ATTACHMENT B

Waste Management Plan for the Production Area
For
Existing Milk Cow Dairies

A Waste Management Plan (WMP) for the production area is required for all existing milk cow dairies subject to Waste Discharge Requirements General Order No. ___ and shall address all of the items below. The portions of the WMP that are related to facility and design specifications (items II and III) must be prepared by, or under the responsible charge of, and certified by a civil engineer who is registered pursuant to California law or other person as may be permitted under the provisions of the California Business and Professions Code to assume responsible charge of such work.

The purpose of the WMP is to ensure that the production area of the dairy facility is designed, constructed, operated and maintained so that dairy wastes generated at the dairy are managed in compliance with Waste Discharge Requirements General Order No. ___ in order to prevent adverse impacts to groundwater and surface water quality.

I. A description of the facility that includes:

A. The name of the facility and the county in which it is located;

B. The address, Assessor's Parcel Number, and Township, Range, Section(s), and Baseline Meridian of the property;

C. The name(s), address(es), and telephone number(s) of the property owner(s), facility operator(s), and the contact person for the facility;

D. Present and maximum animal population as indicated below (this information is in the Report of Waste Discharge submitted in response to the Central Valley Water Board's 8 August 2005 request);

Type of Animals	Present Number of Animals	Maximum Number of Animals in Past 12 months	Breed of Animals
Milking Cows			
Dry Cows			
Heifers: 15 – 24 months			
Heifers: 7 to 14 months			

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Type of Animals	Present Number of Animals	Maximum Number of Animals in Past 12 months	Breed of Animals
Heifers: 4 to 6 months			
Calves: up to 3 months			
Other types of commercial animals			

E. Total volume (gallons) of process wastewater (e.g., milk barn washwater, fresh (not recycled) corral flush water, etc.) generated daily and how this volume was determined; and

F. A Site Map (or Maps) of appropriate scale to show property boundaries and the following in sufficient detail:

1. The location of the features of the production area including:

   a. Structures used for animal housing, milk parlor, and other buildings; corrals and ponds; solids separation facilities (settling basins or mechanical separators); other areas where animal wastes are deposited or stored; feed storage areas; drainage flow directions and nearby surface waters; all water supply wells (domestic, irrigation, and barn wells) and groundwater monitoring wells; and

   b. Process wastewater conveyance structures, discharge points, and discharge/mixing points with irrigation water supplies; pumping facilities and flow meter locations; upstream diversion structures, drainage ditches and canals, culverts, drainage controls (berms/levees, etc.), and drainage easements; and any additional components of the waste handling and storage system.

2. The location and features of all land application areas (land under the Discharger's control, whether it is owned, rented, or leased, to which manure or process wastewater from the production area is or may be applied for nutrient recycling) including:

   a. A field identification system (Assessor's Parcel Number; field by name or number; total acreage of each field; crops grown; indication if each field is owned, leased, or used pursuant to a formal agreement);

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); irrigation supply wells and groundwater monitoring wells; sampling locations for discharges of storm water and tailwater to surface water from the field; and

b. Process 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.

3. The location of all cropland that is part of the dairy but is not used for dairy waste application including the Assessor's Parcel Number, total acreage, crops grown, and information on who owns or leases the field. The Waste Management Plan shall indicate if such cropland is covered under the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Order No. R5-2006-0053 for Coalition Group or Order No. R5-2006-0054 for Individual Discharger, or updates thereto). Such cropland will be covered under Waste Discharge Requirements General Order No. ___;

4. The location of all off-property domestic wells within 600 feet of the production area or land application area(s) associated with the dairy and the location of all municipal supply wells within 1,500 feet of the production area or land application area(s) associated with the dairy; and

5. A map scale, vicinity map, north arrow, and the date the map was prepared. The map shall be drawn on a published base map (e.g., a topographic map or aerial photo) using an appropriate scale that shows sufficient details of all facilities.

II. An engineering report demonstrating that the existing facility has adequate containment capacity. The report shall include calculations showing if the existing containment structures are able to retain all facility process wastewater generated, together with all precipitation on and drainage through manured areas, up to and including during a 25-year, 24-hour storm.

A. The determination of the necessary storage volume shall reflect:

1. The maximum period of time, as defined in the Nutrient Management Plan (item III.B of Attachment C), anticipated between land application

events (storage period), which shall consider application of process wastewater or manure to the land application area as allowed by Waste Discharge Requirements General Order No. ____ using proper timing and rate of applications;

2. Manure, process wastewater, and other wastes accumulated during the storage period;

3. Normal precipitation, or normal precipitation times a factor of one and a half, less evaporation on the surface area during the entire storage period. If normal precipitation is used in the calculation of necessary storage volume, the Waste Management Plan shall include a Contingency Plan as specified in II.C below;

4. Normal runoff (runoff from normal precipitation), or runoff due to normal precipitation times a factor of one and a half, from the production area during the storage period. If normal runoff is used in the calculation of necessary storage volume, the Waste Management Plan shall include a Contingency Plan as specified in II.C below;

5. 25-year, 24-hour precipitation on the surface (at the required design storage volume level) of the facility;

6. 25-year, 24-hour runoff from the facility's drainage area;

7. Residual solids after liquids have been removed; and

8. Necessary freeboard (one foot of freeboard for belowground retention ponds and two feet of freeboard for aboveground retention ponds).

B. If the existing facility's storage capacity is inadequate, the WMP shall include proposed modifications or improvements. Any proposed modifications or improvements must be: prepared by, or under the responsible charge of, and certified by a civil engineer who is registered pursuant to California law or other person as may be permitted under the provisions of the California Business and Professions Code to assume responsible charge of such work; and include:

1. Design calculations demonstrating that adequate containment will be achieved;

2. Details on the liner and leachate collection and removal system (if appropriate) materials;

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3. A schedule for construction and certification of completion to comply with the Schedule of Tasks J.1 of Waste Discharge Requirements General Order No. ___;

4. A construction quality assurance plan describing testing and observations need to document construction of the pond in accordance with the design and Sections 20323 and 20324 of Title 27; and

5. An operation and maintenance plan for the pond.

C. Contingency Plan: If the necessary storage volume calculated in II.A or II.B above is based on normal precipitation and/or runoff rather than precipitation or runoff from normal precipitation times a factor of one and a half (see II.A.3 and II.A.4 above), then the engineering report shall include a Contingency Plan that includes a plan on how the excess precipitation and/or runoff that is generated during higher than normal precipitation will be managed. If the Contingency Plan includes plans to discharge the excess runoff and/or precipitation to land without being in conformance with the NMP, then the Contingency Plan shall include a Monitoring Well Installation and Sampling Plan (MWISP) with a schedule for implementation that proposes monitoring wells to determine the impacts of such disposal on groundwater quality.

III. An engineering report showing if the facility has adequate flood protection. If the Discharger can provide to the Executive Officer an appropriate published flood zone map that shows the facility is outside the relevant flood zone, an engineering report showing adequate flood protection is not required for that facility. The engineering report shall include a map and cross-sections to scale, calculations, and specifications as necessary. The engineering report shall also describe the size, elevation, and location of all facilities present to protect the facility from inundation or washout as follows:

A. For facilities in the Sacramento River and San Joaquin River Basins showing if:

1. The ponds and manured areas at facilities in operation on or before November 27, 1984 are protected from inundation or washout by overflow from any stream channel during 20-year peak storm flow; or

2. Existing facilities in operation on or before November 27, 1984 that are protected against 100-year peak storm flows will continue such protection; or

3. Facilities, or portions thereof, which began operation after November 27, 1984, are protected against 100-year peak storm flows.

B. For facilities in the Tulare Lake Basin showing if the facility is protected from overflow from stream channels during 20-year peak stream flows for facilities that existed as of 25 July 1975 and protected from 100-year peak stream flows for facilities constructed after 25 July 1975. Facilities expanded after 8 December 1984 must be protected from 100-year peak stream flows.

C. If the facility's flood protection does not meet these minimum requirements, the WMP shall include proposed modifications or improvements with the corresponding design to achieve the necessary flood protection and a schedule for construction and certification of completion to comply with the Schedule of Tasks J.1 of Waste Discharge Requirements General Order No. ____.

IV. A report assessing if the animal confinement areas, animal housing, and manure and feed storage areas are designed and constructed properly.

A. The report shall assess if the following design and construction criteria are met:

1. Corrals and/or pens are designed and constructed to collect and divert all process wastewater to the retention pond;

2. The animal housing area (i.e., barn, shed, milk parlor, etc.) is designed and constructed to divert all water that has contacted animal wastes to the retention pond; and

3. Manure and feed storage areas are designed and constructed to collect and divert runoff and leachate from these areas to the retention pond.

B. If the facility does not meet the above design and construction criteria, the WMP shall include proposed modifications or improvements to achieve the criteria and a schedule for construction and certification of completion to comply with the Schedule of Tasks J.1 of Waste Discharge Requirements General Order No. ____.

V. An operation and maintenance plan to ensure that:

A. All precipitation and surface drainage from outside manured areas, including that collected from roofed areas, is diverted away from manured areas, unless such drainage is fully contained and is included in the storage requirement calculations required in item II, above;

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B. Ponds are managed to maintain the required freeboard and to prevent odors, breeding of mosquitoes, damage from burrowing animals, damage from equipment during removal of solids, embankment settlement, erosion, seepage, excess weeds, algae, and vegetation;

C. Holding ponds provide necessary storage volume prior to winter storms (by November 1st at the latest), maintain capacity considering buildup of solids, and comply with the minimum freeboard required in Waste Discharge Requirements General Order No. ____;

D. There is no discharge of waste or storm water to surface waters from the production area;

E. Procedures have been established for removal of solids from any lined pond to prevent damage to the pond liner;

F. Corrals and/or pens are maintained to collect and divert all process wastewater to the retention pond and to prevent ponding of water and to minimize infiltration of water into the underlying soils;

G. The animal housing area (e.g., barn, shed, milk parlor, etc.) is maintained to collect and divert all water that has contacted animal wastes to the retention pond and to minimize the infiltration of water into the underlying soils;

H. Manure and feed storage areas are maintained to ensure that runoff and leachate from these areas are collected and diverted to the retention pond and to minimize infiltration of leachate from these areas to the underlying soils;

I. All dead animals are disposed of properly;

J. Chemicals and other contaminants handled at the facility are not disposed of in any manure or process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants;

K. All animals are prevented from entering any surface water within the confined area; and

L. Salt in animal rations is limited to the amount required to maintain animal health and optimum production.

VI. Documentation from a trained professional (i.e., a person certified by the American Backflow Prevention Association, an inspector from a state or local governmental

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agency who has experience and/or training in backflow prevention, or a consultant with such experience and/or training) that there are no cross-connections that would allow the backflow of wastewater into a water supply well, irrigation well, or surface water as identified on the Site Map required in I.F above.

VII. The certification required in Required Reports and Notices H.2.a of Waste Discharge Requirements General Order No. ___.