee must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 C.F.R. allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

2. Regional Water Board Standard Provisions

In addition to the Federal Standard Provisions (Attachment D), the Permittee shall comply with the Regional Water Board Standard Provisions provided in Standard Provisions VI.A.2.

a. Order Provision VI.A.2.a identifies the State's enforcement authority under the Water Code, which is more stringent than the enforcement authority specified in the federal regulations (e.g., sections 122.41(j)(5) and (k)(2)).

b. Order Provision VI.A.2.b requires the Permittee to notify Regional Water Board staff, orally and in writing, in the event that the Permittee does not comply or will be unable to comply with any Order requirement. This provision requires the Permittee to make direct contact with a Regional Water Board staff person. This Provision implements federal requirements at section 122.41(I)(6) and (7) for notification of noncompliance and spill reporting.

B. Special Provisions

1. Reopener Provisions

a. Standard Revisions (Special Provision VI.C.1.a). Conditions that necessitate a major modification of a permit are described in section 122.62, which include the following:

i. When standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision. Therefore, if revisions of applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such revised standards.

ii. When new information that was not available at the time of permit issuance would have justified different permit conditions at the time of issuance.

b. Reasonable Potential (Special Provision VI.C.1.b). . This provision allows the Regional Water Board to modify, or revoke and reissue, this Order if present or future

investigations demonstrate that the Permittee governed by this Permit is causing or contributing to excursions above any applicable priority pollutant criterion or objective, or adversely impacting water quality and/or the beneficial uses of receiving waters.

c. **Whole Effluent Toxicity (Special Provision VI.C.1.c).** This Order requires the Permittee to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity through a TRE. This Order may be reopened to include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity limitation based on that objective.

d. **303(d)-Listed Pollutants (Special Provision VI.C.1.d).** This provision allows the Regional Water Board to reopen this Order to modify existing effluent limitations or add effluent limitations for pollutants that are the subject of any future TMDL action.

e. **Water Effects Ratios (WERs) and Metal Translators (Special Provision VI.C.1.e).** This provision allows the Regional Water Board to reopen this Order if future studies undertaken by the Permittee provide new information and justification for applying a water effects ratio or metal translator to a water quality objective for one or more priority pollutants.

f. **Nutrients (Special Provision VI.C.1.f).** This Order establishes monitoring requirements for the effluent and receiving water for nutrients (i.e., ammonia, nitrate, and phosphorus). This provision allows the Regional Water Board to reopen this Order if future monitoring data indicates the need for effluent limitations or more stringent effluent limitations for any of these parameters.

g. **Salt and Nutrient Management Plans (SNMPs) (Special Provision VI.C.1.g)**. This provision allows the Regional Water Board to reopen this Order if it adopts a regional or subregional SNMP that is applicable to the Permittee.

h. **Title 22 Engineering Report (Special Provision VI.C.1.h)**. This provision allows the Regional Water Board to reopen this Order to adequately implement title 22, if future modifications to the Permittee's title 22 engineering report occur.

2. Special Studies and Additional Monitoring Requirements

Toxicity Reduction Requirements (Special Provision VI.C.2.a). The SIP requires the use of short-term chronic toxicity tests to determine compliance with the narrative toxicity objectives for aquatic life in the Basin Plan. Attachment E of this Order requires acute and chronic toxicity monitoring for demonstration of compliance with the narrative toxicity objective.

In addition to WET monitoring, this provision requires the Permittee to maintain an up-to-date TRE Work Plan for approval by the Executive Officer, to ensure the Permittee has a plan to immediately move forward with the initial tiers of a TRE, in the event effluent toxicity is encountered in the future. The TRE is initiated by evidence of a pattern of toxicity demonstrated through the additional effluent monitoring obtained as a result of an accelerated monitoring program. The TRE may end if the Permittee can document that the failed toxicity test was the result of a temporary condition or plant upset (e.g., incomplete dechlorination, toxic chemical slug, etc.). In the absence of demonstrating a temporary condition or plant upset, the TRE may also end by demonstrating that less than 20% of the WET tests demonstrate toxicity.

3. Best Management Practices and Pollution Prevention

Pollutant Minimization Plan. Provision VI.C.3.a is included in this Order as required by section 2.4.5 of the SIP. The Regional Water Board includes standard provisions in all NPDES permits requiring development of a Pollutant Minimization Program when there is evidence that a toxic pollutant is present in the effluent at a concentration greater than an applicable effluent limitation.

4. Construction, Operation, and Maintenance Specifications

40 C.F.R. section 122.41(e) requires proper operation and maintenance of permitted wastewater systems and related facilities to achieve compliance with permit conditions. An up-to-date operation and maintenance manual, as required by Provision VI.C.4.b of the Order, is an integral part of a well-operated and maintained facility.

5. Special Provisions for Municipal Facilities (POTWs Only) - Not Applicable

6. Other Special Provisions

Storm Water (Special Provision VI.C.6.a). This provision acknowledges the Permittee coverage under the State Water Board's Water Quality Order No. 97-03-DWQ, NPDES General Permit Number CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.

7. Compliance Schedules – Not Applicable

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 C.F.R. requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E, establishes monitoring and reporting requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

A. Influent Monitoring – Not Applicable

B. Effluent Monitoring

Effluent monitoring requirements are necessary to determine compliance with prohibitions and/or effluent limitations established by the Order. Effluent monitoring requirements from the previous permit are retained for flow at monitoring locations EFF-002 and LND-001. Daily disposal area observations and documentation of risers have also been retained from the previous permit.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) limitations and monitoring requirements are retained from the previous Order and are included in the new Order to protect the receiving water quality from the aggregate effect of a mixture of pollutants in the effluent. Acute toxicity testing measures mortality in 100 percent effluent over a short test period and chronic toxicity testing is conducted over a longer time period and may measure mortality, reproduction, and/or growth.

D. Land Discharge Monitoring Requirements

Land discharge monitoring requirements are retained from Order R1-2008-0020.

E. Receiving Water Monitoring

1. Surface Water

Receiving water monitoring is required to demonstrate compliance with the Receiving Water Limitations. Surface water monitoring requirements are retained from Order R1-2008-0020.

2. Groundwater

Groundwater monitoring is required to demonstrate compliance with the Groundwater Limitations. Groundwater monitoring requirements are retained from Order R1-2008-0020.

F. Other Monitoring Requirements

Quarterly monitoring requirements for depth to water measurements at monitoring locations INT-North, INT-South, GWR-North, and GWR-South have been established to assess proper function of the onsite septic treatment and disposal system.

VIII. PUBLIC PARTICIPATION

The Regional Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the Humboldt Creamery. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board notified the Permittee and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the following posting on the Regional Water Board's Internet site at: http://www.waterboards.ca.gov/northcoast/public_notices/public_hearings/npdes_permits_and_wdrs.shtml and through publication in the Eureka Times-Standard on June 12, 2014. The public had access to the agenda and any changes in dates and locations through the Regional Water Board's website.

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Regional Water Board at 5550 Skylane Boulevard, Suite A, Santa Rosa, California, 95403.

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 5:00 p.m. on June 12, 2014. Additional written documentation received August 21, 2014, to further support timely written comments also was considered.

C. Public Hearing

The Regional Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date:	November 20, 2014
Time:	8:30 A.M.
Location:	Regional Water Board Hearing Room 5550 Skylane Blvd., Suite A Santa Rosa, CA 95403

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

D. Reconsideration of Waste Discharge Requirements

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be received by the State Water Board at the following address within 30 calendar days of the Regional Water Board's action:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

For instructions on how to file a petition for review, see http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (707) 576-2220.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this Facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Lisa Bernard at (707) 576-2677 or lisa.bernard@waterboards.ca.gov.

Humboldt Creamery BOD input Calculations

Average mass of milk per day to drying plant

2011	680,000
2012	655,000
2013	585,000

BOD Input 40 CFR Part 405

The term "BOD5 input" shall mean the biochemical oxygen demand of the materials entered into process. It can be calculated by multiplying the fats, proteins and carbohydrates by factors of 0.890, 1.031 and 0.691 respectively. Organic acids (e.g., lactic acids) should be included as carbohydrates. Composition of input materials may be based on either direct analysis or generally accepted published values.

Milk Composition - The Milk Quality Improvement Program
Department of Food Science
College of Agriculture and Life Sciences
Cornell University

Percentages in milk based on Cornell University data

Fats	3.40%
Proteins	3.30%
Carbohydrates	4.90%

BOD input

2011			2012			2013	
	Fats	20576.8		Fats	19820.3		Fats
	Proteins	23135.6		Proteins	22285.1		Proteins
	Carbohydrates	23024.1		Carbohydrates	22177.6		Carbohydrates
	Total	66,737		Total	64,283		Total

Long term average BOD input

Average over the past 3 years **62,811**

40 CFR 405.102

§405.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Except as provided in §§125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) For milk drying plants with an input equivalent to more than 145,000 lb/day of milk equivalent (more than 15,070 lb/day of BOD5 input).

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg of BOD5 input)	
BOD5	1.625	0.65
TSS	2.438	0.975
pH	-1	-1
	English units (pounds per 100 lb of BOD5 input)	
BOD5	0.163	0.065
TSS	0.244	0.098
pH	1	1

[1]Within the range 6.0 to 9.0.

Effluent Limits	Daily Maximum (lbs/day)	Monthly Average (lbs/day)
BOD	102	41
TSS	153	62