

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2007-0102

INDIVIDUAL WASTE DISCHARGE REQUIREMENTS  
FOR  
HENRY JONGSMA, DBA HENRY JONGSMA AND SON DAIRY  
GLENN COUNTY

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

**Findings**

**Facility Owner & Location**

1. The Henry Jongsma and Son Dairy (hereafter "facility") is owned and operated by Henry Jongsma (hereafter "Discharger") and is located in the southwestern portion of Section 9, Section 16, and the southwestern portion of Section 15. Township 21W, Range 2S, Mount Diablo Base & Meridian, at 3724 County Road S in Orland, Glenn County (see Attachment A, which is hereby made part of this Order).
2. The facility has been in operation since 13 June 2007.

**Facility Description**

3. The Discharger milks 1,700 cows, and has 290 dry cows, 840 one-to-two-year heifers, and 560 three-to-twelve month calves for a total herd size of 3,390 Holstein animals. No baby calves are housed at the facility. The maximum herd size at the facility is 3,390 animals based on the final Environmental Impact Report. The maximum number of animals in each age category will not exceed the numbers given in this Finding. The facility produces approximately 11,900 gallons of milk per day.
4. The Discharger owns 979 total acres where the facility is located. Land under agricultural production at the facility consists of 711 acres located on Assessor's Parcel Numbers 012-160-001, 023-160-002, 023-150-011, and 012-150-012. Six hundred acres of the cropland are doubled cropped in corn and wheat, 40 acres is cropped in alfalfa, and 148 acres is in pasture. The Discharger applies liquid waste to all the cropland at the facility except for the alfalfa. Manure solids are used for bedding or given to local farmers in the Glenn County area as fertilizer.

5. The remaining 191 acres are used for the dairy production area, including corrals, freestall barns, loafing barns, milking parlor, holding pens, manure storage and drying areas, settling ponds, and the storage lagoon (See Attachment B).
6. The facility is located outside the 100-year floodplain.

### **Waste Production**

7. Waste produced at the facility consists of wastewater from facility wash down operations and storm water containing manure, urine, milk products, spoiled feed material, bedding (litter), soil, and cleaning compounds. Solid wastes are also produced at the facility and primarily consist of manure with additional fractions of spoiled feed, bedding material and soil.
8. An estimated 93,500 gallons per day (gpd) of clean water from the on-site water supply wells is used to wash down the holding pen, wash pen, and milking parlor floors, rinse the cows, and wash down miscellaneous dairy equipment.

### **Wastewater Ponds**

9. Wastewater generated at the facility is conveyed to two lined settling ponds, which are side by side to settle out solids material from the flushing of the freestall barns. Wastewater then gravity flows into the main storage lagoon, before it is used for irrigation of the land application area. An estimated 24,520 gpd of effluent are recycled from the storage lagoon to flush the lanes. Wastewater from the flush lanes flows via gravity into the settling ponds at the facility.
10. The facility has two settling ponds, one main storage lagoon, and an emergency overflow lagoon for storm water. The two settling ponds and main storage lagoon are lined with a 36 mil scrim-reinforced polypropylene liner.
11. The main lagoon has been constructed to handle runoff from storm events above and beyond a 25-year, 24-hour storm as long as the storage lagoon is properly managed throughout the year.

### **Groundwater Monitoring**

12. The Discharger has installed a monitoring well system to characterize groundwater flow direction and gradient beneath the site, characterize natural background (unaffected by the Discharger or others) groundwater quality upgradient of the facility, and characterize groundwater quality downgradient of the corrals, downgradient of the storage lagoon, and downgradient of the land application area. In addition, the Discharger monitors existing domestic and agricultural production wells for changes in water quality. If additional groundwater monitoring wells are required in the future, they will be installed in accordance with Attachment D.

### **Land Application Area**

13. Wastewater generated at the facility is applied to land owned and/or operated by the dairy at agronomic rates as described in the certified Nutrient Management Plan (Attachment C). Any manure solids applied to land application areas will be applied at agronomic rates as described in the certified Nutrient Management Plan.
14. All land application areas have tailwater recovery systems.
15. All fields, ditches, and pipelines exposed to wastewater are flushed with clean water during the last irrigation or usage of the season to remove any waste residue.

### **California Environmental Quality Act**

16. The Glenn County Planning and Public Works Department is the lead agency for purposes of the California Environmental Quality Act (CEQA). A Draft Environmental Impact Report (EIR) for this project was submitted to the Glenn County Planning and Public Works Department on 15 August 2005. A Final EIR was submitted to the Glenn County Planning and Public Works Department on 1 January 2006. The Glenn County Planning and Public Works Department certified the Final EIR and approved the Conditional Use Permit #2004-01 on 15 February 2006. The Board is a responsible agency for purposes of CEQA. The Board reviewed and considered the environmental effects of the project identified in the EIR. The EIR identified mitigation measures to lessen or avoid significant effects on the environment. This Order incorporates mitigation measures identified in the EIR that are within the Board's jurisdiction, specifically Specifications B. 10 and B. 18. 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 degradation of groundwater.

### **General Findings**

17. 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.
18. 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.

19. 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 degradation 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 degradation of surface and groundwater. This Order requires the Discharger to meet requirements that constitute best practicable treatment or control. The facility is designed to include lined ponds and groundwater monitoring. This Order requires the Discharger to meet waste discharge and land application specifications, monitoring and reporting requirements, and other provisions.
20. 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.
21. 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.
22. If not controlled or retained, surface water drainage from the area flows to Walker Creek, and then the Sacramento River. Beneficial uses of the Sacramento River are: industrial supply, agricultural supply, recreation, fresh water habitat, fish migration, fish spawning, and wildlife habitat.
23. Beneficial uses of groundwater in the surrounding area are domestic, municipal, industrial, and agricultural supply.
24. The Board adopted a Water Quality Control Plan for the Sacramento and San Joaquin River Basins (4<sup>th</sup> Ed. Revised August 2006) (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.

25. These requirements are consistent with Title 27, Division 2, Chapter 7, Subchapter 2, California Code of Regulations, regulating confined animal facilities.
26. On **6 July 2007**, 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.
27. After considering all comments pertaining to this Order during a public hearing on **2 August 2007** this Order was found consistent with the above findings.

IT IS HEREBY ORDERED that Henry Jongsma, dba Henry Jongsma and Son Dairy, its owners, tenants, agents, successors, and assigns, 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 thereunder shall comply with the following;

A. Prohibitions

1. The discharge of waste other than as defined in General Finding 18 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 General 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 settling basins and lagoon at the facility shall be operated and maintained to preserve the integrity of the synthetic liners. If at any time the design, construction, operation, and/or maintenance of the basins and/or lagoon 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. 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.

4. Ponds, lagoons, 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)).
5. The level of waste in the settling ponds and storage lagoon 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 pond will be maintained with the proposed freeboard.
6. Settling ponds and the storage lagoon at the facility, and the temporary storm water storage pond (if used), 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.
7. 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)).
8. Ponds and 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.
9. 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)).
10. The milk parlor, animal confinement area (including corrals), and manure and feed storage areas 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 shall, at a minimum of once per year, backfill any slope loss with compacted, non-manured material to maintain pre-existing slopes.

11. 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 settling ponds or storage lagoon, 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**

12. Land application of all waste from the facility shall be 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 degrade 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 degrading 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.
13. 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.
14. The application of 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.
15. Land application areas that receive dry manure shall be managed through implementation of erosion control measures to minimize erosion and must be consistent with a certified Nutrient Management Plan.
16. All wastewater applied to land application areas must infiltrate completely within 72 hours after application.
17. 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.
18. 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. If existing agricultural or domestic wells are located less than 100 feet from where wastewater will be applied, the wells must have casing seals at least 50 feet deep.
19. 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.
20. 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. 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. R5-2007-0102 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 No. 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 C.1 or Prohibition B.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 E1.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 retention pond(s), 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.

#### **D. 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.

#### **E. 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 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. **Salinity Report:** 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.

- e. **Operation and Maintenance Plan:** The Discharger has submitted an Operation and Maintenance Plan for the facility, which includes information pertaining to procedures the facility operates under during day to day management of the facility and in case of emergency situations. The Operation and Maintenance Plan shall be updated as needed and all employees will be trained on its contents.

#### **F. 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. R5-2007-0102.
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.

#### **G. 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. R5-2007-0102.

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 2 August 2007.

ORIGINAL SIGNED BY  
PAMELA C. CREEDON, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2007-0102

INDIVIDUAL WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2007-0102  
FOR  
HENRY JONGSMA DBA HENRY JONGSMA AND SON DAIRY  
GLENN COUNTY

This Monitoring and Reporting Program (MRP) is issued pursuant to California Water Code (CWC) Section 13267. The Discharger shall not implement any changes to this MRP unless a revised MRP is issued by the Executive Officer.

This MRP includes Monitoring, Record-Keeping, and Reporting requirements. Monitoring requirements include monitoring of discharges of storm water and groundwater monitoring in order to determine if the Discharger's dairy is in compliance with the discharge limitations of Waste Discharge Requirements Order No. R5-2007-0102 (Order).

Monitoring requirements also include monitoring of nutrients applied to, and removed from, land application areas in order for the Discharger to implement a Nutrient Management Plan that will minimize leaching of nutrients and salts to groundwater and transport of these constituents to surface water.

In addition, monitoring requirements include periodic visual inspections of the dairy to ensure the dairy is being operated and maintained to ensure continued compliance with the Order.

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

Except where indicated, all monitoring must begin immediately. Note that some types of events require that a report be submitted to the Central Valley Water Board within 24 hours (see Section C).

The Discharger must follow sampling and analytical procedures approved by the Executive Officer. Approved procedures will be posted on the Board's web site and copies may be obtained by contacting staff. The Discharger may submit alternative procedures for consideration, but must receive written approval from the Executive Officer before using them.

The Discharger shall conduct monitoring, record-keeping, and reporting as specified below.

## A. MONITORING REQUIREMENTS

### Visual Inspections

Effective immediately, the Discharger shall conduct and record the inspections specified in Table 1 below and maintain records of the results on-site for a period of five years.

Table 1. INSPECTIONS
<p><b><i>Production Area</i></b> <u>Weekly during the wet season (1 October to 31 May) and monthly between 1 June and 30 September:</u> Inspect all waste storage areas and note any conditions or changes that could result in discharges to surface water and/or from property under control of the Discharger.</p> <p>Note whether freeboard within each liquid storage structure is less than, equal to, or greater than the minimum two feet required.</p> <p><u>During and after each significant storm event<sup>1</sup>:</u> Visual inspections of storm water containment structures for discharge, freeboard, berm integrity, cracking, slumping, erosion, excess vegetation, animal burrows, and seepage.</p> <p><u>Monthly on the 1<sup>st</sup> day of each month:</u> Photograph each pond showing the current freeboard on that date. All photos shall be dated and maintained as part of the discharger's record.</p>
<p><b><i>Land Application Areas</i></b> <u>Immediately before each wastewater application begins:</u> Inspect the land application area and note the condition of land application berms including rodent holes, piping, and bank erosion. Verify that any field valves are correctly set to preclude off-property or accidental discharges of wastewater.</p> <p><u>Daily when wastewater is being applied:</u> Inspect the land application area and note the condition of land application berms including rodent holes, piping, and bank erosion; the presence (or lack) of field saturation, ponding, erosion, runoff (including tailwater discharges from the end of fields, pipes, or other conveyances), and nuisance conditions; and the conditions of any vegetated buffers or alternative conservation practices.</p>

### Nutrient Monitoring

The Discharger shall monitor wastewater, manure, and plant tissue produced at the facility, soil in each land application area, and irrigation water used on each land application area for the constituents and at the frequency as specified in Table 2 below. This monitoring is for nutrient management, shall begin when the Order is adopted, and will be used to refine the Nutrient Management Plan. The

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

Discharger is encouraged to collect and use additional data, as necessary, to refine nutrient management.

<b>Table 2. NUTRIENT MONITORING</b>
<p><b><i>Wastewater</i></b>  <u>Each application:</u>  Record the volume (gallons or acre-inches) and date of wastewater application to each land application area.</p> <p><u>Quarterly during one application event:</u>  Field measurement of electrical conductivity.</p> <p>Laboratory analyses for nitrate-nitrogen (only when retention pond is aerated), ammonium-nitrogen, total Kjeldahl nitrogen, total phosphorus, potassium, and total dissolved solids.</p> <p><u>Annually for the first two years of operation:</u>  Laboratory analyses for general minerals (calcium, magnesium, sodium, bicarbonate, carbonate, sulfate, and chloride).</p>
<p><b><i>Manure</i></b>  <u>Each application to each land application area:</u>  Record the total volume (cubic yards) applied and density (grams per liter) or total weight (tons) applied and percent moisture.</p> <p><u>Once within 12 months:</u>  Laboratory analyses for general minerals (calcium, magnesium, sodium, bicarbonate, carbonate, sulfate, and chloride).</p> <p><u>Twice per year:</u>  Laboratory analyses for total nitrogen, total phosphorus, potassium, total dissolved solids and density (if volume manure applied is reported) or percent moisture (if weight manure applied is reported).</p> <p><u>Each offsite export of manure:</u>  Record the total volume (cubic yards) exported and density (grams per liter) or total weight (tons) exported and percent moisture.</p> <p>Laboratory analyses for density (if volume manure exported is reported) or percent moisture (if weight manure exported is reported).</p> <p><u>Annually:</u>  Record the total dry weight (tons) of manure applied annually to each land application area and the total dry weight (tons) of manure exported offsite.</p>
<p><b><i>Plant Tissue</i></b>  <u>At harvest:</u>  Record the total weight (tons) and percent wet weight or volume (cubic yards) and density (grams per liter) of harvested material removed from each land application area.</p> <p>Laboratory analyses for total nitrogen, phosphorus, and potassium (expressed on a dry weight basis), and percent wet weight (if weight of harvested material is reported) or density (if volume of harvested material is reported).</p> <p>The following test is only required if the Discharger wants to add fertilizer in excess of 1.4 times</p>

<b>Table 2. NUTRIENT MONITORING</b>
<p><u>the nitrogen expected to be removed by the harvested portion of the crop (See Attachment C for details): Mid-season, if necessary to assess the need for additional nitrogen fertilizer during the growing season.</u></p> <p>Laboratory analyses for total nitrogen, expressed on a dry weight basis.</p>
<p><b>Soil</b>  <u>Beginning in the summer of 2008 and then once every 5 years from each land application area:</u>                      Laboratory analyses for:                          Total phosphorus</p> <p><b><i>The following soil tests are recommended but not required:</i></b>  <u>Spring pre-plant for each crop:</u>                      Laboratory analyses for:                          0 to 1 foot depth: Nitrate-nitrogen and organic matter.                          1 to 2 foot depth: Nitrate-nitrogen.</p> <p><u>Fall pre-plant for each crop:</u>                      Laboratory analyses for:                          0 to 1 foot: Electrical conductivity, nitrate-nitrogen, soluble phosphorus, potassium and organic matter.                          1 to 2 foot: Nitrate-nitrogen.                          2 to 3 foot: Nitrate-nitrogen.</p>
<p><b><i>Irrigation Water</i></b><sup>2</sup>  <u>Each irrigation event for each land application area:</u>                      Record volume (gallons or acre-inches) and source (well or canal) of irrigation water applied and dates applied.</p> <p><u>One irrigation event during each irrigation season during actual irrigation events:</u>                      For each irrigation water source (well and canal):                          Electrical conductivity and total nitrogen.<sup>3</sup>                      Data collected to satisfy the groundwater monitoring requirements (below) will satisfy this requirement if the irrigation water source is local groundwater.</p>

### Monitoring of Surface Runoff

The Discharger shall monitor discharges of storm water from the land application area for the constituents and at the frequency as specified in Table 3 below.

<b>Table 3. DISCHARGE MONITORING</b>
<p><b><i>Storm Water Discharges to Surface Water from Each Land Application Area</i></b><sup>4</sup>  <u>First storm event of the wet season<sup>5</sup> and during peak storm season (typically February)<sup>6</sup> each year from one third of the land application areas<sup>7</sup> with the land application areas sampled</u></p>

<sup>2</sup> The Discharger shall monitor irrigation water (from each water well source and canal) that is used on all land application areas.

<sup>3</sup> In lieu of sampling the irrigation water, the Discharger may provide equivalent data from the local irrigation district. The results of the initial chemical testing of the irrigation water shall be included in the initial annual report as specified in the Annual Reporting section under Reporting Requirements C, below. The Discharger may propose in the annual report to reduce the constituents and/or sampling frequency of irrigation water based on the previous year's data.

<sup>4</sup> Sample locations must be chosen such that the samples are representative of the quality and quantity of storm water discharged.

<b>Table 3. DISCHARGE MONITORING</b>
rotated each year <sup>8</sup> : Record date, time, duration, location, and ultimate destination of the discharge.
Field measurements of the discharge for electrical conductivity, temperature, pH, total ammonia-nitrogen, and unionized ammonia-nitrogen.
Laboratory analyses of the discharge for nitrate-nitrogen, phosphorus, turbidity, and total and fecal coliform.

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

### **Groundwater Monitoring**

<sup>5</sup> This sample shall be taken from the first storm event of the season that produces significant storm water discharge such as would occur during continuous storm water runoff for a minimum of one hour, or intermittent storm water runoff for a minimum of three hours in a 12-hour period.

<sup>6</sup> This sample shall be taken during a storm event that produces significant storm water discharge and that is preceded by at least three days of dry weather. The sample shall be taken during the first hour of the discharge.

<sup>7</sup> One land application area shall be sampled for Dischargers that have one to three land application areas, two land application areas shall be sampled for Dischargers that have four to six land application areas, etc.

<sup>8</sup> The Discharger may propose in the annual storm water report to reduce the constituents and/or sampling frequency of storm water discharges to surface water from any land application area based on the previous year's data (see Storm Water Reporting below).

The Discharger shall sample the domestic and two agricultural supply wells and the four monitoring wells to characterize existing groundwater quality. This monitoring shall be conducted at the frequency and for the parameters specified in Table 4 below.

<b>Table 4. GROUNDWATER MONITORING</b>
<p><b><i>Domestic and Agricultural Supply Wells</i></b> <u>Semiannually at time of expected highest and lowest water table levels:</u> Field measurements of electrical conductivity. Laboratory analyses of nitrate-nitrogen.</p> <p><u>Annually:</u> Laboratory analyses for general minerals (calcium, magnesium, sodium, bicarbonate, carbonate, sulfate, and chloride) , ammonium-nitrogen, total dissolved solids, and fecal coliform.</p>
<p><b><i>Monitoring Wells</i></b> <u>Semi-annually at time of expected highest and lowest water table levels:</u> Field measurements of electrical conductivity and pH. Laboratory analyses for nitrate-nitrogen, ammonium-nitrogen, total dissolved solids, fecal coliform, phosphorus, and potassium.</p> <p><u>Annually:</u> Laboratory analyses for general minerals (calcium, magnesium, sodium, bicarbonate, carbonate, sulfate, and chloride).</p>

1. Groundwater samples from domestic wells shall be collected from the tap nearest to the pressure tank (and before the pressure tank if possible) after water has been pumped from this tap for 10 to 20 minutes. Groundwater samples from agricultural supply wells shall be collected after the pump has run for a minimum of 30 minutes or after at least three well volumes have been purged from the well.
2. Prior to any pre-sample purging, the depth of groundwater shall be measured from a surveyed reference point to the nearest 0.01 foot in each well.
3. Monitoring of the domestic and agricultural supply wells may be reduced after one year of data are provided to the Executive Officer.
4. Prior to installation of additional monitoring wells, the Discharger shall submit to the Executive Officer a Monitoring Well Installation and Sampling Plan (MWISP) (see Attachment D) and schedule prepared under the direct supervision of, and certified by, a California registered civil engineer or a California registered geologist with experience in hydrogeology. Installation of monitoring wells shall not begin until the Executive Officer notifies the Discharger in writing that the MWISP is acceptable
5. Within 45 days after completion of any monitoring well, the Discharger shall submit to the Executive Officer a Monitoring Well Installation Completion

Report (MWICR) (see Attachment D) prepared under the direct supervision of, and certified by, a California registered civil engineer or a California registered geologist with experience in hydrogeology.

6. Groundwater samples from monitoring wells shall be collected as specified in an approved Monitoring Well Installation and Sampling Plan.

### **General Monitoring Requirements**

1. The Discharger shall comply with all the "Requirements Specifically for Monitoring Programs and Monitoring Reports" as specified in the Standard Provisions and Reporting Requirements.
2. The sampling procedures listed in this MRP are standards currently recognized by the Central Valley Water Board. When special procedures appear to be necessary, the Discharger may request approval of alternative sampling procedures for nutrient management. The Executive Officer will review such requests and if adequate justification is provided, may approve the requested alternative sampling procedures.
3. The Discharger shall use clean sample containers and sample handling, storage, and preservation methods that are accepted or recommended by the selected analytical laboratory or, as appropriate, in accordance with approved United States Environmental Protection Agency analytical methods.
4. All samples collected shall be representative of the volume and nature of the material being sampled.
5. All sample containers shall be labeled and records maintained to show the time and date of collection as well as the person collecting the sample and the sample location.
6. All samples collected for laboratory analyses shall be preserved and submitted to the laboratory within the required holding time appropriate for the analytical method used and the constituents analyzed.
7. All samples submitted to a laboratory for analyses shall be identified in a properly completed and signed Chain of Custody form.
8. Field test instruments used for pH and electrical conductivity may be used provided:
  - a. The operator is trained in the proper use and maintenance of the instruments;

- b. The instruments are field calibrated prior to each monitoring event; and
- c. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency.

## **B. RECORD-KEEPING REQUIREMENTS**

The Discharger shall maintain on-site for a period of five years from the date they are created all information as follows:

1. All information necessary to document implementation and management of the minimum elements of the nutrient management plan (NMP);
2. All records for the production area including:
  - a. Records documenting the inspections required under the Monitoring Provisions above.
  - b. Records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Provisions above. Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction;
  - c. Records of the date, time, and estimated volume of any overflow;
  - d. Records of mortality management and practices;
  - e. Steps and dates when action is taken to correct unauthorized releases as reported in accordance with Priority Reporting of Significant Events below; and
  - f. Records of monitoring activities and laboratory analyses conducted as required in Standard Provisions and Reporting Requirements, D.5.
3. All records for the land application area including:
  - a. Expected and actual crop yields;
  - b. Identification of crop, acreage, and dates of planting and harvest for each field;
  - c. Dates, locations, and approximate weight and moisture content, or volume and density, of manure applied to each field;

- d. Dates, locations, and volume of wastewater applied to each field;
  - e. Weather conditions at time of manure and wastewater applications and for 24 hours prior to and following applications;
  - f. Records documenting the inspections conducted as required under the Monitoring Provisions above;
  - g. Dates, locations, and test methods for soil, manure, wastewater, irrigation water, and plant tissue sampling;
  - h. Results from manure, wastewater, irrigation water, soil, plant tissue, and storm water sampling;
  - i. Explanation for the basis for determining manure or wastewater application rates, as provided in the Technical Standards for Nutrient Management established by the Order (Attachment C);
  - j. Calculations showing the total nitrogen, phosphorus, and potassium to be applied to each field, including sources other than manure or wastewater;
  - k. Total amount of nitrogen, phosphorus, and potassium actually applied to each field, including documentation of calculations for the total amount applied;
  - l. The method(s) used to apply manure and/or wastewater;
  - m. Dates of manure and/or wastewater application equipment inspections;
  - n. Records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Provisions above. Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction; and
  - o. Records of monitoring activities and laboratory analyses conducted as required in Standard Provisions and Reporting Requirements, D.5.
4. A copy of the Discharger's site-specific NMP;
  5. All Manure/ Wastewater Tracking Manifest forms (Attachment E) which include information on the manure hauler, destination of the manure, dates hauled, amount hauled, and certification; and

6. All analyses of manure, wastewater, irrigation water, soil, plant tissue, surface water, storm water, and groundwater.

## C. REPORTING REQUIREMENTS

### Priority Reporting of Significant Events (Prompt Action Required)

The Discharger shall report any noncompliance that endangers human health or the environment or any noncompliance with Prohibitions B.1, B.2, B.3, B.4, B.5, B.6., B.7., B.10, and B.11 in the Order, within 24 hours of becoming aware of its occurrence. The incident shall be reported to the Central Valley Water Board Office, local environmental health department, and to the California Office of Emergency Services (OES). During non-business hours, the Discharger shall leave a message on the Board's voice mail. The message shall include the time, date, place, and nature of the noncompliance, the name and number of the reporting person, and shall be recorded in writing by the Discharger. The OES is operational 24 hours a day. The Discharger shall collect a sample of the discharge, refrigerate it, and provide it to the Board upon request. A written report shall be submitted to the Board office **within two weeks** of the Discharger becoming aware of the incident. The report shall contain a description of the noncompliance, its causes, duration, and the actual or anticipated time for achieving compliance. The report shall include complete details of the steps that the Discharger has taken or intends to take, in order to prevent recurrence. All intentional or accidental spills shall be reported as required by this provision. The written submission shall contain:

1. The approximate date, time, and location of the noncompliance including a description of the ultimate destination of any unauthorized discharge and the flow path of such discharge to a receiving water body;
2. A description of the noncompliance and its cause;
3. The flow rate, volume, and duration of any discharge involved in the noncompliance;
4. The amount of precipitation (in inches) the day of any discharge and for each of the seven days preceding the discharge;
5. The period of noncompliance, including dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
6. A time schedule and a plan to implement corrective actions necessary to prevent the recurrence of such noncompliance.

### **Annual Reporting**

By January 15 of each year, the Discharger will submit an Annual Report containing the information on facility operations outlined in the Monitoring and Reporting program and covering the period from 1 November through 31 October of the previous year. The initial annual report will cover the period from the commencement of dairy operations through October 31 of the year following the adoption of the order (for example, for an order adopted in 2007, the initial annual report would be due on January 15, 2009, and cover the period through October 31, 2008) to ensure that the annual report contains results of the first wet season following commencement of dairy operations and covers the crop cycle that ends in late summer-early fall. The initial annual report will also include documentation from a trained professional that no cross connections exist between the waste management system and any water supply or irrigation well, as required under Prohibition B13 of the Order. The initial annual report will include results of irrigation water monitoring and an assessment as to whether the amount of nitrogen in the irrigation water is sufficient to require inclusion of nitrogen from the irrigation water into the NMP. If the quantity of nitrogen in the irrigation water is negligible, the Discharger, as part of the annual report, may request a reduction in the testing of the irrigation water for nitrogen.

The annual report shall be completed on an annual report form provided by the Executive Officer (available on the Central Valley Water Board website at [http://www.waterboards.ca.gov/centralvalley/available\\_documents/index.html#confined](http://www.waterboards.ca.gov/centralvalley/available_documents/index.html#confined)) and shall include all the information as specified below.

1. Identification of the beginning and end dates of the annual reporting period;
2. An Annual Dairy Facility Assessment using the tool provided by the Executive Officer or any future revisions thereto;
3. Number and type of animals, whether in open confinement or housed under roof;
4. Estimated amount of total manure (tons) and wastewater (gallons or acre-inches) generated by the facility during the annual reporting period and a calculation of the nitrogen, phosphorus, potassium, and total salt content of this waste;
5. Estimated amount of total manure (tons) and wastewater (gallons or acre-inches) applied to each land application area during the annual reporting period and a calculation of the nitrogen, phosphorus, potassium, and total salt content of this waste;

6. Estimated amount of total manure (tons) and wastewater (gallons or acre-inches) transferred to other persons by the facility during the annual reporting period and a calculation of the nitrogen, phosphorus, potassium, and total salt content of this waste;
7. A map showing the location and number of acres of each field on the dairy and whether each field was or was not used for land application of manure and/or wastewater during the annual reporting period;
8. Summary of all discharges from the production area that occurred during the annual reporting period, including date, time, location, approximate volume, a map showing discharge and method of measuring discharge flows;
9. Summary of all storm water discharges from the land application area during the annual reporting period, including the date, time, duration, location, a map showing the discharge and sample locations, and rationale for sample locations;
10. Summary of all discharges other than storm water from the land application area that have occurred during the annual reporting period, including the date, time, approximate volume, location, source of discharge (i.e., tailwater, wastewater, or blended wastewater), a map showing the discharge locations, and method of measuring discharge flows;
11. A statement indicating if the NMP has been updated and whether the current version of the facility's NMP was developed or approved by a certified nutrient management planner as specified in Attachment C of the Order;
12. Copies of all manure/ wastewater tracking manifests for the reporting period;
13. Copies of all written agreements with each third party that receives wastewater from the Discharger for its own use from the Discharger;
14. Copies of laboratory analyses of all storm water samples, including chain-of-custody forms and laboratory quality assurance/quality control results;
15. Tabulated analytical data for samples of manure, wastewater, irrigation water, soil, and plant tissue. The data shall be tabulated to clearly show sample dates, constituents analyzed, constituent concentrations, and detection limits; and
16. Results of the Record-Keeping Requirements for the production and land application areas specified in Record-Keeping Requirements B.2.b, B.2.c, B.3.a, B.3.b, B.3.c, B.3.d, B.3.e, B.3.j., B.3.k, and B.3.n above.

### **Groundwater Reporting**

By 30 June 2008, and annually thereafter, the Discharger shall report the results of all groundwater monitoring. Groundwater monitoring reports shall include all laboratory analyses (including chain-of-custody forms and laboratory quality assurance/quality control results) and tabular and graphical summaries of the monitoring data. Data shall be tabulated to clearly show the sample dates, constituents analyzed, constituent concentrations, detection limits, depth to groundwater, and groundwater elevations. Graphical summaries of groundwater gradients and flow directions shall also be included. Each groundwater monitoring report shall include a summary data table of all historical and current groundwater elevations and analytical results. The submittal shall include a description of the statistical or non-statistical methods used in evaluating the groundwater monitoring data. The methods must be approved by the Executive Officer. The groundwater monitoring reports shall be certified by a California registered professional as specified in General Reporting Requirements C.9 of the Standard Provisions and Reporting Requirements of the Order.

### **Storm Water Reporting**

By 30 June 2008, and annually thereafter, the Discharger shall submit an annual report that details the results of the previous year's storm water monitoring, including the Discharger's preparation for the upcoming wet season for all land application areas. The annual report shall include a map showing all sample locations for all land application areas, rationale for all sampling locations, the results (including the laboratory analyses, chain of custody forms, and laboratory quality assurance/quality control results) of all samples of storm water, an assessment of the storm water monitoring results, an explanation for any pollutants found in storm water from any land application area, and any modifications made to the facility or sampling plan in response to pollutants detected in storm water. The annual report must also include documentation if no significant discharge of storm water occurred from the land application area(s) or if it was not possible to collect any of the required samples or perform visual observations due to adverse climatic conditions.

If the storm water monitoring for any land application area indicates pollutants have not been detected in storm water samples, the Discharger may propose to the Executive Officer to reduce the constituents and/or sampling frequency for that area.

### **General Reporting Requirements**

1. The results of any monitoring conducted more frequently than required at the locations specified herein shall be reported to the Central Valley Water Board.
2. Laboratory analyses for manure, wastewater, and soil shall be submitted to the Central Valley Water Board upon request by the Executive Officer.

3. Each report shall be signed by the Discharger or a duly authorized representative as specified in the General Reporting Requirements C.7 of the Standard Provisions and Reporting Requirements (SPRR), and shall contain the following statement:

*"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."*

4. Submit reports to:

California Regional Water Quality Control Board  
Central Valley Region  
11020 Sun Center Drive #200  
Rancho Cordova, CA 95670  
Attention: Confined Animal Regulatory Unit

ORDERED BY:

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PAMELA C. CREEDON, Executive Officer

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Date

## INFORMATION SHEET

Waste Discharge Requirements Order No. R5 – 2007 – 0102  
Henry Jongsma DBA Henry Jongsma and Son Dairy  
Glenn County

### INTRODUCTION

Henry Jongsma has built and proposes to operate a new dairy on 979 acres in Glenn County, southeast of the city of Orland. The maximum herd size (Holsteins) at the dairy is 3,390: 1700 milking cows, 290 dry cows, 840 one-to-two year old heifers, and 560 three-to-twelve month calves. The dairy includes all new structures, including a milking parlor, freestall barns, loafing barns, corrals, manure storage and drying areas, lined settling ponds, a lined wastewater storage lagoon, and feed storage areas. Wastewater is land-applied to 711 of the 979 acres for agricultural production. Solid manure is hauled offsite to other farmers for use as fertilizer or used onsite as bedding.

A Report of Waste Discharge dated 15 October 2004 was submitted for the proposed dairy, including a Nutrient Management Plan and portions of the Waste Management Plan. Additional information has been submitted to the Board subsequent to that date. An Environmental Impact Report was prepared for the project and was certified by the Glenn County Planning Commission on 12 February 2006.

### CURRENT CONDITIONS

The site of the dairy is zoned AP-80 (Agricultural Preserve, eighty acre minimum parcel size) and has been used for growing crops (primarily alfalfa) and raising beef cattle. The property is generally flat lying, and is underlain by the Jacinto fine sandy loam association.

### WASTE GENERATION AT FACILITY

Operation of the dairy is estimated to generate 1.37 cubic feet of manure per animal unit per day, where an animal unit equals 1000 pounds of animal weight. Forty percent of the manure is removed as solids through the two settling basins, leaving a total of 378,383 cubic feet of manure wastewater generated over 120 days for a herd of 3,390 animals. One hundred twenty days (December 1 through March 30) is the maximum amount of time that waste needs to be stored at the facility between land applications.

Operation of the barn generates 55 gallons of wastewater per milk cow or 93,500 gallons per day for a milking herd of 1700 cows. Over 120 days, the volume of barn wastewater generated is 1,500,000 cubic feet.

Rainfall onto impervious areas of the dairy, onto the ponds, and onto corrals is estimated at 1,458,914 cubic feet over the December through March storage period, using average rainfall figures and including rainfall from one 25-year, 24-hour storm.

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 3,337,300 cubic feet.

#### WASTE MANAGEMENT AT FACILITY

Wastewater is passed through a solids separator located on a concrete slab, and then into two lined separation ponds, where suspended matter is partially removed. The solids and excess manure in corrals is stockpiled on the concrete slab at the solids separator and then either removed to other farms for use as fertilizer or used on site. A portion of the solids may be composted on site and used as animal bedding.

The two separation ponds gravity flow into the storage lagoon. The storage lagoons are 60 feet wide, 548 feet long and 13.5 feet deep, with side slopes of 2:1. The storage lagoon is 370 feet wide, 875 feet long, and 13.5 feet deep, with side slopes of 2:1. All three ponds are lined with 36 mil scrim-reinforced polypropylene. All seams were nondestructively tested at the time of installation using an air lance. The total storage capacity of all three ponds combined, allowing for two feet of freeboard is 3,642,590 cubic feet. All three ponds have at least five (5) feet between the bottom of the ponds and the estimated historic high water table, which is approximately 20 feet below the land surface.

An additional pond was created at the facility as a borrow source for facility construction. This pond is not lined and will only be used for temporary storm water storage resulting from an unusually large storm.

#### LAND APPLICATION OF WASTEWATER TO CROPS

Wastewater, and possibly solid manure is applied to land at agronomic rates to grow corn, wheat, and alfalfa in accordance with the certified Nutrient Management Plan.

All fields that receive solid manure or liquid wastewater have tailwater recovery systems. All fields, ditches, and pipelines exposed to wastewater are flushed with clean water during the last irrigation or usage of the season to remove any waste residue.

The Order requires that solid manure and wastewater samples be collected and analyzed, and the tons of solid manure and volume of wastewater applied to

each field determined. This information will be used to refine the Nutrient Management Plan on an ongoing basis.

The dates and volume of each irrigation application (without waste water) are recorded. These data are used to ensure that wastewater is not applied when the ground is at or above field moisture capacity, and to limit the flushing of nutrients below the root zone due to excessive application of irrigation water. In addition, samples of the irrigation water are tested to determine if there are nitrogen compounds present in the groundwater such that the Nutrient Management Plan should be amended to reflect nitrogen added from the irrigation water.

Soil monitoring and plant tissue monitoring are also required and the results used to further refine the Nutrient Management Plan.

#### GROUND WATER AND SURFACE WATER MONITORING PROVISIONS

There are two existing agricultural supply wells and one domestic well on the property. Four monitoring wells have been installed to monitor upgradient ground water quality (unaffected by dairy operations) and downgradient of the location of corrals, land application areas, and the wastewater storage pond. The Order requires sampling of these wells. Regional ground water flow is to the southeast and the depth to groundwater at the facility ranged from 28.5 to 37.5 feet in April 2007.

An initial round of sampling for all wells has been completed. All monitoring wells have elevated iron and manganese, and one well, MW-3 (near the new corrals) has nitrate in excess of the MCL as a result of historic (pre-dairy) farming activity on the property. The domestic and agricultural wells will be sampled semiannually for electrical conductivity and nitrate-nitrogen, and annually for general minerals, ammonia-nitrogen, total dissolved solids, and fecal coliform. The monitoring wells will be sampled semiannually for electrical conductivity, pH, nitrate-nitrogen, ammonium-nitrogen, total dissolved solids, fecal coliform, phosphorous, and potassium; and annually for general minerals. Prior to any pre-sample purging, the depth of groundwater shall be measured from a surveyed reference point (anticipated to be the top of each well vault) to the nearest 0.01 foot in each well.

Because all fields receiving solid manure or liquid wastewater have tailwater recovery systems, it is not anticipated that there will be off-property discharges of waste, which would be in violation of the Water Code. It is expected that, if the Nutrient Management Plan and other conditions of the Order regarding waste application are followed, any discharges of storm water from fields receiving solid manure or wastewater should not contain waste constituents. To verify this, representative samples will be collected from a portion of the fields each year to

determine if waste constituents are present. Storm water monitoring will be adjusted based on the results from these samples.

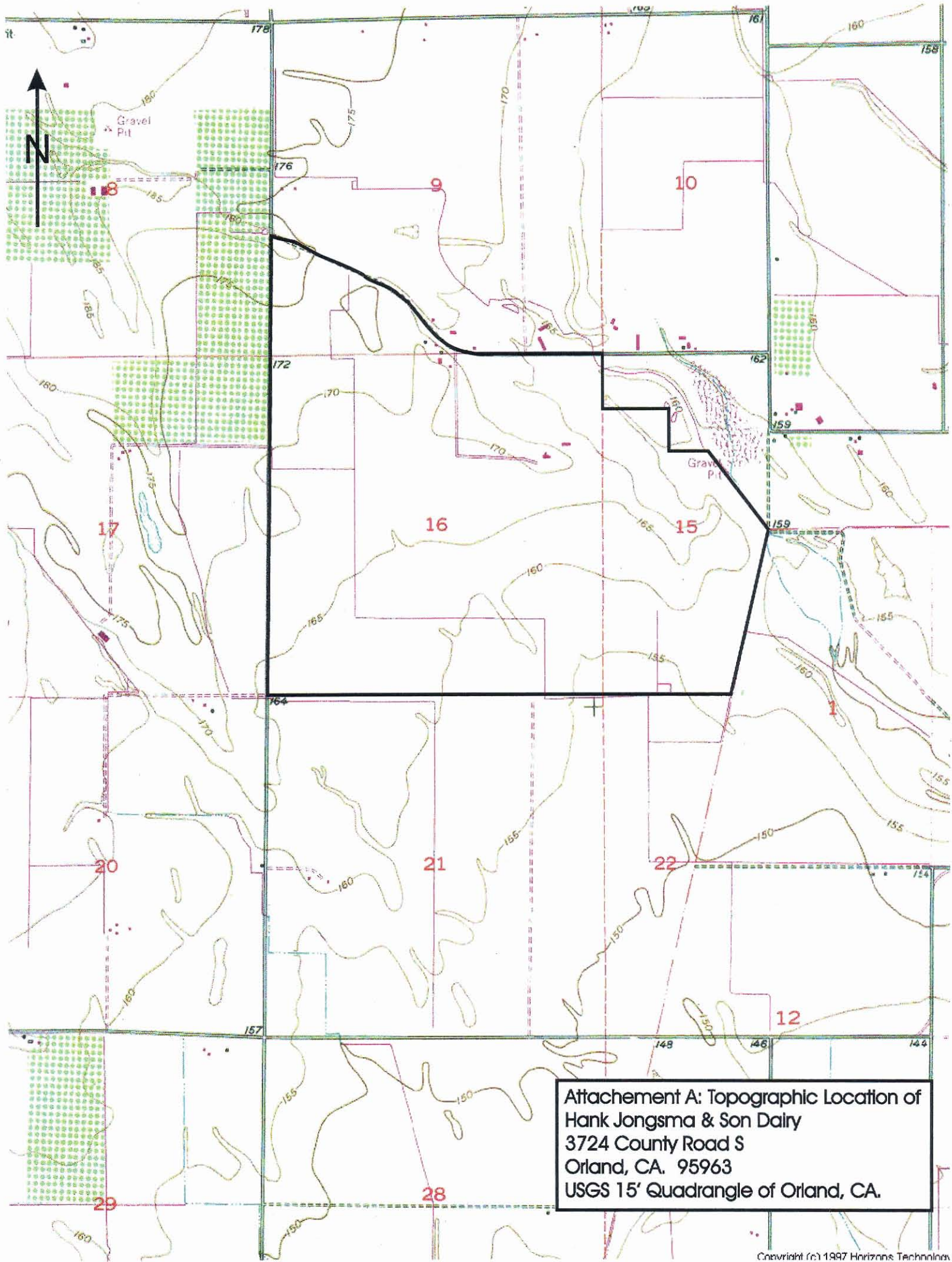
## REPORTING REQUIREMENTS

By January 15 of each year, the Discharger will submit an Annual Report containing the information on facility operations outlined in the Monitoring and Reporting program and covering the period from 1 November through 31 October of the previous year. The initial annual report will cover the period from the commencement of dairy operations through October 31 of the year following the adoption of the order (for example, since this order is adopted in 2007, the initial annual report would be due on January 15, 2009, and cover the period through October 31, 2008) to ensure that the annual report contains results of the first wet season following commencement of dairy operations. The initial annual report will also include documentation from a trained professional that no cross connections exist between the waste management system and any water supply or irrigation well, as required under Section F.1 of the Order.

By 30 June 2008, the Discharger will submit a Storm Water Report describing the results of storm water monitoring conducted pursuant to the Monitoring and Reporting Program.

By 30 June 2008, and annually thereafter, the Discharger will submit the results of groundwater monitoring.

In the event of any noncompliance with the requirements of the Order that endangers human health or the environment, or any noncompliance with the prohibitions in the Order as listed in the Noncompliance Reporting provisions of the Monitoring and Reporting Program, the Discharger shall notify the Board within 24 hours of becoming aware of the occurrence. Information about the situation shall be collected and submitted in accordance with the Priority Reporting of Significant Events requirements in the Monitoring and Reporting Program.



Attachement A: Topographic Location of  
Hank Jongsma & Son Dairy  
3724 County Road S  
Orland, CA. 95963  
USGS 15' Quadrangle of Orland, CA.



County Road S

County Road S

County Road 27

Production Area

Daily Property Boundary

500 yds

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Attachment B: Aerial Photo of  
Jongsma Dairy Property  
3724 County Road S  
Orland, CA, 95963

## **ATTACHMENT C**

### **Nutrient Management Plan Provisions And Technical Standards For Nutrient Management**

#### **Individual Waste Discharge Requirements Order No. R5-2007-0102 For Henry Jongsma DBA Henry Jongsma and Son Dairy Glenn County**

Owners and operators of milk cow dairies (Dischargers) who apply manure, bedding, or wastewater to land for nutrient recycling are required to develop and implement management practices that control nutrient losses and that are described in a Nutrient Management Plan (NMP). The purpose of the NMP is to budget and manage the nutrients applied to the land application area(s) considering all sources of nutrients, crop requirements, soil types, climate, and local conditions in order to prevent adverse impacts to surface water and groundwater quality. The NMP must take the site-specific conditions into consideration in identifying steps that will minimize nutrient movement through surface runoff or leaching past the root zone.

The Discharger has prepared a NMP which contains the elements listed below under Contents of a Nutrient Management Plan and is in conformance with the applicable Technical Standards for Nutrient Management (Technical Standards), also listed below. These provisions in the NMP must be updated as necessary in response to changing conditions, monitoring results and other factors. Implementation of the Nutrient Management Plan meets the requirements of Resolution No. 68-16.

Any revisions to the NMP must be developed and signed by a specialist who is certified in developing nutrient management plans. A certified specialist is a Professional Soil Scientist, Professional Agronomist, or Crop Advisor certified by the American Society of Agronomy or a Technical Service Provider certified in nutrient management in California by the Natural Resources Conservation Service (NRCS). The Executive Officer may approve alternative proposed specialists. The NMP will only be considered certified if it is prepared and signed by one of these parties.

The NMP is linked to other sections of the WDRs. The Monitoring and Reporting Program specifies minimum amounts of monitoring that must be conducted at the dairy. As indicated below, this information must be used to make management decisions related to nutrient management and to determine if revisions to the NMP are needed. Likewise, the timing and amounts of wastewater applications to crops must be known to correctly calculate the amount of storage needed in holding ponds.

Wastes 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.

### **Contents of a Nutrient Management Plan**

#### **Dairy Facility Assessment**

The NMP will include the annual Dairy Facility Assessments and the annual monitoring reports as required by Monitoring and Reporting Program No. R5-2007-0102. Copies of these assessments shall be maintained for 10 years.

The NMP identifies the name and address of the dairy, the dairy operator, and legal owner of the dairy property and contains all of the following elements to demonstrate that the Discharger can control nutrient losses that may impact surface water or groundwater quality and comply with the requirements of the Order and the Technical Standards for Nutrient Management (Technical Standards). These elements shall be updated as conditions change at the facility:

- I. Land Application Area Information
  - A. Identification of each land application area (under the Discharger’s control, whether it is owned, rented, or leased, to which manure or wastewater from the production area is or may be applied for nutrient recycling) on a single published base map (topographic map or aerial photo) at an appropriate scale which includes:
    1. A field identification system (Assessor’s Parcel Number); land application area by name or number; total acreage of each land application area; crops grown; indication if each land application area is owned, rented, or leased by the Discharger; indication what type of waste is applied (solid manure only, wastewater only, or both solid manure and wastewater); drainage flow direction in each field, nearby surface waters, and storm water discharge points; tailwater and storm water drainage controls; subsurface (tile) drainage systems (including discharge points and lateral extent) if installed; irrigation supply wells and groundwater monitoring wells; sampling locations for discharges of storm water to surface water from the field; and
    2. Wastewater conveyance structures, discharge points and discharge mixing points with irrigation water supplies; pumping

facilities; flow meter locations; drainage ditches and canals, culverts, drainage controls (berms, levees, etc.), and drainage easements.

- B. Copies of written agreements with third parties that receive wastewater for their own use from the Discharger's dairy.
- C. Identification of each field that is both under the control of the Discharger and within five miles of the dairy where neither wastewater nor manure is applied. Each field shall be identified on a single published base map at an appropriate scale by the following:
  - 1. Assessor's Parcel Number.
  - 2. Total acreage.
  - 3. Information on who owns or leases the field.

Note: The NMP must be updated and the Regional Board notified in writing before waste is applied to the lands identified this section.

II. Sampling and Analysis (see Technical Standard I below)

Identify the sampling methods, sampling frequency, and analyses to be conducted for soil, manure, wastewater, irrigation water, and plant tissue analysis (Technical Standard I below).

III. Nutrient Budget (see Technical Standard V below)

The NMP contains a nutrient budget for each land application area. The nutrient budget establishes planned rates of nutrient applications for each crop based on soil test results, manure and wastewater analyses, irrigation water analyses, crop nutrient requirements and patterns, seasonal and climatic conditions, the use and timing of irrigation water, and the nutrient application restrictions listed in Technical Standards V.A through V.D below. The Nutrient Budget includes the following:

- A. The rate of application and the basis for the application rate of manure and wastewater for each crop in each land application area (also considering sources of nutrients other than manure or wastewater) to meet each crop's needs without exceeding the application rates specified in Technical Standard V.B below.

- B. The timing of applications for each crop in each land application area and the basis for the timing (Technical Standard V.C below). The maximum period of time anticipated between land application events (storage period) based on proper timing and compliance with Technical Standard V.C. below. .
  - C. The method of manure and wastewater application for each crop in each land application area (Technical Standard V.D below).
  - D. If phosphorus and/or potassium applications exceed the amount of these elements removed from the land application area in the harvested portion of the crop, the soil and crop tissue analyses shall be reviewed by an agronomist at least every five years. If this review determines that the buildup of phosphorus or potassium threatens to reduce the long-term productivity of the soil or the yield, quality or use of the crops grown, application rates will be adjusted downward to prevent or correct the problem.
- IV. Setbacks, Buffers, and Other Alternatives to Protect Surface Water (see Technical Standard VII below)
- A. Identify all potential surface waters or conduits to surface water that are within 100 feet of any land application area.
  - B. For each land application area that is within 100 feet of a surface water or a conduit to surface water, identify the setback, vegetated buffer, or other alternative practice that will be implemented to protect surface water (Technical Standard VII below).
- V. Field Risk Assessment (see Technical Standard VIII below)
- Evaluate the effectiveness of management practices used to control the discharge of waste constituents from land application areas using the water quality monitoring results.
- VI. Record-Keeping (see Technical Standard IX below)
- Identify the records that will be maintained for each land application area identified in I.A above.
- VII. Nutrient Management Plan Review (see Technical Standard X below)
- A. Identify the schedule for review and revisions to the NMP.

- B. Identify the person who will conduct the NMP review and revisions.

### **Technical Standards for Nutrient Management**

The Discharger shall comply with the following Technical Standards for Nutrient Management in the implementation of the Nutrient Management Plan (NMP).

#### **I. Sampling and Analysis**

Soil, manure, wastewater, irrigation water, and plant tissue shall be monitored, sampled, and analyzed as required in Monitoring and Reporting Program No. R5-2007-0102, and any future revisions thereto. The results of these analyses shall be used during the implementation of the NMP.

#### **II. Crop Requirements**

- A. Realistic yield goals for each crop in each land application area shall be established. For new crops or varieties, industry yield recommendations may be used until documented yield information is available.
- B. Each crop's nutrient requirements for nitrogen, phosphorus, and potassium shall be determined based on recommendations from the University of California, *Western Fertilizer Handbook* (9th Edition), or from historic crop nutrient removal.

#### **III. Available Nutrients**

- A. All sources of nutrients (nitrogen, phosphorus, and potassium) available for each crop in each land application area shall be identified prior to land applications. Potential nutrient sources include, but are not limited to, manure, wastewater, irrigation water, commercial fertilizers, soil, and previous crops.
- B. Nutrient values of soil, manure, wastewater, and irrigation water shall be determined based on laboratory analysis. "Book values" for manure and wastewater may be used for planning of waste applications during the first two years during initial implementation of the NMP if necessary. Acceptable book values are those values recognized by American Society of Agricultural and Biological Engineers (ASABE), the NRCS, and/or the University of California that accurately estimate the nutrient content of the material. The nutrient content of commercial fertilizers shall be derived from California Department of Food and Agriculture published values.

- C. Nutrient credit from previous legume crops shall be determined by methods acceptable to the University of California Cooperative Extension, the Natural Resources Conservation Service (NRCS), or a specialist certified in developing nutrient management plans.

#### IV. Overall Nutrient Balance

If the NMP shows that the nutrients generated by the dairy exceed the amount needed for crop production in the land application area, the Discharger must implement management practices (such as offsite removal of the excess nutrients, treatment, or storage) that will prevent impacts to surface water or groundwater quality due to excess nutrients.

#### V. Nutrient Budget

The NMP's nutrient budget includes planned rates of nutrient applications for each crop that do not exceed the crop's requirements for total nitrogen considering the stage of crop growth and that also considers all nutrient sources, climatic conditions, the irrigation schedule, and the application limitations in the Order, and A through D below.

##### A. General Standards for Nutrient Applications

1. Plans for nutrient management shall specify the form, source, amount, timing, and method of application of nutrients on each land application area to minimize nitrogen and/or phosphorus movement to surface and/or ground waters to the extent necessary to meet the provisions of the Order.
2. Where crop material is not removed from the land application area, waste applications are not allowed. For example, if a pasture is not grazed or mowed (and cuttings removed from the land application area), waste shall not be applied to the pasture.
3. Manure and/or wastewater will be applied to the land application area for use by the first crop covered by the NMP only to the extent that soil tests indicate a need for nitrogen application.
4. Supplementary commercial fertilizer(s) and/or soil amendments may be added when the application of nutrients contained in manure and/or wastewater alone is not sufficient to meet the crop needs, as long as these applications do not exceed provisions of the Order.

5. Nutrient applications to a crop shall not be made prior to the harvest of the previous crop except where the reason for such applications is provided in the NMP.
6. Water applications shall not exceed the amount needed for efficient crop production.
7. Nutrients shall be applied in such a manner as not to degrade the soil's structure, chemical properties, or biological condition.

B. Nutrient Application Rates

1. General

- a. Planned rates of nutrient application shall be determined based on soil test results, crop tissue test results, nutrient credits, manure and wastewater analysis, crop requirements and growth stage, seasonal and climatic conditions, and use and timing of irrigation water. Actual applications of nitrogen to any crop shall be limited to the amounts specified below.
- b. Nutrient application rates shall not attempt to approach a site's maximum ability to contain one or more nutrients through soil adsorption. Excess applications or applications that cause soil imbalances should be avoided. Excess manure nutrients generated by the Discharger must be handled by export to a good steward of the manure, or the development of alternative uses.

2. Nitrogen

- a. Total nitrogen applications to a land application area prior to and during the growing of a crop will be based on pre-plant or pre-side dress soil analysis to establish residual nitrogen remaining in the field from the previous crop to establish early season nitrogen applications. Pre-plant or side dress nitrogen applications will not exceed the estimated total crop use as established by the nutrient management plan. At no time will application rates result in total nitrogen applied to the land application areas exceeding 1.4 times the nitrogen that will be removed from the field in the harvested portion of the crop. Additional applications of nitrogen are allowable if the following conditions are met:

- i. Plant tissue testing has been conducted and it indicates that additional nitrogen is required to obtain a crop yield typical for the soils and other local conditions;
- ii. The amount of additional nitrogen applied is based on the plant tissue testing and is consistent with University of California Cooperative Extension written guidelines or written recommendations from a professional agronomist;
- iii. The form, timing, and method of application facilitates timely nitrogen availability to the crop; and
- iv. Records are maintained documenting the need for additional applications.

### 3. Phosphorus and Potassium

Phosphorus and potassium may be applied in excess of crop uptake rates. If, however, monitoring indicates that levels of these elements are causing adverse impacts, corrective action must be taken. Cessation of applications may be necessary until crop uptake and harvest has reduced the concentration in the soil.

### C. Nutrient Application Timing

1. Wastewater application is not the same as irrigation. Wastewater application scheduling should be based on the nutrient needs of the crop, the daily water use of the crop, the water holding capacity of the soil, and the lower limit of soil moisture for each crop and soil.
2. Wastewater shall not be applied when soils are saturated. During the rainy season rainfall can exceed crop water demand. However, the application of wastewater is allowable if tests show that there is an agronomic need and current conditions indicate that threat of nitrate leaching is minimal.
3. The timing of nutrient application must correspond as closely as possible with plant nutrient uptake characteristics, while considering cropping system limitations, weather and climatic conditions, and land application area accessibility.

4. Nutrient applications for spring-seeded crops shall be timed to avoid surface runoff and leaching by winter rainfall.
5. Except for orchards and vineyards, nutrients shall not be applied during periods when a crop is dormant.

D. Nutrient Application Methods

The Discharger shall apply nutrient materials uniformly to application areas or as prescribed by precision agricultural techniques.

VI. Wastewater Management on Land Application Areas

Control of water and wastewater applications and runoff is a part of proper nutrient management since water transports nutrients, salts, and other constituents from cropland to groundwater and surface water. The Discharger shall comply with the provisions of the Order which place requirements on applications of manure and wastewater to, and runoff from, cropland.

VII. Setbacks and Vegetated Buffer

- A. A setback is a specified distance from surface waters or potential conduits to surface waters where manure and wastewater may not be land applied, but where crops may continue to be grown.
- B. A vegetated buffer is a narrow, permanent strip of dense perennial vegetation where no crops are grown and which is established parallel to the contours of and perpendicular to the dominant slope of the land application area for the purposes of slowing water runoff, enhancing water infiltration, trapping pollutants bound to sediment, and minimizing the risk of any potential nutrients or pollutants from leaving the land application area and reaching surface waters.
- C. Practices and management activities for vegetated buffers include the following:
  1. Removal of vegetation in vegetated buffers will be in accordance with site production limitations, rate of plant growth, and the physiological needs of the plants.
  2. Do not mow below the recommended height for the plant species.

3. Maintain adequate ground cover and plant density to maintain or improve filtering capacity of the vegetation
4. Maintain adequate ground cover, litter, and canopy to maintain or improve infiltration and soil condition.
5. Periodic rest from mechanical harvesting may be needed to maintain or restore the desired plant community following episodic events such as drought.
6. When weeds are a significant problem, implement pest management to protect the desired plant communities.
7. Prevent channels from forming.

#### VIII. Field Risk Assessment

The results of the Storm Water Monitoring for each land application area required by Monitoring and Reporting Program No. R5-2007-0102 shall be used by the Discharger to assess the movement of nitrogen and phosphorus from each land application area where manure and/or wastewater is applied. The Discharger will follow guidelines provided by the Regional Board in conducting these assessments.

#### IX. Record-Keeping

The Discharger shall maintain records for each land application area as required in the Record-Keeping Requirements of Monitoring and Reporting Program No. R5-2007-0102.

#### X. Nutrient Management Plan Review

- A. The NMP shall be updated when discharges from any land application area exceed water quality objectives, a nutrient source has changed, site-specific information has become available to replace default values used in the overall nutrient balance or the nutrient budget, or nitrogen application rates in any land application area exceed the rates specified in Technical Standard V.B.
- B. The NMP shall be updated prior to any anticipated changes that would affect the overall nutrient balance or the nutrient budget such as, but not limited to, a crop rotation change, changes in the available cropland, or the changes in the volume of wastewater generated.

- C. The Discharger shall review the NMP at least once every five years and notify the Regional Board in the annual report of any proposed changes that would affect the NMP.

## **ATTACHMENT D**

### **Monitoring Well Installation And Sampling Plan And Monitoring Well Installation Completion Report For Dairies with Individual Waste Discharge Requirements In the Sacramento and San Joaquin River Basins August 2007**

A Monitoring Well Installation and Sampling Plan (MWISP) must be submitted by the Discharger prior to installation of groundwater monitoring wells. At a minimum, the MWISP must contain all of the information listed below. Wells may be installed after the Executive Officer notifies the Discharger in writing that the MWISP is acceptable. The Order also requires the Discharger to submit a Monitoring Well Installation Completion Report (MWICR) within 45 days after completion of any monitoring well. At a minimum, the MWICR must summarize the field activities, as described below. All plans and reports must be signed and stamped by a California Registered Geologist, Certified Engineering Geologist, or Professional Engineer with experience in hydrogeology.

#### **General Requirements**

1. The Discharger shall install sufficient monitoring wells to:
  - a. Characterize groundwater flow direction and gradient beneath the site;
  - b. Characterize natural background (unaffected by the Discharger or others) groundwater quality upgradient of the facility; and
  - c. Characterize groundwater quality downgradient of the corrals, downgradient of the retention ponds, and downgradient of the land application areas.
2. It may be necessary to install more than one upgradient monitoring well (i.e., for the production area and the land application area). The Executive Officer may order more extensive monitoring based on site-specific conditions.
3. Prior to installation of additional monitoring wells, the Discharger shall submit to the Executive Officer a Monitoring Well Installation and Sampling Plan (MWISP) (see Attachment D) and schedule prepared under the direct supervision of, and certified by, a California registered civil engineer or a California registered geologist with experience in hydrogeology. Installation of monitoring wells shall not begin until the Executive Officer notifies the Discharger in writing that the MWISP is acceptable.
4. All monitoring wells shall be constructed in a manner that maintains the integrity of the monitoring well borehole and prevents the well from acting as a conduit for pollutant/contaminant transport. The sampling interval of each monitoring well shall be appropriately screened and fitted with an appropriate filter pack to enable collection of representative groundwater samples of the first encountered groundwater.

Monitoring Well Installation and Sampling Plan and Monitoring Well Installation Completion Report For Dairies with Individual Waste Discharge Requirements in the Sacramento and San Joaquin River Basins

5. The construction and destruction of monitoring wells and supply wells shall be in accordance with the standards under *Water Wells* and *Monitoring Wells* in the *California Well Standards Bulletin 74-90 (June 1991)* and *Bulletin 74-81 (December 1981)*, adopted by the Department of Water Resources (DWR). Should any county or local agency adopt more stringent standards than that adopted by the DWR, then these local standards shall supercede the Well Standard of DWR, and the Discharger shall comply with the more stringent standards.
6. The horizontal and vertical position of each monitoring well shall be determined by a registered land surveyor or other qualified professional. The horizontal position of each monitoring well shall be measured with one-foot lateral accuracy using the North American Datum 1983 (NAD83 datum). The vertical elevations of each monitoring well shall be referenced to the North American Vertical Datum 1988 (NAVD88 datum) to an absolute accuracy of at least 0.5 feet and a relative accuracy between monitoring wells of 0.01 feet.
7. Within 45 days after completion of any monitoring well, the Discharger shall submit to the Executive Officer a Monitoring Well Installation Completion Report (MWICR) (see Attachment D) prepared under the direct supervision of, and certified by, a California registered civil engineer or a California registered geologist with experience in hydrogeology.
8. Groundwater samples from monitoring wells shall be collected as specified in an approved Monitoring Well Installation and Sampling Plan.

### **Monitoring Well Installation and Sampling Plan**

At a minimum, the MWISP must contain all of the information listed below.

A. General Information:

1. Topographic map showing any existing nearby (about 2000 feet) domestic, irrigation, and municipal supply wells and monitoring wells, utilities, surface water bodies, drainage courses and their tributaries/destinations, and other major physical and man-made features, as appropriate.
2. Site plan showing proposed well locations, other existing wells, unused and/or abandoned wells, major physical site structures (such as corrals, freestall barns, milking barns, feed storage areas, etc.), waste handling facilities (including solid separation basins, retention ponds, manure storage areas), irrigated cropland and pasture, and on-site surface water features.

Monitoring Well Installation and Sampling Plan and Monitoring Well Installation Completion Report For Dairies with Individual Waste Discharge Requirements in the Sacramento and San Joaquin River Basins

3. Rationale for the number of proposed monitoring wells, their locations and depths, and identification of anticipated depth to groundwater.
4. Local permitting information (as required for drilling, well seals, boring/well abandonment).
5. Drilling details, including methods and types of equipment for drilling and logging activities. Equipment decontamination procedures (as appropriate) should be described.
6. Health and Safety Plan.

B. Proposed Drilling Details:

1. Drilling techniques
2. Well logging method

C. Proposed Monitoring Well Design: All proposed well construction information must be displayed on a construction diagram or schematic to identify the following:

1. Well depth
2. Borehole depth and diameter
3. Well construction materials
4. Casing material and diameter – include conductor casing, if appropriate
5. Location and length of perforation interval, size of perforations, and rationale
6. Location and thickness of filter pack, type and size of filter pack material, and rationale
7. Location and thickness of bentonite seal
8. Location, thickness, and type of annular seal
9. Surface seal depth and material
10. Type of well cap(s)
11. Type of well surface completion
12. Well protection devices (such as below-grade water tight-vaults, locking steel monument, bollards, etc.)

Monitoring Well Installation and Sampling Plan and Monitoring Well Installation Completion Report For Dairies with Individual Waste Discharge Requirements in the Sacramento and San Joaquin River Basins

D. Proposed Monitoring Well Development:

1. Schedule for development (at least seven days after well completion)
2. Method of development
3. Method of determining when development is complete
4. Parameters to be monitored during development
5. Method for storage and disposal of development water

E. Proposed Surveying:

1. How horizontal and vertical position of each monitoring well will be determined
2. The accuracy of horizontal and vertical measurements to be obtained
3. The California licensed professional (licensed land surveyor or civil engineer) to perform the survey

F. Proposed Groundwater Monitoring:

1. Schedule (at least 48 hours after well development)
2. Depth to groundwater measuring equipment (e.g., electric sounder or chalked tape capable of  $\pm 0.01$ -foot measurements)
3. Well purging method, equipment, and amount of purge water
4. Sample collection (e.g., bottles and preservation methods), handling procedures, and holding times
5. Quality assurance/quality control (QA/QC) procedures (as appropriate)
6. Analytical procedures
7. Equipment decontamination procedures (as appropriate)

G. Proposed Schedule:

1. Fieldwork
2. Laboratory analyses

Monitoring Well Installation and Sampling Plan and Monitoring Well Installation Completion Report For Dairies with Individual Waste Discharge Requirements in the Sacramento and San Joaquin River Basins

3. Report submittal

**Monitoring Well Installation Completion Report**

At a minimum, the MWICR shall summarize the field activities as described below.

A. General Information:

1. Brief overview of field activities including well installation summary (such as number, depths), and description and resolution of difficulties encountered during field program.
2. Topographic map showing any existing nearby domestic, irrigation, and municipal supply wells and monitoring wells, utilities, surface water bodies, drainage courses and their tributaries/destinations, and other major physical and man-made features.
3. Site plan showing monitoring well locations, other existing wells, unused and/or abandoned wells, major physical site structures (such as corrals, freestall barns, milking barns, feed storage areas, etc.), waste handling facilities (including solid separation basins, retention ponds, manure storage areas), land application area(s), and on-site surface water features.
4. Period of field activities and milestone events (e.g., distinguish between dates of well installation, development, and sampling)

B. Monitoring Well Construction:

1. Number and depths of monitoring wells installed
2. Monitoring well identification (i.e., numbers)
3. Date(s) of drilling and well installation
4. Description of monitoring well locations including field-implemented changes (from proposed locations) due to physical obstacles or safety hazards
5. Description of drilling and construction, including equipment, methods, and difficulties encountered (such as hole collapse, lost circulation, need for fishing)
6. Name of drilling company, driller, and logger (site geologist to be identified)
7. Driller's/Lithologic log
8. As-builts for each monitoring well with the following details:

Monitoring Well Installation and Sampling Plan and Monitoring Well Installation Completion Report For Dairies with Individual Waste Discharge Requirements in the Sacramento and San Joaquin River Basins

- a. Well identification
  - b. Total borehole and well depth
  - c. Date of installation
  - d. Boring diameter
  - e. Casing material and diameter (include conductor casing, if appropriate)
  - f. Location and thickness of slotted casing, perforation size
  - g. Location, thickness, type, and size of filter pack
  - h. Location and thickness of bentonite seal
  - i. Location, thickness, and type of annular seal
  - j. Depth of surface seal
  - k. Type of well cap
  - l. Type of surface completion
  - m. Depth to water (note any rises in water level from initial measurement) and date of measurement
  - n. Well elevation (measuring point to nearest  $\pm 0.01$  foot) at top of casing
  - o. Well protection device (such as below-grade water tight vaults, stovepipe, bollards, etc)
9. All depth to groundwater measurements during field program
10. Field notes from drilling, installation, and surveying activities (e.g., all subcontractor dailies, as appropriate)
11. Construction summary table of pertinent information such as date of installation, well depth, casing diameter, screen interval, bentonite seal interval, and well elevation
- C. Monitoring Well Development:
1. Date(s) and time of development
  2. Name of developer
  3. Method of development
  4. Methods used to identify completion of development
  5. Development log: volume of water purged and measurements of temperature, pH and electrical conductivity during and after development
  6. Disposal of development water
  7. Field notes (such a bailing to dryness, recovery time, number of development cycles)

Monitoring Well Installation and Sampling Plan and Monitoring Well Installation Completion  
Report For Dairies with Individual Waste Discharge Requirements in the Sacramento and  
San Joaquin River Basins

D. Monitoring Well Survey

1. Identify coordinate system or reference points used
2. Description of measuring points (i.e. ground surface, top of casing, etc.)
3. Horizontal and vertical coordinates of well casing with cap removed
4. Name, license number, and signature of California licensed professional who conducted survey
5. Surveyor's field notes
6. Tabulated survey data

## ATTACHMENT E

### Manure/Wastewater Tracking Manifest For Henry Jongsma and Son Dairy, Glenn County

#### Instructions:

- 1) Complete one manifest for each hauling event, for each destination. A hauling event may last for several days, as long as the manure is being hauled to the same destination.
- 2) If there are multiple destinations, **complete a separate form for each destination.**
- 3) The operator must obtain the signature of the hauler upon completion of each manure-hauling event.
- 4) The operator shall submit copies of manure/process wastewater tracking manifest(s) with the Annual Monitoring Report.

#### Operator Information:

Name of Operator: Hank Jongsma

Name of Dairy Facility: Henry Jongsma and Son Dairy

Facility Address: 3724 County Road S, Orland, CA 95963

Contact Person Name and Phone Number:

\_\_\_\_\_

Name

\_\_\_\_\_

Phone Number

#### Manure/Wastewater Hauler Information:

Name of Hauling Company and Contact Person:

\_\_\_\_\_

Hauling Company

\_\_\_\_\_

Number and Street

\_\_\_\_\_

City

\_\_\_\_\_

Zip Code

\_\_\_\_\_

Contact Person

\_\_\_\_\_

Phone Number

**Destination Information:**

Composting Facility / Broker / Farmer / Other (identify) \_\_\_\_\_ (please circle one)

Destination Address or Assessor's Parcel Number:

\_\_\_\_\_

Number and Street	City	Zip Code	Assessor's Parcel Number
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Contact information of party that receives the manure or wastewater:

Name of Company (if applicable): \_\_\_\_\_

Contact Person: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Number and Street	City	Zip Code
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Phone Number: \_\_\_\_\_

Dates Hauled: \_\_\_\_\_

**Amount Hauled:**

Enter the amount of manure hauled in tons or cubic yards (indicate the units used), the manure solids content (if amount reported in tons) or manure density (if amount reported in cubic yards), and the method used to calculate the amount:

Manure: \_\_\_\_\_ Tons or Cubic Yards (indicate which units used)

Manure Solids Content (if amount reported in tons): \_\_\_\_\_

Manure Density (if amount reported in cubic yards): \_\_\_\_\_

Method used to determine amount of manure: \_\_\_\_\_

Enter the amount of wastewater hauled in gallons and the method used to determine the amount.

Wastewater: \_\_\_\_\_ Gallons

Method used to determine volume of wastewater: \_\_\_\_\_

**Written Agreement:**

Does the Operator have a written agreement (in compliance with Land Application Specification 12 of Waste Discharge Requirements Order No. \_\_\_\_\_) with any party that receives wastewater from the Operator for its own use? (please check one)

\_\_\_\_\_ Yes      \_\_\_\_\_ No

**Certification:**

I declare under the penalty of law that I personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

Operator's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Hauler's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION**

**STANDARD PROVISIONS AND REPORTING REQUIREMENTS  
FOR INDIVIDUAL WASTE DISCHARGE REQUIREMENTS  
FOR  
DAIRIES IN THE SACRAMENTO AND SAN JOAQUIN RIVER BASINS  
August 2007**

**A. Introduction**

1. These Standard Provisions and Reporting Requirements (SPRR) are applicable to milk cow dairies that are regulated pursuant to the provisions of Title 27 California Code of Regulations (CCR) Division 2, Subdivision 1, Chapter 7, Subchapter 2, Sections 22560 et seq.
2. Any violation of the Order constitutes a violation of the California Water Code and, therefore, may result in enforcement action.
3. If there is any conflicting or contradictory language between the Order, the Monitoring and Reporting Program (MRP) associated with the Order, or the SPRR, then language in the Order shall govern over the MRP and the SPRR, and language in the MRP shall govern over the SPRR.

**B. Standard Provisions**

1. The requirements prescribed in the Order do not authorize the commission of any act causing injury to the property of another, or protect the Discharger from liabilities under federal, state, or local laws.
2. The Discharger shall comply with all federal, state, county, and local laws and regulations pertaining to the discharge of wastes from the facility that are at least as stringent as the requirements of the Order.
3. All discharges from the facility must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or to other courses under their jurisdiction that are at least as stringent as the requirements of the Order.
4. The Order does not convey any property rights or exclusive privileges.
5. The provisions of the Order are severable. If any provision of the Order is held invalid, the remainder of the Order shall not be affected.
6. The Discharger shall take all reasonable steps to minimize any adverse impact to the waters of the State resulting from noncompliance with the Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.

7. The fact that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the Order shall not be a defense for violations of the Order by the Discharger.
8. The filing of a request by the Discharger for modification, revocation and reissuance, or termination of the Order, or notification of planned changes or anticipated noncompliance, does not stay any condition of the Order.
9. The Order is not transferable to any person except after notice to the Central Valley Water Board. The Central Valley Water Board may modify or revoke and reissue the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the California Water Code.
10. The Discharger shall provide to the Executive Officer, within a reasonable time, any information which the Executive Officer may request to determine whether cause exists for modifying, revoking, and reissuing, or terminating the Discharger's coverage under the Order or to determine compliance with the Order. The Discharger shall also provide to the Executive Officer upon request, copies of records required by the Order to be kept.
11. After notice and opportunity for a hearing, the Order may be terminated or modified for cause, including but not limited to:
  - a. Violation of any term or condition contained in the Order;
  - b. Obtaining the Order by misrepresentation, or failure to disclose fully all relevant facts;
  - c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge; or
  - d. A material change in the character, location, or volume of discharge.
12. The Order may be modified if new state statutes or regulations are promulgated, and if more stringent applicable water quality standards are approved pursuant to Title 27 of the CCR, or as adopted into the Central Valley Water Board *Water Quality Control Plans (Basin Plans) for the Sacramento River and San Joaquin River Basins (4<sup>th</sup> Ed)*. The Order may also be modified for incorporation of land application plans, and/or changes in the waste application to cropland.
13. The Central Valley Water Board may review and revise the Order at any time upon application of any affected person or by motion of the Regional Board.
14. The Discharger shall ensure compliance with existing and/or future promulgated standards that apply to the discharge.

15. The Discharger shall permit representatives of the Central Valley Water Board and the State Water Resources Control Board (State Water Board), upon presentations of credentials at reasonable hours, to:
  - a. Enter premises where wastes are treated, stored, or disposed and where any records required by the Order are kept;
  - b. Copy any records required to be kept under terms and conditions of the Order;
  - c. Inspect facilities, equipment (monitoring and control), practices, or operations regulated or required by the Order; and
  - d. Sample, photograph, and/or video tape any discharge, waste, waste management unit, or monitoring device.
16. The Discharger shall properly operate and maintain in good working order any facility, unit, system, or monitoring device installed to achieve compliance with the Order. Proper operation and maintenance includes best practicable treatment and controls, and the appropriate quality assurance procedures.
17. Animal waste storage areas and containment structures shall be designed, constructed, and maintained to limit, to the greatest extent possible, infiltration, inundation, erosion, slope failure, washout, overtopping, by-pass, and overflow.
18. Setbacks or separation distances contained under Water Wells, Section 8, Part II, in the *California Well Standards, Supplemental Bulletin 74-90 (June 1991)*, and *Bulletin 94-81 (December 1981)*, California Department of Water Resources (DWR), shall be maintained for the installation of all monitoring wells and groundwater supply wells at existing dairies. A setback of 100 feet is required between supply wells and animal enclosures in the production area. A minimum setback of 100 feet, or other control structures (such as housing, berming, grading), shall be required for the protection of existing wells or new wells installed in the cropland. If a county or local agency adopts more stringent setback standards than that adopted by the DWR, then these local standards shall carry precedence over the Well Standards of DWR, and the Discharger shall comply with the more stringent standards.
19. Following any storm event that causes the freeboard of any wastewater holding pond to be less than one (1) foot for below-grade ponds, or two (2) feet for above-grade ponds, the Discharger shall take action as soon as possible to provide the appropriate freeboard in the wastewater holding pond.
20. For any electrically operated equipment at the facility, the failure of which would cause loss of control or containment of waste materials, or violation of this Order, the Discharger shall employ safeguards to prevent loss of control over wastes or violation of this Order. Such safeguards may include alternate power sources,

standby generators, standby pumps, additional storage capacity, modified operating procedures, or other means.

### **C. General Reporting Requirements**

1. The Discharger shall give at least 60 days advance notice to the Central Valley Water Board of any planned changes in the ownership or control of the facility.
2. 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 the Order by letter at least 60 days in advance of such change, a copy of which shall be immediately forwarded to the appropriate Central Valley Water Board office listed below in the General Reporting Requirements C.11.
3. To assume operation under the Order, any succeeding owner or operator must request, in writing, that the Executive Officer transfer coverage under the Order. The Central Valley Water Board will provide a form for this request that will allow the succeeding owner or operator to provide their full legal name, address and telephone number of the persons responsible for contact with the Central Valley Water Board and a responsibility statement and a signed statement in compliance with General Reporting Requirement C.7 below. The form will also include a statement for signature that the new owner or operator assumes full responsibility for compliance with the Order and that the new owner or operator will implement the Waste Management Plan and the NMP prepared by the preceding owner or operator. Transfer of the Order shall be approved or disapproved in writing by the Executive Officer. The succeeding owner or operator is not authorized to discharge under the Order and is subject to enforcement until written approval of the coverage transfer from the Executive Officer.
4. The Executive Officer may require the Discharger to submit technical reports pursuant to the Order and California Water Code Section 13267.
5. The Discharger shall identify any information that may be considered to be confidential under State law and not subject to disclosure under Public Records Act. The Discharger shall identify the basis of confidentiality. If the Executive Officer cannot identify a reasonable basis for treating the information as confidential, the Executive Officer will notify the Discharger that the information will be placed in the public file unless the Central Valley Water Board receives, within 10 calendar days, a written request from the Discharger to keep the information confidential containing a satisfactory explanation supporting the information's confidentiality.
6. Except for data determined to be exempt from disclosure under the Public Records Act (California Government Code Sections 6275 to 6276), and data determined to be confidential under Section 13267(b)(2) of the California Water Code, all reports prepared in accordance with the Order and submitted to the Executive Officer shall

be available for public inspection at the offices of the Central Valley Water Board. Data on waste discharges, water quality, meteorology, geology, and hydrogeology shall not be considered confidential.

7. All technical reports and monitoring program reports shall be accompanied by a cover letter with the certification specified in C.8 below and be signed by a person identified below:
  - a. For a sole proprietorship: by the proprietor;
  - b. For a partnership: by a general partner;
  - c. For a corporation: by a principal executive officer of at least the level of senior vice-president; or
  - d. A duly authorized representative if:
    - (1) The authorization is made in writing by a person described in Subsection a, b, or c of this provision;
    - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility, such as the position of manager. A duly authorized representative may thus be either a named individual or an individual occupying a named position; and
    - (3) The written authorization is submitted to the Central Valley Water Board.
8. Each person, as specified in C.7 above, signing a report required by the Order or other information requested by the Central Valley Water Board shall make the following certification:

*“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”*
9. In addition to Item C.7 above, all technical reports required in the Order that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by, or under the direction of, and signed by persons registered to practice in California pursuant to California Business and Professions Code, Sections 6735, 7835, and 7835.1 or federal officers and employees who are exempt from these Sections by California Business and Professions Code, Section 6739 or 7836. To demonstrate compliance with Title 16 CCR, Sections 415 and 3065, all technical reports must

contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

10. The Discharger shall file a Report of Waste Discharge with the Central Valley Water Board at least 140 days before making any material change in the character, location, or volume of the discharge. A material change includes, but is not limited to, the following:
  - a. The addition of a new wastewater that results in a change in the character of the waste;
  - b. Significantly changing the disposal or waste application method or location;
  - c. Significantly changing the method of treatment;
  - d. Increasing the discharge flow beyond that specified in the Order; and/or
  - e. Expanding existing herd size beyond the maximum herd size listed in the Order.
11. All reports shall be submitted to the following address:

For facilities in Butte, Lassen, Modoc, Plumas, Tehama, and Shasta counties, submit reports to:

California Regional Water Quality Control Board  
Central Valley Region  
415 Knollcrest Drive, Suite 100  
Redding, CA 96002  
Attention: Confined Animal Regulatory Unit

For facilities in all other counties, submit reports to:

California Regional Water Quality Control Board  
Central Valley Region  
11020 Sun Center Drive #200  
Rancho Cordova, CA 95670  
Attention: Confined Animal Regulatory Unit

#### **D. Requirements Specifically for Monitoring Programs and Monitoring Reports**

1. The Discharger shall file self-monitoring reports and/or technical reports in accordance with the detailed specifications contained in the MRP attached to the Order.

2. The Discharger shall maintain a written monitoring program sufficient to assure compliance with the terms of the Order. Anyone performing monitoring on behalf of the Discharger shall be familiar with the written program.
3. The monitoring program shall include observation practices, sampling procedures, and analytical methods designed to ensure that monitoring results provide a reliable indication of water quality at all monitoring points.
4. All instruments and devices used by the Discharger for the monitoring program shall be properly maintained and shall be calibrated as recommended by the manufacturer and at least once annually to ensure their continued accuracy.
5. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by the Order, and records of all data used to complete the reports. Records shall be maintained for a minimum of five years from the date of sample, measurement, report, or application. Records shall also be maintained after facility operations cease if wastes that pose a threat to water quality remain at the site. This five-year period may be extended during the course of any unresolved litigation regarding the discharge or when requested in writing by the Central Valley Water Board Executive Officer.
  - a. Records of on-site monitoring activities shall include the:
    - (1) Date that observations were recorded, measurements were made, or samples were collected;
    - (2) Name and signature of the individual(s) who made the observations, made and recorded the measurements, or conducted the sampling;
    - (3) Location of measurements or sample collection;
    - (4) Procedures used for measurements or sample collection;
    - (5) Unique identifying number assigned to each sample; and
    - (6) Method of sample preservation utilized.
  - b. Records of laboratory analyses shall include the:
    - (1) Results for the analyses performed on the samples that were submitted;
    - (2) Chain-of-custody forms used for sample transport and submission;
    - (3) Form that records the date that samples were received by the laboratory and specifies the analytical tests requested;

- (4) Name, address, and phone number of the laboratory which performed the analysis;
- (5) Analytical methods used;
- (6) Date(s) analyses were performed;
- (7) Identity of individual(s) who performed the analyses or the lab manager; and
- (8) Results for the quality control/quality assurance (QA/QC) program for the analyses performed.

**E. Enforcement**

1. California Water Code Section 13350 provides that any person who violates WDRs or a provision of the California Water Code is subject to civil liability of up to \$5,000 per day or \$15,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil liability of up to \$10 per gallon, or \$20 per gallon; or some combination thereof, depending on the violation, or upon the combination of violations. In addition, there are a number of other enforcement provisions that may apply to violation of the Order.