

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2008-XXXX

INDIVIDUAL WASTE DISCHARGE REQUIREMENTS  
FOR  
GREENWOOD DAIRY  
GLENN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board) finds that:

**Findings**

**Facility Owner & Location**

1. The Greenwood Dairy (hereafter "facility") is owned by Pieter Verboom and operated by Daniel Vander Dussen (collectively referred to here as "Discharger") and is located 4 miles south of Orland in Glenn County. The dairy is located in portions of Sections 10, 15, and 16, Township 21 North, Range 3 West, Mount Diablo Base and Meridian. Based upon U.S. Geological Survey (USGS) Orland 7.5-minute Quadrangle, the site coordinates are: Latitude: 39.674° N, Longitude: 122.190° W. County Road 27 borders the property to the north. Southern Pacific Railroad line and private parcels border the property to the west, and the Fulton Reclamation and Recycling Facility borders the property to the south. Irrigated cropland borders the property to the east. The dairy is located at 6569 County Road 27. General site location information is included as Attachment A and the site layout is included as Attachment B1.
2. The facility has been in operation since May 2001.

**Facility Description**

3. The Discharger currently milks 1800 milking cows, and has 400 dry cows, 800 bred heifers, and 350 calves. Other support stock (e.g. additional heifers and calves) is kept offsite. The facility currently produces approximately 432,000 gallons of milk per day. The Discharger proposes to increase the Phase 2 herd size to milk 2,900 cows, and have 450 dry cows, and 300 bred heifers, for a total herd size of 3,650 animals. The ultimate ("Phase 3") herd size will be 3,500 milk cows, 550 dry cows, and 50 bred heifers for a total of 4,100 animals. The maximum herd size currently at the facility is 3,350 animals based on the Preliminary Dairy Facility Assessment Report.

4. The Discharger operates on 890 total acres. Land under agricultural production at the facility consists of 680 acres located on Assessor's Parcel Numbers 024-040-018, 024-040-019, 024-090-004, 024-090-035, 024-090-044, 024-090-0071, and 024-100-017. In a typical year 340 acres are dedicated to alfalfa, and 340 acres are double cropped with corn and wheat. The Discharger applies dairy process wastewater as a natural fertilizer. The average irrigation requirements are approximately 2.5 acre-feet of water per acre per year. This equates to approximately 1,700 acre-feet of fresh water per year. In addition to fresh water irrigation, wastewater is applied to the fields via Ponds 2, 3, 4, and 5.
5. The dairy facility is located on approximately 50 acres that are used for the dairy production area, including corrals, free stall barns, milking parlor, feed storage, storage lagoons, and storm water detention basins (See Attachment B1), offices, two houses, and a small shop.
6. The facility is not located within the 100-year floodplain. The site is located in an area of minimal flooding, Zone C. Flood potentials are derived from the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA).

### **Waste Production**

7. Waste water is generated from several practices: washing down the milking parlor; flushing free stall barns of manure; and rainwater coming into contact with manure (any rainwater that falls within the production area, that isn't captured by roof drains, must be routed to the waste water ponds). Solid manure is scraped from the corrals and collected from the mechanical separator. With the proposed expansion, dried manure not used for bedding will be sold offsite, as the nutrient requirements of the onsite crops will be met with process water application. Approximately 20 percent of manure will be used and recycled onsite as bedding (2,018 tons per year). The remaining 8,070 tons will be exported offsite.
8. An estimated 432,000 gallons per day (gpd) of fresh water from the two on-site water supply wells is used for the production area of the dairy. With the expansion, an estimated 589,210 gpd of fresh water from the on-site water supply wells will be used.
9. Once the herd expansion is complete, operation of the dairy is estimated to generate 18 pounds of manure at 46% moisture per animal unit per day, where an animal unit equals 1000 pounds of animal weight. At full capacity at the end of Phase 3, the facility will generate 10,088 dry tons of manure per year. This equates to a monthly generation of 907 tons. Of the 907 tons, approximately 20 percent (181 tons per month) is retained for use as bedding. The remainder is stockpiled onsite until it is removed. Removal is scheduled bi-annually in May and October of each year. Manure exported from the dairy has historically been divided among several farming

operations in the area. In the future, the majority of the manure will be sold to Compost Inc., a nearby composting facility that applies the composted material to their own orchards. Compost Inc. has the capacity to import approximately 32,000 tons of manure a year, which is four times the amount of manure estimated for export from the dairy. In the event that a new market need be found for the dairy manure, the options are other composting facilities, other agricultural facilities, purchasing additional cropland, and offering the manure for free.

10. The annual rainwater runoff and a 25-year, 24-hour storm event after evaporation will accumulate approximately 1,781,557 cubic feet, which will provide only a small percentage of the annual water needs for proposed crops.
11. The total amount of wastewater requiring storage over the 120-day maximum storage period, after removing losses due to evaporation and adding one 25-year 24-hour storm, is 4,294,389 cubic feet.

### **Wastewater Ponds**

12. Wastewater generated at the facility is conveyed to a concrete-lined process pit, which is then pumped into a mechanical separator that settles out solid material from the flushing of the freestall barns and cleaning of the milking parlor. Wastewater then gravity flows into several storage ponds. There are six ponds. Pond 1 is for flush water storage. Pond 2 is for irrigation water storage. Ponds 3, 4, and 5 are for additional wastewater storage as needed and to provide improved sediment removal. Pond 6 will serve as an emergency pond for use only in times of heavy precipitation.
13. Pond 1, constructed in 2001, is 350 by 600 feet, has a surface area of approximately 4.8 acres and was excavated to a depth of 13.5 feet. Pond 2, also constructed in 2001, is 225 by 290 feet, and has a surface area of approximately 1.4 acres. It was excavated to a depth of approximately 14.5 feet. These two ponds were clay lined. The liner included 24 inches of clay material laid on top of a geosynthetic filter fabric base. The clay material was compacted to 92 percent relative compaction and having a minimum permeability of  $1 \times 10^{-6}$  centimeters per second. The clay material was covered with 2 feet of protective soil.
14. Four newer ponds were constructed in spring 2006. Ponds 3, 4, 5, and 6 are lined with 12 inches of clay material compacted to 95 percent relative compaction and having a permeability of  $1 \times 10^{-6}$  centimeters per second. Pond 3 is 164 feet by 809 feet. Pond 4 is 164 feet by 796 feet and Pond 5 is 158 feet by 782 feet. This equates to an approximate total of 6 acres of surface area. These three ponds are 14 feet deep with 1 to 3 slopes. Pond 6 is 6 feet deep by 917 feet by 568.5 feet.
15. The storage lagoons are constructed to handle runoff from the 25-year, 24-hour storm as long as the storage lagoons are properly managed throughout the year.

Clean storm water, not contacting manure or animals (parking lots, feed areas and office), is diverted away from the site. Roof runoff is diverted to the depression east of the site.

### **Groundwater Monitoring**

16. The Discharger has installed a monitoring well system to characterize groundwater flow direction and gradient beneath the site, and characterize groundwater quality downgradient of the corrals, and downgradient of the storage lagoons. In addition, the Discharger monitors existing domestic and agricultural production wells for changes in water quality. There are 10 monitoring wells on site. Monitoring Wells MW-2, MW-3, MW-6, MW-8 and MW-9 are associated with the wastewater ponds; Monitoring Wells MW-1, MW-4, and MW-5 border the irrigated croplands; and Monitoring Wells MW-10 and MW-11 are downgradient from the corral area. The monitoring wells are sampled biannually.

### **Land Application Area**

17. Wastewater and manure generated at the facility are currently applied to land owned and/or operated by the dairy at agronomic rates as described in the Nutrient Management Plan attached to the Conditional Use Permit Application and Submittal Package, dated April 2007. As soon as the expanded operations begin, solid manure will no longer be applied to cropland. An updated Nutrient Management Plan, dated 11 April 2008, indicates that only wastewater will be applied to cropland. Under the updated Nutrient Management Plan, the total nitrogen applied to the cropland will not exceed 1.4 times crop uptake.

18. All land application areas have tailwater recovery via field drains and sumps.

19. The discharger conducts inflow metering to estimate application rates from the storage lagoons to the cropland. The wastewater piped from Pond 1 to the eastern and southern most fields is routed through a flow meter. Another flow meter is to be installed for water piped from Ponds 3, 4, 5, and 6.

### **California Environmental Quality Act**

20. The Glenn County Department of Planning and Public Works is the lead agency for purposes of the California Environmental Quality Act (CEQA). The Glenn County Department of Planning and Public Works adopted a Mitigated Negative Declaration on 19 December 2007. The Board reviewed and considered the environmental effects of the project identified in the Mitigated Negative Declaration. The Mitigated Negative Declaration identified mitigation measures to lessen or avoid significant effects on the environment. This

Order incorporates mitigation measures identified in the Mitigated Negative Declaration that are within the Board's jurisdiction, in Section 2.1.8 Hydrology and Water Quality, specifically Mitigation Measures # 5 and #6, which require the owner to obtain a General Construction Stormwater Permit and Waste Discharge Requirements. This Order includes requirements to assure compliance with the Porter-Cologne Water Quality Control Act and the applicable Basin Plan. This Order prohibits discharges of waste to surface water and prevents pollution of groundwater.

### **General Findings**

21. This Order regulates the storage, management, and disposal of wastes on the dairy production area and land application area to protect the beneficial uses of underlying ground water and the surface waters that receive discharges from the facility.
22. For the purposes of this Order, "waste" includes, but is not limited to, manure, leachate, wastewater and any water, precipitation or rainfall runoff that contacts raw materials, products, or byproducts such as manure, compost piles, feed, silage, milk, or bedding. Wastewater is defined as water directly or indirectly used in operation of a milk cow dairy for any or all of the following; washing, cleaning, or flushing pens, barns, manure pits, or other dairy facilities; washing or spray cooling of animals; or dust control and includes any water or precipitation and precipitation runoff which comes into contact with any raw materials, products, or byproducts including, feed, milk, or bedding. Storm water is defined as storm water runoff, surface runoff, and drainage.
23. State Water Resources Control Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California") (Resolution 68-16) requires that the Board maintain the high quality of waters of the State unless it has been demonstrated that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses of such water, and will not result in water quality less than that prescribed in the policies. Any activity which produces or may produce waste must be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that a pollution or nuisance will not occur and that the highest water quality consistent with maximum benefit to the people of the State will be maintained. This Order is consistent with Resolution 68-16. It does not authorize pollution of waters of the State. It prohibits the discharge of waste to surface waters from the production area; it prohibits the discharge of waste to surface waters from the land application area; and it prohibits pollution of surface and groundwater. This Order requires the Discharger to meet requirements that constitute best practicable treatment or control. Groundwater monitoring will be conducted at the facility. This Order requires the Discharger to meet waste discharge and land

application specifications, monitoring and reporting requirements, and other provisions.

24. This Order does not authorize violation of any federal, state, or local law or regulation. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the Discharger from his liabilities under federal, state, or local law.
25. As stated in California Water Code Section 13263(g), the discharge of waste into waters of the State is a privilege, not a right, and this Order does not create a vested right to continue the discharge of waste. Failure to prevent conditions that create or threaten to create pollution or nuisance will be sufficient reason to modify, revoke, or enforce this Order, as well as prohibit further discharge.
26. The Tehama-Colusa Canal crosses the northwest portion of the site approximately a half mile up gradient from the location of the dairy facility. If not controlled or retained, surface water drainage from the area flows to the Sacramento River. Beneficial uses of the Sacramento River are: municipal, industrial supply, agricultural supply, recreation, fresh water habitat, fish migration, fish spawning, and wildlife habitat.
27. Beneficial uses of groundwater in the surrounding area are domestic, municipal, industrial, and agricultural supply.
28. The Board adopted a Water Quality Control Plan for the Sacramento and San Joaquin River Basins (4<sup>th</sup> Ed. Revised October 2007) (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. These requirements are consistent with the Plan.
29. These requirements are consistent with Title 27, Division 2, Chapter 7, Subchapter 2, California Code of Regulations, regulating confined animal facilities.
30. On **28 May 2008**, the Board notified the discharger and interested parties of its intent to issue Waste Discharge Requirements for this discharge and has provided them with a copy of the proposed Order and an opportunity to submit written comments.
31. After considering all comments pertaining to this Order during a public hearing on **31 July/1 August 2008** this Order was found consistent with the above findings.

IT IS HEREBY ORDERED that Daniel Vander Dussen, operator, and Peter Verboom, owner, dba Greenwood Dairy, its owners, tenants, agents, successors, and assigns, are no longer covered under Order No. R5-2007-0035 (Waste Discharge Requirements General Order for Existing Milk Cow Dairies) and instead, pursuant to California Water Code Sections 13260, 13263, and 13267 and in order to meet the provisions contained in Division 7 of the California Water Code and regulations and policies adopted there under, shall comply with the following;

**A. Prohibitions**

1. The discharge of waste other than as defined in General Finding 21 above or from septic tanks, or of hazardous waste, as defined in the California Water Code Section 13173 and Title 23 CCR Section 2521 (a), respectively, is prohibited. The disposal of waste not generated by on-site animal production activities as defined in Finding 7, above, is prohibited unless a Report of Waste Discharge for the disposal has been submitted to the Executive Officer and the Central Valley Water Board has issued or waived waste discharge requirements (WDRs).
2. The direct or indirect discharge of waste and/or storm water from the production area to surface waters is prohibited.
3. The discharge of wastewater to surface waters from a land application area is prohibited. Irrigation supply water that comes into contact or is blended with waste or wastewater shall be considered wastewater under this Prohibition.
4. The discharge of storm water to surface water from a land application area where manure or wastewater has been applied is prohibited unless the land application area has been managed consistent with a certified Nutrient Management Plan.
5. The application of wastewater to a land application area before, during, or after a storm event that would result in runoff of the applied water is prohibited.
6. The discharge of waste from the facility to surface waters which causes or contributes to an exceedance of any applicable water quality objective in the Basin Plan or any applicable state or federal water quality criteria, or a violation of any applicable state or federal policies or regulations is prohibited.
7. The collection, treatment, storage, discharge or disposal of waste from the facility that results in pollution or nuisance is prohibited.
8. The disposal of dead animals in any liquid manure or wastewater system is prohibited. The disposal of dead animals at the facility is prohibited except when federal, state or local officials declare a State of Emergency and where

all other options for disposal have been pursued and failed and the onsite disposal complies with all state and local policies for disposal of dead animals.

9. All animals shall be prohibited from entering any surface water within the animal confinement area (Title 27 CCR Section 22561).
10. The application of waste to lands not owned, leased, or controlled by the Discharger without written permission from the landowner or in a manner not approved by the Executive Officer, is prohibited.
11. The land application of manure or wastewater to land application areas for other than nutrient recycling is prohibited.
12. The use of manure to construct containment structures or to repair, replace, improve, or raise existing containment structures is prohibited.
13. The direct discharge of wastewater into groundwater via backflow through water supply or irrigation supply wells is prohibited.

## **B. Specifications**

### **Waste Discharge Specifications**

1. The collection, treatment, storage, discharge, or disposal of wastes at the facility shall not result in: (1) discharge of waste constituents in a manner which could cause degradation of surface water or groundwater, (2) contamination or pollution of surface water or groundwater, (3) a condition of nuisance, (4) exceedance of water quality objectives, or (5) unreasonably affect beneficial uses (as defined by the California Water Code Section 13050).
2. The storage lagoons and the storm water detention basins at the facility shall be operated and maintained to be protective of water quality. If at any time the design, construction, operation, and/or maintenance of the lagoons and/or basins is not protective of water quality, the Discharger shall notify the Board and propose modifications in accordance with Required Reports and Notices E.1.b.
3. Prior to the enlargement of any of the existing storage lagoons; construction of any new lagoon or settling basin; or in the event that the design, construction, operation and/or maintenance of the lagoons is not protective of water quality the Discharger shall submit a design for review and approval by the Executive Officer. The design shall conform to either of the options described below:



- a. Tier 1: A pond designed to consist of a double liner constructed with 60-mil high-density polyethylene or material of equivalent durability with a leachate collection and removal system (constructed in accordance with Section 20340 of Title 27) between the two liners will be considered to be consistent with Resolution 68-16. Review for ponds designed to this standard will be conducted in less than 30 days of receipt of a complete design plan package submitted to the Board.
  - b. Tier 2: A pond designed in accordance with California Natural Resource Conservation Service (NRCS) Conservation Practice Standard 313 or equivalent and which the Discharger must demonstrate through submittal of technical reports that the alternative design is protective of groundwater quality as required in Specification B.4 below.
4. Prior to the enlargement of any of the existing storage lagoons; construction of any new lagoon or settling basin; or in the event that the design, construction, operation and/or maintenance of the lagoons is not protective of water quality the Discharger shall submit a design report for review and approval by the Executive Officer prepared by, or under the direct supervisor of, and certified by, a Civil Engineer who is registered pursuant to California law or other person as may be permitted under the provisions of the California Business and Professions Code to assume responsible charge of such work. The design report shall include the following:
  - a. Design calculations demonstrating that adequate containment will be achieved.
  - b. Details on the liner and leachate collection and removal system (if appropriate) materials,
  - c. A schedule for construction and certification of completion,
  - d. A construction quality assurance plan describing testing and observations needed to document construction of the pond in accordance with the design and Sections 20323 and 20324 of Title 27,
  - e. An operations and maintenance plan for the pond, and
  - f. Unless waived by the Executive Officer, a technical report and groundwater model that demonstrates the proposed pond is in compliance with the groundwater limitations in this Order,

including calculations that demonstrate the amount and quality of seepage from the proposed pond and its effect on water quality.

5. Prior to the placement of waste in any enlarged existing settling, storage, or retention pond or any such newly constructed pond, the Discharger shall submit a post construction report prepared by, or under the direct supervision of, and certified by, a Civil Engineer who is registered pursuant to California law or other person as may be permitted under the provisions of the California Business and Professions Code to assume responsible charge of such work. Waste shall not be placed into the pond until the Executive Officer notifies the Discharger in writing that the post construction report is acceptable. The post construction report shall include: (1) verification that the pond meets the requirements of this Order including documentation of the results of the construction quality assurance testing and observations, (2) certification that the pond was constructed as designed and (3) as-built diagrams.
6. The facility shall have lagoons and conveyance structures that are designed, constructed, operated, and maintained to retain all facility wastewater generated during the storage period (maximum period of time anticipated between land application of wastewater), together with all precipitation on and drainage through manured areas, up to and including during a 25-year, 24-hour storm.
7. The production area, including storage lagoons, the process pit, and manured areas at the facility, shall be protected from inundation or washout by overflow from any stream channel during 100-year peak stream flows (Title 27 Section 22562(c)).
8. The level of waste in the storage lagoons and of water in the detention basins at the facility shall be kept a minimum of two (2) feet from the top of each pond. Less freeboard may be approved by the Executive Officer when a Civil Engineer who is registered pursuant to California law, or other person as may be permitted under the provisions of the California Business and Professions Code to assume responsible charge of such work, demonstrates that the structural integrity of the ponds will be maintained with the proposed freeboard.
9. The storage lagoons and the detention basins shall be managed and maintained to prevent breeding of mosquitoes and other vectors. In particular,
  - a. Small coves and irregularities shall not be allowed around the perimeter of the water surface;
  - b. Weeds shall be minimized through control of water depth, harvesting, or other appropriate method;

- c. Dead algae, vegetation, and debris shall not accumulate on the water surface; and
- d. Management shall be in accordance with the requirements of the Mosquito Abatement District.

10. The facility shall implement the following Best Management Practices to address potential fly problems:

- a. Daily inspections of water supply and circulation systems to ensure that any leaks are promptly repaired. These inspections shall include all watering troughs to ensure that mechanisms for controlling water level are operating effectively and are protected from damage;
- b. Regular scraping of corrals to minimize the potential for development of fly populations on manure;
- c. Weekly inspection of silage storage areas to ensure proper covering, drainage, and removal of any spoiled silage;
- d. Weekly inspection of fence lines of corrals and other "edge" areas and removal of any accumulated manure.

11. All precipitation and surface drainage from outside of the facility (i.e., "run on") shall be diverted away from any manured areas unless such drainage is fully contained (Title 27 Section 22562(b)).

12. Storage lagoons designated to contain the 25-year, 24-hour storm event runoff must have a depth marker that clearly indicates the minimum capacity necessary to contain the runoff and direct precipitation from a 25-year, 24-hour storm event.

13. All roofs, buildings, and non-manured areas located in the production area at the facility shall be constructed or otherwise designed so that clean rainwater, including roof drainage, is diverted away from manured areas, including corrals and waste containment facilities, unless such drainage is fully contained in the wastewater retention system (Title 27 Section 22562(b)).

14. The milk parlor, animal confinement area (including corrals), and manure and feed storage areas, and any unpaved areas in the production area shall be designed and maintained to convey all water that has contacted animal wastes or feed to the wastewater retention system and to minimize standing water and the infiltration of water into the underlying soils. The Discharger

15. Unlined ditches, swales, and/or earthen-berm channels may not be used for storage of wastewater, manure, or tailwater and may only be used for conveyance of wastewater collected in the production area to the storage lagoons, conveyance of wastewater from the storage lagoon to the land application area, irrigation return water management, or temporary control of accidental spills.

### **Land Application Specifications**

16. Land application of all waste from the facility shall be initially conducted in accordance with the certified Nutrient Management Plan. The Nutrient Management Plan is consistent with Resolution No. 68-16. Land application of wastes at the facility shall not pollute underlying groundwater or cause the underlying groundwater to contain any waste constituent, degradation product, or any constituent of soil mobilized by the interactions between applied waste and soil or soil biota, to exceed the groundwater prohibitions and specifications set forth in this Order. The Nutrient Management Plan shall be modified within 90 days if monitoring shows that discharge from the land application is polluting ground water or fails to comply with surface water quality objectives or criteria. The modifications must be designed to bring the facility into compliance with this Order.

17. The Discharger shall have a written agreement with each third party that receives wastewater from the Discharger for its own use. Each written agreement shall be included in the Discharger's Nutrient Management Plan and Annual Report. The written agreement(s) shall be effective until the third party is covered under waste discharge requirements or a waiver of waste discharge requirements that are adopted by the Central Valley Water Board and that are specific to the application of the Discharger's wastewater to land under the third party's control. The written agreement shall:

- a. Clearly identify:
  - i. The Discharger and dairy facility from which the wastewater originates,
  - ii. The third party that will control the application of the wastewater to land application areas,
  - iii. The Assessor's Parcel Number(s) and the acreage(s) of the land application areas where the wastewater will be applied, and
  - iv. The types of crops to be fertilized with the wastewater.

- b. Include an agreement by the third party to:
    - i. Use the wastewater at agronomic rates appropriate for the crops to be grown, and
    - ii. Prevent the runoff to surface waters of wastewater, storm water or irrigation supply water that is blended with wastewater.
  - c. Include a certification statement, as specified in General Reporting Requirements C.7 of the Standard Provision and Reporting Requirements (which is attached to and made part of this Order), which is signed by both the Discharger and third party.
18. The application of liquid waste to land application areas shall be at rates that preclude development of vectors or other nuisance conditions and meet the conditions of the certified Nutrient Management Plan. Application shall be timed to minimize nitrogen movement below the root zone.
19. Land application areas that receive dry manure shall be managed through implementation of erosion control measures to minimize erosion that are consistent with the certified Nutrient Management Plan.
20. All wastewater applied to land application areas must infiltrate completely within 72 hours after application.
21. Wastewater shall not be applied to land application areas during periods when the soil is at or above field moisture capacity unless consistent with a certified Nutrient Management Plan.
22. Manure and wastewater shall not be applied closer than 100 feet to any down gradient surface waters, open tile line intake structures, sinkholes, or other conduits to surface waters, unless a 35-foot wide vegetated buffer or physical barrier is substituted for the 100-foot setback or alternative conservation practices or field-specific conditions will provide pollutant reductions equivalent or better than the reductions achieved by the 100-foot setback. Manure and wastewater shall not be applied, and corrals and wastewater ponds shall not be located, closer than 100 feet to any agricultural or domestic well.
23. Animal waste (manure solids) shall not be applied for disposal to any land that is not being used to grow crops. Crops must be planted within one month of waste application. Animal waste (manure solids) shall not be applied at this dairy unless the certified Nutrient Management Plan is revised to reflect their use.

24. Waste and land application areas shall be managed to prevent contamination of crops grown for human consumption. The term “crops grown for human consumption” refers only to crops that will not undergo subsequent processing which adequately removes potential microbial danger to consumers.

### **C. Interim Groundwater Limitations**

1. These interim groundwater limitations are to be applied at the shallowest groundwater beneath the facility. These limitations are based on either the maximum contaminant level (MCL) for the constituent as published in Title 22 CCR or other applicable Basin Plan objectives but they may or may not reflect the appropriate final groundwater limitations for this site. Final limitations will be established following completion of work required by this Order. Release of waste constituents from any treatment, storage, or disposal component associated with the facility shall not cause or contribute to groundwater.
  - a. Containing constituent concentrations in excess of the concentrations specified below or natural background quality (as determined pursuant to the study described in Finding 35 and Provision E.12, and updated as appropriate as a result of ongoing monitoring), whichever is greater:
    - i. Nitrate as nitrogen of 10 mg/L (title 22 CCR MCL);
    - ii. Chloride of 250 mg/L (Title 22 CCR Secondary MCL);
    - iii. Total Dissolved Solids of 500 mg/L (Title 22 CCR Secondary MCL);
    - iv. Electrical Conductivity of 900  $\mu$ mhos/cm (Title 22 CCR Secondary MCL);
    - v. Most probable number of total coliform (either E. coli or fecal coliform bacteria) not to exceed 2.2/100 milliliters (title 22 CCR MCL);
    - vi. For constituents identified in Title 22 CCR, the MCLs quantified therein; and
  - b. Containing taste or odor-producing constituents, toxic substances, or any other constituents, in concentrations that cause nuisance or adversely affect beneficial uses.

2. Final groundwater limitations will be developed based upon the results of the BPTC evaluations and monitoring conducted as directed by this Order and reported consistent with the Provisions below.

#### **D. Provisions**

1. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Individual Waste Discharge Requirements for Dairies in the Sacramento and San Joaquin River Basins* (Standard Provisions) dated **August 2007**, which is attached to and made part of this Order.
2. The Discharger shall comply with all applicable provisions of the California Water Code, Title 27 CCR, and the applicable Water Quality Control Plans.
3. The Discharger shall comply with the attached Monitoring and Reporting Program No. R5-2008-XXXX which is part of this Order, and future revisions thereto as specified by the Board or the Executive Officer.
4. The number of animals shall not be increased above the maximum herd size stated in Finding 3 until the Discharger submits a new Report of Waste Discharge (ROWD) and the Regional Board has issued new Waste Discharge Requirements. The ROWD shall clearly demonstrate that the increase in animals will not constitute a threat to water quality.
5. The Discharger shall submit a complete Report of Waste Discharge in accordance with the California Water Code Section 13260 at least 140 days prior to any material change or proposed change in the character, location, or volume of the discharge, including any expansion of the facility or development of any treatment technology, or construction of an anaerobic digester.
6. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Board.
7. The Board will review this Order periodically and may revise requirements when necessary.
8. If site conditions threaten to violate Specification B.1 or Prohibition A.2, the Discharger shall take immediate action to preclude the violation, documenting the condition and all corrective actions. Such actions shall be summarized in the annual monitoring report. Alterations of the Waste Management Plan (see Required Reports and Notices G.1.b) for the production area to avoid a

recurrence shall be submitted as a modification to the Waste Management Plan.

9. If a discharge of waste creates, or threatens to create, significant objectionable odors or nuisance odor and vector conditions, enforcement and/or revocation of coverage under this Order may result.
10. The Discharger shall comply with all requirements of this Order and all terms, conditions, and limitations specified by the Executive Officer.
11. Any instance of noncompliance with this Order constitutes a violation of the California Water Code and its regulations. Such noncompliance is grounds for enforcement action, and/or termination of the authorization to discharge.
12. The Discharger must maintain coverage under this Order or a subsequent revision to this Order until all manure, wastewater, and animal waste impacted soil, including soil within the storage lagoons, is disposed of or utilized in a manner which does not pose a threat to surface water or groundwater quality or create a condition of nuisance. At least 90 days before seeking to terminate coverage under this Order, the Discharger must submit to the Executive Officer a closure plan that ensures protection of surface water and groundwater. No more than 30 days after completion of site closure, the Discharger shall submit a closure report which documents that all closure activities were completed as proposed and approved in the closure plan. Coverage under this Order will not be terminated until cleanup is complete.
13. This Order shall become effective upon adoption by the Board.
14. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the time schedule. Violations may result in enforcement action, including Board or court orders requiring corrective action or imposing civil monetary liability.
15. Technical reports required by this Order must be certified by an appropriately licensed professional as required in this Order and its Attachments. If the Executive Officer provides comments on any technical report, the Discharger will be required to address those comments.



16. The Discharger shall maintain a copy of this Order at the site so as to be available at all times to site-operating personnel. The Discharger, landowner and his/her designee shall be familiar with the content of this Order.

#### **E. Permit Reopening, Revision, Revocation, and Re-Issuance**

1. If more stringent applicable water quality standards are adopted in the Basin Plan, the Board may revise and modify this Order in accordance with such standards.
2. This Order may be reopened to address any changes in state plans, policies, or regulations that would affect the water quality requirements for the discharges and as authorized by state law.

#### **F. Required Reports and Notices**

- I. Dischargers must prepare and submit the following pursuant to Water Code Section 13267 in accordance with this Order:
  - a. The Discharger shall submit Annual Reports, Groundwater Reports, and Storm Water Reports as described in the Monitoring and Reporting Program.
  - b. **Waste Management Plan:** The Discharger has submitted a Waste Management Plan that describes and evaluates the facility's design, construction, operation, and maintenance for flood protection and waste containment. If, in the course of operation the Discharger or the Board determines that the design, construction, operation, and/or maintenance of the dairy facility is not protective of water quality, the Discharger must notify the Board and propose modifications and a schedule for modifications that will bring the dairy facility into compliance. Certification that the modifications have been implemented shall be submitted to the Executive Officer within 30 days of completion of the modifications.
  - c. **Nutrient Management Plan:** The Discharger has submitted a Certified Nutrient Management Plan that addresses the application of wastewater to land for nutrient recycling (See Attachment C). The Plan must be maintained at the dairy, submitted to the Executive Officer upon request and must ultimately provide for protection of both surface water and groundwater. The Nutrient Management Plan shall be updated as necessary or if the Executive Officer requests that additional information be included. Groundwater monitoring will be used to determine if implementation of the Nutrient Management Plan is protective of groundwater quality.

- d. **Other Reports:** Prior to expanding beyond 3450 mature cows, Discharger will provide information regarding:
- i. Documentation on the repair of Agricultural Well 5 (AW5) and the installation of double check valves to AW1 and AW2. These valves must provide backflow prevention that can be tested. All backflow prevention valves must be tested annually.
  - ii. Documentation of the installation of the second flow meter on the west side of the new ponds.
  - iii. Documentation of the date that solid manure will no longer be applied on the fields. Certification will be verified by the Manure Manifests submitted with the annual reports.
  - iv. Documentation that the necessary modifications to the wastewater pipeline system is completed.
- e. By **1 October 2008**, the discharger shall submit a written work plan for a BPTC technical evaluation that sets forth a schedule for a systematic and comprehensive technical evaluation of the five wastewater lagoons (Ponds 1-5) to determine if the existing construction is protective of groundwater. The work plan shall contain a time schedule for completing the comprehensive technical evaluation. The schedule to complete the BOTC Technical Evaluation shall be as short as practicable, and shall not exceed two years. Upon written determination of adequacy of the technical report by the Executive Officer, the Provision shall be satisfied.
- f. **Salinity Report:** By **1 July 2009**, The Discharger shall submit a report that identifies sources of salt in waste generated at the dairy, evaluates measures that can be taken to minimize salt in the dairy waste, and includes a commitment to implement measures identified to minimize salt in the dairy waste. If a third party (for example, the California Dairy Quality Assurance Program) produces an industry-wide report that is acceptable to the Executive Officer, the Discharger may refer to that report rather than generating his own report, but must certify that the appropriate measures will be implemented to reduce salt in his dairy waste.

### **G. Reporting Provisions**

1. All annual reports or information submitted to the Board shall be signed and certified in accordance with C.7 and C.8 of the Standard Provisions.
2. The Discharger shall submit all reports as specified in the attached Monitoring and Reporting Program No. R5-2008-XXXX.

3. The Discharger shall furnish, within a reasonable time, any information the Board may request, to determine whether cause exists for modifying, revoking, and reissuing, or terminating this Order. The Discharger shall, upon request, also furnish to the Board copies of records required to be kept by this Order.
4. All reports prepared and submitted to the Executive Officer in accordance with the terms of this Order shall be available for public inspection at the offices of the Board.

#### **H. Record Keeping**

The Discharger shall create, maintain for five years, and make available to the Board upon request by the Executive Officer any reports or records required by this Order including those required under Monitoring and Reporting Program No. R5-2008-XXXX.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on \_\_\_\_\_.

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PAMELA C. CREEDON, Executive Officer