APPENDIX J

TECHNICAL REPORT CONTENTS

TECHNICAL REPORT:

The *Technical Report* is a series of reports, plans, and programs prepared by ~~a~~ qualified professionals that ~~is~~ are submitted with an application for a new dairy or expansion of an existing dairy. The ~~technical report~~ *Technical Report* shall includes various studies, plans, and programs necessary to describe ~~the dairy site, dairy facility, and the management and operation of the dairy. Additional documentation may be required prior to construction to verify that specific requirements will be included in the actual construction~~. how the proposed application, when implemented, will satisfy the standards set in the Dairy Element. In addition, a monitoring and record keeping program shall be included for each component that both documents how the component achieves the standard, and provides documentation by the dairy operator of the results of implementing the plans and programs identified in the *Technical Report*. The components of the *Technical Report* are ~~listed below~~:

SUMMARY OF TECHNICAL REPORT COMPONENTS:

1a. Geotechnical Report
1b. Groundwater Evaluation
1c. Soils Evaluation
1d. Hydrologic Sensitivity Assessment
1e. Gas and Oil Well Evaluation
2a. Manure Nutrient Management Plan (MNMP
2B. Comprehensive Dairy Process Water Disposal Plan (CDWDP)
2c. Manure Treatment Management Plan
2d. Odor Management Plan (OMP)
2e. Irrigation Management Program (IMP)
3. Hazardous Materials Business Plan (HMBP)
4. Pest and Vector Management Plan (PVMP)
5. Dead Animal Management Plan (DAMP)
6. Wildlife Survey
7. Cultural Resources Evaluation by the California Historic Resources Information System (CHRIS)
8. Traffic Impact Study
9a. Air Quality Assessment
9b. Fugitive Dust Emissions Control Plan (FDECP)
10. Light, Glare and Noise Assessment

TECHNICAL REPORT COMPONENTS:

1a. Geotechnical Report (Policy DE 2.1f, DE 3.2b and DE 4.1a.B.2.c):
The *Geotechnical Report* is a part of the *Technical Report* documentation prepared by a qualified professional, either a Professional Engineer or Licensed Geotechnical Engineer, and shall be submitted to the Kings County Planning Agency with the SPR or CUP application. The report shall, at a minimum, present the results of sufficient subsurface sampling and testing to classify and characterize the soils and groundwater conditions in areas of proposed dairy facility structures, corrals, feed and manure storage areas, lagoon, and cropland where process water and

manure are spread. The report shall include recommendations for foundation design, cut and fill slope design, levee or embankment design, and site grading. The recommendations shall specifically address, but not limited to, the following:

A. Soil consolidation and compression;
B. Shrink-swell potential;
C. Soil corrosivity;
D. Cut and fill slope stability under static and pseudo-static (earthquake) conditions;
E. Erosion potential

Prior to construction of ~~the~~ a proposed above-grade embankments for the manure separation pits and process water lagoons at ~~each of the~~ a dairy ~~facilities~~ facility, the owner/operator shall submit a revise geotechnical report, prepared by a qualified professional that presents any changes to the specifications for the construction of embankments, foundations, cut and fills using on-site surface soils. The geotechnical report shall be submitted to the Kings County Planning Department and shall include at least the following requirements:

A. Specific compaction testing requirements that ensure suitable compressive strength for the embankments. The compaction requirements shall specifically address the potential for leaching of salts and possible effects associated with hydrocompressibility of the emplaced soils.
B. Slope stability analysis for proposed embankment design. The slope stability analysis shall demonstrate that, under proposed design and requirements for fill compaction, the fill slopes will have a factor of safety of 1.25 or greater under static conditions and 1.0 or greater under pseudo-static (expected seismic shaking) conditions.

Following Construction:

A. Following construction of lagoons and separation pits, a registered Civil Engineer or licensed Geotechnical Engineer shall submit to the Kings County Planning Agency documentation and certification that the embankments have been constructed in compliance with design requirements. The documentation and certification shall also be maintained on the dairy site and be made available to Dairy Monitoring Office personnel upon request.
B. Following construction of lagoons and separation pits, a registered Civil Engineer or licensed Geotechnical Engineer shall submit to the Kings County Planning Agency documentation and certification that the bottoms and sides of the lagoons and separation pits has a permeability equal to, or less than, 10^{-5}~~6~~ cm/sec. The documentation and certification shall be maintained on the dairy site and be made available to Dairy Monitoring Office personnel upon request.
C. Annual inspection and reporting of findings by a Registered Civil Engineer or licensed Geotechnical Engineer of the inspection of the lagoons and separation pits, and any remedial action taken.

1b. Groundwater Evaluation (Policy DE 3.2a):

This evaluation may be done in conjunction with the Geotechnical Report described above. The *Technical Report* shall address the following:

A. *Depth to first groundwater:* Minimum separation from bottom of (lined and unlined) lagoons, manure and feed storage areas, and corrals shall be at least five (5) feet to the highest recorded groundwater level.
B. *Depth to first useable groundwater for human consumption:* The source of potable water for the dairy facility and nearby properties, and the safeguards to protect that water source must be identified.
C. *Proximity to watercourses:* Adjacent watercourses and improvements to protect watercourses from discharges from a dairy into watercourses or water bodies must be identified.

Documentation of the above information shall be submitted to the Kings County Planning Agency with the SPR or CUP application, and maintained on the dairy site and be made available to Dairy Monitoring Office personnel upon request.

In the event there is a variance between these standards and the RWQCB requirements, the more restrictive requirement shall prevail, unless RWQCB specifies a lesser standard in the permit they issue. In such a case the RWQCB standard will then prevail.

1c. Soils Report (Policy DE 2.1f and 3.2b):

The applicant for new dairies, or the expansion of existing dairies, shall file as part of the *Technical Report* a preliminary soils report on the Dairy Facility prepared by a Registered Civil Engineer. The preliminary soils report shall be based upon sufficient subsurface sampling and testing to classify and characterize the soils using test borings or excavations necessary to evaluate the soil beneath the proposed Dairy Facility. If the preliminary soils report indicates the presence of critically expansive soils or other soil problems, which if not corrected, could lead to structural defects or leakage of contaminates into the groundwater, a soil investigation shall be prepared by a Civil Engineer registered in the State of California and shall recommend design requirements that are likely to prevent possible structural damage to structures or lagoons proposed to be constructed within the Dairy Facility. The report shall include recommendations for foundation design, cut and fill slope design, and site grading.

1d. Hydrologic Sensitivity Assessment (HSA) (Policy DE 3.2h):

A *Hydrologic Sensitivity Assessment* (HSA) prepared by a qualified Certified Hydrogeologist or Professional Engineer shall be required as part of the *Technical Report* when either:

A. Drinking water wells screened above the E clay are located within one-half (½) mile of the dairy site, or where the E clay is not present, and therefore does not provide a hydrogeological barrier to pollutant transport, or
B. The site is located within the Kettleman Plains or Sunflower Valley (an area of limited water supply).

1e. Gas and Oil Well Evaluation (Policy DE 3.5a):

The *Technical Report* shall include a report that the California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) has reviewed their records for the potential presence of active and abandoned oil or gas wells at or adjacent to (within 100 feet) a proposed dairy site. If DOGGR identifies wells, the *Technical Report* shall include a scaled map showing the location of the wells on the Site Plan of the proposed dairy facility. Any abandoned oil or gas wells identified by DOGGR within the proposed dairy site located beneath or within 300 feet of a proposed dairy structure shall be properly closed in accordance with specification provided by DOGGR.

Documentation of any well closure or destruction pursuant to DOGGR standards shall be submitted to the Kings County Planning Agency.

2a. Manure Nutrient Management Plan (MNMP) (Objective 4.1, Policy 4.1a, 4.1b, 4.1c, 4.1e, and 4.1f):

The ~~*Comprehensive*~~ Manure *Nutrient Management Plan* (~~C~~**M**NMP) is a part of the *Technical Report* submitted with each application to either establish a new dairy or expand an existing dairy. The ~~C~~**M**NMP specifies practices that will be used to implement each component of the ~~C~~**M**NMP. The ~~C~~**M**NMP includes the following components as found in the USDA/USEPA *Unified National Strategy for Animal Feeding Operations*:

A. Feed Management - Animal diets and feed may be modified to reduce the amounts of nutrients in manure. ~~Feed management can include the use of low phosphorus corn and enzymes such as phytase, that can be added to non-ruminant animal diets to increase the utilization of phosphorus. Reduced inputs and greater utilization of phosphorus by the animal reduces the amount of phosphorus excreted and produces a manure with a nitrogen phosphorus ratio closer to that required by crop and forage plants.~~

B. Manure Handling and Storage - Manure needs to be handled and stored properly to prevent water pollution from AFOs. Manure and wastewater handling and storage practices should also consider odor and other environmental and public health problems. Handling and storage considerations should include:

1. Diversion of clean water- Siting and management practices ~~should~~ may include diverting clean water from contact with feed lots and holding pens, animal manure, or manure storage systems. Clean water can include rainfall falling on roofs of facilities, run off from adjacent lands, or other sources. If clean water is not diverted away from manured or feed storage areas, the capacity of process water storage facilities (i.e., lagoons) shall be sufficient to collect and retain the additional runoff.
2. Prevent leakage - Construction and maintenance of buildings, collection systems, conveyance systems, and permanent and temporary storage facilities should prevent leakage of organic matter, nutrients, and pathogens to ground or surface water.
   a. All manure separation pits and process water lagoons shall be constructed so that the bottoms of the pits and lagoons are at least five feet above the highest expected groundwater levels.
   b. The pits and lagoons shall be maintained so that the integrity of the liners are ensured.
   c. The specific permeability of soils lining the pits and lagoons shall not be greater than 1×10^{-5} centimeters per second in compliance with the Geotechnical, Design, and Construction Guidelines published by the Natural Resource Conservation Service (1997).
   d. A qualified professional (i.e., Professional Engineer or Certified Engineering Geologist) shall certify that the liner system of a lagoon or pit is installed according to the NRCS design standards.
   e. The soil sampling and permeability testing program shall be designed to be representative of all soils lining all proposed pond areas.
   f. Construction of the lagoons shall be inspected by a qualified professional to ensure that geologic heterogeneities (e.g., channel deposits and sandy lenses) are identified and properly mitigated to ensure integrity of the liner in compliance with the NRCS standards. The liner must be protected against damage during operation and maintenance activities.
   g. Site drainage shall be included in the project design and construction of any manured area, including but not limited to, dairy surroundings, corrals, and ramps, pursuant to *Title 3, Division 2, Chapter 1, Article 22, §646.1 of the California Code of Regulations* to ensure that ponding does not occur.
   h. Regular maintenance of corrals and dry manure storage areas shall include filling of depressions. Care shall be taken not to disturb the seal layer in the corrals. Dairy personnel shall be taught to correctly use manure collection equipment.
   i. The potential for discharge of water-borne pathogens to existing and proposed domestic water supply wells shall be minimized by ensuring that the domestic wells are constructed in accordance with the California Well Standards and that appropriate minimum setbacks (150 feet, or other distance set in

the Waste Discharge Requirements issued for the dairy by the RWQCB) between domestic wells and potential sources of pollution are maintained.

3. Provide adequate storage for manure:
   a) Dry manure shall be stored in a manner to ensure all runoff from manure storage areas is captured and diverted to the dairy process water collection system.
   b. Dairy process water storage systems shall be designed and constructed to store, handle, and transport all of the quantity and contents of dairy process water produced on the Dairy Facility, runoff from the Dairy Facility, and rainfall that falls on the Dairy Facility. Location of manure storage areas shall consider proximity to water bodies, floodplains, and other environmentally sensitive areas.
4. Manure treatments - Manure ~~should~~ shall be ~~handled and~~ treated to reduce the loss of nutrients to the atmosphere during storage, to make the material a more stable fertilizer when land-applied or to reduce pathogens, vector attraction and odors, as appropriate.
5. Management of dead animals - Dead animals should be disposed of in a way that does not adversely affect ground or surface water or create public health concerns. Composting, rendering, and other practices are common methods used to dispose of dead animals.

C. Land Application of Manure - Land application is the most common, and usually most desirable method of utilizing manure because of the value of the nutrients and organic matter. Land application ~~should~~ shall be planned to ensure that the proper amounts of all nutrients are applied in a way that does not cause harm to the environment or to public health. Land application in accordance with the ~~C~~MNMP ~~should~~ shall minimize water quality and public health risk. Considerations for appropriate land application ~~should~~ shall include:

1. Nutrient balance - The primary purpose of nutrient management is to achieve the level of nutrients (e.g. nitrogen and phosphorus) required to grow the planned crop by balancing the nutrients that are already in the soil and from other sources with those that will be applied in manure, biosolids and commercial fertilizer. At a minimum, nutrient management should prevent the application of nutrients at rates that will exceed the capacity of the soil and planned crops to assimilate nutrients and prevent pollution. Soils and manure should be tested to determine nutrient content.
2. Timing and methods of application - Care must be taken when land-applying manure to prevent it from entering streams, other water bodies, or environmentally sensitive areas. The timing and methods of application should minimize the loss of nutrients to groundwater or surface water and the loss of nitrogen to the atmosphere. Manure application equipment should be calibrated to ensure that the quantity of material being applied is ~~what is planned~~ at agronomic rates. Manure application shall be avoided during periods of high winds (in excess of 15 miles per hour) and when winds are directed at populated areas within ½ mile of the manure application.

D. Land Management - Tillage, crop residue management, grazing management, and other conservation practices ~~should~~ shall be utilized to minimize movement to surface water and groundwater of soil, organic materials, nutrients, and pathogens from lands where manure is applied. ~~Forest riparian buffers, filter strips, field borders, contour buffer strips, and other conservation buffer practices should be installed to intercept, store and utilize nutrients or other pollutants that may migrate from fields on which manure is applied.~~

E. Record Keeping - ~~AFO~~ Dairy operators ~~should~~ shall keep records that indicate the quantity of manure produced and how the manure was utilized, including where, when, and amount of nutrients applied. Soil and manure testing ~~should~~ shall be incorporated into the record keeping system. These records ~~should~~ shall be ~~kept when manure leaves the AFO~~ maintained by the dairy and shall be made available to the

Dairy Monitoring Office personnel upon their request.

F. Other Utilization Options - Where the potential for environmentally sound land application is limited, alternative uses of manure, such as the sale of manure to other farmers, composting and sale of compost to home owners, and using manure for power generation may also be appropriate. All manure utilization options should be designed and implemented to reduce the risk to all environmental resources and must comply with Federal, State, Tribal and local law.

Nitrogen and salt loading estimates provided in the literature and by the RWQCB are general estimates to be used for planning purposes only. Each dairy shall implement and maintain a Nutrient and Irrigation Water Management Plan and a Monitoring and Reporting Program, as required by the RWQCB, to ensure that excess nitrogen and salt loading of crop lands does not occur. Specific requirements of these programs are described by the RWQCB in *Fact Sheet No. 4* for Dairies and the General Waste Discharge Requirements for Milk Cow Dairies (No. 96-270-01). After the dairies begin operation, the actual nitrogen and salt content of manure generated at the proposed dairies shall be determined by a State-certified laboratory using standard collection, chain-of-custody, and analytical techniques (a minimum of four times per year to account for seasonal variation). The numerical values obtained from the laboratory analyses shall be used to refine nitrogen and salt loading estimates. The dairy operators shall make the necessary adjustments to application rates or animal units maintained at the site, as appropriate, to remain within maximum loading rates established by the RWQCB. An annual report documenting on-site activities shall be submitted to the RWQCB (with a copy to Kings County Planning Department). At minimum, the annual report to the RWQCB shall include laboratory analytical data, calculations demonstrating on-site animal units, manure load generation, total nitrogen and salts generated, liquid manure application rates, crop type where liquid waste was applied, and fate of dry manure transported off-site. The RWQCB is responsible for reviewing the annual reports for adequacy and specifying modification of on-site activities, as appropriate.

~~3~~2b. Comprehensive Dairy Process Water ~~Disposal~~ Application Plan (CDW~~D~~AP) (Objective DE 4.2, Policy DE4.2a, 4.2b, 4.2c, and 4.2d):

The *Comprehensive Dairy Process Water ~~Disposal~~ Application Plan* (CDW~~D~~AP) is a part of the *Technical Report* submitted with an application for a new dairy or the expansion of an existing dairy. ~~It shall include *dairy process water use agreements* for land where dairy process water will be used. The agreements are between the dairy operator and the owner of the land where dairy process water will be used. The term of the agreement is the term of the zoning permit unless a new agreement is provided to the Planning Commission for review and approval prior to the expiration date of the agreement. The agreement is required for the dairy owners own land as well as land owned by other parties.~~

1. The applicant for the site plan review (SPR) or conditional use permit (CUP), for a new dairy or the expansion of an existing dairy shall submit an enforceable and recordable agreement for the use of the land where the dairy's process water and manure will be used. The agreement shall:
   a. Include the estimated amount of process water and manure that will be generated by the dairy (including an estimate of the Nitrogen and salt content of the dairy process water and manure.
   b. Identify all land, on and off the dairy site, where the dairy's process water will be applied by legal description or the property. Solid manure sold to other farmers or brokers does not have to be tracked; however, the amount transported from the dairy shall be documented. This agreement will be recorded

after issuance of the SPR for the proposed new dairy, or expansion of an existing dairy, but before the new dairy, or expansion area, becomes operational. This agreement is also required when the dairy operator owns the land where the dairy process water and solid manure will be used. The terms of the SPR, or CUP, shall not exceed the terms of the agreement. In order to operate the dairy, the operator must have a valid dairy process water and manure agreement in force. Termination of the agreement is a violation of the SPR, or CUP, and the dairy operation becomes illegal unless alternative land sufficient to manage the dairy's process water and solid manure is substituted and included in a new agreement that is recorded.

2. If a dairy owner/operator enters into an agreement with another landowner to use the dairy's process water on the other land, the following shall apply:
   a. The agreement shall state that it is for the proposed dairy or expansion, and identifies the Dairy Facility by name and location. The agreement shall include a legal description of all lands burdened by the obligation of the agreement.
   b. The land identified in the agreement for the use of the dairy process water does not have any other dairy process water or dairy water agreement currently upon it or added in the future.
   c. The agreement may not be transferred to any other dairy or animal-feeding operation without the prior notice to the Zoning Administrator. If such transfer occurs, the original dairy must cease operation or simultaneously enter into a new agreement elsewhere which the Zoning Administrator must approve. The Zoning Administrator's approval shall be in the form of a SPR modifying the dairy's zoning permit.
   d. The agreement must restrict the use of the land to cropping patterns that use the nutrients from the dairy process water generated from the new or expanded Dairy Facility. The lowest nutrient utilization rate of the cropping pattern shall be used in the calculations for nutrient utilization, unless the cropping patterns are based on the recommendations of a Certified Agronomist.
   e. The agreement shall be recorded after issuance of the SPR, or CUP, for the proposed new dairy. Or expansion of an existing dairy, but before the new dairy, or expansion area, becomes operational, and shall be binding upon the current property owner's successors in interest as long as the agreement is in force.
   f. The dairy operator shall have control of the timing of the dairy process water and manure application on the land subject to the agreement.
   g. The agreement becomes part of the SPR or CUP. The Zoning Administrator must approve any changes in the terms of the agreement before the change in the agreement is valid.

Record keeping shall include documentation by a Certified Agronomist of the utilization of the dairy process water and the crops nutrient demands. Copies of the documentation and utilization records of the dairy process water shall be maintained on site. All of the records shall be made available to the Dairy Monitoring Office personnel upon their request.

~~5~~2c. Manure Treatment Management Plan (MTMP) (Policy DE 5.1c, 6.2d, 6.2e, and 6.2f):

The *Manure Treatment Management Plan* (MTMP) is a part of the *Technical Report* submitted with each application to either establish a new dairy or expand an existing dairy. The owner/operator, or his or her agent, of a proposed new dairy or the expansion of an existing dairy, shall provide treatment of the manure generated by the flushing systems to reduce emissions of reactive organic gases, nitrous oxides, ammonia, methane, hydrogen sulfide, and odor. ~~The Kings County Zoning Administrator shall consult with the Cooperative Extension, Agriculture and Natural Sciences Department at the University of California, Davis, to determine whether the MTMP is sufficient.~~ The MTMP shall specify the treatment technology and a schedule for implementation. The appropriate treatment technology, or combination of technologies, shall be selected on the basis of expected manure volumes and site-specific management strategies. The selected treatment system shall be designed to minimize, to the extent economically feasible, the release of air emissions into the environment.

The most effective treatment systems that are currently available to reduce ROG emissions are:

A. Anaerobic digestion technologies, including covered lagoons, plug flow digesters, and complete mix digesters; or
B. Aerobic treatment systems, including activated sludge reactors, aerated lagoons, and aerated treatment tanks.

Each of the technologies listed above can be supplemented by enhancement of the biological decomposition of the treated manure. Biological decomposition, which can occur under aerobic and anaerobic conditions, can be improved through controlled addition of supplemental microbes or macroscopic organisms, such as worms, which are capable of metabolizing the manure constituents.

The MTMP shall include a monitoring and record keeping component of the treatment program. It shall document, at least but not limited to the following information: volume of dairy process water and manure treated; and the estimated reduction of ROG, ammonia, and methane. This estimate shall be based on the design capacity and the treatment efficiency of the treatment system as documented by a qualified professional or manufacture's documentation.

~~6~~2d. Odor Management Plan (OMP) (Policy DE 5.1b and 6.2d):

The *Odor Management Plan* (OMP) is a part of the *Technical Report* submitted with the application for a new dairy or the expansion of an existing dairy. The OMP may be incorporated into the MTMP. The purpose of the OMP is to reduce the potential for odor impacts to nearby receptors. The owner/operator, or his or her agent, shall prepare an OMP that specifies standard operating practices for livestock handling, and manure collection, treatment, storage, and land application. The OMP shall specifically address standard operating practices for livestock handling, and manure collection, treatment, storage, and land application. It shall also provide standard operating procedures/control measures to be implemented to protect receptors from potential odors that could be generated from dairy operations. At a minimum, the plan shall include the following components:

A. Manure Collection Areas:
    1. Clean out manure generated at the freestall barns and corrals at a frequency that will minimize odors;
    2. Keep cattle as dry and clean as possible at all times;
    3. Scrape manure from the corrals and bedding from the freestall barns and corrals at a frequency that will minimize odors.
B. Manure Treatment and Application
    1. Minimize moisture content of stockpiled manure/retained solids to a level that will reduce the potential for release of odorous compounds during storage.
    2. Minimally agitate stockpiled manure during loading for off-site transport;
    3. Mix process water with irrigation water prior to irrigation (dilution rate shall be adequate to minimize odor levels and maintain appropriate nutrient content in effluent);
    4. Apply process water containing ammonia so that it minimizes exposure to air;
    5. Clean up manure spills upon occurrence;
    6. Maintain and operate separation pits and process water lagoons to minimize odor levels.
    7. Avoid spreading in windy conditions, especially when it blows toward populated areas, or immediately before weekends or holidays when nearby neighbors are likely to be engaged in outdoor and recreational activities.
    8. If there is no storage facility, spread manure as frequently as possible during warm weather. Unload storages on schedule. To minimize the time that odor is released to the air, have machinery in good repair and labor ready before starting to unload.

9. Incorporate manure during or immediately after land application by injecting it into the soil or plowing or disking the soil. Where immediate incorporation is not possible, apply manure uniformly in a thin layer so that it will dry quickly.

C. General
   1. Implement dust suppression measures to prevent the release of odorous compound-carrying fugitive dust;
   2. During project operations, the dairy operator/owner shall respond to neighbors who are adversely affected by odors generated at the project site and take prompt corrective action.

D. Record Keeping:

The OMP shall include a complaint register kept at the dairy site. The register shall include each complaint received by the dairy, who received the complaint, and the date of the complaint. In addition, the documentation shall indicate what action was taken to determine the cause of the odor, action taken to resolve the odor problem, the results of the action, and whether additional action was required to eliminate the problem from re-occurring. The complaint register shall be available to the Dairy Monitoring Office personnel upon their request.

~~A final version~~ Amendments of the OMP shall be submitted for ~~review and approval~~ to the ~~Kings County Planning Department 60 days prior to any livestock being housed at the site~~ Zoning Administrator for approval.

8~~2~~e. Irrigation Management Program (IMP) (Policy DE 4.1b.C):

The *Irrigation Management Plan* (IMP) is a part of the *Technical Report* submitted with each application to either establish a new dairy or expand an existing dairy. The owner/operator shall prepare an IMP, and it shall include, but not be limited to, the following components:

A. Ensure that irrigation water and runoff from fields at each dairy unit do not migrate away from the project site, ~~and~~
B. Do not allow excessive nutrients to accumulate in one part of a field and create "hot spots". Ensure that the nutrients are spread evenly over the entire field, and
C. Coordinate the timing of irrigation to meet the crop needs and the capacity limits of the ponds.

4~~3~~. Hazardous Materials Business Plan (HMBP) (Policy DE 4.3a):

The *Hazardous Materials Business Plan* (HMBP) is a part of the *Technical Report* submitted with each application to either establish a new dairy or expand an existing dairy. A draft HMBP prepared pursuant to the Health and Safety Code Chapter 6.95, sections 25500 to 25520 shall be submitted with the application, and the final HMBP shall be filed with the Kings County Department of Environmental Health Services pursuant to their requirements after the zoning permit is issued.

The operator of the dairy shall review the HMBP at least annually and amend the plan if changes have been made. The amended plan shall be submitted to the Kings County Department of Environmental Health and a copy retained on site with the dairy's other reporting documentation. The HMBP shall be made available to the Dairy Monitoring Office personnel upon their request.

~~***7. Livestock Management Plan (LMP):***~~

~~*The Livestock Management Plan (LMP) is a part of the Technical Report submitted with each application to either establish a new dairy or expand an existing dairy. The LMP will identify practices to reduce methane emissions from ruminant livestock; and shall be consistent with the*~~

~~*voluntary practices incorporated in EPA's Ruminant Livestock Efficiency Program. The LMP shall be approved as a condition of approval by the Kings County Planning Commission and implemented during dairy operations. At a minimum, the LMP shall identify:*~~

~~*a) Practices to control disease and maintain herd health, such as use of appropriate antibiotics, vaccines, and other health maintenance products (e.g., regular deworming); management practices for sick and new animals (e.g., quarantine and treat sick and new animals immediately); and development of a health and medication record keeping system;*~~
~~*b) Feed quality and nutritional levels, feed intake levels, feed schedule;*~~
~~*c) Herd nutrition including adding molasses, sugar beet pulp, grape pomace, brewery waste, and distillers grains into the feed;*~~
~~*d) Methods for selecting cattle that are known to be efficiently productive.*~~

9~~4~~. ~~*Integrated*~~ Pest and Vector Management Plan (~~*I*~~PVMP) (Policy DE 4.3b):

The ~~*Integrated*~~ *Pest* ***and Vector*** *Management Plan* (~~*I*~~P**V**MP) is a part of the *Technical Report* submitted with each application to either establish a new dairy or expand an existing dairy. The ~~*I*~~P**V**MP (sometimes referred to as a fly and mosquito control plan) shall include methods of controlling flies, mosquitoes, and rodents under various conditions.

The ~~*I*~~P**V**MP shall be designed to use good housekeeping practices as the primary tool to combat vector infestation. The ~~*I*~~P**V**MP shall include, but not be limited to, measures that ensure good drainage of manured areas, frequent lane flushing, clean-up and maintenance along fence lines, and prompt repair of all leaking pipes and fixtures. ~~*Secondary measures to be included in the PVMP are biological controls, including, but not limited to, the use of parasitic beetles and mites (to control egg and larvae populations) and parasitic wasps (to control fly pupae populations)*~~. When housekeeping ~~*and biological*~~ controls prove ineffective (or have provided limited effectiveness), chemicals (i.e., pesticides) may supplement the program. When chemicals are used, special care shall be taken to select and apply chemicals that are compatible with existing biological controls that may be in use (i.e., those that do not kill the parasitic wasps). Other measures that may be considered in the PVMP are biological controls, including, but not limited to, the use of parasitic beetles and mites (to control egg and larvae populations) and parasitic wasps (to control fly pupae populations).

The Kings County Zoning Administrator shall distribute the ~~*I*~~P**V**MP to the Kings Mosquito Abatement District, Kings County Agricultural Commissioner, and the Kings County Division of Environmental Health Services for review and comment before final ~~*approval*~~ acceptance of the ~~*I*~~P**V**MP.

Record keeping for the PVMP shall consist of documentation kept at the dairy site that includes pest control methods used and the dates of the pest control activities. The PVMP shall also include a complaint register. The complaint register documentation shall indicate the who received the complaint; date a complaint was received, what and when action was taken to determine the cause of pest problem, action taken to resolve the problem, and the results action and whether additional action was required to resolve the problem. The complaint register shall be made available to Dairy Monitoring Office personnel upon their request.

~~10~~5. Dead Animal Management Plan (DAMP) (Policy DE 4.1d):

The *Dead Animal Management Plan* (DAMP) is a part of the *Technical Report* submitted with each application to either establish a new dairy or expand an existing dairy. The DAMP shall include a program of removing dead animals from the site within ~~*48*~~ 72 hours, or by the end of the first working day after a holiday ~~*or*~~ weekend. ~~*A contract with a service, such as Baker Commodities, will be sufficient if the contract terms specify the above schedule.*~~ Burial or otherwise disposing of the carcasses on site shall not be allowed unless by order of the Health Officer, Agricultural Commissioner, or other authority authorized to make such an order.

Record keeping for the DAMP shall consist of a log kept at the dairy site that documents the number of dead animals by date; the date and method of their removal, and location where the dead animals were taken when removed from the dairy site. The documentation shall be made available to Dairy Monitoring Office personnel upon their request.

~~11~~6. ~~Wildlife~~ Biological Resources Survey (Policy DE 3.3a):

The results of a ~~*Wildlife Habitat*~~ *Biological Resources Survey* shall be made a part of the *Technical Report* submitted with each application to either establish a new dairy or expand an existing dairy. The survey ~~for wildlife~~ of habitat for sensitive species and wetlands shall be conducted by a qualified wildlife biologist prior to initiation of grading for each dairy facility to confirm the presence or absence of any nesting activity at each location. If habitat for sensitive species or wetlands is found, appropriate measures shall be taken to avoid destruction of an active dens or nests. An appropriate buffer zone shall be established around any active den or nest based on consultation with representatives of the California Department of Fish and Game. Construction activities shall be restricted in this zone until the qualified biologist has determined that the young animals are no longer using the dens or nests. Passive relocation methods shall be used by the qualified biologist in the event that removal any wildlife from the impact area is deemed necessary by a regulatory agency with appropriate jurisdiction.

~~12~~7. Cultural Resources Evaluation by the California Historic Resources Information System (CHRIS) (Policy DE 3.1d and 3.1e):

The *Technical Report* shall include documentation that a review of records of known cultural resources has been completed by the California Historical Resources Information System (CHRIS) and that no significant cultural (historic or archaeological) resources would be disturbed by the proposed dairy development. If CHRIS indicates that known resources are present or suspected within the construction area of the proposed dairy development, the *Technical Report* shall include an evaluation of the resource by an archaeologist qualified under the Secretary of the Interior's Standards and Guidelines for archaeologists which includes an appropriate mitigation plan that will be implemented by the dairy developer.

This evaluation shall include an evaluation of paleontological and unique geologic feature resources.

8. TRAFFIC IMPACT STUDY (Policy DE 3.1g):

The *Technical Report* for new and expanded dairies shall include a Traffic Impact Study prepared by a qualified traffic engineer in conformance with guidelines provided by the California Department of Transportation, which demonstrates that the project will not result in degradation of the level of service of adjacent roadways to below Level of Service (LOS) D. Additionally, the Traffic Impact Study shall demonstrate that the proposed dairy project will not result in significant safety hazards.

9a. AIR QUALITY ASSESSMENT (Policy DE 5.1e, 5.1i, and 6.2e):

The *Technical Report* shall be required to estimate the anticipated net increase in ROG, NOx, and PM_{10} emissions generated from anticipated dairy operation compared to existing conditions and demonstrate that the net increase will not exceed the SJVUAPCD threshold limits for ROG, NOx, and PM_{10}.

~~1~~29b. Fugitive Dust Emissions Control Plan (FDECP) (Policy DE 5.1g and 5.1h):

The Fugitive Dust Emissions Control Plan (FDECP) is part of the *Technical Report* submitted with each application to either establish a new dairy or expand an existing dairy. The owner/operator shall prepare a FDECP which shall include, but not be limited to the following components:

A. Identification of all significant off-field source of fugitive dust emissions (e.g., unpaved roads, unpaved corrals and other open or vacant areas, and bulk material stockpiles);
B. Description of ~~Best Available Control Measures (BACMs)~~ the control measures used for controlling of fugitive emissions from all sources identified at the dairy facility and an estimate of control efficiency ~~provided by BACMs~~;
C. Discussion of compliance of identified ~~BACM~~ control measures with the requirements of the most recent Regulation VIII rules adopted by the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD);
D. Discussion of quality control/quality assurance procedures to ensure that ~~BACM~~ control measures are implemented and inspected;
E. Discussion of record keeping for quality control/quality assurance procedures;
F. Identification of person responsible for implementation of the FDECP implementation.

11. Light, Glare and Noise Assessment: (Policies DE 3.1a):

A. Provide an exterior lighting plan of the Dairy Facility showing all exterior lights and methods used to ensure that the lighting is so arranged to reflect light away from adjoining properties.
B. Provide a Noise Assessment of the Dairy Facility and any mitigation requirements necessary to comply with the noise level standards in the *Noise Element* of the *Kings County General Plan*.