Response to Comments Document

DAIRY MANURE DIGESTER AND CO-DIGESTER FACILITIES

Final Program Environmental Impact Report
SCH No. 2010031085

Prepared for
California Regional Water Quality
Control Board, Central Valley Region

November 2010

ESA

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CHAPTER 1
Executive Summary

This chapter contains the final mitigation measures for the Program EIR, summarizes key issues raised in the comments on the draft Program EIR, and discusses implementation of the Mitigation Monitoring and Reporting Programs (MMRPs) under the waste discharge regulatory program. For additional details regarding specific issues, please consult the appropriate chapters of the draft Program EIR, as well as any modifications to those chapters as identified in the Text Changes to the draft Program EIR (Chapter 5 of this document). All of the final mitigation measures, as modified in this Response to Comments document, are presented in the revised **Table 1-1**, Environmental Impacts and Mitigation Measures, presented at the end of this chapter. Please see Chapter 5 (Text Changes to the draft Program EIR) to see the detailed deletions and insertions to any changes in the mitigation measures in **Table 1-1**.

1.1 Key Issues in the Response to Comments Document

This Response to Comments document has modified the draft Program EIR as identified in the specific insertions and deletions contained in Chapters 3 and 4 that are organized sequentially in Chapter 5. The most substantial comments are in Comment Letters H (Dairy Cares), I (Sustainable Conservation) and J (Western United Dairymen). These three comment letters have questions regarding the mitigation measures that would be implemented for various types of dairy manure digester projects. These comment letters resulted in modification to some of the mitigation measures in the EIR and were helpful in preparing the mitigation monitoring and reporting plan contained in Appendix A for the overall waste discharge regulatory program.

The three commenters also expressed concern about the need for several of the mitigation measures. The need for more mitigation measures than might be required for a site specific EIR stems from the fact that this EIR is for a broad-based program meant to cover a variety of potential dairy digester configurations that could be proposed in the Central Valley (Region 5) and thus there is a lack of site specific information. The commenters are reminded of this in response to Comment I-12, which states that, “the primary goal of the Program EIR is to provide certainty to the CEQA environmental review process for dairy digester projects by identifying potentially significant environmental level impacts absent knowledge of site specific conditions, and identify feasible mitigation measures to address the potential impacts.”

1.2 Mitigation Monitoring and Reporting Programs

Mitigation monitoring is the follow-up effort by the Lead Agency to ensure that mitigation measures are implemented. The Final Program EIR identifies mitigation measures that reduce most potentially significant effects of the program to a less than significant level. A Mitigation Monitoring and Reporting Program (MMRP) is required by CEQA Guidelines Section 15097, and will be incorporated into each waste discharge requirement (WDR) order or other action taken pursuant to the waste discharge regulatory program. The mitigation monitoring reporting plan (Appendix A of this document) provides a framework for the MMRPs to be considered during the adoption of each WDR order (e.g., General Order, and Individual WDRs) under the waste discharge regulatory program.

TABLE 1-1
ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
5. Hydrology and Water Quality			
Impact 5.1: Construction associated with installation of dairy digesters and co-digester facilities could generate loose, erodible soils that may impair water quality.	None required.	LS	LS
Impact 5.2: Digester and co-digester development could adversely affect surface waters.	**Measure 5.2:** WDRs for digester and co-digester facilities shall include design and operational requirements to manage all wastes and discharges to protect surface waters. Requirements shall include the following: • Prohibitions against any surface water discharges (unless exempt from NPDES permitting requirements or covered by separate NPDES permit), • Prohibitions against any discharges that would cause exceedance of surface water quality objectives, • Setbacks from surface water bodies • Drainage requirements for co-digestion substrates/waste storage/receiving/handling areas to drain to on-site wastewater retention ponds, • Lining requirements for retention ponds in new facilities and operational dairies, • Monitoring requirements that include sampling data of soils, retention water, and waste streams to reconcile annually with Nutrient Management Plan (NMP), • Requirements for tailwater return systems or other effective methods to minimize offsite discharges; • Prohibitions against any unreasonable effects on beneficial uses of nearby surface waters.	S	LSM
Impact 5.3: Digester and co-digester development could adversely affect groundwater quality.	**Measure 5.3:** WDRs for the discharge to land from dairy digester and co-digester facilities shall include the following BPTC requirements or equivalent: • Prepare and implement site-specific Salt Minimization Plan (SMP) as approved by the Central Valley Water Board. The SMP shall consider the elimination, decommissioning, or the reduction in use of regenerative water softeners on process water distribution networks or, alternatively, evaluate and install alternate technology that reduces or eliminates on-site brine disposal; • Prepare and implement a site-specific NMP that incorporates analytical data for soils, wastewater, manure, digester solids, groundwater and/or surface water supply. The required analytical data is to be generated by a site-specific monitoring and reporting program. In the case of groundwater, data from an approved representative groundwater monitoring program may be substituted for some or all site-specific groundwater monitoring, if appropriate. The NMP will be reconciled annually based on results of the monitoring and reporting program and site-specific measurements of agronomic rates; • Require all drainage be directed to a retention wastewater pond that has been designed to meet antidegradation provisions of Resolution 68-16 by an appropriately licensed professional;	S	LSM

LS – Less than Significant LSM – Less than Significant with Mitigation NI – No Impact S – Significant SU – Significant and Unavoidable

TABLE 1-1
ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
	• To the extent practicable, use crops that maximize salt uptake; • Apply liquid digestate consistently with crop water uptake rates; • Prohibit hazardous substances in co-digestion substrates processed by each facility as verified by laboratory analytical testing; • Apply digestate at an approved rate commensurate with agronomic rate; • Properly time application of digestate in accordance with crop requirements; • Avoid excess irrigation; • Maintain cover crops and vegetative buffer zones; • Develop co-substrate acceptance criteria; • Perform vector control and reduction; • Monitor groundwater for pathogen indicator organisms; • Require that solid wastes be stored on surfaces designed in accordance with a site-specific Waste Management Plan prepared for the facility by an appropriate California registered professional in accordance with WDR requirements; • Maintain a neutral or alkaline pH for dairy digestate waste water applied to cropland unless conditions warrant otherwise as detailed in the NMP; • Prohibit hazardous waste, mammalian tissues (with the exception of mammalian tissue as contained in compostable material from the food service industry, grocery stores, or residential food scrap collection), dead animals, and human waste from all discharges; and • Incorporate lined digester and co-digestion substrate storage facilities that meet the antidegradation provisions of Resolution 68-16, as relevant, into project design in order to prevent groundwater contamination with salts, nutrients, and other constituents. Each facility shall prepare a site-specific Waste Management Plan in accordance with the WDR requirements for review and approval to the Central Valley Water Board prior to commencement of operations. Annual monitoring reports shall be reviewed by the Central Valley Water Board and any revisions deemed necessary to the handling, storage, or land application of wastes shall be incorporated into facility operations.		
Impact 5.4: Development of dairy digester and co-digester facilities could be exposed to flooding hazards.	**Measure 5.4:** WDRs for digester and co-digester facilities shall include design requirements for individual or centralized anaerobic digester or co-digester facilities and associated facilities to protect them from FEMA 100-year flood events. Design measures may include, but are not limited to: facility sitting, access placement, grading foundation soils above projected water elevation, and site protection.	S	LSM
Impact 5.5: Development of dairy digester and co-digester facilities could require additional water supplies resulting in depletion of groundwater.	None required.	LS	LS
Impact 5.6: Development of dairy digester and co-digester facilities could contribute to cumulative impacts to water quality.	**Measure 5.6:** Implement Mitigation Measures 5.2, 5.3 and 5.4.	S	SU

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ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
6. Air Quality and Greenhouse Gas Emissions			
Impact 6.1: Construction of dairy digester and co-digester facilities within Region 5 would generate short-term emissions of criteria air pollutants: ROG, NOx, CO, SO_2, PM10, and PM2.5 that could contribute to existing nonattainment conditions and further degrade air quality.	**Measure 6.1a:** Applicants shall prepare and submit an Air Quality Technical Report as part of the environmental assessments for the development of future dairy digester or co-digester facilities on a specific project-by-project basis. The technical report shall include an analysis of potential air quality impacts (including a screening level analysis to determine if construction and operation related criteria air pollutant emissions would exceed applicable air district thresholds, as well as any health risk associated with TACs from all dairy digester or co-digester facility sources) and reduction measures as necessary associated with digester developments through the environmental review process. Preparation of the technical report should be coordinated with the appropriate air district and shall identify compliance with all applicable New Source Review and Best Available Control Technology (BACT) requirements. The technical report shall identify all project emissions from permitted (stationary) and non-permitted (mobile and area) sources and mitigation measures (as appropriate) designed to reduce significant emissions to below the applicable air district thresholds of significance, and if these thresholds cannot be met with mitigation, then the individual digester project could require additional CEQA review or additional mitigation measures. **Measure 6.1b:** Applicants shall require construction contractors and system operators to implement the following Best Management Practices (BMPs) as applicable during construction and operations: • Facilities shall be required to comply with the rules and regulations from the applicable AQMD or APCD. For example, development of dairy digester and co-digester facilities in the SJVAPCD jurisdiction shall comply with the applicable requirements of Regulation VIII (Fugitive PM10 Prohibitions) and Rule 9510 (Indirect Source Review). • Use equipment meeting, at a minimum, Tier II emission standards, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations. • Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes (as required by the state airborne toxics control measure [Title 13, §2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site. • Comply with state regulations to minimize truck idling. • Maintain all equipment in proper working condition according to manufacturer's specifications. • Use electric equipment when possible. • Payment into an AQMD or APCD operated Voluntary Emission Reduction Agreement (VERA). • Incorporate fuel cells where feasible as an alternative to internal combustion engines, which generate NOx emissions, to generate energy from the biogas produced at dairy digester and co-digester facilities. • Where feasible as an alternative to internal combustion engines, which generate NOx emissions, use biogas from dairy manure digester and co-digester projects as a transportation fuel (compressed biomethane) or inject biomethane into the utility gas pipeline system.	S	LSM

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Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
Impact 6.2: Pre-processing, digestion, and post-processing operational activities of dairy digester and co-digester facilities in Region 5 would result in emissions of criteria air pollutants at levels that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.	**Measure 6.2:** Implement Mitigation Measures 6.1a and 6.1b.	S	LSM
Impact 6.3: Operation of dairy digester and co-digester facilities in Region 5 could create objectionable odors affecting a substantial number of people.	**Measure 6.3a:** Applicants for the development of digester facilities shall comply with appropriate local land use plans, policies, and regulations, including applicable setbacks and buffer areas from sensitive land uses for potentially odoriferous processes. **Measure 6.3b:** AD facilities that handle compostable material and are classified as a compost facility must develop an Odor Impact Minimization Plan (OIMP) pursuant to 14 CCR 17863.4. Otherwise, applicants shall implement a site-specific Odor Management Plan (OMP) as part of each application submitted to establish digester and co-digester facilities under the waste discharge regulatory program. The OMP will specifically address odor control associated with digester operations and will include: • A list of potential odor sources. • Identification and description of the most likely sources of odor. • Identification of potential, intensity, and frequency of odor from likely sources. • A list of odor control technologies and management practices that could be implemented to minimize odor releases. These management practices shall include the establishment of the following criteria as appropriate: - Establish time limit for on-site retention of undigested odiferous co-substrates (i.e., organic co-substrates must be put into the digester within 48 hours of receipt). - Provide negative pressure buildings for indoor unloading of odiferous co-digestion substrates. Treat collected foul air in a biofilter or air scrubbing system. - Establish contingency plans for operating downtime (e.g., equipment malfunction, power outage). - Manage delivery schedule to facilitate prompt handling of odorous co-substrates. - Modification options for land application practices if land application of digestate results in unacceptable odor levels. - Protocol for monitoring and recording odor events. - Protocol for reporting and responding to odor events.	S	LSM
Impact 6.4: Construction and operation of dairy digester and co-digester facilities in Region 5 could lead to increases in chronic exposure of sensitive receptors in the vicinity to certain toxic air contaminants from stationary and mobile sources.	**Measure 6.4a:** Implement Mitigation Measures 6.1a and 6.1b. **Measure 6.4b:** Based on the Air Quality Technical Report (specified in Measure 6.1a), if the health risk is determined to be significant on a project-by-project basis with DPM as a major contributor, then the applicants shall either use new diesel engines that are designed to minimize DPM emissions (usually through the use of catalyzed particulate filters in the exhaust) or retrofit older engines with catalyzed particulate filters, which will reduce DPM emissions by 85%. **Measure 6.4c:** H_2S contained in the biogas shall be controlled before emission to air can occur.	S	LSM

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TABLE 1-1
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Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
Impact 6.5: Construction and operation of dairy digester and co-digester facilities in Region 5 would reduce GHG emissions.	None required.	NI	NI
Impact 6.6: Development of dairy digester and co-digester facilities in Region 5, together with anticipated cumulative development in the area, would contribute to regional criteria pollutants.	**Measure 6.6:** Implement Mitigation Measures 6.1a and 6.1b.	S	SU
7. Land Use and Agricultural Resources			
Impact 7.1: The project would not physically divide an established community.	None required.	LS	LS
Impact 7.2: The project would not result in dairy digester and co-digester facilities that could conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	None required.	LS	LS
Impact 7.3: Implementation of the project would not conflict with an applicable habitat conservation plan or natural community conservation plan.	None required.	LS	LS
Impact 7.4: Implementation of the project could result in the permanent conversion of land designated by the Department of Conservation FMMP as Prime Farmland, Farmland of Statewide Importance or Unique Farmland.	**Measure 7.4:** Whenever feasible, project related facilities off-site of a dairy should not be sited on Important Farmland as defined by the California Department of Conservation's Farmland Mapping and Monitoring Program.	LS	LS
Impact 7.5: The project would not result in conflicts with existing zoning for agricultural use or a Williamson Act contract.	None required.	LS	LS
Impact 7.6: Implementation of the project would not result in the conversion of farmland to non-agricultural uses.	None required.	LS	LS
Impact 7.7: Development of dairy digester and co-digester facilities would not result in cumulative land use impacts or cumulative impacts to agricultural resources.	None required.	LS	LS
8. Transportation and Traffic			
Impact 8.1: Construction of dairy digester and co-digester facilities would intermittently and temporarily increase traffic levels and traffic delays due to vehicle trips generated by construction workers and construction vehicles on area roadways.	**Measure 8.1:** The contractor(s) will obtain any necessary road encroachment permits prior to installation of pipelines within the existing roadway right-of-way. As part of the road encroachment permit process, the contractor(s) will submit a traffic safety / traffic management plan (for work in the public right-of-way) to the agencies having jurisdiction over the affected roads. Elements of the plan will likely include, but are not necessarily limited to, the following:	S	LSM

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Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
	• Develop circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible. Use flaggers and/or signage to guide vehicles through and/or around the construction zone. • To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours. • Limit lane closures during peak traffic hours to the extent possible. Restore roads and streets to normal operation by covering trenches with steel plates outside of allowed working hours or when work is not in progress. • Limit, where possible, the pipeline construction work zone to a width that, at a minimum, maintains alternate one-way traffic flow past the construction zone. • Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones. • Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities. • To the maximum extent feasible, maintain access to private driveways located within construction zones. • Coordinate with the local public transit providers so that bus routes or bus stops in work zones can be temporarily relocated as the service provider deems necessary.		
Impact 8.2: Operations of dairy digester and co-digester facilities would increase traffic volumes on roadways serving the facility sites.	None required.	LS	LS
Impact 8.3: Construction and operation of dairy digester and co-digester facilities could potentially cause traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways, and could increase traffic hazards due to possible road wear or to accident spills of manure, or co-digestion feedstocks or digestate.	**Measure 8.3a:** Implement Measure 8.1, which stipulates actions required of the contractor(s) to reduce potential traffic safety impacts to a less-than-significant level. **Measure 8.3b:** Prior to construction, the contractor(s), in cooperation with the agencies having jurisdiction over the affected roadways, will survey and describe the pre-construction roadway conditions on rural roadways and residential streets. Within 30 days after construction is completed, the affected agencies will survey these same roadways and residential streets in order to identify any damage that has occurred. Roads damaged by construction will be repaired to a structural condition equal to the condition that existed prior to construction activity.	S	LSM
Impact 8.4: Construction of dairy digester and co-digester facilities could intermittently and temporarily impede access to local streets or adjacent uses (including access for emergency vehicles), as well as disruption to bicycle/pedestrian access and circulation.	**Measure 8.4:** Implement Measure 8.1, which stipulates actions required of the contractor(s) to reduce potential access impacts to a less-than-significant level.	S	LSM

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Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
Impact 8.5: Construction and operation of dairy digester and co-digester facilities could contribute to cumulative impacts to traffic and transportation (traffic congestion, traffic safety, and emergency vehicle access).	**Measure 8.5a:** Prior to construction, for installation of pipelines in existing roadways, the project sponsor will coordinate with the appropriate local government departments, Caltrans, and utility districts and agencies regarding the timing of construction projects that would occur near project sites. Specific measures to mitigate potential significant impacts will be determined as part of the interagency coordination, and could include measures such as employing flaggers during key construction periods, designating alternate haul routes, and providing more outreach and community noticing. **Measure 8.5b:** Implement Mitigation Measures 8.1 and 8.3b.	S	LSM
9. Biological Resources			
Impact 9.1: The project could impact special-status plant or wildlife species or their habitats.	**Measure 9.1a:** The project applicant or agency(s) responsible shall document that a site assessment report for dairy digester and co-digester facilities to be constructed (including the location of digestate application) has been submitted to CDFG for its review. This report shall be prepared by a qualified biologist. It shall evaluate the project site's potential to support special-status plant and wildlife species (including critical habitat) and whether special-status species could be affected by dairy digester and co-digester development, including construction and operations. If there are no special-status species or critical habitat present, no additional mitigation would be required. **Measure 9.1b:** If the site assessment determines that special-status species could be affected by facilities development, the project would not be eligible as part of the project (for the Central Valley Water Board discharge permit) unless the applicant submits a plan, prepared by a qualified biologist, to mitigate or avoid any significant impacts on special-status species. This plan must be forwarded to the appropriate regional office of the CDFG, the Endangered Species Unit of the USFWS in Sacramento, and/or NMFS for review and approval of the mitigation strategy, when appropriate. If the site assessment determines that a State or federally listed species would be affected by facilities development, the project applicant shall consult with CDFG, the Endangered Species Unit of the USFWS in Sacramento, and/or NMFS, as appropriate.	S	LSM
Impact 9.2: The project could result in impacts on biologically unique or sensitive natural communities.	**Measure 9.2a:** The project applicant or agency(s) responsible shall submit a site assessment report prepared by a qualified biologist that determines if the project is likely to affect biologically unique or sensitive natural communities. This information could be included in the report prepared under Mitigation Measure 9.1a. If there are no biologically unique or sensitive natural communities present, no further mitigation is required. **Measure 9.2b:** If biologically unique or sensitive natural communities are present and would be disturbed, the project would not be authorized under the project unless the applicant or agency(s) responsible submits a plan to avoid or mitigate for any significant impacts on biologically unique or sensitive natural communities and agrees to implement the mitigation. This report must be forwarded to the appropriate regional office of the CDFG and/or the Endangered Species Unit of the USFWS in Sacramento (as appropriate) for review and approval of the mitigation strategy. As described above, this portion of the report could be incorporated into the report prepared under Mitigation Measure 9.1a.	S	LSM
Impact 9.3: The project could result in impacts on waters of the State and/or the U.S., including wetlands.	**Measure 9.3a:** The project applicant or agency(s) responsible shall submit a site assessment report prepared by a qualified biologist that evaluates if the project is likely to affect waters of the State and/or U.S., including wetlands. This information could be included in the report prepared under Mitigation Measure 9.1a. If there are no waters present, no further mitigation would be required.	S	LSM

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Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
	Measure 9.3b: If waters of the State and/or U.S. are present in the project area, the project applicant or agency(s) responsible shall either re-design the project to avoid affecting the waters, or obtain the appropriate permits to allow for the impact. For waters that cannot be avoided, the permit process shall start with the preparation of a jurisdictional wetland delineation, prepared by a qualified biologist that will be submitted to the Corps for verification. Following verification, if jurisdictional waters occur within the project site, the project applicant or agency(s) responsible shall obtain and comply with federal and State permit requirements. This could include obtaining a Clean Water Act Section 404 permit, Section 401 Water Quality Certification or Waiver, a Section 1602 Streambed Alteration Agreement, and any other applicable permits.		
Impact 9.4: The project would not result in impacts on migratory corridors or native wildlife nursery sites.	None required	LS	LS
Impact 9.5: Dairy digester and co-digester facilities would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	None required.	LS	LS
Impact 9.6: Development of dairy digester and co-digester facilities could contribute to cumulative impacts to biological resources.	**Measure 9.6:** Implement Measures 9.1a, 9.1b, 9.2a, 9.2b, 9.3a, and 9.3b.	S	LSM
10. Hazards and Hazardous Materials			
Impact 10.1: Construction of dairy digester and co-digester facilities could result in the potential exposure of construction workers, the public and the environment to preexisting soil and/or groundwater contamination.	**Measure 10.1:** Prior to final project design and any earth disturbing activities, the applicant or agency(s) responsible shall conduct a standard "Phase I Type" electronic record search. If no incidents are identified within a quarter mile of the construction area, standard construction practices can be implemented. If the record search identifies soil or water quality contamination open cases within a quarter mile of the construction area, a Phase I Environmental Site Assessment (ESA) shall be prepared by a Registered Environmental Assessor (REA) or other qualified professional to assess the potential for contaminated soil or groundwater conditions at the project site; specifically in the area proposed for construction of dairy digester or co-digester facilities. The Phase I ESA shall include a review of appropriate federal and State hazardous materials databases, as well as relevant local hazardous material site databases for hazardous waste on-site and off-site locations within a one quarter mile radius of the project site. This Phase I ESA shall also include a review of existing or past land uses and areal photographs, summary of results of reconnaissance site visit(s), and review of other relevant existing information that could identify the potential existence of contaminated soil or groundwater. If no contaminated soil or groundwater is identified or if the Phase I ESA does not recommend any further investigation then the project applicant or agency(s) responsible shall proceed with final project design and construction. OR If existing soil or groundwater contamination is identified and if the Phase 1 ESA recommends further review, the applicant or agency(s) responsible shall retain a REA to conduct follow-up sampling to characterize the contamination and to identify any required remediation that shall be conducted	S	LSM

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Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
	consistent with applicable regulations prior to any earth disturbing activities. The environmental professional shall prepare a report that includes, but is not limited to, activities performed for the assessment, summary of anticipated contaminants and contaminant concentrations at the proposed construction site, and recommendations for appropriate handling of any contaminated materials during construction.		
Impact 10.2: Transportation, use, disposal or accidental spill of hazardous materials during construction of dairy digester and co-digester facilities would not result in the potential exposure of construction workers, the public and the environment to hazardous materials.	None required.	LS	LS
Impact 10.3: Transportation, use, disposal or accidental spill of hazardous materials during the operation and maintenance of dairy digester and co-digester facilities would not result in the potential exposure of the public or the environment to hazardous materials.	None required.	LS	LS
Impact 10.4 Operation of dairy digester and co-digester facilities would not result in the release of biogas which could increase the risk of fire hazards.	None required.	LS	LS
Impact 10.5 Dairy digester and co-digester facilities could be located within a one quarter mile of a school resulting in potential hazards associated with accidental release of hazardous materials, including biogas.	**Measure 10.5:** Dairy digester and co-digester facilities shall be sited at least one quarter mile from existing or proposed schools, daycare facilities, hospitals and other sensitive land uses.	LS	LS
Impact 10.6: Installation of biogas pipelines in public rights-of-way could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	**Measure 10.6:** Implement Mitigation Measure 8.1.	S	LSM
Impact 10.7: Development of dairy digester and co-digester facilities could contribute to cumulative impacts related to hazardous materials.	**Measure 10.7:** Implement Mitigation Measures 10.1 and 10.5.	LS	LS
11. Aesthetic Resources			
Impact 11.1: Implementation of the project, including operation of dairy digester and co-digestion facilities, could result in impacts to scenic highways and/or scenic vistas.	**Measure 11.1a:** Centralized biogas processing facilities shall be sited in locations that do not conflict with local polices for preservation of vistas or scenic views. **Measure 11.1b:** When feasible considering the scale of the facilities and the site specific topography, site specific landscape design, including berms and/or tree rows, shall be constructed in order to minimize potentially sensitive views of both digester facilities at dairies or off dairies at centralized facilities. **Measure 11.1c:** Centralized biogas processing facilities shall be designed similarly in massing and scale to other nearby agricultural buildings in agricultural areas, in order to retain the character of the surrounding visual landscape.	S	LSM

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ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
Impact 11.2: Construction of the project could result in impacts to scenic highways and/or scenic vistas.	**Measure 11.2:** The project shall incorporate into all construction contracts for the proposed project and ensure implementation of the following measures: • Main construction staging areas and the storage of large equipment shall be situated on individual sites in such a manner to minimize visibility to nearby receptors. As feasible, staging areas and storage shall occur away from heavily traveled designated scenic roadways, in areas where it will be least visible from the surrounding roads. • Construction staging areas shall be onsite and remain clear of all trash, weeds and debris, etc. Construction staging areas shall be located in areas that limit visibility from scenic roadways and sensitive receptors to the extent feasible.	S	LSM
Impact 11.3: Implementation of the project could result in substantial creation of or change in light or glare.	**Measure 11.3:** Whenever possible, flares shall be situated on individual sites in such a manner to minimize visibility to nearby receptors. Site specific design shall discourage placement of flares at higher elevations, or within the line of site of nearby residential buildings or scenic highways. In the event that site design does not provide adequate coverage, an enclosed flare design shall be used or landscaping, such as berms or tree rows, shall be constructed to minimize light impacts.	S	LSM
Impact 11.4: Development of dairy digester and co-digester facilities could contribute to cumulative impacts to aesthetics.	**Measure 11.4:** Implement Mitigation Measures 11.1a, 11.1b, 11.1c, 11.2, and 11.3.	S	LSM
12. Cultural Resources			
Impact 12.1: Construction of dairy digester and co-digester facilities could result in the adverse change in the significance of a historical or archaeological resource, pursuant to §15064.5.	**Measure 12.1a:** In order to determine whether a project may cause a significant impact to cultural resources, and therefore, have an adverse effect on the environment, the Central Valley Water Board shall require each application submitted for a discharge permit for a digester or co-digester facility to identify the project's potential impacts to cultural resources. Prior to ground-disturbing activities, the project applicant shall retain a qualified archaeologist to (1) conduct a record search at the appropriate information center of the California Historical Resources Information System (CHRIS) to determine whether the project area has been previously surveyed and whether cultural resources were identified; and (2) request a sacred lands search from the NAHC. The results of the record search and sacred lands search shall be included in the Cultural Resources Inventory Report provided to the Central Valley Water Board. In the event the CHRIS records search indicates that no previous survey has been conducted, the qualified archaeologist shall recommend whether a survey is warranted to satisfy the requirements of CEQA based on the sensitivity of the project area for cultural resources. If, for example, the existing dairy or agricultural land proposed for establishment of a digester or co-digester facility was constructed entirely on fill, as shown by original and final contour drawings, a surface survey for archaeological resources would not be warranted. Similarly, a surface survey may not be warranted if the project area has been extensively disturbed by dairy or agricultural use. For projects that constitute federal undertakings, as described in the Federal Agencies section of the Introduction (Chapter 2), the cultural resources study shall be prepared in accordance with Section 106 of the NHPA. The cultural resources study and inclusive mitigation measures shall form the basis for the cultural resources component of the project-level environmental documentation prepared for	S	LSM

LS – Less than Significant LSM – Less than Significant with Mitigation NI – No Impact S – Significant SU – Significant and Unavoidable

TABLE 1-1
ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
	the project under Section 106. If the survey, CHRIS record search, or NAHC search indicate cultural resources are located within a project area, the Cultural Resources Inventory Report shall include an assessment of the significance of the resources according to applicable federal, state, and local significance criteria. If the cultural resources are determined significant historical resources, the Lead Agency (usually the Central Valley Water Board) must review and approve the applicant's proposed treatment measures to ameliorate any "substantial adverse change" in the significance of each historical resource, in consultation with a qualified archaeologist or architectural historian, and other concerned parties. Treatment measures may include preservation through avoidance or project redesign, incorporation within open space or conservation easements, data recovery excavation of archaeological resources, formal documentation of built environment resources, public interpretation of the resource, or other appropriate treatment, and may be described in a project-level Cultural Resources Mitigation Plan included in the Cultural Resources Inventory Report to be approved by the Lead Agency. Should the project area contain standing, built environment resources now 50 years of age, a qualified architectural historian shall be retained to evaluate the integrity and significance of the resource(s) unless the building(s) or structure(s) were covered in the existing survey report and determined not significant according to applicable federal, state, and local criteria. The results of that evaluation shall be included in the Cultural Resources Inventory Report. If cultural resources identified within a project area are neither a historical resource nor unique archaeological resource, there would be no significant effect to the environment and no further treatment of those known resources would be required. **Measure 12.1b:** Inadvertent discovery measures for cultural resources shall be implemented during all construction activities within the project area. Measures shall include procedures for discovery and protection of cultural resources, including human remains, during construction or earth-disturbing activities. Within project areas of identified archaeological sensitivity, discovery measures would include: (1) a worker education course for all construction personnel; (2) monitoring of all earth-disturbing activities by a qualified archeologist; and (3) procedures for discovery of cultural resources, including human remains, during construction or ground-disturbing activities if an archaeological monitor is not present. Monitoring by a Native American with knowledge in cultural resources may also be required, as appropriate. Monitoring within recent fill deposits or non-native soil would not be required. All construction or ground-disturbing activities shall be halted within 100 feet of a cultural resources discovery, including human remains, whether or not a monitor is present, until a qualified professional archaeologist can evaluate the find. If the find is determined to be a significant historical resource and cannot be avoided, then impacts on that resource will require mitigation. During evaluation or mitigative treatment, ground disturbance and construction work could continue on other parts of the project area. If known or suspected human remains are discovered, in addition to halting all construction or ground-disturbing activities within 100 feet, the following steps must be taken before construction activities may be resumed within the stop-work area:		

LS – Less than Significant LSM – Less than Significant with Mitigation NI – No Impact S – Significant SU – Significant and Unavoidable

TABLE 1-1
ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
	• The County Coroner has been immediately notified and has determined that no investigation of the cause of death is required; and • If the remains are of Native American origin, the following steps have been taken: o The applicant has 24 hours to notify the NAHC, who should, in turn, notify the person identified as the proper descendant of any human remains. Under existing law, the descendant then has 24 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. o If the NAHC is unable to identify a descendant or if the descendant does not make recommendations within 24 hours, the applicant shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. o Should the applicant not accept the descendant's recommendations, the applicant or the descendant may, under existing law, request mediation by the NAHC.		
Impact 12.2: Construction of dairy digester and co-digester facilities could result in the disruption of human remains, including those interred outside formal cemeteries.	**Measure 12.2:** Implement inadvertent discovery measures for the protection of cultural resources, including human remains (Measure 12.1b).	S	LSM
Impact 12.3: Construction of dairy digester and co-digester facilities could result in direct or indirect disturbance or destruction of a unique paleontological resource or site or unique geologic feature.	**Measure 12.3:** If paleontological resources, such as fossilized bone, teeth, shell, tracks, trails, casts, molds, or impressions are discovered during ground-disturbing activities, all ground disturbing activities within 50 feet of the find shall be halted until a qualified paleontologist can assess the significance of the find and, if necessary, develop appropriate salvage measures in consultation with the lead agency and in conformance with Society of Vertebrate Paleontology Guidelines (SVP, 1995; SVP, 1996). Additional guidance may be found in *Standard Guidelines for the Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources* (SVP 2010).	S	LSM
Impact 12.4: Development of dairy digester and co-digester facilities could contribute to cumulative impacts related to archaeological, historical, and/or paleontological resources.	**Measure 12.4:** Implement Measures 12.1a, 12.1b, 12.2, and 12.3.	S	LSM
13. Geology			
Impact 13.1: The project could expose people to injury and structures to damage resulting from seismic activity.	**Measure 13.1:** Prior to construction, project applicants or agency(s) responsible shall ensure that dairy digester facilities are designed and construction techniques are used that comply with relevant local, State and federal regulations and building code requirements. Requirements could include, but might not be limited to: • Preparation of site-specific soil and geotechnical engineering studies performed by a licensed professional including, but not limited to, a geologist, engineering geologist, certified soil scientist, certified agronomist, registered agricultural engineer, registered civil or structural engineer, and/or certified professional erosion and sediment control specialist with expertise in geotechnical engineering issues who is registered and/or certified in the State of California, to determine site specific impacts and to recommend site specific mitigations. The site specific soil and geotechnical engineering studies shall be submitted to the all appropriate State and local regulatory agencies including, but not limited to, the CVRWQCB and the city or county engineering department for review and approval. The project applicant or agency(s)	S	LSM

LS – Less than Significant LSM – Less than Significant with Mitigation NI – No Impact S – Significant SU – Significant and Unavoidable

TABLE 1-1
ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
	responsible shall implement all feasible recommendations addressing potential seismic hazards and soil constraints; and • Implementation of CBC design requirements		
Impact 13.2: The project could expose people to injury and structures to damage resulting from unstable soil conditions.	**Measure 13.2:** Implement Mitigation Measure 13.1.	S	LSM
Impact 13.3: Construction of project facilities would not result in an increase in the erosion of soils which could result in a loss of top soil.	None required	LS	LS
Impact 13.4: Development of dairy digester and co-digester facilities would not contribute to cumulative impacts related to geology, soils and seismicity.	None required	LS	LS
14. Noise			
Impact 14.1: Construction of dairy digester and co-digester facilities could temporarily increase noise levels at nearby sensitive receptor locations or result in noise levels in excess of standards in local general plans, noise ordinance, or other applicable standards.	**Measure 14.1a:** Construction activities shall be limited to daytime hours, between 7 a.m. and 6 p.m., Monday through Saturday, or an alternative schedule established by the local jurisdiction. **Measure 14.1b:** Construction equipment noise shall be minimized by muffling and shielding intakes and exhaust on construction equipment to a level no less effective than the manufacture's specifications, and by shrouding or shielding impact tools. **Measure 14.1c:** Construction contractors within 750 feet of sensitive receptors shall locate fixed construction equipment, such as compressors and generators, and construction staging areas as far as possible from nearby sensitive receptors. **Measure 14.1d**: Construction contractors shall comply with all local noise ordinances and regulations.	S	LSM
Impact 14.2: Noise from operation of dairy digester and co-digester facilities or centralized facilities could substantially increase ambient noise levels at nearby land uses or result in noise levels in excess of standards in local general plans, local noise ordinances, or other applicable standards.	**Measure 14.2:** Any continuous equipment operating at night within 1,000 feet of a sensitive receptor must be enclosed. Furthermore, an acoustic study and follow-up measurements must be performed (after construction) to prove that the noise from any continuous equipment operating at night would comply with all local noise regulations. If no local regulations are available, noise levels must be below 45 dBA at the nearest sensitive receptor. If the sound level exceeds local regulations, or 45 dBA if applicable, additional sound-proofing shall be installed to meet the required sound level.	S	LSM
Impact 14.3: Project operational activities associated with transportation would not increase ambient noise levels at nearby land uses.	None required.	LS	LS
Impact 14.4: Development of dairy digester and co-digester facilities could result in a cumulative increase in noise levels.	**Measure 14.4a:** Implement Mitigation Measures 14.1a through Measure 14.1d and Measure 14.2, above.	S	LSM
15. Public Services			
Impact 15.1: The project would not substantially increase demands on fire protection services.	None required.	LS	LS
Impact 15.2: The project would not conflict with wastewater treatment requirements of the Central Valley Water Board.	None required.	LS	LS

LS – Less than Significant LSM – Less than Significant with Mitigation NI – No Impact S – Significant SU – Significant and Unavoidable

TABLE 1-1
ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
Impact 15.3: The project could result in significant environmental effects from the construction and operation of new water and wastewater treatment facilities or expansion of existing facilities.	**Measure 15.3a:** If the project proposes to obtain water from a water supplier (irrigation district, municipal system or other public water entity), the developer would enter into an agreement for service with the supplier. **Measure 15.3b**: If the project proposes to obtain wastewater service from a wastewater treatment provider (municipal or other public entity), the developer would enter into an agreement for service with the provider.	S	LSM
Impact 15.4: The project would not result in significant environmental effects from the construction of new stormwater treatment facilities or expansion of existing facilities.	None required.	LS	LS
Impact 15.5: The project would not require significant levels of new or expanded water supply resources or entitlements.	None required.	LS	LS
Impact 15.6: The project could result in exceeding the capacity of a wastewater treatment provider.	**Measure 15.6:** If the project proposes to obtain wastewater service from a wastewater treatment provider (municipal or other public entity), implement Mitigation Measure 15.3b.	S	LSM
Impact 15.7: The project could result in the construction new energy supplies and could require additional energy infrastructure.	**Measure 15.7:** Implement Mitigation Measures for construction of energy infrastructure including Mitigation Measures 6.1b, 9.1a, 9.1b, 9.2a, 9.2b, 9.3b, 12.1b, 12.2, 12.3, and 14.1a-c.	S	LSM
Impact 15.8: The project would not conflict with existing energy policies or standards.	None required.	NI	NI
Impact 15.9: Development of dairy digester and co-digester facilities would not contribute to cumulative impacts to public services and utilities.	None required.	LS	LS

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CHAPTER 2
Introduction

The Program Environmental Impact Report (Program EIR) for the Waste Discharge Regulatory Program for Dairy Manure Digester and Dairy Manure Co-Digester Facilities within Central Valley Region (Region 5) (SCH #2010031085) was prepared by ESA, pursuant to the requirements of the California Environmental Quality Act (CEQA), to inform the Central Valley Regional Water Quality Control Board (Central Valley Water Board) of the potential environmental impacts related to the proposed waste discharge regulatory program for dairy digester and co-digester (i.e., that use manure plus other organic feedstocks) facilities in Region 5. The Program EIR provides a programmatic analysis of the environmental impacts of the development of dairy manure digester and co-digester facilities and is intended to provide (CEQA) compliance for the Central Valley Water Board's waste discharge regulatory program for these facilities.

Throughout this Response to Comments document, the development of the waste discharge regulatory program for the adoption of Waste Discharge Requirements (WDRs) General Orders and Individual WDRs to regulate the discharge to land of liquid and solid digestate generated from dairy manure digesters and diary manure co-digesters will be referred to as the "project". The Central Valley Water Board is the lead agency for the environmental review of the project and has the principal responsibility for project approval. Written and oral comments received during the 45-day public review and comment period (8 July 2010 until 23 August 2010) for draft Program EIR are addressed in this Final Program EIR Response to Comments document. The Response to Comments document and the draft Program EIR together comprise the Final Program EIR for the project.

The Central Valley Water Board circulated a draft Program EIR regarding this project for public review and comment in accordance with CEQA Guidelines. The draft Program EIR is intended to inform the Central Valley Water Board and the public of the possible environmental impacts of the project, to determine whether these impacts could be significant, to identify methods whereby significant impacts could be reduced to less-than-significant levels, and to discuss possible alternatives. CEQA Guidelines specify that the Final EIR shall consist of the following:

- The draft EIR or a revision of that draft.
- Comments and recommendations received on the draft EIR either verbatim or in summary.
- A list of persons, organizations, and public agencies commenting on the draft EIR.
- The response of the lead agency to significant environmental points raised in the review and consultation process.
- Any other information added by the Lead Agency.

This Final Program EIR Response to Comments document responds to all significant environmental points raised during the public review period for the draft Program EIR. It also lists the text changes to the draft Program EIR as a result of the CEQA review process. This Final Program EIR Response to Comments document, together with the draft Program EIR, constitutes the Final Program EIR. To that end, the draft Program EIR is hereby incorporated by reference into this report. The draft Program EIR is available for review at the following Central Valley Regional Water Quality Control Board locations:

Fresno Office
1685 E Street, Suite 100
Fresno, CA 93706

Sacramento Office
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

Redding Office
415 Knollcrest Drive, Suite 100
Redding, CA 96002

The draft Program EIR can also be found online at:

http://www.swrcb.ca.gov/centralvalley/press_room/announcements/index.shtml

2.1 Recommendations regarding the use of this Final Program EIR Response to Comments document

The inputs received on the draft Program EIR are written comments on the draft Program EIR and oral comments from speakers at the two public meetings held during the 45-day public comment and review period. Chapter 3 contains copies of the comment emails and letters on the draft Program EIR received by the deadline for responses (or shortly thereafter) and responses to the significant environmental points made by the commenters. Each comment email or letter is immediately followed by the responses to the email or comment letter. Each comment has been labeled with an identification number for reference to its response. The list of written commenters and identification numbers are depicted in **Table 2-1**.

The oral comments are responded to in Chapter 4. For ease of reading the list of commenters for both public meetings and the responses to the oral comments are at the beginning of Chapter 4. The comment responses are followed by the transcripts (with the comments identified) by the Fresno transcript and finally the Rancho Cordova transcript. The Fresno public meeting was held on Tuesday August 3, 2010 in the evening (6:30 to 8:00 p.m.), the list of each oral commenter and comment identification numbers are depicted in **Table 2-2**.

TABLE 2-1
LIST OF WRITTEN COMMENTERS ON DRAFT PROGRAM EIR

Letter ID	Agency	Commenter
A	State of California, Governor's Office of Planning and Research, State Clearinghouse and Planning Unit	Scott Morgan, Director
B	United Stated Environmental Protection Agency, Communities and Ecosystems Division	Katherine Taylor, Associate Director
C	U.S. Army Corps of Engineers, Regulatory Division, Sacramento District	Zac Fancher
D	Department of Resources Recycling and Recovery (CalRecycle)	Mark de Bie, Division Chief
E	California Department of Fish and Game	Lisa Gymer, Environmental Scientist
F	Stanislaus County Environmental Review Committee	Christine Almen ,Senior Management Consultant
G	County of Tulare, Resource Management Agency	Cynthia Echavarria, Environmental Coordinator
H	Dairy Cares	J.P. Cativiela, Dairy Cares Program Coordinator
I	Sustainable Conservation	Allen J. Dusault, Program Director
J	Western United Dairymen	Michael L. H. Marsh, CPA, Chief Executive Officer
K	United Auburn Indian Community of the Auburn Rancheria	Greg Baker, Tribal Administrator

TABLE 2-2
LIST OF ORAL COMMENTERS ON THE DRAFT PROGRAM EIR (FRESNO)

Comment Number	Commenter
1-1	Craig Hartman, Four Creeks
2-1	Nettie Drake
2-2	Nettie Drake
3-1	Marvin Mears
3-2	Marvin Mears
3-3	Marvin Mears
3-4	Marvin Mears

The Rancho Cordova public meeting was held on Wednesday August 4, 2010 in the evening (6:30 to 8:00 p.m.), the list of each oral commenter and identification numbers are depicted in **Table 2-3**.

TABLE 2-3
LIST OF ORAL COMMENTERS ON THE DRAFT PROGRAM EIR (RANCHO CORDOVA)

Comment Number	Commenter
4-1	Dan Weller, California Air Resources Board
4-2	Dan Weller, California Air Resources Board
4-3	Dan Weller, California Air Resources Board
4-4	Dan Weller, California Air Resources Board
4-5	Dan Weller, California Air Resources Board
4-6	Dan Weller, California Air Resources Board
4-7	Dan Weller, California Air Resources Board
4-8	Dan Weller, California Air Resources Board
5-1	Justin Ellerby, California Center for Cooperative Development
5-2	Justin Ellerby, California Center for Cooperative Development
5-3	Justin Ellerby, California Center for Cooperative Development
5-4	Justin Ellerby, California Center for Cooperative Development
6-1	Bill Van Dam, Alliance of Western Milk Producers
6-2	Bill Van Dam, Alliance of Western Milk Producers

Some comments and responses in this document resulted in text that should be changed in the draft Program EIR. Text with a line through it (~~strikethrough~~) is removed from the draft Program EIR; <u>underlined text</u> is added to the draft Program EIR. Chapter 5 contains all the changes in this Response to Comments document that result in changes to the draft Program EIR. The changes are organized sequentially according to the page in the draft Program EIR on which the change was made.

CHAPTER 3
Written Comments and Responses

TABLE 3-1
LIST OF WRITTEN COMMENTERS ON DRAFT PROGRAM EIR

Letter ID	Agency	Commenter	Page
A	State of California, Governor's Office of Planning and Research, State Clearinghouse and Planning Unit	Scott Morgan, Director	3.A-1
B	United Stated Environmental Protection Agency, Communities and Ecosystems Division	Katherine Taylor, Associate Director	3.B-2
C	U.S. Army Corps of Engineers, Regulatory Division, Sacramento District	Zac Fancher	3.C-1
D	Department of Resources Recycling and Recovery (CalRecycle)	Mark de Bie, Division Chief	3.D-1
E	California Department of Fish and Game	Lisa Gymer, Environmental Scientist	3.E-1
F	Stanislaus County Environmental Review Committee	Christine Almen ,Senior Management Consultant	3.F-1
G	County of Tulare, Resource Management Agency	Cynthia Echavarria, Environmental Coordinator	3.G-1
H	Dairy Cares	J.P. Cativiela, Dairy Cares Program Coordinator	3.H-1
I	Sustainable Conservation	Allen J. Dusault, Program Director	3.I-1
J	Western United Dairymen	Michael L. H. Marsh, CPA, Chief Executive Officer	3.J-1
K	United Auburn Indian Community of the Auburn Rancheria	Greg Baker, Tribal Administrator	3.K-1

A

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Cathleen Cox
Acting Director

August 24, 2010

Stephen Klein
Regional Water Quality Control Board, Region 5 (Central Valley)
1685 E Street
Fresno, CA 93706

AUG 30 2010

Subject: Central Valley Dairy Digester and Co-digester Facilities Program
SCH#: 2010031085

Dear Stephen Klein:

A-1

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on August 23, 2010, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

Response A1

Comment noted that the Central Valley Water Board (Region 5) has complied with the State Clearinghouse review requirements for the draft Program EIR pursuant to the California Environmental Quality Act.

B

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

COMMUNITIES AND ECOSYSTEMS
DIVISION

California Regional Water Quality Control Board, Central Valley Region
Attn: Stephen Klein, P.E., M.S., project manager
1685 E Street
Fresno, CA 93706-2007

Via e-mail: sklein@waterboards.ca.gov

Subject: Comment Letter -- Dairy digester and co-digester draft Program EIR

Dear Mr. Klein,

We at U.S. EPA Region 9 appreciate the Central Valley Water Board's proactive preparation of this Program EIR to help support future development of dairy manure digester and co-digester projects in Region 5. We share your interests in supporting these projects that can provide benefits to the State by generating renewable energy and by reducing greenhouse gas (GHG) emissions. EPA is pleased to provide comments on the draft program EIR. Our comments address the environmental context of the PEIR, the proposed "environmentally superior alternative," and the biogas production scenarios analyzed.

In general, we note that a large subsection of the Central Valley Water Board's jurisdiction is the San Joaquin Valley, where dairies and dairy cows are highly concentrated. In the San Joaquin Valley, topography, climate, and emissions sources combine to make air quality the least healthful in the nation, and the contamination of groundwater with nitrates is widespread. As a result of these geographic and environmental conditions, generation of renewable energy from digesters must meet all applicable water and air regulatory requirements and, specifically, emit as little nitrous oxide (NOx) as feasible. We suggest that the PEIR acknowledge these conditions as constraints on the program in the introduction to the document. (To this end, we note that U.S. EPA is investing $400,000 in San Joaquin Valley's Clean Air Technology Initiative, some of which will advance low-NOx alternatives for electricity generation from digester biogas.) B-1

In addition, we are concerned about the cumulative effects on both air and groundwater quality that the PEIR indicates will occur under "the project" as specified. In this context, we question the designation of the project as the environmentally superior alternative, as opposed to a project that contains both the co-digestion substrate restriction and the reduced NOx emissions alternatives. The PEIR (p. 17-13) justifies this designation by defining the purpose of the project as to "promote the increase of renewable energy sources" and thereby obtain greenhouse gas emission reduction benefits, and by stating that the more stringent alternatives would impede this purpose. However, this seems to ignore the larger context and the need to consider the larger B-2

goal of balancing and reducing, to the extent feasible, all environmental impacts. We suggest revising the description of the purpose of the PEIR to address this issue and then re-evaluating the designation of the environmentally superior alternative. B-2 cont

Our specific comments address the scenarios analyzed in the PEIR. The PEIR analysis addresses individual on-farm anaerobic digesters, centralized digester facilities that process manure trucked or piped in from several nearby dairies, and centralized biogas upgrade facilities that process biogas piped in from distributed digesters. We suggest that the analysis also include a scenario in which a centralized facility generates electricity using biogas piped in from distributed digesters. The size of the resulting facility could make use of cleaner electricity generation technology financially feasible in locations not convenient to gas transmission infrastructure. B-3

In passing, we noted an apparent logical inconsistency and minor typographical errors. On page 5-18, the descriptions of the relationship between pH, NH3, and NH4- in the first and second paragraphs seem contradictory. On page 6-5, “system-troposphere system” should be “surface-troposphere system” and, on page 6-6, “nitric acid production” appears twice in the list of anthropogenic sources of NO2. B-4

Again, we appreciate the Central Valley Water Board’s work and the opportunity to comment on this important study.

Sincerely,

Katherine Taylor, Associate Director
Communities and Ecosystems Division
Agriculture Advisor to the Regional Administrator

Response B-1

The Central Valley Water Board appreciates the $400,000 investment in the San Joaquin Valley's Clean Air Technology Initiative, some of which will advance low-NOx alternatives for electricity generation from digester biogas.

We acknowledge that the program is constrained by the potential for NOx emission and that the San Joaquin Valley has the least healthful air quality in the nation. Please see Section 1.4 (third bullet top of page 1-7 in the draft Program EIR), where the San Joaquin Valley is described as "one of the most polluted air basins in the country".

Also on page 1-7 is a summary of "The Reduced NOx Emissions Alternative, which specifically addresses the concern for minimal NOx emissions.

Table 6-3 on page 6-9 of the draft Program EIR shows that many of the Air Basins in Region 5 are nonattainment with regard to state and federal air quality standards for ozone and particulate matter (PM10 and PM2.5).

Tables 5-1, 5-2 and 5-3 (draft program EIR pages 5-21, 5-22, and 5-23 respectively) show that nitrates are a common contaminant in groundwater wells in the Sacramento River Hydrologic Region (HR), San Joaquin River HR, and Tulare Lake HR. As noted in the second full paragraph of the draft Program EIR, the dairy digesters would also result in the conversion of more of the nitrogen into its mineralized form, which is more readily available to plants than organic nitrogen compounds, which release nitrogen slowly and not always at times and rates useful to plants. Reducing the time organic nitrogen remains in the surface soil reduces the potential that slowly mineralized nitrogen will be available to leach to groundwater.

Response B-2

Comment noted. The draft Program EIR did consider the larger context in making the determinations on the Environmentally Superior Alternatives given cumulative effects on both air and groundwater quality. Especially the context that the alternatives would actually have to be implemented to provide environmental benefits and if they are not implemented the opportunities for environmental improvements, especially in the areas of developing renewable energy resources and the reduction of greenhouse gas emissions, would not be realized. Extensive thought was given to balancing all the environmental impacts and these thoughts are summarized on page 1-8 (end of the last paragraph) and page 17-14 (end of the last paragraph) of the draft Program EIR as follows:

> "Regardless of their potential benefits, both the Additional Co-digestion Substrate Restrictions Alternative, and the Reduced NOx Emissions Alternative place restrictions on the development of dairy manure digester and co-digester projects that could further restrict future growth of digesters in Region 5. Dairy digester development would be restricted by the high costs and/or additional regulatory hurdles of the technologies associated with the Reduced NOx Emissions Alternative (i.e., fuel cells, transportation fuel, and utility pipeline

injection). Dairy digester development would also be restricted by additional limitations contained in the Additional Co-digestion Substrate Restrictions Alternative. By likely restricting the development of dairy digesters in Region 5, both the Additional Co-digestion Substrate Restrictions Alternative, and the Reduced NOx Emissions Alternative would have a negative influence on two of the primary objectives of the project, which are the development of a renewable energy resource (biogas) and the reduction of GHG emissions from dairy operations. Accordingly, some environmental benefits would as a practical matter be lost under these alternatives. Given the existing technological and economic constraints, therefore, these alternatives cannot be said to be clearly environmentally superior to the proposed project."

Response B-3

The Program EIR analysis is intended to include electrical generation as an option at centralized facility. We agree with the EPA. The description of the centralized facilities in the draft Program EIR should more clearly indicate that the centralized facilities would have the same flexibility as individual dairies with regard to the use of biogas. As shown in the draft Program EIR on Figure 1-2 (page 1-4) and Figure 3-3 (page 3-8), biogas production can be used for a variety of purposes (i.e, transportation fuel, utility pipeline injection, engine/turbine, boiler and fuel cells). The air quality analyses and mitigation measures would be the same whether electricity is generated from biogas at an individual dairy or at a centralized facility (see Impact 6.2 beginning on page 6-24 of the draft Program EIR). Also, as noted by the EPA, the size of the centralized facility could make electrical generation feasible in locations where injection into the utility pipeline system is not possible.

To clarify the lack of any restriction on centralized facilities to generate electricity, the text describing these scenarios on pages 1-5 and 3-11 shall be revised as follows:

"Centralized Locations

There are two categories of centralized location facilities for dairies that will be assessed in this Program EIR: (1) Central AD Facility, whereby individual dairies would collect manure and transport the manure by pipeline or truck to a central facility; and (2) a Central Biogas Clean-Up Facility, whereby raw biogas from individual dairies (including dairies linked via underground gas pipelines) is piped to a central facility. These types of centralized facilities may be sited on or off-site of dairies. For both location options, the central facility would have the potential to receive manure, manure plus co-digestion substrate, and/or raw biogas. <u>Biogas at centralized facilities could be used to generate electricity using internal combustion engines/turbines or fuel cells or used for boilers, transportation fuel, or for utility pipeline injection.</u>"

Response B-4

The second sentence in the second paragraph on page 5-18 of the Program EIR is revised to read:

> "Toxicity ~~increases~~ decreases as pH decreases and as temperature decreases."

The fourth sentence of the first paragraph of the Greenhouse Gas Emissions discussion on page 6-5 of the draft Program EIR has been revised as shown below:

> "The term "natural greenhouse effect" refers to how greenhouse gases trap heat with the ~~system~~ surface-troposphere system; the term "enhanced greenhouse effect" refers to an increased concentration of greenhouse gases, which results in an increase in temperature of the surface-troposphere system."

The third sentence on page 6-7 of the draft Program EIR has been revised as shown below.

> "Anthropogenic sources of nitrous oxide include fertilizer application, production of nitrogen fixing crops~~, nitric acid production~~, animal manure management, sewage treatment, combustion of fossil fuels, and nitric acid production (CAT, 2006; CAPCOA, 2009)."

C

Paul Miller

From: Stephen Klein [sklein@waterboards.ca.gov]
Sent: Thursday, July 22, 2010 9:34 AM
To: Paul Miller
Cc: Clay Rodgers; Doug Patteson; David Sholes
Subject: Fwd: USACE Comments on Waste Discharge Regulatory Program SCH #2010031085

Paul,

This is the first comment I have received on the draft PEIR.

Stephen

>>> "Fancher, Zachary J SPK" <Zachary.J.Fancher@usace.army.mil>
>>> 7/21/2010 2:36 PM >>>
Dear Mr. Klein,

We are responding to your July 8, 2010 request for comments on the Draft Program EIR for a Waste Discharge Regulatory Program for Dairy Manure Digester and Co-Digester Facilities within the Central Valley Region. We understand that study locations are undetermined as of yet, but correspondence with the Corps should be maintained as they are confirmed.

The Corps of Engineers' jurisdiction within the study areas may be under the authority of Section 404 of the Clean Water Act for the discharge of dredged or fill material into waters of the United States. Waters of the United States include, but are not limited to, rivers, perennial or intermittent streams, lakes, ponds, wetlands, vernal pools, marshes, wet meadows, and seeps. Project features that result in the discharge of dredged or fill material into waters of the United States will require Department of the Army authorization prior to starting work.

To ascertain the extent of waters on the project site(s), the applicant should prepare a wetland delineation, in accordance with the "Minimum Standards for Acceptance of Preliminary Wetland Delineations", under "Jurisdiction" on our website at the address below, and submit it to this office for verification. A list of consultants that prepare wetland delineations and permit application documents is available on our website at the same location. C-1

The range of alternatives considered for the project(s) should include alternatives that avoid impacts to wetlands or other waters of the United States. Every effort should be made to avoid project features which require the discharge of dredged or fill material into waters of the United States. C-2
In the event it can be clearly demonstrated there are no practicable alternatives to filling waters of the United States, mitigation plans should be developed to compensate for the unavoidable losses resulting from project implementation. C-3

If you have any questions, please contact Zachary Fancher at 1325 J Street, Room 1480, Sacramento, California 95814-2922, email Zachary.J.Fancher@usace.army.mil, or telephone 916-557-6643. For more information regarding our program, please visit our website at www.spk.usace.army.mil/regulatory.html.

Zac Fancher
U.S. Army Corps of Engineers
Regulatory Division, Sacramento District
1325 J Street, Room 1480
Sacramento, California 95814-2922
Phone: 916.557.6643 Fax: 916.557.6877
Zachary.J.Fancher@usace.army.mil

Let us know how we're doing.
http://per2.nwp.usace.army.mil/survey.html

Information on the Regulatory Program.

Response C-1

Comment noted. Because the dairy digesters are likely to be constructed on lands that have been previously altered by agricultural activities, they are unlikely to impact any waters of the U.S. However, Mitigation Measure 9.3a requires a wetland assessment, prepared by a qualified biologist that will determine if waters of the U.S. and/or waters of the State are present in the project area. If potential wetlands are present, and cannot be avoided, under Mitigation Measure 9.3b, the project applicant or agency(s) responsible will be required to prepare a wetland delineation for review by the Corps.

Response C-2

Comment noted. As stated in Mitigation Measure 9.3b, if waters of the U.S. are present in the project area, the project would either be re-designed to avoid impacts or the project applicant or agency(s) responsible would obtain the appropriate permits. If waters of the U.S. are present, and cannot be avoided, the project applicant will comply with state and federal law, including the Clean Water Act, which could require the preparation of an alternatives analysis.

Response C-3

Comment noted. Mitigation Measure 9.3b requires that if waters of the U.S. are present, and cannot be avoided, then the project applicant or agency(s) responsible shall obtain all appropriate permits. Mitigation plans are required as part of the Clean Water Act, Section 404 permit.

CalRecycle

DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY

801 K STREET, MS 19-01, SACRAMENTO, CALIFORNIA 95814• (916) 322-4027 • WWW.CALRECYCLE.CA.GOV

D

August 23, 2010

Mr. Stephen Klein, Project Manager
Central Valley Regional Water Quality Control Board
1685 E Street
Fresno, California 93706

Subject: **State Clearinghouse (SCH) No. 2010031085** – Draft Program Environmental Impact Report (EIR) for a *Waste Discharge Regulatory Program for Dairy Manure Digester and Dairy Manure Co-Digester Facilities* (project) within the Central Valley Regional Water Quality Control Board (CVRWQCB) Region.

Dear Mr. Klein:

CalRecycle staff (staff) have reviewed the draft Program EIR cited above and offer the following comments intended to assist the lead agency.

Staff have outlined CalRecycle's regulatory requirements relative to anaerobic digestion (AD) projects in a publication entitled *How Anaerobic Digestion Fits Current Board Regulatory Structure*. The publication is included as Attachment 1 to this comment letter, and it may also be accessed online at the following URL: http://www.calrecycle.ca.gov/Publications/Organics/2009021.pdf. This document provides an overview of how the Title 14 requirements for permit/authorization apply to anaerobic digestion with consideration of the feedstock, source of the feedstock, location and quantity involved. The determination of the appropriate level of authorization or permit for an activity involving anaerobic digestion is made by the [Local] Enforcement Agency. D-1

Staff have reviewed all aspects of the draft Program EIR and have the following observations and questions:

Regarding air quality, mitigation measure 6.3b requires applicants to "…implement an Odor Management Plan (OMP) as part of each application submitted to establish digester and co-digester facilities." If an AD facility handles compostable material and is classified as a compost facility, odor issues are shared responsibility of the Enforcement Agency and local air pollution control or air quality management district pursuant to Public Resources Code Section 43209.1 The facility must develop an Odor Impact Minimization Plan (OIMP) pursuant to14 CCR §17863.4. If an OIMP is required for an AD facility, staff recommend that odor mitigations include reference to the need to comply with 14 CCR §17863.4. D-2

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The draft Program EIR on page 3-16 states that "…the solids [digestate] could be used for land application, compost, fertilizer, or potentially landfill alternative daily cover and the liquid portion of the effluent could be recycled for flush water, used for land application, or at a centralized facility it could potentially be sent to a sanitary sewer." The solid digestate is not a material that has been evaluated for use as Alternative Daily Cover (ADC) at landfills. If a landfill operator proposes to use the solid digestate as ADC, a site-specific demonstration project would be required in compliance with Section of Title 27 Section 20690(b). D-3

As noted in the draft Program EIR on page 2-2, CalRecycle is preparing a Program EIR for AD facilities that would use food waste, green material, and mixed solid waste (MSW) as feedstocks. CalRecycle will be analyzing the development and operation of AD facilities that would be sited at solid waste facilities and in industrial areas. The Program EIR will not cover AD facilities sited at dairies and other agricultural areas. D-4

Please note that correspondence for staff of CalRecycle's Waste Compliance and Mitigation Program should continue to be sent to 1001 I Street, P.O. Box 4025, Sacramento, CA 95812. Correspondence specifically for the attention of the Director of CalRecycle should be sent to the address in the letterhead at the top of this letter.

If you have any questions regarding these comments, please contact Ken Decio of my staff at (916) 341-6313, facsimile at (916) 319-7244, or e-mail Mr. Decio at Ken.Decio@CalRecycle.ca.gov.

Sincerely,

Mark de Bie, Division Chief
Permitting and LEA support Division
Waste Compliance and Mitigation Program
CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY

cc: State Clearinghouse
Office of Planning and Research
P.O. Box 3044
Sacramento, CA 95812-3044

California Integrated Waste
Management Board

September 2009

How Anaerobic Digestion Fits Current Board Regulatory Structure

California Environmental Protection Agency

STATE OF CALIFORNIA

Arnold Schwarzenegger
Governor

Linda S. Adams
Secretary, California Environmental Protection Agency

•

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California Integrated Waste Management Board

Executive Summary

The Board adopted Strategic Directives, specifically SD-2, SD-3 and SD-9, to establish goals to increase the diversion of waste from landfills, encourage use the technology to effectively manage and reuse waste consistent with the waste management hierarchy and The Global Warming Solutions Act of 2006 (AB 32), and to encourage the development of alternative fuels. AB 32 calls for the reduction of greenhouse gases through reductions from sources and the use of low carbon fuels. Solid waste landfills are a significant source of greenhouse gases due to decomposition of organic material in landfills into methane. Anaerobic digestion is being considered for many projects to meet the goals in the Board Strategic Directives and AB 32.

The use of anaerobic digestion to digest organic waste will contribute to meeting the goals identified in the Strategic Objectives and AB 32 by eliminating the land disposal of organic waste, generating a methane rich gas that can be used as fuel for generating electricity, heat, or vehicles. The methane rich gas is a low carbon fuel that is environmentally superior to petroleum based fuel such as gasoline or diesel. Lastly, this fuel source is sustainable, reducing the dependence on the importation of crude oil.

California, as well as the rest of the United States, is behind in using anaerobic digestion to manage solid waste. Many European countries are using anaerobic digestion to reduce their dependence on land disposal while creating a source of low carbon fuel. Possible reasons for this may be that available land for landfills in Europe is scarcer, and fuel and energy costs are much higher in Europe.

The guidance focuses on the applicability for a solid waste facilities permit, compostable materials handling facility permit, enforcement agency notification and exclusions. It is not a comprehensive discussion of all Board requirements that may apply. Likewise, it does not include a discussion of any approvals that may be required by other state agencies or local jurisdictions, such as the Regional Water Quality Control Board and local air pollution control agency. The determination of what level of authorization or permit is required for an activity involving anaerobic digestion is made by the Local Enforcement Agency.

Guidance Document On How Anaerobic Digestion Fits Current Board Regulatory Structure

Purpose of this Document

The use of anaerobic digestion to treat solid waste to produce compost and biogas will continue to increase in California as municipalities and industry take on the challenge to reduce the disposal of organic waste into landfills and reduce our reliance on non-renewable energy.

Anaerobic digestion is one technology that is part of a system that includes the digester, feedstock handling process, equipment for the control and collection of off-gases from the digester, and management of digestate (liquid and/or solids) from the digester. This guidance document is intended to provide a basic outline of how the statutory and regulatory requirements of the California Integrated Waste Management Board apply to the permitting/authorization of anaerobic digestion projects. The application of the Board requirements must be applied on a case-by-case basis. This document provides an overview of how the Title 14 requirements for permit/authorization apply to anaerobic digestion with consideration of the feedstock, source of the feedstock, location and quantity involved. The determination what level of authorization or permit for an activity involving anaerobic digestion is made by the LEA.

The guidance focuses on the applicability for a solid waste facilities permit, compostable materials handling facility permit, enforcement agency notification and exclusions. It is not a comprehensive discussion of all Board requirements that may apply. Likewise, it does not include a discussion of any approvals that may be required by other state agencies or local jurisdictions, such as the Regional Water Quality Control Board and local air pollution control districts.

The following discussion provides guidance on how anaerobic digestion is regulated under the current regulatory structure, as charted in Attachment 1, Decision Diagram for Anaerobic Digestion, Attachment 2, Tier Regulatory Placement for Anaerobic Digestion by Feedstock, and in Attachment 3, Excluded Activities for Anaerobic Digestion Handling Compostable Materials.

Brief Description of Anaerobic Digestion

Anaerobic digestion is a biological process that decomposes organic matter in an environment with little or no oxygen resulting in a biogas and liquid/solid stream called digestate. This process occurs in nature in anaerobic environments, as well in landfills. Engineered anaerobic digestion systems have been used in Europe, Canada, Japan, Australia and the U.S. to reduce the biodegradable content of organic solid waste and to produce energy. The decomposition occurs in a four-step process: hydrolysis, acidogenesis, acetogenesis, and methanogenesis to break down organic matter into methane, carbon dioxide, water, and digestate/residuals.

The biogas contains mostly methane and carbon dioxide but frequently carrying impurities such as moisture, hydrogen sulfide (H_2S), ammonia, siloxane, and particulate matter. Anaerobic digestion can be conducted in lagoons (covered or not), controlled reactors, digesters and landfills. Biogas, primarily methane and carbon dioxide, is the principal energy product from anaerobic digestion processes. Biogas can be burned directly for heat or steam or converted to electricity in reciprocating or gas turbine engines, steam turbines, or fuel cells. Biogas can be upgraded to biomethane and used as a vehicle fuel, injected to the natural gas transmission system, or reformed into hydrogen fuel.

Anaerobic digestion systems are employed in many wastewater treatment facilities for sludge degradation and stabilization, and used in engineered anaerobic digesters to treat high-strength industrial and food processing wastewaters prior to disposal. In Europe, the systems are used to treat the biodegradable fraction of solid waste prior to landfilling in order to reduce future methane and leachate emissions and recover some energy. As a consequence of the European Commission Landfill Directive, installed anaerobic digestion capacity in Europe has increased sharply and now stands at more than 4 million tons of annual capacity.

A facility using anaerobic digestion to handle solid waste will have a system comprised of the following units: feedstock handling/storage, preprocessing, digester, collection and storage of the biogas, dewatering of the digestate, and handling/storage of the dewatered digestate. There are several designs for digesters, single-stage (wet or dry), two-stage, and batch systems. The dewatered digestate still contains organic matter and may need to be further treated to stabilize it, usually through aerated composting or disposal in a landfill. A digestate that meets the definition of compostable material, but fails the standards set for metals or pathogens set in Title 14 California Code of Regulations Sections 17868.2 and 17868.3, should continue to be considered to be a waste material. The storage and use of biogas generated from anaerobic digestion is not viewed as a part of the solid waste handling activities discussed in this guidance.
Information on anaerobic digestion systems and their use is contained in the March 2008 Board report, "Current Anaerobic Digestion Technologies Used for Treatment of Municipal Organic Solid Waste," can be viewed or downloaded at
http://www.ciwmb.ca.gov/publications/default.asp?pubid=1275.

Anaerobic Digestion Handling Compostable Material Is Regulated As a Compostable Material Handling Facility

In general, looking first to the nature of the material being handled helps determine the regulatory scheme which applies to anaerobic digestion activities. If the feedstock handled at the facility is a compostable material, the facility will typically be regulated as a compostable material handling facility. If the material is not compostable, then the activity will typically be treated as a transfer and processing facility, subject to the Three-Part Test and volumes involved.

Anaerobic digestion fits within the statutory definition of composting. ("Composting" is defined broadly as "the controlled or uncontrolled biological decomposition of organic wastes." PRC

section 40116.1.) Thus, sites using anaerobic digestion would most properly be regulated under the Board's compostable material handling regulations if their feedstock is compostable (14 CCR 17850 et seq.).

In making this determination, some key definitions include:

> PRC 40116. "Compost" means the product resulting from the controlled biological decomposition of organic wastes that are source separated from the municipal solid waste stream, or which are separated at a centralized facility. "Compost" includes vegetable, yard, and wood wastes which are not hazardous.
>
> PRC 40200 (a) "Transfer or processing station" or "station" includes those facilities utilized to receive solid wastes, temporarily store, separate, convert, or otherwise process the materials in the solid wastes, or to transfer the solid wastes directly from smaller to larger vehicles for transport, and those facilities utilized for transformation.
>
> PRC 40200 (b) "Transfer or processing station" or "station" does not include any of the following:
>
> (1) A facility, whose principal function is to receive, store, separate, convert, or otherwise process in accordance with state minimum standards, manure.
>
> (2) A facility, whose principal function is to receive, store, convert, or otherwise process wastes which have already been separated for reuse and are not intended for disposal.
>
> (3) The operations premises of a duly licensed solid waste handling operator who receives, stores, transfers, or otherwise processes wastes as an activity incidental to the conduct of a refuse collection and disposal business in accordance with regulations adopted pursuant to Section 43309.

Anaerobic digestion of compostable material is typically regulated under the Board's Compostable Materials Handling Operations and Facilities Regulatory Requirements, Title14, CCR 17850 et seq. The regulations take into the consideration the type of feedstock, location of the activity, the volumes involved, and purpose. If the feedstock is not compostable material, the required permit or authorization will be dependent on the feedstock, size and location as illustrated in the Decision Diagram for anaerobic digestion. Mixtures of feedstock will require a case-by-case determination.

Title 14, section 17852(a)(8) "Anaerobic Decomposition" means the biological decomposition of organic substances in the absence of oxygen.

Title 14, section 17852(a)(17) "Enclosed Composting Process" means a composting process where the area that is used for the processing, composting, stabilizing, and curing of organic

materials, is covered on all exposed sides and rests on a stable surface with environmental controls for moisture and airborne emissions present.

Title 14, section 17852(a)(12) “Compostable Material Handling Operation” or “Facility” means an operation or facility that processes, transfers, or stores compostable material. Handling of compostable materials results in controlled biological decomposition. Handling includes composting, screening, chipping and grinding, and storage activities related to the production of compost, compost feedstocks, and chipped and ground materials. “Compostable Materials Handling Operation or Facility” does not include activities excluded from regulation in section 17855. “Compostable Materials Handling Operation or Facility” also includes:

(A) agricultural material composting operations;
(B) green material composting operations and facilities;
(C) research composting operations; and
(D) chipping and grinding operations and facilities.

A Tiered Regulatory Structure

The Board has implemented regulations which exclude some activities from permitting requirements, allow others to operate after making a notification to the Local Enforcement Agency (LEA). The tiers that are applicable for anaerobic digestion are the Full Permit, Enforcement Agency Notification, and Excluded Solid Waste Handling tiers. The determination of how anaerobic digestion fits into the tiers is made by the LEA. The type of feedstock, location, and size of the activity will determine which tier is applicable for a specific anaerobic digestion project. If the feedstock is not compostable material, the activity is subject to the requirements for a transfer station and solid waste handling. As mentioned above, the regulations have specific provisions and requirements for compostable materials. The regulations for compostable materials provide the criteria for activities that are excluded, subject to requirements for notification or a permit.

How do I Determine if the Feedstock is Compostable?

Anaerobic digestion may use compostable or non-compostable material. If an activity is handling compostable material,[*] the activity is usually subject to the compostable material handling requirements of Title 14, Chapter 3.1, Compostable Materials Handling Operations and Facilities Regulatory Requirements. A compostable material is any organic material that when accumulated will become active compost,[†] that is, is unstable and will rapidly decompose, generating temperatures of at least 50 degrees Celsius (122 degrees Fahrenheit) during decomposition, or is releasing carbon dioxide at a rate of at least 15 milligrams per gram of compost per day, or the equivalent of oxygen uptake (Title 14, section 17852(a)(11), (a)(1)). Compostable materials include, but are not limited to, vegetable, yard, food, agricultural, and biosolids.

The compost regulations make an exception for an operator who is handling compostable material in a way that precludes it from becoming active compost. In that case, the activity is excluded from the compost regulation, even though it handles compostable material (Title 14, section 17855(a)(5)(J)). This circumstance is rare. Of course, the activity may still be subject to regulation as a transfer/processing station, as noted below.

Anaerobic Digestion Handling Feedstock That Is Not Compostable Material

Anaerobic digestion that is handling a solid waste that does not meet the definition of a compostable material may be subject to the requirements for a transfer/processing station. See Attachment 4 for more details on transfer station.

When is an Anaerobic Digestion Activity that is Handling Compostable Material and Creating Active Compost Excluded From Any Requirements Under the Solid Waste Regulations?

The use of anaerobic digestion under specific conditions will be considered an excluded activity and not be subject to permitting or notification requirements under the compost regulations. There are provisions addressing agricultural material, small quantity of green material (if no more than 500 cubic yards is on-site at any one time), location, non-commercial composting, and

---

[*] Title 14, section 17852 (a) (11) – "Compostable Material" means any organic material that when accumulated will become active compost as defined in section 17852(a) (1).

[†] Title 14, section 17852 (a) (1) – "Active Compost" means compost feedstock that is in the process of being rapidly decomposed and is unstable. Active compost is generating temperatures of at least 50 degrees Celsius (122 degrees Fahrenheit) during decomposition; or is releasing carbon dioxide at a rate of at least 15 milligrams per gram of compost per day, or the equivalent of oxygen uptake.

within-vessel composting. The activities listed below are excluded activities and do not constitute compostable material handling operations or facilities, and are not subject to the Compostable Materials Handling requirements. Nothing in this section precludes the Enforcement Agency or the Board from inspecting an excluded activity to verify that the activity is being conducted in a manner that qualifies as an excluded activity or from taking any appropriate enforcement action.

Agricultural Material

Title 14, section 17855(a)(1) An activity is excluded if it handles agricultural material derived from an agricultural site, and returns a similar amount of the material produced to that same agricultural site, or an agricultural site owned or leased by the owner, parent, or subsidiary of the composting activity. No more than an incidental amount of up to 1,000 cubic yards of compost product may be given away or sold annually.

Title 14, section 1785 (a)(5) "Agricultural Material" means material of plant or animal origin, which result from the production and processing of farm, ranch, agricultural, horticultural, aquacultural, silvicultural, floricultural, vermicultural, or viticultural products, including manures, orchard and vineyard prunings, and crop residues.

Small Quantity of Green Material

Title 14, section 17855(a)(4) Handling of green material, feedstock, additives, amendments, compost, or chipped and ground material is an excluded activity if 500 cubic yards or less is on-site at any one time, the compostable materials are generated on-site, and if no more than 1,000 cubic yards of materials are either sold or given away annually. The compostable material may also include up to 10 percent food material by volume.

Location at Existing Solid Waste Facilities

Title 14, section 17855(a)(5) The handling of compostable materials is an excluded from having to comply with the Compostable Materials Handling requirements if:

(A) the activity is located at a facility (i.e., landfill or transfer/processing facility) that has a tiered or full permit as defined in section 18101,

1. has a Report of Facility Information which is completed and submitted to the EA that identifies and describes the activity and meets the requirements of Titles 14 or 27; and,
2. will only use the material on the facility site, or

(B) the activity is solely for the temporary storage of biosolids sludge at a Publicly Operated Treatment Works (POTW), (see section on POTW), or

(H) the activity is part of an animal food manufacturing or rendering operation. Non-commercial

(6) Non-commercial composting with less than one cubic yard of food material is excluded provided that all compostable material is generated and used on-site.
Within-vessel Small Quantity
(8) Within-vessel composting process activities with less than 50 cubic yard capacity are excluded.

When is Anaerobic Digestion Required to Comply with the Enforcement Agency Notification?

If an activity meets the requirements for a compost material handling activity, the next step is to determine what type of compostable material handling activity it fits under.

Agricultural Material Composting Operation

When anaerobic digestion is used to process only agricultural material in a manner that does not meet the provisions for the exclusion in Title 14, section 17855(a)(1); pursuant to Title 14, section 17856, the operations must comply with the notification requirement.

Title 14, section 17852(a)(5) "Agricultural Material" means material of plant or animal origin, which result from the production and processing of farm, ranch, agricultural, horticultural, aquacultural, silvicultural, floricultural, vermicultural, or viticultural products, including manures, orchard and vineyard prunings, and crop residues.

Title 14, section 17852(a)(6) "Agricultural Material Composting Operation" means an operation that produces compost from green or agricultural additives, and/or amendments.

Title 14, section 17852(a)(25) "Manure" is an agricultural material and means accumulated herbivore or avian excrement. This definition shall include feces and urine, and any bedding material, spilled feed, or soil that is mixed with feces or urine.

Green Material

A green material composting operation that has up to 12,500 cubic yards of feedstock, compost or chipped and ground material onsite at any one time needs to comply with the requirement for Enforcement Agency Notification (Title 14, section 17857.1). Green material with any quantity of food material will be subject to a full permit.

> Title 14, section 17852(a)(21) "Green Material" means any plant material that is separated at the point of generation, contains no greater than 1.0 percent of physical contaminants by weight, and meets the requirements of section 17868.5. Green material includes, but is not limited to, yard trimmings, untreated wood wastes, natural fiber products, and construction and demolition wood waste. Green material does not include

food material, biosolids, mixed solid waste, material processed from commingled collection, wood containing lead-based paint or wood preservative, mixed construction or mixed demolition debris.

Title 14, section 17852(a)(32) “Physical Contamination” or “Contaminants” means human-made inert products contained within feedstocks, including, but not limited to, glass, metal, and plastic.

Title 14, section 17852(a)(22) “Green Material Composting Operation” or “Facility” is an operation or facility that composts green material, additives, and/or amendments. A green material composting operation or facility may also handle manure and paper products. An operation or facility that handles a feedstock that is not green material, manure, or paper products, shall not be considered a green material composting operation or facility. “Green Material Composting Operation” or “Facility” does not include activities excluded from regulation in section 17855.

Publicly Operated Treatment Works (POTWs)

If a Publicly Operated Treatment Works (POTW) is using anaerobic digestion for biosolids on-site as a part of the process to treat biosolids, they would be excluded under Title 14, section 17855(a)(5)(B). If compostable wastes (material that would typically be received at the site through the sewer system) are added to biosolids undergoing anaerobic digestion at a POTW, the activity shall comply with the EA notification under Title 14, section 17859.1 For example, food waste received by truck and processed on-site before being added to the biosolids anaerobic digestion process would require a Notification level tier under Title 14, section 17859.1.

For activities where anaerobic digestion of other wastes, not including biosolids, is proposed to be conducted at a POTW, these activities may be subject to the requirements for a compostable materials handling activity or transfer station depending on the specifics of the activity as determined by the LEA.

Research Operations

Research operations for anaerobic digestion with no more than 5,000 cubic yards of feedstock, additives, amendments, chipped and ground materials, and composted on-site at any one time, shall comply with the EA notification. A research operation using within-vessel with more than 5,000 cubic yards may be allowed only if the LEA determines that the increased volume will not pose additional risk to public health and the environment.

Title 14, section 17862. Research Composting Operations**.**
(a) An operator conducting research composting operations shall not have more than 5,000 cubic yards of feedstock, additives, amendments, chipped and ground material, and compost on-site at any one time, and shall comply with the EA Notification requirements

set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100), except as otherwise provided by this Chapter.

(b) An operator conducting research composting operations utilizing within-vessel processing, may exceed 5,000 cubic-yards of feedstock, additives, amendments, chipped and ground material and compost, if the EA determines that such increased volume will not pose additional risk to the public health, safety and the environment.

(c) In addition to the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0, section 18103.1 (a)(3), the operator shall provide a description of the research to be performed, research objectives, methodology/protocol to be employed, data to be gathered, analysis to be performed, how the requirements of this subchapter will be met, and the projected timeframe for completion of the research operation.

(d) The EA Notification for a research composting operation shall be reviewed after each two-year period of operation. Review criteria shall include the results and conclusions drawn from the research.

(e) Research composting operations that will be using unprocessed mammalian tissue as a feedstock for the purpose of obtaining data on pathogen reduction or other public health, animal health, safety, or environmental protection concern, shall satisfy the following additional requirements:

> (1) Unprocessed mammalian tissue used as feedstock shall be generated from on-site agricultural operations, and all products derived from unprocessed mammalian tissue shall be beneficially used on-site.
> (2) The operator shall prepare, implement and maintain a site-specific, research composting operation site security plan. The research composting site security plan shall include a description of the methods and facilities to be employed for the purpose of limiting site access and preventing the movement of unauthorized material on to or off of the site.
> (3) The EA Notification for the research composting operation using unprocessed mammalian tissue as feedstock and documentation of additional requirements of this section shall be reviewed after each six month period of operation.

Large Volume of Green Material

An anaerobic digestion of green material at a volume that is more than 12,500 cubic yards of green materials on-site at any time, is required to obtain a Compostable Materials Handling Facility Permit pursuant to the requirements for a full solid waste facility permit, pursuant to Title 14, sections 17854 and 17857.1(b).

All Other Material as a Feedstock

Anaerobic digestion of all other material considered compostable material requires a full permit.

Design and Operational Requirements

As a compostable material handling operation or facility, anaerobic digestion facilities are required to comply with all of the applicable regulatory standards found in Chapter 3.1, Title 14 of the California Code of Regulations. These requirements include the development and approval of a Report of Compost Site Information and an Odor Impact Minimization Plan as part of the permit application package. Many of the design and operational standards have prescriptive requirements focused on aerobic composting methods, but some of the requirements have a process outlined for requesting and receiving approval for alternative compliance methods. Each anaerobic digestion site will be required to maintain records as indicate in Article 8 and will be required to provide for site restoration as outline in Article 9.

Compost Sampling Requirements

Composting facilities and operations in California are required to meet maximum metals concentrations, and pathogen reduction requirements to protect public health and safety. These requirements are based on U.S. Environmental Protection Agency regulations (Title 40 CFR 503) which were based on scientific research and technology. Compost that does not meet the maximum allowable concentrations for metals and pathogens must be designated for disposal or further processing. The LEA may approve alternative methods for sampling or ensuring pathogen reduction if the methods will ensure that allowable thresholds are not exceeded.
Any material resulting from the anaerobic digestion process, such as digestate, that is sold or given away (as product) must be sampled and tested for pathogen and metals prior to leaving the site, consistent with the Compostable Materials Handling Requirements. If a material does not meet the standards for pathogens or metals, the material must continue to be managed as solid waste. A summary of California requirements for sampling, maximum metals concentrations and pathogen reduction at composting operations are listed below:

Section 17868.1 Sampling Requirements
Composting operations that sell or give away greater than 1,000 cubic yards of compost annually must verify that compost meets the maximum acceptable metal concentration limits. Verification of pathogen reduction requirements occurs at the point where compost is sold and removed from the site, bagged for sale, given away for beneficial use and removed from the site, or otherwise beneficially used. An operator who composts green material, food material, or mixed solid waste is required to take and analyze one composite sample for every 5,000 cubic yards of compost produced. The sampling schedule for operators composting biosolids is based on the amount of compost feedstock produced. The LEA may approve alternative methods of sampling for a green material composting operation or facility that ensures the maximum metal concentration requirements and pathogen reduction requirements are met.

Section 17868.2 Maximum Metal Concentrations
Compost cannot exceed the maximum acceptable metal concentrations for arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, and zinc. The LEA may approve alternative methods of sampling for green and food materials composting if the LEA determines that the alternative methods will ensure that the maximum metal concentrations are met.

Section 17868.3 Pathogen Reduction
Compost producers must follow specific procedures to demonstrate adequate pathogen reduction or an alternative method approved by the LEA that will provide equivalent pathogen reduction:

- Enclosed or within-vessel composting. Active compost shall be maintained at a temperature of 55 degrees Celsius (131 degrees Fahrenheit) or higher for a pathogen reduction period of three days.

- Windrow composting process. Active compost shall be maintained under aerobic conditions at a temperature of 55 degrees Celsius (131 degrees Fahrenheit) or higher for a pathogen reduction period of 15 days or longer. During the period when the compost is maintained at 55 degrees Celsius or higher, there shall be a minimum of five turnings of the windrow.

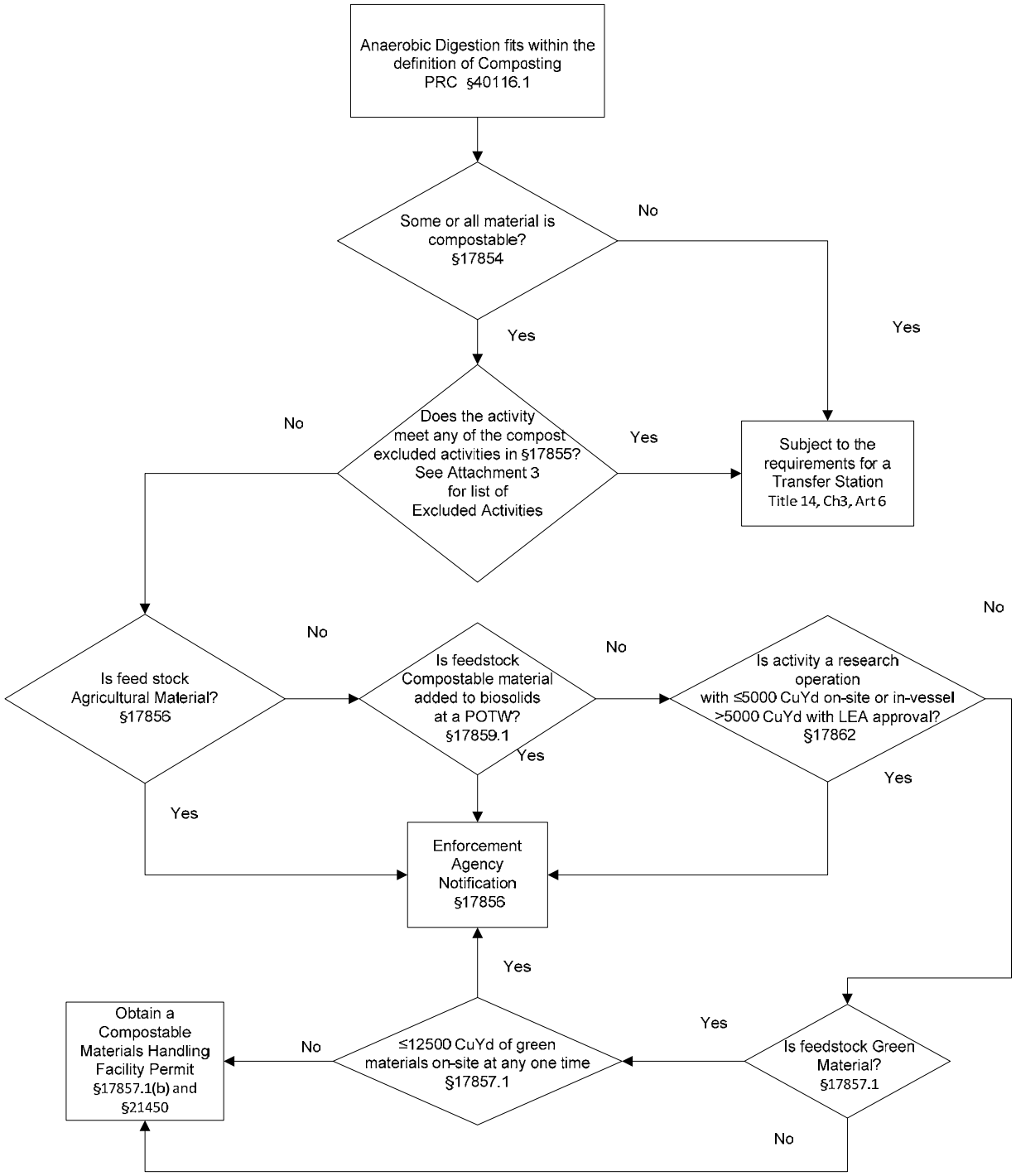
- Aerated static pile composting process. Active compost shall be covered with 6 to 12 inches of insulating material, and the active compost shall be maintained at a temperature of 55 degrees Celsius (131 degrees Fahrenheit) or higher for a pathogen reduction period of three days.

- Alternative methods of compliance may be approved by the EA if the EA determines that the alternative method will provide equivalent pathogen reduction.

- Finished compost must meet acceptable levels for fecal coliform (includes *E. coli*) and Salmonella.

Attachment 1

Decision Diagram for Anaerobic Digestion



Attachment 2
Tier Regulatory Placement for Anaerobic Digestion By Feedstock

TYPE OF FEEDSTOCK	EXCLUDED	EA NOTIFICATION	FULL PERMIT
BIOSOLIDS	STORAGE ON SITE AT A POTW	BIOSOLIDS ONLY SEPARATE FROM NORMAL TREATMENT AT A POTW	
GREEN MATERIAL	≤500 CU YDS ONSITE ≤1000 CU YDS GIVEN AWAY OR SOLD ANNUALLY	≤12, 500 CU YDS	>12,500 CU YDS, OR GREEN MATERIAL WITH OTHER WASTE INCLUDING FOOD
AGRICULTURAL MATERIAL (INCLUDES MANURE)	≤1000 CU YDS GIVEN AWAY OR SOLD ANNUALLY	ONLY AG MATERIAL	WHEN MIXED WITH OTHER WASTE INCLUDING FOOD
RESEARCH	<50 CU YDS	≤5000 CU YDS ON-SITE OR IN-VESSEL (>5000 CU YDS WITH LEA APPROVAL)	
FOOD WASTE	≤10 % FOOD WASTE, ONLY WITH GREEN MATERIAL ≤500 CU YDS, ON-SITE AND ≤1000 CU YARDS GIVEN AWAY OR SOLD ANNUALLY	ONLY WHEN ADDED TO THE TREATMENT OF BIOSOLIDS AT A POTW	ALL OTHER SITUATIONS

Attachment 3

Excluded Activities For Anaerobic Digestion Handling Compostable Materials

Title 14, Section 17855(a) The activities listed below do not constitute compostable material handling operations or facilities and are considered excluded activities. Nothing in this section precludes the EA or the Board from inspecting an excluded activity to verify that the activity is being conducted in a manner that qualifies as an excluded activity or from taking any appropriate enforcement action.

(1) An activity is excluded if it handles agricultural material derived from an agricultural site, and returns a similar amount of the material produced to that same agricultural site, or an agricultural site owned or leased by the owner, parent, or subsidiary of the composting activity. No more than an incidental amount of up to 1,000 cubic yards of compost product may be given away or sold annually.

(4) Handling of green material, feedstock, additives, amendments, compost, or chipped and ground material is an excluded activity if 500 cubic yards or less is on-site at any one time, the compostable materials are generated on-site and if no more than 1,000 cubic yards of materials are either sold or given away annually. The compostable material may also include up to 10% food material by volume.

(5) The handling of compostable materials is an excluded activity if:

(A) the activity is located at a facility (i.e., landfill or transfer/processing facility) that has a tiered or full permit as defined in section 18101,

1. has a Report of Facility Information which is completed and submitted to the EA that identifies and describes the activity and meets the requirements of Titles 14 or 27; and,
2. will only use the material on the facility site, or

(B) the activity is solely for the temporary storage of biosolids sludge at a Publicly Operated Treatment Works (POTW), or

(C) the activity is located at the site of biomass conversion and is for use in biomass conversion as defined in Public Resources Code section 40106; or

(D) the activity is part of a silvicultural operation or a wood, paper, or wood product manufacturing operation; or

(E) the activity is part of an agricultural operation and is used to temporarily store or process agricultural material not used in the production of compost or mulch; or

(F) the activity is part of an operation used to chip and grind materials derived from and applied to lands owned or leased by the owner, parent, or subsidiary of the operation; or

(G) the activity is part of an agricultural operation used to chip and grind agricultural material produced on lands owned or leased by the owner, parent, or subsidiary of the agricultural operation, for use in biomass conversion; or

(H) the activity is part of an animal food manufacturing or rendering operation.

(I) the activity is the storage of yard trimmings at a publicly designated site for the collection of lot clearing necessary for fire protection provided that the public agency designating the site has notified the fire protection agency; or

(J) the materials are handled in such a way to preclude their reaching temperatures at or above 122 degrees Fahrenheit as determined by the EA.

(6) Non-commercial composting with less than one cubic yard of food material is excluded provided that all compostable material is generated and used on-site.

(7) Storage of bagged products from compostable material is an excluded activity provided that such bags are no greater than 5 cubic yards.

(8) Within-vessel composting process activities with less than 50 cubic yard capacity are excluded.

(9) Beneficial use of compostable materials is an excluded activity. Beneficial use includes, but is not limited to slope stabilization, weed suppression, alternative daily cover, and similar uses, as determined by the EA; land application in accordance with California Department of Food and Agriculture requirements for a beneficial use as authorized by Food and Agricultural Code section 14501 et seq.; and reclamation projects in accordance with the requirements of the Office of Mine Reclamation of the Department of Conservation as authorized by Public Resources Code section 2770 et seq.

Attachment 4
Anaerobic Digestion and Transfer/Processing Facility Requirements

If a site is not handling compostable materials as defined in Title 14, section 17852 but is utilizing anaerobic digestion, the site may be subject to transfer/ processing facility requirements.

Activities that only handle non-compostable material that has been separated for reuse and satisfy the 3 Part Test found in Title 14, section 17402.5(d) would be considered a recycling center and would not be subject to regulation. All others could be considered a transfer station and should be examined using Title 14, section 17400 et seq.

There are anaerobic digestion systems that are designed to operate at low temperatures. Several manufacturers that have designed operating temperatures at 95 degrees Fahrenheit are listed in Table 1 of the March 2008 Board report, "Current Anaerobic Digestion Technologies Used for Treatment of Municipal Organic Solid Waste." If the materials on-site are prevented to reach a temperature of 122 degrees Fahrenheit while stored on site or in the digestion process, then the activity is not handling compostable material (Title 14, section 17852(a)(11)). In this situation, the anaerobic digestion systems will not be considered a compostable material handling activity and may be subject to the requirements for a transfer station.

The "Three-Part Test"

An activity is not subject to regulatory requirements if, (1) the site is receiving material that has been source separated (by the generator) or separated for reuse (at a centralized facility – such as a MRF) prior to receipt at the site; (2) less than 1 percent of the material is putrescible and the material is not causing a nuisance as determined by the LEA; and, (3) the residual amount of solid waste in the separated for reuse material is less than 10 percent of the material received at the site (calculated by weight on a monthly basis). Section 17402.5(d) of Title 14, CCR, sets out the regulations which describe the three-part test:

> 14 CCR 17402.5… (d) A "Recycling Center" means a person or business entity that meets the requirements of this subdivision. A recycling center shall not be subject to the requirements of Articles 6.0, 6.1, 6.2, 6.3 and 6.35 of this Chapter.
> (1) A recycling center shall only receive material that has been separated for reuse prior to receipt.
> (2) The residual amount of solid waste in the separated for reuse material shall be less than 10 percent of the amount of separated for reuse material received by weight.
>
> > (A) The residual amount is calculated by measuring the outgoing tonnage after separated for reuse materials have been removed.
> > (B) The residual amount is calculated on a monthly basis based on the number of operating days.
>
> (3) The amount of putrescible wastes in the separated for reuse material shall be less than 1 percent of the amount of separated for reuse material received by weight, and the

putrescible wastes in the separated for reuse material shall not cause a nuisance, as determined by the EA.

(A) The amount of putrescible wastes is calculated in percent as the weight of putrescible wastes divided by the total incoming weight of separated for reuse material.

(B) The amount of putrescible wastes is calculated on a monthly basis based on the number of operating days.

(4) The only separation that may occur at the recycling center is the sorting of materials that have been separated for reuse prior to receipt.

Title 14, section 17402.5(b)(1) "Residual" means the solid waste destined for disposal, further transfer/processing as defined in section 17402(a)(30) or (31) of this Article, or transformation which remains after processing has taken place and is calculated in percent as the weight of residual divided by the total incoming weight of materials.

If the activities fail the Three-Part Test, then the activity is subject to the requirements for a transfer and processing facility set out at Title 14, Chapter 3, Article 6. The type of authorization or permit that is required is dependent on the quantity of waste received as stated below.

1) Enforcement Agency Notification, if the volume received is less than 60 cubic yards per day or 15 tons per day;
2) Registration Permit, if the volume is equal to or greater than 60 cubic yards per day or 15 tons per day, but less than 100 tons per day; or
3) Full Solid Waste Facilities Permit, if equal to or greater than 100 tons per day.

Response D-1

The publication provided is helpful in understanding how the CalRecycle regulation could affect dairy co-digestion facilities and that the determination of the appropriate level of authorization or permit for an activity involving anaerobic digest is made by the Local Enforcement Agency. An LEA contact list can be found at www.calrecycle.ca.gov/LEA/Contacts.htm.

The potential need for a Composting Permit or Transfer Processing Permit is identified in Section 3.7 on page 3-18 of the draft Program EIR.

Response D-2

In response to the comment D-2, and also comment H-13, Mitigation Measure 6.3b has been revised. Please see response to comment H-13.

Response D-3

In response to the comment the last paragraph on page 3-16 of the draft Program EIR is modified to read as follows:

> "…The separated solids and liquids would then be applied pursuant to the applicable nutrient management plan. As an example, the solids could be used for land application, compost, fertilizer, or potentially landfill alternative daily cover and the liquid portion of the effluent could be recycled for flush water, used for land application, or at a centralized facility it could potentially be sent to a sanitary sewer. <u>If a landfill operator proposes to use the solid digestate as Alternative Daily Cover (ADC), a site-specific demonstration project would be required in compliance with Title 27 Section 20690(b).</u>"

Response D-4

In response to the comment the third paragraph on page 2-2 of the draft Program EIR is modified to read as follows:

> "…The order affects projects such as the one proposed in this Program EIR and the anticipated Program EIR being prepared by the Department of Resources Recycling and Recovery (CalRecycle) for anaerobic digester facilities that would use food waste, green material, and mixed solid waste as feedstocks; thus diverting these materials from landfills. <u>CalRecycle will be analyzing the development and operation of AD facilities that would be sited at solid waste facilities and in industrial areas. The CalRecycle Program EIR will not cover AD facilities sited at dairies and other agricultural areas.</u>"

E

Paul Miller

From: Lisa Gymer [LGYMER@dfg.ca.gov]
Sent: Monday, August 23, 2010 3:39 PM
To: sklein@waterboards.ca.gov
Cc: Annee Ferranti
Subject: Comment Letter - Dairy Digester and Co-Digester draft Program EIR

Stephen,

The Department of Fish and Game has reviewed the information submitted by the Regional Water Quality Control Board, Central Valley Region regarding the subject Project.

The Department has the following comments regarding Section 9 - Biological Resources of the draft Program EIR.

Measure 9.1a: The Department agrees that a biological site assessment should be conducted and a report should be submitted as part of the NOI process. The Department disagrees that the biological assessment should be limited to those lands that are undisturbed or have been fallowed for 1 year or greater. There are no such limitations on Measure 9.2a, nor should there be here. The Department recommends that biological site assessments be required to be submitted with the NOI for all proposed dairy digester and co-digester facilities. Special status species can use the fringes of agricultural fields and developed areas. Depending on the type of crop, it can be a foraging sources for special status species. A qualified biologist should be the one to determine the potential impacts on special status species and habitat for all digester and co-digester facilities. The Department would also request that a copy of the biological assessment report be included for CEQA review purposes so that we can provide comments as appropriate on individual projects. E-1

Impact 9.4: The draft Program EIR states there are no mitigation measures required because there will be no impacts on migratory corridors or native wildlife nursery sites. This should be evaluated during the biological site assessment conducted by a qualified biologist and as such should have similar mitigation measures as Impacts 9.1 (see comments above) and 9.2. E-2

Thank you for allowing us the opportunity to provide comments on this Project. If you have questions, please contact me at the numbers below.

Respectfully,

Lisa Gymer
Environmental Scientist
California Department of Fish and Game
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4014 x238
lgymer@dfg.ca.gov

Response E-1

The comment is correct in that special status species could use habitat on the fringe of agricultural fields. Therefore, Mitigation Measure 9.1a on pages 1-15 and 9-13 of the draft Program EIR has been revised to read as follows:

> "**Measure 9.1a:** The project applicant or agency(s) responsible shall document that ~~submit~~ ~~, as part of the NOI,~~ a site assessment report for dairy digester and co-digester facilities to be constructed (including the location of digestate application) has been submitter to CDFG for its review. ~~in areas that contain undisturbed land and/or any agricultural fields that have been fallow for more than 1 year~~. This report shall be prepared by a qualified biologist. It shall evaluate the project site's potential to support special-status plant and wildlife species (including critical habitat) and whether special-status species could be affected by dairy digester and co-digester development, including construction and operations. If there are no special-status species or critical habitat present, no additional mitigation would be required."

Response E-2

Comment noted. As stated on page 9-15 of the draft Program EIR, the project would have a less-than-significant impact on wildlife corridors and nursery sites. Facilities constructed for the project would be small in size and would not affect wildlife corridors or nursery sites. Because this impact is less than significant, no mitigation is required.

F

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FRESNO, CALIF.

STANISLAUS COUNTY ENVIRONMENTAL REVIEW COMMITTEE

August 23, 2010

Stephen Klein, Project Manager
California Valley Water Board
1685 E Street
Fresno, CA 93706-2007

SUBJECT: **ENVIRONMENTAL REFERRAL – CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD – WASTE DISCHARGE REGULATORY PROGRAM FOR DAIRY MANURE DIGESTER AND CO-DIGESTER FACILITIES WITHIN THE CENTRAL VALLEY REGION**

Mr. Klein:

The Stanislaus County Environmental Review Committee (ERC) has reviewed the subject project and has no comments at this time. F-1

The ERC appreciates the opportunity to comment on this project.

Sincerely,

Christine Almen

Christine Almen, Senior Management Consultant
Environmental Review Committee

cc: ERC Members

TOTAL P.02

Response F-1

Comment noted. The Stanislaus County Environmental Review Committee (ERC) has reviewed the project and has no comments at this time.

RESOURCE MANAGEMENT AGENCY

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Roger Hunt — Public Works
Administration/Community Development

JAKE RAPER JR., AICP, DIRECTOR

G

August 24, 2010

Stephen Klein
CVWB Project Manager
CVWQCB
1685 E Street
Fresno, CA 93706

Re: Draft Program Environmental Impact Report (DPEIR) for the Central Valley Dairy Digester and Co-Digester Facilities Program EIR SCH# 2010031085

Dear Mr. Klein:

Thank you for the opportunity to provide comments related to the above project. To assist the Central Valley Region Water Quality Control Board in preparing a Draft Program EIR that provides an adequate and complete document, in accordance with the California Environmental Quality Act (CEQA) the County submits the following comments and concerns:

The County appreciates the effort the Central Valley Regional Water Quality Control Board (CVRWQCB) has put forth to streamline the permitting process for dairy manure digesters and co-digester projects. The County recognized the need for collaboration between the responsible agencies to make the permitting process straightforward and less time consuming without jeopardizing the integrity of the CEQA process. G-1

The County recognizes the Program EIR as a tool that local agencies can use to satisfy the requirements of CEQA. The County is looking at ways to make the land use permitting process faster and more efficient. The County would like to develop an efficient approach to permitting these types of facilities, possibly a two-tiered permitting process. Onsite digesters that meet all regulations, policies, mitigation requirements, and standards set for by the County could be a ministerial process. "Centralized location facilities" going through the Special Use Permit process could utilize the Program EIR to expedite the permitting process. G-2

The County is concerned that the trade off for reduction of Greenhouse could be the increase in other pollutants that could have adverse impacts to the County's resources. The County would prefer a flexible Mitigation Monitoring Plan, making available options to mitigate an impact. All measures should be discussed and reasoning for each measure should be identified. Mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way. G-3

Thank you for the opportunity to discuss our concerns. If you have any questions that require further information, please call Cynthia Echavarria at (559) 624-7000.

Cynthia Echavarria
Environmental Coordinator
County of Tulare

C:file

Response G-1

Comment noted. Tulare County appreciates the effort of the Central Valley Water Board to make the permitting process straightforward and less time consuming without jeopardizing the integrity of the CEQA process.

Response G-2

Comment noted. Tulare County discusses how they could utilize the Program EIR. It should be noted that the process could be different in other counties.

Response G-3

The Mitigation Monitoring and Reporting Plan (MMRP) will have flexibility because of the variety of projects that it covers and the various jurisdictions in Region 5 that potentially could permit dairy digesters. Some of the mitigation measures have performance standards that can be accomplished by a variety of approaches. The MMRP will identify the timing of mitigation measures so they will not be deferred past their appropriate implementation time.

H

VIA EMAIL-REVISED

August 23, 2010

Central Valley Water Board
Attn: Stephen Klein, Project Manager
1685 E Street
Fresno, CA 93706-2007

SUBJECT: Comment letter, Dairy Digester and Co-Digester Draft Program EIR

Dear Stephen:

I have reviewed the above-referenced Draft Program Environmental Impact Report (hereafter "Draft PEIR"), and am providing the following comments to you and the staff of ESA, on behalf of the Dairy Cares coalition. Dairy Cares is a coalition of California's dairy producer and processor associations, including the state's largest producer trade associations (***Western United Dairymen, California Dairy Campaign*** and ***Milk Producers Council***) and the largest milk processing companies and cooperatives (***California Dairies, Inc., Dairy Farmers of America-Western Area Council, Hilmar Cheese Company, Joseph Gallo Farms, Producers Bar 20 Dairy*** and ***Land O' Lakes***). Formed in 2001, Dairy Cares promotes the long-term sustainability of California dairies by working to improve the industry's performance on environmental, animal care and quality-of-life issues.

We appreciate the hard work and expertise that was invested in the effort to create this excellent draft. We look forward, through these comments and the continuing stakeholder process, to assisting you in producing a PEIR that will meet the stated project objectives.

Summary

We agree with the project objectives as stated, support the major findings in the analysis of project alternatives, and concur with overall discussion and findings related to significance levels for the various impacts analyzed prior to mitigation measures. H-1

However, we have concerns and are requesting addition of clarifying language or revisions, primarily in the discussion of proposed mitigation measures related to air quality/greenhouse gases and water quality. Specifically, we are concerned that some mitigation measures have not been thoroughly supported in the record or may not be appropriate in some or all situations. In those cases, additional clarity as to the decision framework that will be applied to variable

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project configurations is needed. We understand that this will likely occur as the referenced draft general orders are developed, and so we have offered some suggestions to consider during that process to ensure that requirements are appropriately matched to project types. H-1 cont

Finally, we have offered a few technical comments intended to improve the factual basis for the report.

Project goals. We support the six overarching project goals as outlined in Section 1.1 of the Executive Summary and appreciate this clear and concise summary. In particular, we appreciate the specific goal of reducing water quality permitting time by 75 percent and inclusion of several pathways to permitting, including general orders, individual orders and conditional waivers. H-2

Electrical capacity of co-digestion. Section 1.2 includes a statement that "co-digestion substrates can increase the electrical capacity of a proposed system by a magnitude five times or greater than that of dairy manure alone." Information reviewed by Dairy Cares to date shows that addition of non-manure substrates can increase, dramatically, biogas production, but more in the range of 100 to 400 percent increases (e.g. two to five times more gas produced than manure alone). The current language suggests that gas production is always at least five times higher. Also, we suggest a citation be added specific to this information. H-3

Lining requirements for retention ponds. Table 1.1, Measure 5.2 suggests that "requirements ***shall*** include [emphasis added]: "Lining requirements for retention ponds in new facilities and operational dairies." Similar language is included in Table 3-1 and on pages 5-35 and 5-42. H-4

Dairy Cares agrees that all newly constructed ponds on new dairies, or newly constructed ponds on expanding, existing dairies where digesters are not being considered, should meet lining requirements approved by the Regional Water Quality Control Board. However, the Draft PEIR does not discuss the process that will be used for developing lining requirements or applying the requirements to various project configurations.

Specifically, it may be appropriate to include different tiers of requirements for dairies, reserving the most stringent review (as CEQA intends) for new facilities installed in areas where a dairy has not previously operated. Less stringent measures are appropriate on existing dairies that are modifying (triggering CEQA review) but almost entirely in a way that benefits the environment. The greatest opportunity to build digesters exists on dairies that already are operating. By holding existing dairies to the most stringent standards reserved for entirely new projects, the proposed orders/permitting requirements could have the opposite of its intended effect by discouraging interim improvements.

In the case of already operational dairies, utilization/conversion of an existing retention pond to an anaerobic digester (AD) tank or covered lagoon, or as a repository for (manure-only) digestate, presents little risk over the California Environmental Quality Act (CEQA) baseline. Indeed, the Draft PEIR correctly points out that for such a project based on an operational dairy,

the dairy would not be required to seek additional water board permits if the dairy is already covered under General Order R5-2007-0035.[1] H-4 cont

As such, certainly no lining requirements are needed for "operational dairies" [ref. Table 1,1, Measure 5.2] unless such a dairy is utilizing co-digestion or is not covered by the General Order. However, to truly meet the goals stated in Section 1.1, the Regional Board should identify additional opportunities for streamlining permitting at operational dairies. For example:

- Dairies not covered under the General Order R5-2007-0035, but who wish to build a digester utilizing an existing pond, should not be required to reconstruct the pond if it can adequately operate as a digester in its present condition.
- On operational dairies, if an existing pond is reconstructed, expanded or otherwise improved within the same facility footprint, lining requirements that otherwise meet General Order R5-2007-0035 Tier II standards (California Natural Resources Conservation Service Practice Standard 313 or equivalent) should be deemed adequate without the additional submission of "technical reports that the alternative design is protective of groundwater quality…"[2] This would allow the dairies to install a technology that generates renewable energy, reduces greenhouse gas emissions *and* represents an improvement over the previous pond – without causing projects to experience excessive project costs or permitting delays due to Tier II groundwater modeling exercises.

Similarly, Measure 5.3 includes a requirement that "all drainage be directed to a retention wastewater pond that has been designed to meet antidegradation provisions of Resolution 68-16 by an appropriately licensed professional." While Dairy Cares supports a requirement for proper drainage to the retention pond, there is a lack of clarity and certainty at this point in time as to who will determine, and how it will be determined, that a pond meets "Antidegradation provisions of Resolution 68-16." If the determination is made that the pond must meet Tier I or Tier II standards in all cases, this will cause a significant disincentive to development of dairy digesters. H-5

Salt minimization plan and "reasonable salt loading." Table 1.1, Measure 5.3 includes a requirement that dairy digesters and co-digesters "prepare and implement site-specific Salt Minimization Plan (SMP) as approved by the Central Valley Water Board." Similar language is included on page 5-42. Similar to above, this requirement would not apply to a manure-only digester added to an operating dairy covered under General Order R5-2007-0035. H-6

This section would appear to require a salt minimization plan for all other dairies installing a digester, whether or not they were utilizing co-digestion. While Dairy Cares supports a process to limit co-digestion substrates to salinity levels that can be managed as digestates are applied to crops, the requirement for an SMP would not appear to be necessary for any manure-only digester. Dairy Cares supports the use of a Nutrient Management Plan on all dairies and this will help ensure proper application levels of crop nutrients.

[1] Section 2.2.1, p. 2-4
[2] Page 13, B.7-b, Waste Discharge Requirements General Order No. R5-2007-0035.

However, language on page 5-36 asserts that "Based on a study conducted by J.L. Meyer in 1973, "reasonable" salt loading rates under normal situations were determined to help prevent the vertical migration of salts within the soil profile (Meyer, 1973 as cited in RWQCB, 2008). Unless environmental conditions show differently, 'reasonable' is **accepted to be** [emphasis added] a maximum annual non-nitrate salt loading rate of 2,000 pounds per acre for single-cropped land and 3,000 pounds per acre for double-cropped land." H-6 cont

To the knowledge of Dairy Cares, numerical limitations on salt application by crop are not required on dairies that do not contain digesters, nor are these required on other farms. Also to the knowledge of Dairy Cares, no basis has been provided for the numerical limitations suggested above. This language stating these specific numerical limitations should be removed from the Draft EIR or alternatively, this section should include more information and citations clarifying exactly how these numbers were "accepted to be" as "reasonable." If the source of this is the Regional Water Quality Control Board, we suggest including a citation of the Board action or Executive Officer decision or other appropriate citation that led to this determination.

Also, to the degree that SMP contains numerical limits on salt loading to agricultural fields, such limits would pose a restriction on dairy digester operators not imposed on non-digester dairy operators and as such, would discourage digester development. One alternative that may be less of a disincentive would be to restrict the digester operator from utilizing certain types or volumes of substrates that are deemed to contain unacceptably high salt levels. H-7

Crop selection based on salt uptake. Measure 5.3 suggests a requirement that dairy digester operators should "to the extent practicable, use crops that maximize salt uptake." This proposed requirement is unclear in its definition of "salt" and to what constitutes "practicable," although elsewhere in the Draft PEIR, the authors reference "non-nitrate salts" as one potential definition. Dairy Cares supports requiring an NMP, which properly implemented, has the effect of ensuring that digestate is not applied at non-agronomic rates. Beyond that, crop selection must remain at the discretion of the farmer. Imposing requirements that could affect the farmer's needs to meet market or feed demands is likely to impose a significant disincentive for digester development. H-8

Hazardous substance testing. Measure 5.3 prohibits "hazardous substances in co-digestion substrates processed by each facility as verified by laboratory analytical testing." Dairy Cares supports testing of substrate to ensure that hazardous materials are not present nor applied to crops. However, steps should be taken to focus the testing scope and frequency so that protection is provided without excessive laboratory costs. Daily testing of substrate for all possible hazardous substances will pose a significant cost that will serve as a disincentive to co-digestion development. The testing regime should be scaled to match the variability and risk actually associated with the substrates used. For example, many food wastes are unlikely to contain hazardous substances simply, because they are a by-product of production of food, which does not contain hazardous substances. H-9

Monitoring groundwater and digestate for pathogens. Measure 5.3 proposes a requirement to "monitor digestate, and groundwater for pathogen indicator organisms." Absent evidence to the contrary, which does not appear to be included in the Draft PEIR, this appears to be an excessive requirement. Evidence in the Draft PEIR suggests that one of the benefits of digestion and co- H-10

digestion is reduction in pathogens. Requiring dairy digester operators to test digestate and groundwater for pathogens imposes a requirement that is not imposed on dairy operators who do not operate digesters and therefore poses a significant disincentive to dairy digester development. H-10 cont

Monitoring groundwater and soil. Measure 5.3 on page 5-42 suggests that dairy digester or co-digester operators must "prepare and implement a site-specific NMP that includes a soils and groundwater monitoring and reporting program that include a variety of waste constituents, as well as yearly reconciliation based on sampling results that measure agronomic rates." Dairy Cares supports use of an NMP on all dairies. However a site-specific groundwater monitoring program should not be the sole path to compliance for dairies installing digesters. All dairies, particularly dairies covered under General Order R5-2007-0035, should be allowed the option to participate in a Representative Groundwater Monitoring program that has been accepted and approved by the Regional Board. Failure to allow such an option will serve as a significant disincentive to development of digesters and co-digesters on dairies. H-11

Solid wastes on impermeable surfaces. Measure 5.3 proposes to require that all "solid wastes" (it is not clear if this applies to substrate, separated solids post-digestion, or both) be stored on an impermeable surface. A clear definition of impermeable is needed. All such materials should be stored on concrete or surfaces that drain to the retention pond. However, it may not be necessary to store, for example, separated solids on concrete. These may be safely stored in corrals or other appropriate, properly drained areas until such time as they may be used as bedding, soil amendment or other productive use. The same may be true for certain substrates. Requiring a concrete pad in situations where no significant protection is necessary may pose a disincentive to dairy digester and co-digester development. H-12

Odor Management Plan (OMP). Measure 6.3 suggests that dairy digesters and co-digesters could cause objectionable odors and as such, an OMP should be required. Dairy Cares does not agree that an odor management plan is necessary in all cases, particularly for manure-only digesters. OMPs should only be required if the dairy digester is part of a new dairy facility (in which case an OMP is typically required), or co-digestion is involved. H-13

In cases where an OMP is required, the requirements must not be excessive. Measure 6.3 says the OMP must include "management practices that could be implemented to minimize odor releases," and that those "management practices shall include the establishment of the following criteria:

- Establish time limit for on-site retention of undigested co-substrates (i.e., organic co-substrates must be put into the digester within 48 hours of receipt).
- Provide negative pressure buildings for indoor unloading. Treat collected foul air in a biofilter or air scrubbing system."

Great care should be exercised in considering any such measures. A time limit for on-site retention of co-substrates could impose significant operational constraints. Dairy Cares supports ensuring that adequate and appropriate storage space (such as tanks or other holding areas) are in place at any dairy receiving deliveries of co-substrate for digester use.

Negative pressure buildings for indoor unloading, combined with a biofilter, adds a significant level of operational cost. Such a measure should be considered only in the case that the odor impacts of the delivered substrate are determined to have a site-specific significant impact that must be mitigated. In most cases, it is likely that such measures would not provide any helpful benefit. H-13 cont

Environmental benefits discussion. Section 3.4, p. 3-10, suggests that the environmental benefits of digesters and co-digesters include "reduction in mass of solid wastes" and "generation of clean liquid effluent for irrigation or recycled water." Generally, reduction in mass attributable to AD is minimal and the (non-water) mass of digestate is not much smaller than the amount fed to the digester. However, diversion of waste streams from sewer systems and landfills to more appropriate use (to generate biogas and a soil amendment or compost) is a benefit of the process. Similarly, AD does not generally produce what can be described as "clean liquid effluent." However, liquid effluent can be blended with irrigation water and put to a beneficial use (irrigating and fertilizing crops). H-14

Section 3.4 also cites "concentration of nutrients in condensed solid for export or storage" as a benefit. Again, this is not a benefit of AD. Digesting and subsequent drying of scraped manure in a plug flow or complete mix digester may act to concentrate nutrients in the solid fraction. However, retention pond digesters tend to move nutrients into the liquid fraction. In summary, the process of AD itself tends to preserve nutrients in the digestate.

Facility size. Section 3.4.2 contains the statement that a "flush system for manure transport, which affects the dilution of waste, would require larger AD facilities than if the manure were collected using a scrape or vacuum system." In fact, a flush system does require a large retention pond to store and recycle flush water and nutrients. If the pond is used as a digester, it is also larger than a complete-mix tank or plug flow digester processing a comparable amount of manure/substrate. However, a pond may still be needed on a dairy with another type of digester tank. Thus, a non-flush system may result in a larger "digester facility" than a flush system when all the digester elements are considered. H-15

Codigestion vs. manure only economics. Page 3-11 contains the statement that "co-digestion is considered to be essential for dairy digester project viability" (ECOregon, 2010). Dairy Cares does not agree with this as a blanket statement. Co-digestion can improve gas output which can improve a project's economic viability. However, co-digestion also brings with it certain requirements that will increase costs and may impact viability negatively. As such, co-digestion or lack of it should not be considered as a sole criterion for viability. H-16

Covered lagoons. Section 3.4.5 includes a description of the gas capture system as a "floating impermeable cover." In fact, these covers do not generally "float" on the lagoon surface but rather are held up by a layer of pressurized gases between the liquid surface of the lagoon and the cover. H-17

Scrubbing of gas in internal combustion situations. The schematic for internal combustion engines on page 3-16 does not include removal of hydrogen sulfide or other pollutants from raw biogas, or cleanup of exhaust via catalytic treatment, even though gas cleanup and pollutant H-18

removal is included in the schematics for comparable energy capture technologies on the same page. This suggests incorrectly that such technologies are not used nor required in the Central Valley when the opposite is true. The schematic should be revised to include this information. H-18 cont

Internal combustion engines not appropriately included as an option for energy generation. The Draft PEIR recognizes as unresolved the issue on appropriate standards for NOx controls on internal combustion biogas engines for electricity generation. These engines are an important and central component of nearly all operating dairy digesters and co-digesters. As such, Dairy Cares supports an appropriate resolution to the issue that protects air quality but also provides a feasible option for dairy digester operators. Fuels cells are generally not yet considered feasible on dairies and pipeline injection projects are extremely capital intensive. In the near-term, internal combustion engines must be maintained as an option for electricity generation if dairy digesters and co-digesters are to develop. H-19

Not all digesters will require all upgrades. Section 3.5.3 suggests that all digesters "will" require the listed improvements. In some cases, some of the improvements will likely not be needed. As such, we suggest changing "will" to "may." H-20

Incentives to build 20 digesters per year. Page 4-7 lists "several factors would need to be necessary to develop up to 20 dairy digesters per year in Region 5. Dairy Cares strongly disagrees with the inclusion of "Regulations that require the development of energy-producing dairy digester facilities for specified dairies" as an included factor. Regulations requiring digesters will be considered not only a disincentive for digester development but also a disincentive for dairy development. Dairy Cares strongly believes that maintaining installation of digesters as a voluntary option for new, expanding or existing dairies will be a far more effective strategy for enhancing their development in California. Regulations requiring digesters would not only eliminate some of the economic incentives for digesters, such as developing and banking greenhouse gas reduction credits, but would also likely drive dairy investment capital out of the Central Valley entirely. H-21

Electricity and renewable gas prices more critical than demand. Page 4-7 also suggests that "demand" for locally generated renewable energy and "demand" for new energy sources is a key factor for driving development of dairy digesters and co-digesters. In fact, demand is important but the critical issue of price is even more important. Even if demand for renewable energy continues to rise, dairy digester development may stagnate is the prices paid for dairy-generated electricity and renewable natural gas/biomethane fuels are not comparable to prices paid for other sources of renewable energy such as wind and solar. <u>Demand coupled with electricity and renewable natural gas/biomethane prices</u> will draw investment capital to dairy digester and co-digester development. H-22

Potential electricity for dairy cattle. The footnote on page 4-7 suggests that the estimate that dairies in Region 5 could produce 140 MW of electricity is based on 1.7 million cows; page 3-3 contains the same estimate but says the Central Valley contains 1.6 million cows. H-23

Evaluation of alternatives. We have reviewed the Draft PEIR's discussion of project alternatives including the "no project" alternative, "co-digestion substrate restrictions" H-24

alternative, "thermal conversion" alternative and "reduced NOx" alternative. Dairy Cares agrees with the draft PEIR's findings that these project alternatives were appropriately selected for review. Dairy Cares also concurs with the finding that none of these projects is "clearly environmentally superior to the proposed project." H-24 cont

Thanks for the opportunity to comment and we look forward to continuing to work with you on the Technical Advisory Group as the process moves forward.

Sincerely,

J.P. Cativiela
Dairy Cares Program Coordinator

Response H-1

Summary comments noted. Dairy Cares indicates support of the significance levels (prior to mitigation measures) for the various impacts analyzed in the draft Program EIR. They express interest in adding clarifying language or revisions in mitigation measures to air quality, greenhouse gases (GHGs), and water quality. These issues are further described in their additional comments.

Response H-2

Comment noted. Dairy Cares indicates support for the project goals as outlined in Section 1.1 of the draft Program EIR.

Response H-3

The fourth sentence of the third paragraph on page 1-5 and the last paragraph on page 3-11 of the draft Program EIR will be revised as shown below:

> "Co-digestion substrates can increase the electrical capacity of a proposed system by ~~a magnitude~~ two to five times or greater than that of dairy manure alone (ECOregon, 2010)."

Response H-4

Comments noted. The commenter states that operational dairies that add manure only digesters "would not be required to seek additional water board permits if the dairy is already covered under General Order R5-2007-0035." That statement is not correct. As stated in Section 4.3 of the draft Program EIR, such dairies will remain under the Dairy General Order, but may be required to submit a Report of Waste Discharge seeking coverage under a dairy digester GO or Individual WDRs. Thus, the draft Program EIR clarifies that the Central Valley Water Board has the ability to require an operational dairy covered under General Order R5-2007-0035 to seek additional permits.

The commenter also states that the draft Program EIR does not discuss the process that will be used for developing lining requirements. The process is not discussed in detail because the draft Program EIR is for a waste discharge regulatory program and thus does not specifically address what liner requirements will be at the project level (i.e., water quality permits including GOs or Individual WDRs). The reasonableness of lining requirements for a water quality permit covered under the Program EIR can be commented on during the public review period of the draft permit. However, for a water quality permit to come under the proposed waste discharge regulatory program covered by the Program EIR it must comply with Mitigation Measure 5.2 which requires that WDRs include "lining requirements" (i.e., design and operation requirements) to protect water quality.

Response H-5

Comment noted. Comment requests clarification as to who will determine and how the determination will be made that a pond meets the antidegradation provisions of Resolution 68-16. Similar to the discussion in Response H-4, the reasonableness of pond requirements for a water quality permit covered under the Program EIR can be commented on during the public review period of the draft permit. However, for a water quality permit to come under the proposed waste discharge regulatory program covered by the Program EIR it must be consistent with the antidegradation provisions of Resolution 68-16 as detailed in Mitigation Measure 5.3.

Response H-6

The comment suggests that the requirement of a Salt Minimization Plan (SMP) within Mitigation Measure 5.3 should not apply to manure only digestion facilities. This waste discharge regulatory program and mitigation measures required by this Program EIR do not pertain to dairies that maintain coverage under the General Order for Existing Milk Cow Dairies including those with manure only digesters. The Program EIR is for a waste discharge regulatory program that will require an SMP as a permit requirement. This requirement will help to protect groundwater from salts regardless if the facility is a manure only digester or co-digester because both types of facilities have the potential to significantly impact groundwater for salts (Impact 5.3) and to have a significant unavoidable cumulative to groundwater (Impact 5.6). The comment also suggests that page 5-36 of the draft Program EIR presents unreasonable numerical limitations and requests they be removed or further clarification be provided. It should also be noted that the numerical figures that are presented on page 5-36 were never intended to represent numerical limitations required by Mitigation Measure 5.3, as the figures are not within Mitigation Measure 5.3 itself. The discussion on page 5-36 has been revised to clarify that the figures are not numeric limitations, as shown below:

> "Based on a study conducted by J.L. Meyer in 1973, ~~"reasonable"~~ salt loading rates ~~under normal situations~~ <u>of no more than 2,000 pounds per acre for single-cropped land and 3,000 pounds per acre for double-cropped land may help</u> ~~were determined to help~~ prevent the vertical migration of salts within the soil profile (Meyer, 1973 as cited in RWQCB, 2008). ~~Unless environmental conditions show differently, "reasonable" is accepted to be a maximum annual non-nitrate salt loading rate of 2,000 pounds per acre for single-cropped land and 3,000 pounds per acre for double-cropped land.~~"

Response H-7

The comment states that numerical limits for the SMP would result in hardship for some operators. See Response to H-6.

Response H-8

The comment requests further clarification on definition of "salt" and "practicable" in regards to Mitigation Measure 5.3's requirement to select crops that maximize salt uptake to the extent practicable. As referenced in the comment, the discussion of salt does refer to non-nutrient based salts otherwise referred to as non-nitrate salts. The choice of crop and its capacity for salt uptake would be one of the elements covered within the SMP, which would be required by Mitigation Measure 5.3. The purpose of the SMP would be to identify sources of salinity in the discharge and measures available to minimize the concentration and mass loading of salinity. See also Response J-4.

Response H-9

Comment noted. The comment expresses support for testing of co-digestion substrates provided that testing frequency of hazardous substances is scaled to match the variability and risk associated with the substrate used to avoid excessive laboratory costs. The monitoring frequency will be established for the waste discharge regulatory program (i.e., one or more GOs etc.) during permit development. Comments on proposed monitoring frequencies will be accepted during the public review period of each permit.

Response H-10

Comment noted. Digestion and co-digestion reduce but do not completely eliminate pathogens. Monitoring of groundwater where wastes with pathogenic concerns are being discharged to land is appropriate to protect public health. This is true even if the numbers of pathogens are less than would have otherwise occurred without digestion or co-digestion. The monitoring type, frequency, and location for groundwater monitoring of pathogens will be established for the waste discharge regulatory program (i.e., one or more GOs etc.) during permit development. Comments on the type (e.g., total and fecal coliform), frequency (e.g., monthly, yearly etc.), and location (e.g., monitoring wells, irrigation wells, domestic water supply wells) of groundwater monitoring for pathogens will be accepted during the public review period of each permit.

Response H-11

Dairy Cares indicates its support for use of an NMP on all dairies. The comment suggests that the second bullet of Mitigation Measure 5.3 on pages 5-42 and 1-9 of the draft Program EIR allow a Representative Groundwater Monitoring Program as an option to a site-specific groundwater monitoring program.

The second bullet has been revised as shown below:

- "Prepare and implement a site-specific NMP that <u>incorporates analytical data for soils, wastewater, manure, digester solids, groundwater and/or surface water</u>

supply. The required analytical data is to be generated by a site-specific monitoring and reporting program. In the case of groundwater, data from an approved representative groundwater monitoring program may be substituted for some or all site-specific groundwater monitoring, if appropriate. The NMP will be reconciled annually based on results of the monitoring and reporting program and site-specific measurements of agronomic rates; ~~includes a soils and groundwater monitoring and reporting program that include a variety of waste constituents, as well as yearly reconciliation based on sampling results that measure agronomic rates;~~"

Response H-12

The comment requests a definition of "impermeable" as it relates to the requirement in Mitigation Measure 5.3 on pages 1-10 and 5-42 (4th bullet from the bottom) of the draft Program EIR:

- "Require that solid wastes be stored on impermeable surfaces;"

It should be noted that "impermeable" does not necessarily refer to a concrete surface and that a surface to store solid wastes that protects groundwater quality can be met in other ways. This text will be revised as follows:

- "Require that solid wastes be stored on ~~impermeable~~ surfaces designed in accordance with a site-specific Waste Management Plan prepared for the facility by an appropriate California registered professional in accordance with WDR requirements;"

In general, solid waste storage areas will be required to divert all runoff to the wastewater retention pond and minimize infiltration into the underlying groundwater. The ultimate performance of the storage areas will be verified through the groundwater monitoring. Solid waste storage area performance must be protective of groundwater quality.

Response H-13

The comment questions the need for an Odor Management Plan (OMP) at manure only digesters at existing dairies. This waste discharge regulatory program and mitigation measures required by this Program EIR (e.g., an Odor Management Plan) do not pertain to dairies that maintain coverage under the General Order for Existing Dairies; including those with manure only digesters. The comment expresses concern that the requirements of Mitigation Measure 6.3b lack the flexibility to appropriately take into account site specific conditions. Mitigation Measure 6.3b has been revised on pages 1-12 and 6-27 of the draft Program EIR to read as follows:

> "**Measure 6.3b:** AD facilities that handle compostable material and are classified as a compost facility must develop an Odor Impact Minimization Plan (OIMP) pursuant to 14 CCR 17863.4. Otherwise, a~~A~~pplicants shall implement a~~n~~ site-specific Odor Management Plan (OMP) as part of each application submitted to establish digester and co-digester facilities under the waste discharge regulatory program. The OMP will specifically address odor control associated with digester operations and will include:
>
> - A list of potential odor sources.
> - Identification and description of the most likely sources of odor.

- Identification of potential, intensity, and frequency of odor from likely sources.
- A list of odor control technologies and management practices that could be implemented to minimize odor releases. These management practices shall include the establishment of the following criteria as appropriate:
  - Establish time limit for on-site retention of undigested odiferous co-substrates (i.e., organic co-substrates must be put into the digester within 48 hours of receipt).
  - Provide negative pressure buildings for indoor unloading of odiferous co-digestion substrates. Treat collected foul air in a biofilter or air scrubbing system.
  - Establish contingency plans for operating downtime (e.g., equipment malfunction, power outage).
  - Manage delivery schedule to facilitate prompt handling of odorous co-substrates.
  - Modification options for land application practices if land application of digestate results in unacceptable odor levels.
  - Protocol for monitoring and recording odor events.
  - Protocol for reporting and responding to odor events."

Response H-14

The commenter provides feedback on the list of environmental benefits on page 3-10 of the draft Program EIR. The commenter states that the reduction in mass attributable to AD is minimal; that the concentration of nutrients is a benefit of drying the materials and not AD; and that AD does not generally produce "clean liquid effluent". The commenter notes that the diversion of waste from sewer systems and landfills to generate biogas or produce compost or other soil amendments is a benefit of the process, and the AD process tends to preserve nutrients in the digestate.

The draft Program EIR (top of page 3-10) is revised as follows:

"AD facilities at dairies provide a number of potentially environmental and economic benefits (Burke, 2001), which are summarized below. Environmental benefits are currently understood to include, but are not limited to:

- Reduction in the mass of solid wastes;
- Generation of ~~clean~~ liquid effluent that can be blended with irrigation water for irrigation and fertilization of crops, or recycled water use;
- Concentration of nutrients in condensed solid for export or storage when AD process includes solids separation;
- Reduction of pathogens in the solid and liquid waste;
- Reduction in GHG emissions;

- Generation of renewable energy from the biogas;
- Diversion of organic materials (for co-digestion systems) from sewer systems and landfills to generate biogas, soil amendments and compost;
- Reduction or elimination of odors associated with waste products; and
- Reduction in flies.

The economic benefits of AD facilities at dairies include, but are not limited to:

- Diversion of organic materials from sewer systems and landfills;
- Time needed to move, handle, and process manure is reduced;
- Biogas can be used for energy recovery;
- Waste heat can be used to meet the heating and cooling requirements of the dairy;
- Concentration of nutrients through solids separation generates a high nutrients soil amendment, which can be sold to the public, nurseries, or other agricultural facilities;
- Reduction in the mass of solid waste also reduces the amount of export needed;
- Income can be obtained from the processing of imported food or agricultural wastes for co-digestion (tipping fees), the sale of organic fertilizer, potential GHG credits, and the sale of energy generated by biogas processing;
- Energy tax credits may be available for power produced;
- Greenhouse gas tax credits may be available for each ton of carbon reduction; and
- Other federal and State incentives available now or in the future related to generation of renewable energy and reduction of GHG emissions."

Response H-15

Commenter correctly points out that a dairy with a flush system will not necessarily result in larger anaerobic digestion facilities than one with a non-flush system when all manure collection and digester elements are considered. For example, a dairy with a flush system could be modified to have manure in flush lanes vacuumed and sent to a digester tank before the lanes are flushed. The draft Program EIR in Section 3.4.2 on page 3-11 is revised as follows:

> "In addition to the total number of cows at a dairy, specific ~~dairy operations affect the amount and quality of manure that are processed~~ operational variables at a dairy affect the amount and quality of manure that are processed at a dairy digester. Operational variables include, but are not limited to, animal housing, manure transport, manure pre-processing, animal bedding, and stormwater management (Burke, 2001). In regards to animal housing, free stall barns provide greater manure collection and quality compared to corral or open lot facilities. Manure handling practices which affect the dilution of waste include: vacuuming, dry scrape, flush, or some combination of the three. ~~A flush system for manure transport, which affects the dilution of waste, would require larger AD facilities than if the manure were collected using a scrape or vacuum system.~~ For manure pre-processing, the removal of organic solids

through screening and sedimentation would reduce the amount of biomass available to undergo biogas conversion through AD…"

Response H-16

Comment noted. The last sentence on page 3-11 is revised as follows:

"Co-digestion is considered to be ~~essential~~ an important element for dairy digester project financial viability (ECOregon, 2010)."

Response H-17

On page 3-12 of the draft Program EIR, the fourth paragraph should be revised as shown below:

"…The lagoons are covered by an ~~floating,~~ impermeable cover that captures the biogas generated by AD…"

Response H-18

The schematic drawing for Alternative 1: Raw Combustion in Internal Combustion (IC) Engine or Flare on page 3-16 of the draft Program EIR has been revised to include removal of hydrogen sulfide and water from raw biogas before combustion in IC Engines. The drawing has also been revised to show cleanup of exhaust via catalytic treatment. This information is shown below:

Response H-19

Comment noted. In preparing the Program EIR the Central Valley Water Board has recognized the importance of internal combustion biogas engines for electricity generation. Internal combustion engines are shown as Alternative 1 on page 3-16 of the draft Program EIR. Table 4-1 on page 4-8 of the draft EIR shows electrical generation as the primary biogas end use and this electrical generation is primarily from internal combustion biogas engines. In agreement with the points raised, Table 4-1 shows one project that uses pipeline gas and no projects using fuel cells. The draft Program EIR does not eliminate the option for electricity generation, nor does it restrict the use of internal combustion biogas engines beyond those requirements found in current local air district regulations.

Response H-20

The first sentence of Section 3.5.3 in draft Program EIR on page 3-17 is revised as shown below:

> "Development of AD facilities ~~will~~may require the construction of various supporting infrastructure including, but not limited to, lined waste storage ponds and/or upgrades to existing dairy ponds, pipelines for transporting effluent to ~~disposal fields~~cropland, bypass valves, and ~~processes for~~ stormwater management facilities."

Response H-21

In response to Comment H-21 and H-22, the bullet list on page 4-7 of the draft Program EIR is revised to read as follows:

- "Competitive electricity and renewable natural gas/biomethane prices;
- Increased demand for new energy sources;
- Increased demand for local renewable energy sources;
- Increased incentives for co-digester facilities;
- Improvements in dairy digester technologies; and
- Public financial support or the development of profitable business models; or
- Governmental measures (e.g., regulatory or otherwise) that incentivize the development of dairy digesters. ~~Regulations that require the development of energy-producing dairy digester facilities for specified dairies.~~"

Response H-22

See response to Comment H-21.

Response H-23

The commenter correctly notes this discrepancy. The Krich, et al. reference estimated a best case 140 megawatts based on an estimate of 1.7 million cows in California. This should be adjusted in the draft Program EIR to approximately 130 megawatts for the estimated 1.6 million cows in Region 5.

The second sentence of the fourth paragraph on page 3-3 of the draft Program EIR is revised as follows:

> "Based on calculations developed by Krich, it is ~~It has been~~ estimated that the ~~estimates dairies~~ 1.6 million cows in Region 5 could potentially generate approximately ~~14~~ 13 billion cubic feet of methane per year through manure only anaerobic digestion, which would correspond to ~~140~~ 130 megawatts of ~~annual~~ electrical capacity (Krich, et al., 2005)[2]."

The next to last sentence on page 4-7 of the draft Program EIR is revised as follows. The footnote has been deleted from the sentence.

> "~~Potentially,~~ Based on calculations developed by Krich, it is estimated that the 1.6 million cows ~~dairies~~ in Region 5 could potentially generate approximately ~~14.6~~ 13 billion cubic feet of methane per year through manure only anaerobic digestion, which would correspond to ~~140~~ 130 megawatts~~[3]~~ of ~~annual~~ electrical capacity (Krich, et al., 2005)."
>
> "~~[3] This was based on an estimate of 1.7 million cows.~~"

Response H-24

Dairy Care agrees with the draft Program EIR finding that these project alternatives were appropriately selected for review and concurs with the finding that none of these projects is clearly environmentally superior to the proposed project.

I

Sustainable Conservation

August 20, 2010

Central Valley Water Board
Attn: Stephen Klein, Project Manager
1685 E Street
Fresno, CA 93706-2007

RE: Comment Letter – Dairy Digester and Co-Digester draft Program EIR

Dear Mr. Klein:

I appreciate the opportunity to comment on the draft Programmatic EIR for Dairy Digesters. This is an important and timely document that can help facilitate new facility permitting. However, I have some concerns that it will not have that effect without some key modifications. I do note that the document is very thorough and covers much ground. I have identified several issue areas that should be modified. They are as follows;

1) Section 1.4 – "Areas of Controversy and Unresolved Issues" is missing a least one very important issue, one that I brought up at one of the meetings. Cal Recycle (formerly the Integrated Waste Management Board) has stated they will be regulating dairy digesters (or at least those that meet certain conditions) as part of their existing authority. That would be detrimental, or worse, for further development of the emerging digester industry. Farm scale digester facilities are already heavily regulated at several levels including by the local Air District and Water Board. Existing rules and requirements have already caused a hiatus in most new facility installations. Adding another regulatory agency into the mix is both unnecessary and could result in the remaining dairy digester developers to abandon California. This is not idle speculation on my part but what I have heard directly from one of the few remaining digester developers left in California. Not only is Cal Recycle involvement unnecessary for most single waste and co-digestion facilities from both an environmental and public health standpoint it is also inconsistent with current regulations and statute. I know that Cal Recycle's intentions are honorable but in this instance their statutory and regulatory authority are largely absent. I will not delve into the specific limitations on their current authority but I will point out that Cal Recycle's reliance on existing transfer station and composting regulations (an aerobic process that is in many ways the antithesis of anaerobic digestion) is inappropriate and leads to some bizarre consequences. At the very least, this issue should be recognized in the document. I-1

2) The final bullet point of Section 1.4 relating the ability of biogas digesters engine generator sets to meet the existing San Joaquin Valley Air District NOx emission requirement is not yet settled. The position of the San Joaquin Valley Air Pollution Control District that there are two facilities that are meeting the requirement is not accurate. One of the facilities cited has operated with a variance from the Air District, has gone through eight to ten catalysts and uses an older engine technology that is no longer offered by the manufacturers for this application. The other dairy is using selective catalytic reduction (SCR) technology to meet the emission requirements but in a year or so of operation has not been able to consistently meet the emission limits even as many resources have been devoted to attaining compliance. And in both cases, the pollution control technologies are expensive and need constant attention to keep them running properly. The I-2

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good news is there are new technologies in development that may prove more reliable and cost effective. They will be installed later this year. But it is still premature to claim success. I-2 cont

3) One of the alternatives discussed in Chapter 17, "Alternative #4" does not characterize the impact of NOx emissions realistically. But let me first point out that emission control technology is not static. There are continuous improvements in emissions technology, including for NOx. BACT is currently at about 9ppm in the San Joaquin Valley Air Basin for this application. It is entirely feasible, some would say nearly certain, that within the next couple of years emission control technology for biogas IC engines will have comparable NOx emissions to combined cycle gas turbine power stations. If that happens, biogas engine generators will be displacing central station electricity because they produce base load power with no net NOx increase. But even if it doesn't happen, because digesters also often use both heat and power on site, they can have the net effect of lowering NOx emissions (using engine heat to displace propane on site, typical of dairy farms, yields a NOx reduction benefit) compared to central combined cycle gas turbines (i.e. lower total NOx emissions). That net NOx reduction benefit has been documented by NREL. I-3

   And that is not the only benefit. Digesters capture VOCs, ammonia, particulate matter and other emissions that would otherwise occur from dairy lagoons. Only VOCs emission reduction benefits appear to be valued in the analysis. Further, there are other environmental and public health benefits to farm scale versus centralized power generating facilities. Centralized natural gas plants have significant lifecycle impacts on water and air quality that are not factored into a localized air basin only analysis. The evidence for these impacts are well documented and will not be repeated here (but are available). It is important to recognize we are not only displacing combined cycle gas turbine power with digesters but also electricity generated from coal plants. Approximately 20% of California's electricity comes from coal. The amount of NOx, SO_2, lead, mercury, PM, etc. emissions that come from these facilities, and their local health impacts on communities, many of them poor or disadvantaged, are orders of magnitude greater than from distributed generation renewable energy facilities like biogas digesters. We have exported our air emission impacts outside of California. Concern for environmental and public health should not stop at our borders or air basin boundaries. Although that does not factor into an air quality permit, it should factor into an EIR. In fact, I would think it rather unconscionable if it does not.

4) Table 1-1 – "Environmental Impacts and Mitigation Measures" leads one to ask is the cure worse than the disease. Currently it is very difficult but not impossible to get a Water Board or Air District permit for digestion or co-digestion. With so many mitigation considerations involved in the Programmatic EIR, will the level of difficulty go down or up? Looking at the table, it is hard to believe it will go down. Would that defeat one of the purposes of doing a Programmatic EIR? I-4

5) The impact of digesters and co-digestion on special status plant or wildlife species is stated as "Significant" in Impact 9.1. The analysis talks about the possibility of impacts by destroying vernal pools etc. That potential impact is both overstated and unlikely. Every digester I have seen in California is on land that was long ago developed for crop production, equipment storage, field access, livestock confinement, etc. These farm environments are not sensitive wetlands, endangered species habitat or native plant areas, at least in the areas of the Central Valley where the dairies are located. Most were developed more than 50 or 100 years ago and have been intensively farmed. And although they are not devoid of wildlife, they contain few endangered birds, frogs, snakes, etc. In fact it is a sad but true reality that most ESA habitats I-5

have been both unintentionally and intentionally eliminated. And it is hard to imagine how any of the narrow trenches put in for pipelines that may run between farms are going to have any significant effect on endangered species or native plants that 100 years of farming, irrigating, spraying pesticides, leveling land, putting in fences, roads, etc. haven't already eliminate. As such, the level of threat identified is overstated and unsupported. Importantly, if the Programmatic EIR requires that a biologist go out and do an assessment on the applicants farm for endangered species or special status plant or wildlife, that very well could be a deal killer for most farmers. It is one more penalty for "doing good". I-5 cont

6) Impact 9.6 makes a similar reference (as above) to biological impacts, specifically cumulative impacts. On this point the analysis is particularly weak. It references the possibility of a digester contributing to more development nearby. The nature, proximity and size of the potential development is unspecified. To quote from the draft document, I-6

"While it is not expected that implementation of the project would lead to conversion of habitat to dairy farms, the project could facilitate additional development near dairies that would incrementally deplete native habitats and other biological resources. Most of the dairy digester and co-digester facilities would be constructed on, or in proximity to, existing dairies, on land that is unlikely to support sensitive biological resources. However, facilities that could be constructed on land not currently in active agricultural use could affect biological resources. In combination with other development in the project area, this conversion of potential habitat land represents a significant cumulative impact."

What is the author referring to? There is no documentation or examples given and it does not comport with anything I have seen or heard in the 10 years I have been working on digester projects. This is highly speculative and not supported by what has happened in California or in other States that have digesters. Dairy digesters are not analogous to industrial parks or even wind farms. Putting one in isn't creating an "energy park". I can see no basis for this statement.

7) Chapter 12 ascribes the likelihood of archeological resources impacts as "significant". This is disturbing (no pun intended). These are highly developed agricultural lands that have been farmed intensively for many decades. The likelihood of finding significant artifacts is limited and less than in most other developments. That doesn't mean it is zero but labeling the potential impact as "significant" and requiring a cultural resources inventory is inappropriate. A dairy could decide to install a manure pond in the exact same location of identical shape and depth. But it wouldn't require an archeological assessment. It shouldn't be required for dairy biogas digesters that generate renewable energy, destroy greenhouse gas and kill pathogens. It is another disincentive to build biogas digesters and it doesn't seem justified by the analysis. I-7

8) Chapters 1 (page 19), 5 (page 123) and 17 (page 310) make reference to the term "regional aquifer". However, that is an undefined term. A Google search of that term finds only one reference and it is as the San Joaquin Valley Regional Aquifer in a document entitled, "Spatial and Temporal Trends in Nitrate Concentration In the Eastern San Joaquin Valley Regional Aquifer and Implications for Nitrogen Fertilizer Management". The relevance is in context of disallowing importation waste for digestion from outside the "regional aquifer". That raises the question of where is the boundary of the regional aquifer and is it a reasonable one. And is the term synonymous with or distinct from the San Joaquin Valley Regional Hydraulic Region which is referenced repeatedly in the draft EIR? The document should both clarify what is meant and I-8

better justify the boundary. For a dairy with a digester on the edge of the boundary, that could potentially mean not importing waste from across the road or from a neighboring field. Is that reasonable, particularly if that waste is already coming into the region, however that is defined, and being used in a much less environmentally friendly way? That would seem unreasonable. I-8 cont

9) Chapter 5 page 36 makes reference to salt impacts and mitigation measure. However, there is one specific characterization in the document that is only partially accurate, at least for certain types of digesters, and should be corrected. The specific provision is as follows. I-9

"The digestion process neither adds nor reduces the total salt content of the substrate that it processes, but simply passes salt from the substrate through to the digester effluent. For every unit of salt that is fed into a digester from dairy wastes or other substrates, that same unit of salt is released from the digester in its effluent."

It is the last sentence that is not entirely correct. At least some types of digesters, such as the GHD design, may actually have less salt in the effluent, at least at the point of land application. That apparently has been documented by Washington State University. Some of the salts settle out in holding or storage ponds but at differential rates depending on the compound of salt (potassium, phosphorous, etc). Post solid separators also can remove salt with the solids. And other digester designs, such as covered lagoons, have some salt that builds up in the solids at the bottom of the digesters. The significance of that is it may allow dairymen to maintain a salt balance by exporting the settled or removed solids even while taking in substrate that yields a net increase in salt going into a digester over a manure only digester. That means the effluent that is land applied can have a lower concentration of total salt than the digester influent.

10) In Chapter 5 – Hydrology and Groundwater Quality, there are several references to managing the discharge from manure only or co-digestion digesters in ways that ensure protection of surface and groundwater. However, mitigation measure 5.3 is at best problematic and at worst, could spell the end of new digesters in the Central Valley. The provisions states: I-10

"Require all drainage be directed to a retention wastewater pond that has been designed to meet antidegradation provisions of Resolution 68-16 by an appropriately licensed professional;"

The anti-degradation provision referenced has been interpreted to mean what is essentially a hazardous waste facility design where a double liner with leachate collection system is used. That is not now the requirement for existing wastewater ponds. Dairies with biogas digesters have not had to use double lined retention ponds. Retention pond requirements should be as contained in the General Order. The draft Programmatic EIR appears to create a new rule. The effect of that very expensive requirement may be no new digesters in the Central Valley.

One final point before closing; it doesn't appear that the "status quo" or baseline impact of candidate substrates going for land disposal, solid waste landfilling, use as an industrial feedstock, or sending to a wastewater plant are adequately recognized or quantified. For example, food waste going to a landfill may emit H_2S, VOCs, methane and/or contribute to vectors, is not juxtaposed to farm scale digestion. California wants these organic waste streams diverted from landfills as stipulated by AB 939 and other laws and regulations and encourages beneficial reuse. As such, organic wastes going to digesters could be considered as mitigating the impact of solid waste landfills. It would be useful to recognize that tradeoff benefit. I-11

As a concluding observation, it is obvious that a lot of work went into this draft Programmatic EIR document. And ESA should be commended for their effort. However, the practical effect of the likely requirements and mitigation measures that result from using the Programmatic EIR are likely to have a discouraging effect on all but the most persistent and well funded project developers. That means government agencies (i.e. DOC), environmentally progressive utilities (i.e. SMUD) or large industries (i.e. food processor). If this is the outcome of the process, then the "raison d'être" for the Programmatic EIR will be largely unfulfilled. That would be a shame. I-12

I am happy to provide follow-up information or documentation to my comments if needed.

Sincerely,

Allen Dusault

Allen J. Dusault
Program Director
Sustainable Conservation

cc: Paul Miller, M.S., REA, Environmental Science Associates
Deborah Kruse, M.S., Environmental Science Associates

Response I-1

Please see also comment D-1 and the response.

The commenter states that Section 1.4 "Areas of Controversy and Unresolved Issues" on page 1-6 fails to include dairy digester regulation by CalRecycle as an area of controversy. To provide full disclosure of this issue, an additional area of controversy has been added to the end of Section 1.4 on page 1-7 of the draft Program EIR. The added text is as follows:

- "Concern has been raised by TAG members about CalRecycle involvement in review and permitting of dairy AD facilities. There is concern about the additional permitting and regulatory requirements. There is concern that CalRecycle's reliance on existing transfer station and composting regulations are inappropriate for regulating anaerobic digesters, because anaerobic digestion is a fundamentally different process than the "aerobic" process of composting. Other stakeholders indicate that adding an additional agency to the review process will work against the intent of the Program EIR to help streamline the permitting of dairy digester facilities and co-digester facilities."

Response I-2

Comment noted. The ability of biogas digester engine-generator sets to meet existing San Joaquin Valley Air Pollution Control District NOx emission requirements remains an area of controversy, which is why it was included in Section 1.4 "Areas of Controversy and Unresolved Issues". Sustainable Conservation provides information about the current difficulty of biogas digesters engine-generators sets to meet the existing San Joaquin Valley Air Pollution Control District NOx emission requirements. According to the commenter, there are no examples of relatively inexpensive and easy to maintain engines despite the SJVAPCD assertion that two dairies are currently meeting the NOx requirement (see the discussion in the last paragraph on page 1-6 of the draft Program EIR). Sustainable Conservation has previously expressed the concern that meeting the new stringent SJVAPCD standards is infeasible.

The commenter notes that new technologies in development may prove more reliable and cost effective.

Response I-3

The commenter identifies potential benefits associated with dairy digesters. There is already a list of environmental and economic benefits described in the Program EIR on page 3-10. See also response to Comment H-14.

The NOx benefit from dairy digester electricity generation described by the commenter from electricity displacement could reduce the impact to the local air shed in some cases, but since electricity is often generated at remote facilities, the potential benefit would often be outside the air basin. Even if there would be a net reduction of NOx in California, the increased NOx in non-attainment air

basins such as the San Joaquin Valley Air Basin would still be an adverse impact to residents of the air basin.

It is acknowledged that the electrical generation from dairy digesters will have a variety of benefits in other power plant locations (where the electrical demand has been displaced by the dairy digester electrical generation), but it remains important that the electrical generation does not degrade the local air sheds where the dairies are located, especially with regard to NOx and ozone formation. That is why the "Reduced NOx Emissions Alternative" was considered beginning on page 17-10 of the draft Program EIR.

We appreciate the insight into improvements in internal combustion engines and encourage all efforts to improve the engines (see also comment B-1, that describes EPA efforts in this area).

Response I-4

Please see responses to Comments I-12 and J-1.

Response I-5

Comment noted. As stated in the first sentence of Impact 9-1, on page 9-11 of the draft Program EIR, it is unlikely that the dairy digester facilities would be located in areas that would impact special status plant and wildlife species. However, because this is a Program EIR, the exact location of the digester facilities to be permitted under the program is unknown and therefore any statement over the absence of special status plant and wildlife species cannot be made with certainty for all sites. As the commenter points out, the locations where digesters may be located "are not devoid of wildlife." The mitigation measures have been written as a two step processes and if special status species are not identified in the first step (e.g., a biological site assessment), as is likely for most of the facilities, no additional mitigation would be required.

Response I-6

The text cited from the draft Program EIR is referring to potential impacts associated with centralized facilities and associated pipelines, which would be constructed on land not currently under agricultural use. To clarify, text within Impact 9.6 on page 9-16 of the draft Program EIR has been revised as follows:

> "While it is not expected that implementation of the project would lead to conversion of habitat to dairy farms, the project could facilitate additional development <u>such as centralized facilities and associated pipelines,</u> near dairies that would incrementally deplete native habitats and other biological resources. Most of the dairy digester and co-digester facilities would be constructed on, or in proximity to, existing dairies, on land that is unlikely to support sensitive biological resources. However, <u>centralized</u> facilities <u>and associated pipelines</u> that could be constructed on land not currently in active agricultural use could

affect biological resources. In combination with other development in the project area, this conversion of potential habitat land represents a significant cumulative impact."

Response I-7

Comment noted. As stated in the second paragraph of Impact 12.1, on page 12-17 of the draft Program EIR, the potential for discovery of archaeological resources, including human remains, varies depending on the sensitivity of a project area, but may be higher during trenching for underground pipelines and utility infrastructure. Because the exact location of the facilities is unknown, the sensitivity for cultural resources cannot be made with certainty for all project areas. Measure 12.1a, on page 12-19 of the draft Program EIR, states that a cultural resources survey may not be warranted to satisfy the requirements of CEQA based on the sensitivity of the project area for cultural resources. To further clarify the mitigation measures, Mitigation measures 12.1a and 12.1b have been modified to make them more straightforward. The following revised mitigations completely replace the mitigation measures (from the draft Program EIR) starting on pages 1-18 and 12-18 of the draft Program EIR.

> **"Measure 12.1a:** In order to determine whether a project may cause a significant impact to cultural resources, and therefore, have an adverse effect on the environment, the Central Valley Water Board shall require each application submitted for a discharge permit for a digester or co-digester facility to identify the project's potential impacts to cultural resources.
>
> Prior to ground-disturbing activities, the project applicant shall retain a qualified archaeologist to (1) conduct a record search at the appropriate information center of the California Historical Resources Information System (CHRIS) to determine whether the project area has been previously surveyed and whether cultural resources were identified; and (2) request a sacred lands search from the NAHC. The results of the record search and sacred lands search shall be included in the Cultural Resources Inventory Report provided to the Central Valley Water Board.
>
> In the event the CHRIS records search indicates that no previous survey has been conducted, the qualified archaeologist shall recommend whether a survey is warranted to satisfy the requirements of CEQA based on the sensitivity of the project area for cultural resources. If, for example, the existing dairy or agricultural land proposed for establishment of a digester or co-digester facility was constructed entirely on fill, as shown by original and final contour drawings, a surface survey for archaeological resources would not be warranted. Similarly, a surface survey may not be warranted if the project area has been extensively disturbed by dairy or agricultural use.
>
> For projects that constitute federal undertakings, as described in the Federal Agencies section of the Introduction (Chapter 2), the cultural resources study shall be prepared in accordance with Section 106 of the NHPA. The cultural resources study and inclusive mitigation measures shall form the basis for the cultural resources component of the project-level environmental documentation prepared for the project under Section 106.

If the survey, CHRIS record search, or NAHC search indicate cultural resources are located within a project area, the Cultural Resources Inventory Report shall include an assessment of the significance of the resources according to applicable federal, state, and local significance criteria. If the cultural resources are determined significant historical resources, the Lead Agency (usually the Central Valley Water Board) must review and approve the applicant's proposed treatment measures to ameliorate any "substantial adverse change" in the significance of each historical resource, in consultation with a qualified archaeologist or architectural historian, and other concerned parties. Treatment measures may include preservation through avoidance or project redesign, incorporation within open space or conservation easements, data recovery excavation of archaeological resources, formal documentation of built environment resources, public interpretation of the resource, or other appropriate treatment, and may be described in a project-level Cultural Resources Mitigation Plan included in the Cultural Resources Inventory Report to be approved by the Lead Agency.

Should the project area contain standing, built environment resources now 50 years of age, a qualified architectural historian shall be retained to evaluate the integrity and significance of the resource(s) unless the building(s) or structure(s) were covered in the existing survey report and determined not significant according to applicable federal, state, and local criteria. The results of that evaluation shall be included in the Cultural Resources Inventory Report.

If cultural resources identified within a project area are neither a historical resource nor unique archaeological resource, there would be no significant effect to the environment and no further treatment of those known resources would be required.

Measure 12.1b: Inadvertent discovery measures for cultural resources shall be implemented during all construction activities within the project area. Measures shall include procedures for discovery and protection of cultural resources, including human remains, during construction or earth-disturbing activities.

Within project areas of identified archaeological sensitivity, discovery measures would include: (1) a worker education course for all construction personnel; (2) monitoring of all earth-disturbing activities by a qualified archeologist; and (3) procedures for discovery of cultural resources, including human remains, during construction or ground-disturbing activities if an archaeological monitor is not present. Monitoring by a Native American with knowledge in cultural resources may also be required, as appropriate. Monitoring within recent fill deposits or non-native soil would not be required.

All construction or ground-disturbing activities shall be halted within 100 feet of a cultural resources discovery, including human remains, whether or not a monitor is present, until a qualified professional archaeologist can evaluate the find. If the find is determined to be a significant historical resource and cannot be avoided, then impacts on that resource will require mitigation. During evaluation or mitigative treatment, ground disturbance and construction work could continue on other parts of the project area.

If known or suspected human remains are discovered, in addition to halting all construction or ground-disturbing activities within 100 feet, the following steps must be taken before construction activities may be resumed within the stop-work area:

- The County Coroner has been immediately notified and has determined that no investigation of the cause of death is required; and
- If the remains are of Native American origin, the following steps have been taken:
    - The applicant has 24 hours to notify the NAHC, who should, in turn, notify the person identified as the proper descendant of any human remains. Under existing law, the descendant then has 24 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery.
    - If the NAHC is unable to identify a descendant or if the descendant does not make recommendations within 24 hours, the applicant shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance.
    - Should the applicant not accept the descendant's recommendations, the applicant or the descendant may, under existing law, request mediation by the NAHC.

Impact Significance After Mitigation: Less than Significant

Implementation of the Mitigation Measures 12.1a and 12.1b would ensure that any identified or undocumented historical resource or archaeological resource, or inadvertent discoveries of cultural resources during construction or ground-disturbing activities, would be properly recorded and the historical significance of the resources documented."

Response I-8

The comment requests clarification on the use of the term "regional aquifer" in Chapters 1, 5 and 17 and asks if it is reasonable to restrict importation of co-digestion substrates from outside the regional aquifer boundary. The reference to regional aquifer in Chapter 17, Alternatives, refers in general to the broad Hydrologic regions or watersheds. As discussed in Chapter 5 of the draft Program EIR, the Central Valley consists of different Hydrologic regions and subwatersheds as well as Groundwater Basins and subbasins. For the purposes of evaluating Alternatives to the proposed project, as required by CEQA, a hypothetical project where substrates are restricted by location, as well as other factors, was analyzed. However, it should be noted that this does not constitute the proposed project and therefore a full analysis of outlying projects that might be located on watershed boundaries is not warranted.

Response I-9

The comment finds the following statement on page 5-36 of the draft Program EIR to be only partially correct:

"The digestion process neither adds nor reduces the total salt content of the substrate that it processes, but simply passes salt from the substrate through to the digester effluent. For every unit of salt that is fed into a digester from dairy wastes or other substrates, that same unit of salt is released from the digester in its effluent."

The comment suggests that through the digestion process there can be stratification of salt content allowing for some of the higher salt content waste material to be exported as opposed to land applied. This claim does not refute the statement above for the overall process and does not eliminate a potential for excessive salt loading at some other location other than the subject digestion facility. The effluent as discussed above refers to both the liquid and solid wastes produced from the digestion and co-digestion processes. Therefore, the application of liquid effluent can be managed to minimize the land application of salts but there would still be a need to dispose of the salts contained in the remaining solid effluent. As a result, for the purposes of clarification, the beginning of the last paragraph on page 5-36 of the draft Program EIR shall be revised as follows:

> "The amount of salt that is contained in digester effluent depends on the substrate that is input into the digester. The digestion process neither adds nor reduces the total salt content of the substrate that it processes, but simply passes salt from the substrate through to the digester effluent. For every unit of salt that is fed into a digester from dairy wastes or other substrates, that same unit of salt is released from the digester in its <u>solid and liquid</u> effluent <u>which may be managed separately</u>……"

Response I-10

Comment noted. Please see response to Comment H-4 and H-5.

Response I-11

The commenter is correct in pointing out some of the positive aspects of co-digestion organic materials being diverted to dairy manure digesters. Please see response to Comment H-14. In response to Comment H-14 a new bullet has been added to the list of environmental benefits of the program that identifies the diversion of materials from landfills and sewer systems.

Response I-12

The Program EIR assesses the environmental impacts associated with the Central Valley Water Board's waste discharge regulatory program for dairy digesters and co-digesters. A primary goal of the Program EIR is to provide certainty to the CEQA environmental review process for dairy digester and co-digester projects by identifying potentially significant environmental program-

level impacts absent knowledge of site specific conditions, and identify feasible mitigation measures to address the potential impacts. Based upon the specifics of a particular project, many of the mitigation measures will be relatively straightforward to implement at the start of a project, such as the initial biological, cultural, traffic and visual assessments. If no potential impacts are identified in the initial studies further studies would not be required. Furthermore, full consideration of a variety of these issues early in the process could help identify potential flaws in a particular site that might not be obvious otherwise. See also response to Comment J-1.

J

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August 23, 2010

Stephen Klein
Central Valley Water Board
1685 E Street
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Dear Mr. Klein:

RE: Draft Programmatic EIR for Dairy Digesters and Co-digestion Facilities

Western United Dairymen (WUD) is the largest dairy farmer trade association in California, representing approximately 1,000 families who produce 60% of California's milk. WUD assists members with milk pricing, animal welfare, environmental quality, and labor issues, and is a primary source for dairy information. Through a grant from the California Energy Commission, WUD has been involved in providing financial assistance to dairymen interested in installing anaerobic digesters on farms. These systems provide many benefits, including a reduction in greenhouse gas emissions. The Programmatic EIR (PEIR) is intended to assist dairy producers and developers in permitting digester projects. However, it is important that the PEIR not create additional hurdles that could further stifle the development of digesters in California. Unfortunately, it appears to us that this hurdle is yet to be overcome.

While we appreciate the amount of work by the number of agencies and people that went into this project, we fear it has fallen short. An EIR is intended to identify environmental impacts and associated mitigation measures that may be employed as necessary to relieve those impacts wherever possible. However, the intensity of the listed mitigation measures, while possibly appropriate for a large regional project, is far too extreme for simple on-farm projects. Since these smaller on-farm projects are the most likely to require the ability to tier off of a PEIR to develop their projects, some consideration should be given to providing a more streamlined or graduated process to provide the reports and technical documents the PEIR indicates necessary. As an example, adding a new covered lagoon digester to the existing waste management system at a dairy has minimal environmental impacts. A second situation is where co-digestion products grown on farm are used and simply cycled within the project boundary. Unless the smaller projects can be better facilitated, the PEIR will not achieve its intent. We hope that our comments will assist in resolving some of those real concerns. J-1

Specific comments from Western United Dairymen's review of the draft PEIR follow.

1. Measure 5.2, page 1-9, requires that a tailwater return system be installed as a mitigation measure. The General Order Waste Discharge Requirements for Existing Milk Cow Dairies (WDR) prohibits the discharge of waste to surface waters from the fields receiving manure applications. There are multiple ways of complying with that requirement; one of those ways is with a tailwater return system. However, there are other options that can be just as effective that appear to be excluded here. Changing that J-2

mitigation to read "Requirements for tailwater return systems or other effective methods to minimize offsite discharges" would correct this issue. J-2 cont

2. Measure 5.3, page 1-9, requires that drainage be directed to a 68-16 pond. Clarification is necessary to cover how the use of existing ponds used to store drainage will be handled. We suggest that existing ponds are adequately governed by the current Dairy General Order and that the PEIR language should be changed to require that any new ponds be designed and constructed to 68-16 standards. J-3

This measure also requires the use of salt tolerant crops where practicable. It should be noted that forage production—fed back to the cows—simply recycles the salt within the facility. This distinction should be addressed. Small on-farm digester projects are different than a large centralized project and this difference should be addressed as discussed above. J-4

Additionally, this impact also requires that digestate be of neutral or alkaline pH before land application. The reason for this is not clear to us. In many cases, valley soils are alkaline and the addition of acidic materials is a common agronomic practice. Potential language could be: "Dairy digestate wastewater applied to cropland must be of adequate quality and pH for the appropriate planned agronomic use." J-5

Animal mortalities are excluded from digester feed stock options. We suggest that a blanket exclusion is inappropriate. Mortality management is increasingly a problem for California's livestock industry and alternatives are limited. We are aware that there is a prohibition against composting mammalian tissue; however, recent research has shown very positive results from composting. Digestion is expected to provide similar results and is used effectively in other states. This section needs to avoid an outright prohibition and be constructed to allow digestion of mammalian tissue if and when it is eventually approved. J-6

3. Measure 5.6, page 1-10, lists the cumulative water quality impacts as Significant and Unavoidable (SU). WUD believes that a designation of Less than Significant with Mitigation (LSM) is the proper designation. J-7

4. Measure 6.1b, page 1-11, requires equipment with Tier II engines and that they be inspected by a certified mechanic before use in construction of a dairy digester. This requirement should be restated to require compliance with applicable Air Resources Board and air district regulations. We do not believe it appropriate to task the dairy project to be the enforcement arm of the air quality agencies. A simple statement that all applicable air quality regulations must be followed by contracting entities should suffice. J-8

In addition, the last two bullets in this impact discuss fuel cells and alternatives such as vehicle fuel and direct injection as preferred alternatives to internal combustion engines. These alternatives are not sufficiently mature and proven technologies to list them as preferred. The final two bullet points in this section should be removed as they are constraining to digester development. They will be adequately and more appropriately dealt with in the permitting process J-9

5. Measure 6.3b, page 1-12, requires negative pressure buildings vented to a biofilter. This mitigation is more appropriate for large centralized digesters, not for on-farm digesters, J-10

and that differentiation should be identified. Certain feed stocks for co-digestion projects may be more or less odor intensive and this should also be identified. However, it should be noted that recent studies by university researchers have indicated that biofilters are not homogenous and that some production of N2O and NOx can be expected in certain portions of the biofilter. Again, the technology of biofilters is inadequately mature to be identified as a requirement in the PEIR. J-10 cont

We suggest a change in the fourth bullet point, second sentence, of this measure to replace the word "shall" with "may" as follows: "These management practices may include the establishment of …" This will allow the necessary flexibility to deal with the issues we have raised above. J-11

6. Measure 6.4c, page 1-12, requires that H2S be scrubbed from the biogas. Some digester projects are using other technologies to reduce H2S, such as air injection. This measure seems to preclude other technologies. Also future technologies may be developed that can utilize biogas that contains H2S without negatively affecting air quality. This measure also precludes such future technologies. At a minimum, if the word "scrubbed" were changed to "controlled before emission to air can occur" the problem would be resolved. J-12

7. Measure 9 inclusive, page 1-15, requires certain assessments for all projects. Those projects that are developed completely within the production area or its immediate environs, or projects covering an existing lagoon should not need to undergo this expense and the assessments should be deemed unnecessary. Perhaps the NOI could be used to determine the applicability of these measures without a formal report. Possibly language indicating an "initial assessment" with a "triggering mechanism" can be developed, and if negative the technical reports may be avoided where unnecessary. J-13

8. Measure 12.1a requires a project-specific cultural resources evaluation. This does not seem appropriate for most dairy digester projects. These projects are normally located on highly developed agricultural land that has been significantly disturbed for decades. This measure should be more specific and applied only where warranted. Pipeline installations should be exempted from this requirement. A similar alternative as expressed for measure 9, including a "triggering mechanism", should be considered here as well. J-14

9. The first line on page 3-2 states that the application of digestate to land is considered a "discharge to waters of the State". It is not. Rather, it is a "discharge to land." Discharges of dairy manure, wastewater, and digester digestate to waters of the state are strictly prohibited by the State Water Code. This error must be corrected. J-15

10. The descriptions of manure handling at dairies on page 3-6 need to be revised. Some freestall dairies scrape their freestalls instead of flushing them. Basically, there are three methods of removing manure from animal housing and feeding areas: flushing, scraping, and vacuuming. Each of these methods may be employed to some degree in specific areas of most dairies, and in some cases may be substituted for each other as conditions warrant. J-16

11. Table 4-1 on page 4-8 needs to be updated and corrected. We have attached the table with annotated corrections noted for your use. J-17

12. We do not believe it is either appropriate or authorized by statute to require dairy digester development to undergo review by CalRecycle. Adequate review for issues that might be of concern to CalRecycle will be provided by the Regional Water Board. Adding an additional agency to the review process will negate the intent of the PEIR process. J-18

Western United Dairymen appreciates the opportunity to provide you with our comments. Western United Dairymen, requests a meeting with you to resolve these issues before the final draft is prepared. We are very concerned that the PEIR process established in the draft document will make digester development even more difficult than the current system. The final document absolutely must have a defined method to scale the degree of environmental review required for smaller, simpler projects. J-19

Very truly yours,

Michael L. H. Marsh, CPA
Chief Executive Officer

MM/kmr

cc: Paul Martin, Western United Dairymen
Paul Sousa, Western United Dairymen

For the purpose of cumulative impact analyses in the various resource chapters in this Program EIR, development of the digesters can be assumed to be concentrated geographically (within reasonable limits), to the extent that such assumptions will help to identify potentially significant cumulative impacts. The potential for central facilities to be connected to dairies by biogas pipelines would be one of the factors that would concentrate several dairy digester or co-digesters in a localized geographic area.

Operating Parameters of Future Dairy Digester Facilities

Based on the existing dairy digester data for California where 19 of the 21 digesters (operational and non-operational) used biogas for electricity or co-generation, this analysis projects that the majority of the dairy digesters to be developed will use the biogas for electricity or co-generation, which typically occurs on individual dairies. Of the 200 digesters, the analyses assumes that about 180 of the facilities would combust the biogas on-site through a generator and that 20 of these would be at centralized facilities. The analysis assumes there would be 5 centralized facilities that would process biogas piped from digesters at individual dairies and 5 centralized facilities that would have multiple digesters each to process manure that would be piped or trucked from dairies and co-digestion organic substrates that would be trucked to the central facilities.

TABLE 4-1
EXISTING DAIRY DIGESTERS IN CALIFORNIA

Facility	Digester Type	Biogas End Use(s)	Operational Status
Blakes Landing Dairy	Covered Lagoon	Electricity	Operational
Bob Giacomini Dairy	Covered Lagoon	Cogeneration	Operational
Bullfrog Dairy	Covered Lagoon	Electricity	Operational
~~Cal-Poly Dairy~~	~~Covered Lagoon~~	~~Electricity~~	~~Not Operating~~ -- digester removed
CAL-Denier Dairy	Covered Lagoon	Electricity	Operational
Castelanelli Bros. Dairy	Covered Lagoon	Electricity	Operational
CottonWood Dairy	Covered Lagoon	Cogeneration; Boiler/Furnace Fuel	Operational
Edenvale Dairy	Horizontal Plug Flow	Electricity	Not Operating
Fiscalini Farms	Complete Mix	Cogeneration	Operational
Hilarides Dairy	Covered Lagoon	Electricity; Vehicle Fuel	Operational
Inland Empire Utilities Agency - Reg Plant 5	Horizontal Plug Flow; Complete Mix	Electricity	Not Operating
Koetser Dairy	Horizontal Plug Flow	Electricity	Not Operating
Langerwerf Dairy	Horizontal Plug Flow	Cogeneration	Operational
Lourenco Dairy	Covered Lagoon	~~Flared Full Time~~ -- Electricity	Not Operating
Meadowbrook Dairy	Horizontal Plug Flow	Electricity	Operational
St. Anthony Dairy	Covered Lagoon	Cogeneration	Not Operating
~~Strauss Family Dairy~~	~~Covered Lagoon~~	~~Cogeneration~~ -- same facility as	~~Operational~~ -- Blakes Landing
Tollenaar Holsteins Dairy	Complete Mix	Cogeneration; Boiler/Furnace Fuel	Operational
Van Ommering Dairy	Horizontal Plug Flow	Electricity	~~Operational~~ -- Not Operating
~~Van Warmerdam Dairy~~	~~Unknown~~	~~Electricity~~	~~Operational~~ -- Never Built
Vintage Dairy	Covered Lagoon	Pipeline Gas	Not Operating

SOURCE: Western United Dairymen, 2010

NOTE: Corrections to the above chart provided by Western United Dairymen

Response J-1

The comment states that the intensity of the listed mitigation measures, while possibly appropriate for a large regional project, is far too extreme for simple on-farm projects.

In using the Program EIR and waste discharge programs developed, each development project will be evaluated according to the level of potential impact upon site-specific resources, from a small AD facility on an existing dairy (one that will include no new land disturbance) to a major centralized facility. See response to Comment I-12. As noted in response to Comment I-12, based upon the specifics of a particular project many of the mitigation measures will be relatively straightforward to implement at the start of a project, such as the initial biological, cultural, traffic and visual assessments. If no potential impacts are identified in the initial studies further studies would not be required. Furthermore, full consideration of a variety of these issues early in the process could help identify potential flaws in a particular site that might not be obvious otherwise.

The field surveys and reports required to ensure that no biological or cultural resources are adversely affected are expected of new projects in California and, although a cost and time consideration, are not expected to be excessive or different than what is required for similar levels of new land development.

The Program EIR is expected to reduce the permitting time for other State and local agencies with discretionary permit responsibilities by providing a program-level analysis that can be relied upon or tiered from for region wide environmental and regulatory settings, project alternatives analyses and cumulative impacts analyses. For other agencies with discretionary permits this should be a benefit for all dairy digesters, since those agencies will have the program-level analysis available.

The draft Program EIR, once certified, will meet its objective of assessing the broad range of environmental impacts associated with the construction and operations of dairy digester and co-digester facilities in Region 5. The Program EIR will provide CEQA documentation for the water quality GOs, Individual WDRs, or CWs issued by the Central Valley Water Board to the owners and operators of those facilities. Once certified, the Program EIR may be used by other state and local agencies with discretionary permit responsibilities to expedite the review process by providing the first tier review of a project. Meeting CEQA through the Program EIR cannot substitute for acquiring project-specific regulatory permits required by the state and local resource agencies responsible for issuing air quality, water quality, biological resource and other permits. However, the technical information and analysis in the Program EIR can be used toward obtaining those permits through completing standardized mitigation measures identified in the Program EIR and included in the waste discharge regulatory programs that will be developed.

With or without the Program EIR, these site-specific permits would be required to construct and operate dairy manure digesters. There is always the option of dairy operators not using the Program EIR, and addressing CEQA using another CEQA document if they determine relying upon the Program EIR is more difficult that the current system.

Response J-2

The comment points out that there are other ways to effectively comply with requirements to minimize offsite discharges besides tailwater return systems. The seventh bullet in Mitigation Measure 5.2 on pages 5-35 and 1-9 of the draft Program EIR shall be revised as follows:

- "Requirements for tailwater return systems <u>or other effective methods</u> to minimize offsite discharges; "

Response J-3

Comment noted. Please see response to Comment H-4 and H-5.

Response J-4

The comment suggests that a distinction be made regarding facilities that would grow crops used for feeding the cows thereby recycling the salt within the facility. As stated in the draft Program EIR on page 5-42 (Mitigation Measure 5.3; the first bullet), any proposed digestion or co-digestion facility would be required to prepare and implement a Salt Minimization Plan (SMP) as approved by the Central Valley Water Board. In addition (Mitigation Measure 5.3; the 5th bullet), proposed facilities would be required "to the extent practicable, [to] use crops that maximize salt uptake." How a facility would manage salt content of land applied liquid and solid wastes would be detailed within the site-specific SMP, regardless of whether the facility was a small on-farm digester project or a large centralized project. The choice of crop and its capacity for salt uptake would be one of the elements covered within the SMP; to minimize the potential migration of salts in the underlying groundwater. See also response to Comment H-8.

Response J-5

The comment suggests revising language within Mitigation Measure 5.3 that calls for neutral or alkaline pH in dairy digestate wastewater applied to cropland. The commenter adds that many areas have alkaline soils where the addition of acidic materials is common practice. This pH requirement in Mitigation Measure 5.3 was developed primarily to address the possibility of metals being discharged from co-digesters given the lack of information regarding specific feedstock characteristics. Dissolved metals (arsenic, cadmium, chromium, copper, nickel, lead, selenium, zinc, and mercury) that have been identified in some co-digester feedstock materials may be mobile under acidic conditions. Repeated application of acidic wastewater that contains dissolved metals increases the risk that this material may leach through the soil column and into groundwater. By requiring that the wastewater to be of neutral to slightly alkaline pH, the mobility of any dissolved metals contained within the wastewater is greatly reduced or eliminated. Nonetheless, there may be instances where the use of an acidic pH digestate wastewater might be appropriate. The 16th bullet from the list of measures in Mitigation Measure 5.3 on pages 1-10 and 5-42 of the draft Program EIR is revised as shown below:

- "Maintain a neutral or alkaline pH for dairy digestate waste water applied to cropland unless conditions warrant otherwise as detailed in the NMP;"

Response J-6

The comment suggests that a strict prohibition on mammalian tissue should not be made and recent research has shown positive results from composting. In general, the draft Program EIR cannot speculate on potential future outcomes of research and the analysis but must rely on the best available science.

The comment also suggests avoiding an outright prohibition of mammalian tissue. Title 14 Section 17855.2 of the California Code of Regulations (CCR) prohibits the composting of mammalian tissues, except when from the food service industry, grocery stores, or residential food scrap collection, or as part of a research composting operation.

The 17th bullet from the list of measures in Mitigation Measure 5.3 on pages 1-10 and 5-42 of the draft Program EIR is revised as shown below:

- "Prohibit hazardous waste, mammalian tissues (with the exception of mammalian tissue as contained in compostable material from the food service industry, grocery stores, or residential food scrap collection), dead animals, and human waste from all discharges; and"

The use of mammalian tissue, dead animals and human waste (e.g., sludge, septage, domestic and municipal wastewater), in a co-digester, or application of these materials to a land application area is prohibited largely because of complex pathogenic risks (e.g., prion-protein contamination associated with Bovine Spongiform Encephalitis [BSE] or Mad Cow's Disease) associated with the use of these materials.

Response J-7

Comment suggests the cumulative water quality impact be changed to Less than Significant with Mitigation. Comment is noted. However, as stated in the draft Program EIR on pages 5-45 and 5-46, "…Past projects that have historically discharged to cropland have led in some instances to the degradation of both surface waters and groundwater in various areas of Region 5… [G]iven the existing, significant cumulative impacts caused by other projects to groundwater throughout Region 5, and in particular those areas most likely to be affected by the future development of dairy digesters and co-digesters, the program's potential incremental contribution to groundwater quality remains cumulatively considerable, even after mitigation." Therefore, the conclusion remains Significant and Unavoidable.

Response J-8

Comment noted. Tier II engine usage is not a requirement under regulation at this point, however, the Tier II engine mitigation identified on pages 1-11 and 6-24 of the Program EIR was specifically included in the SJVAPCD Scoping Comment Letter (April 22, 2010) as recommended feasible

mitigation. Tier II engines greatly reduce NOx emissions. The fifth bullet of Mitigation Measure 6.1b has been revised as follows:

- "Maintain all equipment in proper working condition according to manufacturer's specifications. ~~The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.~~"

Response J-9

It is understood that the technologies identified on pages 1-11 and 6-24 of the Program EIR, including fuel cells, are not typically used for biogas right now, but these technologies do resolve many of the air quality issues associated with internal combustion engines. The language "where feasible" was included due to uncertainties regarding the feasibility of these technologies at this time for the various digester scenarios analyzed in the Program EIR. Feasible means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors (CEQA Guidelines §15364). It is not anticipated that these technologies would be determined to be feasible for most projects in the near-term. However, they need to be considered for the air quality benefits they could provide with the understanding that changes in economic, environmental, legal, social, and technological factors may make them feasible at the time of project initiation (i.e., given that this EIR is for a program). See also the expanded discussion of these options in the Reduced NOx Emissions Alternative beginning on page 17-10 of the draft Program EIR.

Response J-10

Comment noted. Please see response to Comment H-13 which details revisions to Mitigation Measure 6.3b.

Response J-11

Comment noted. Please see response to Comment H-13.

Response J-12

The comment recommends that the draft Program EIR mitigation of H_2S (as described in Mitigation Measure 6.4c) be revised in order allow for other technologies in addition to scrubbing. The text on page 1-12 and 6-29 of the draft EIR shall be revised as follows:

> "**Measure 6.4c:** H_2S contained in the biogas shall be ~~scrubbed~~ <u>controlled before emission to air can occur</u>."

Response J-13

Mitigation Measures in Chapter 9 require the preparation of a site assessment to determine if sensitive biological resources are present in the project area. If resources are present, then

additional measures are outlined. This process is consistent with the "initial assessment" and "trigger mechanism" mentioned in the comment letter.

Response J-14

Comment noted. Please also see response to Comment I-7.

Response J-15

The commenter is correct, the first sentence on page 3-2 of the draft Program EIR has been revised as follows:

> "Liquid and solid digestate application to land is considered to be a "discharge of waste" ~~to waters of the state~~, as defined in the Porter-Cologne Water Quality Act."

Response J-16

The comment recommends that the draft Program EIR description of manure handling (see Section 3.2 Project Location and Dairy Overview) be revised in order to clarify the various methods employed at dairies. The text on page 3-6 of the DEIR shall be revised as follows:

> "Dairies in Region 5 employ manure handling practices as a matter of manure management and general animal husbandry. Manure handling practices include: vacuuming, dry scrape, flush, or some combination of the ~~two~~ three. Each of these manure collection methods may be employed to some degree on specific areas of most dairies, and in some cases may be substituted for each other as conditions warrant. ~~Dry scrape operations occur at dairies where stock are housed in open corrals and manure is scraped from the corrals several times during the year. Stormwater runoff and process wastewater generated within the milk barn at these facilities are piped directly to the wastewater retention system.~~
>
> Dairy cows are generally housed in two different types of housing. In freestall housing the cows lay in areas that are partitioned to orient them in a specific direction to ease in manure collection and provide a clean, dry place to lie. There are paved lanes where the cows stand to eat and lanes used to access the freestall resting areas. At freestall dairies, most of the animal manure is deposited on the concrete lanes. Freestall facilities often have exercise pens where the cows can go during good weather. Cows are also housed in open lot corrals with or without shades. Open lot corrals also have a paved feed lane where the cows stand to eat. At open lot dairies, most of the animal manure is deposited in the corrals.
>
> Manure from the paved lanes at both freestall facilities and open lot facilities can be collected by scrape, vacuum or flush systems or a combination of the three. Manure from the open lot corrals and exercise pens is scraped several times during the year and handled as a dry material. When flushing is used, the lanes are flushed daily with process wastewater from the milk barn and recycled wastewater from the wastewater retention system. Stormwater may be routed through the flush system or piped directly to the wastewater retention system depending on the dairy.

~~Flush operations occur at dairies that house their stock in flushed free stalls and allow only intermittent access to open loafing pens. At flush dairies, most of the animal waste is deposited on concrete flush lanes, which are flushed with process wastewater from the milk barn and recycled wastewater from the wastewater retention system. Stormwater is routed through the flush system into the wastewater retention system. Flush manure management practices tend to occur at newer larger dairies.~~

~~Dairies that employ both dry scrap and flush are dairies that house their herds in open corrals with flushed concrete lanes designed to capture manure deposited while the cows are eating. At these facilities, the corrals are scraped several times a year while the lanes are flushed daily with process wastewater from the milk barn and recycled wastewater from the wastewater retention system. Stormwater is routed through the flush system or piped directly to the wastewater retention system.~~"

Response J-17

The following table on page 4-8 of the draft Program EIR has been revised to correct the data provided.

TABLE 4-1
EXISTING DAIRY DIGESTERS IN CALIFORNIA

Facility	Digester Type	Biogas End Use(s)	Operational Status
Blakes Landing Dairy	Covered Lagoon	Electricity	Operational
Bob Giacomini Dairy	Covered Lagoon	Cogeneration	Operational
Bullfrog Dairy	Covered Lagoon	Electricity	Operational
~~Cal Poly Dairy~~	~~Covered Lagoon~~	~~Electricity~~	~~Not Operating~~ Digester removed
CAL-Denier Dairy	Covered Lagoon	Electricity	Operational
Castelanelli Bros. Dairy	Covered Lagoon	Electricity	Operational
CottonWood Dairy	Covered Lagoon	Cogeneration; Boiler/Furnace Fuel	Operational
Edenvale Dairy	Horizontal Plug Flow	Electricity	Not Operating
Fiscalini Farms	Complete Mix	Cogeneration	Operational
Hilarides Dairy	Covered Lagoon	Electricity; Vehicle Fuel	Operational
Inland Empire Utilities Agency - Reg Plant 5	Horizontal Plug Flow; Complete Mix	Electricity	Not Operating
Koetser Dairy	Horizontal Plug Flow	Electricity	Not Operating
Langerwerf Dairy	Horizontal Plug Flow	Cogeneration	Operational
Lourenco Dairy	Covered Lagoon	~~Flared Full Time~~ Electricity	Not Operating
Meadowbrook Dairy	Horizontal Plug Flow	Electricity	Operational
St. Anthony Dairy	Covered Lagoon	Cogeneration	Not Operating
~~Strauss Family Dairy~~	~~Covered Lagoon~~	~~Cogeneration~~	~~Operational~~ Same as Blakes Landing
Tollenaar Holsteins Dairy	Complete Mix	Cogeneration; Boiler/Furnace Fuel	Operational
Van Ommering Dairy	Horizontal Plug Flow	Electricity	~~Operational~~ Not Operating
~~Van Warmerdam Dairy~~	~~Unknown~~	~~Electricity~~	~~Operational~~ Never Built
Vintage Dairy	Covered Lagoon	Pipeline Gas	Not Operating

SOURCE: Western United Dairymen, 2010

Response J-18

The strong concern about the potential role of CalRecycle has been added to Areas of Controversy in the Executive Summary of the draft Program EIR (see response to Comment I-1). Commenter questions the statutory authority of the Department of Resources Recycling and Recovery or CalRecycle over dairy digester development. See Comment D-1 and response to Comment D-1. Specifically, attached to CalRecycle's comment letter (D) is a publication entitled *How Anaerobic Digestion Fits Current Board Regulatory Structure* (note that CalRecycle was previously known as the California Integrated Waste Management Board). This publication can be accessed online at www.calrecycle.ca.gov/Publications/Organics/2009021.pdf. CalRecycle indicates in its Comment D-1 that the determination of the appropriate level of authorization or permit for an activity involving anaerobic digestion is made by the Local Enforcement Agency.

Response J-19

See response to Comment J-1.

CRWQCB, SJK JK PCC

K

MIWOK
MAIDU

United Auburn Indian Community
of the Auburn Rancheria

David Keyser
Chairman

Kimberly DuBach
Vice Chair

Gene Whitehouse
Secretary

Brenda Conway
Treasurer

Calvin Moman
Council Member

September 7, 2010

SEP 29 2010

Pamela C. Creedon, Executive Officer
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

RECEIVED
SACRAMENTO
CVRWQCB
10 SEP 16 PM 2:28

Subject: Environmental Impact Report (EIR) for the Dairy Manure Digesters and Co-Digesters

Dear Ms. Creedon:

Thank you for initiating formal consultations with the United Auburn Indian Community (UAIC) of the Auburn Rancheria. The UAIC would like to consult under SB 18 on the proposed Environmental Impact Report (EIR) for the Dairy Manure Digesters and Co-Digesters. The UAIC is comprised of Miwok and Nisenan (Southern Maidu) people whose tribal lands are within Placer County and ancestral territory spans into Eldorado, Nevada, Sacramento, Sierra, Sutter, and Yuba counties. The UAIC is concerned about development within its aboriginal territory that has potential to impact the lifeways, cultural sites, and landscapes that may be of sacred or ceremonial significance. We appreciate the opportunity to comment on this and other projects in your jurisdiction. K-1

We would like to make a few general points for consideration in developing the scope and content of the Environmental Impact Report (EIR) for Dairy Manure Digesters and Co-Digesters:

- The UAIC recommends that projects within the Dairy Manure Digesters and Co-Digesters EIR jurisdiction be designed to incorporate known cultural sites into open space or other protected areas; K-2
- The UAIC is interested in holding conservation easements for culturally significant prehistoric sites; K-3

Tribal Office 10720 Indian Hill Road Auburn, CA 95603 (530) 883-2390 FAX (530) 883-2380

- The UAIC would like the opportunity to provide Tribal representatives to monitor projects if excavation and data recovery are required for prehistoric cultural sites, or in cases where ground disturbance is proposed at or near sensitive cultural resources; K-4

- The UAIC is interested in receiving cultural materials from prehistoric sites where excavation and data recovery has been performed; K-5

- The UAIC would like to receive copies of environmental notices and documents for projects within the jurisdiction of the EIR for Dairy Manure Digesters and Co-Digesters; K-6

- The UAIC would like to receive all confidential cultural and archaeological reports within the jurisdiction of for the Dairy Manure Digesters and Co-Digesters EIR. K-7

Thank you in advance for taking these matters into consideration, and for involving the UAIC in the planning process as early as possible. We look forward to meeting with you in the near future, and to reviewing the EIR. Please contact Marcos Guerrero, cultural resources specialist, at (530) 883-2364 or email at mguerrero@auburnrancheria.com.

Sincerely,

Greg Baker
Tribal Administrator

CC: Marcos Guerrero, UAIC

Response K-1

The interest by UAIC is noted. Consultation under SB 18 does not apply since this EIR does not entail land use planning by California cities or counties. The EIR does not propose the adoption of a general plan, specific plan, amendment to such plans, or designation of open space land. Nonetheless, the Program EIR team conducted a phone conference with the UAIC representative on November 1, to clarify issues related to the Program EIR and procedures for cultural resources that would be implemented at the time that site-specific projects are proposed under the Program EIR.

Response K-2

The purpose of initial cultural resources surveys (Mitigation Measure 12.1a on page 12-18 of the draft Program EIR) is to identify any significant resources so they can be avoided or otherwise have any impacts to cultural resources minimized. See also response to Comment I-7.

Response K-3

As appropriate, the UAIC would be contacted should a culturally significant prehistoric site(s) be identified within a project area within UIAC tribal lands or ancestral territory. Appropriate mitigation measures would be identified for the site specific situation, which could include conservation easements.

Response K-4

As appropriate, the Lead agency at the project level would be responsible for contacting local Native American tribes, as recommended by the Native American Heritage Commission, regarding monitoring during data recovery or within archaeologically sensitive areas as provided under Mitigation Measures 12.1a and 12.1b. See also response to Comment I-7.

Response K-5

The Lead agency at the project level, in consultation with the Native American Heritage Commission, would be responsible, for determining the appropriate repository of any cultural material collected during data recovery mitigation.

Response K-6

Mitigation Measure 12.1a requires specific projects to consult with the NAHC to determine whether known sacred sites or traditional cultural resources are situated within the project area, and identify the Native American(s) to contact to obtain information about the project area. See also response to Comment I-7.

Response K-7

The Lead agency at the project level would be responsible for determining the appropriateness and legality of providing any confidential reports to the UAIC.

CHAPTER 4
Responses to Oral Comments

4.1 Fresno Public Meeting

The Central Valley Water Board held a public meeting on Tuesday August 3, 2010 its Fresno office from 6:30 p.m. to 8:00 p.m. to provide participants with an opportunity to comment on the draft Program EIR. Below are the responses to comments made during the public meeting. Table 4-1 lists the commenters and organizes their comments by number and identifies where a particular comment can be found within the meeting transcript by page number. The transcript for the Fresno Public Meeting directly follows the Chapter 4 responses to comments.

TABLE 4-1
LIST OF ORAL COMMENTERS ON THE DRAFT PROGRAM EIR (FRESNO)

Comment Number	Commenter	Page
1-1	Craig Hartman, Four Creeks	4-17
2-1	Nettie Drake	4-17
2-2	Nettie Drake	4-18
3-1	Marvin Mears	4-19
3-2	Marvin Mears	4-20
3-3	Marvin Mears	4-21
3-4	Marvin Mears	4-21

1-1 The Program EIR covers the program-level analysis for both dairy manure digesters and dairy manure co-digesters. A project could be phased to begin as a manure digester at an existing dairy regulated under Order No. R5-2007-0035, Waste Discharge Requirement for Existing Milk Cow Dairies (Dairy General Order) and later convert to manure co-digester. However, because the Dairy General Order prohibits the introduction of co-digestion substrates into a dairy's waste stream, a Report of Waste Discharge (RWD) would need to be submitted to the Central Valley Water Board for the material change (e.g., character, quantity, and location) in the waste discharge from co-digestion. To receive permit coverage under the waste discharge regulatory program the applicant would have to demonstrate compliance (i.e., typically through the submission of technical reports) with the Program EIR's mitigation measures. New permit coverage could come from either a General Order or Individual Waste Discharge Requirements (WDRs).

2-1 The commenter concerns and observations about consistency between the different offices are noted.

As identified in the first paragraph on page 2-1 of the draft Program EIR, the Program EIR covers the jurisdiction boundaries of the Central Valley Region (Region 5). Region 5 includes the Fresno, Redding and Rancho Cordova offices. The benefits of the Program EIR will be available for all of the proposed dairy digester facilities in Region 5, as describe in the second paragraph on page 2-1 of the draft Program EIR as shown below:

> "The Program EIR is intended to provide a comprehensive analysis of the environmental impacts of the development of dairy manure digester and co-digester facilities, including construction and operation. As such, it is expected to facilitate and enhance the CEQA process for individual dairy manure digester and co-digester facilities throughout Region 5."

2-2 The goal of the draft Program EIR is to remain general in most of the analyses and not to identify specific technologies or vendors. With regard to meeting local air district standards, the primary mitigation measure is Mitigation Measure 6.1a, beginning on page 6-23 of the draft Program EIR. Mitigation Measure 6.1a does not specify specific technologies but identifies that equipment must be in compliance with local air district New Source Review and Best Available Control Technology (BACT) requirements.

3-1 Aesthetics mitigation within the Program EIR is designed to encourage future digester and co-digester facilities to remain unobtrusive within the existing visual setting. As described in Section 11, Aesthetics, the visual effect of the digesters developed as a result of the project would not be likely to substantially degrade the visual character of the site and its surroundings, and would still be subject to potential discretionary review from local jurisdictions. Mitigation for impacts to scenic vistas or highways refers to specific, locally designated regulations regarding development within counties, with which digester development would be required to comply.

3-2 Comment noted. As stated in Mitigation Measure 9.1a, a biological site assessment report, which would identify any potential biological resources at the project site, is to be submitted to the California Department of Fish and Game (CDFG).

3-3 The positive effects of dairy digesters identified by the commenter are embedded in the program objectives. See bullets three (reducing greenhouse gases in support of AB 32) and four (providing renewable green energy sources) on page 1-1 of the draft Program EIR.

3-4 There will be a fee structure for the waste discharge requirement (WDR) orders. The fee rating will be specified in the WDR orders.

4.2 Rancho Cordova Public Meeting

The Central Valley Water Board held a public meeting on Wednesday August 4, 2010 its Rancho Cordova office from 6:30 p.m. to 8:00 p.m. to provide participants with an opportunity to comment on the draft Program EIR. Below are the responses to comments made during the public meeting. Table 4-2 lists the commenters and organizes their comments by number and identifies where a particular comment can be found within the meeting transcript by page number. The public meeting transcript directly follows the Chapter 4 responses to comments (after the transcript for the Fresno Public Meeting).

TABLE 4-2
LIST OF ORAL COMMENTERS ON THE DRAFT PROGRAM EIR (RANCHO CORDOVA)

Comment Number	Commenter	Page
4-1	Dan Weller, Air Resources Board	4-37
4-2	Dan Weller, Air Resources Board	4-42
4-3	Dan Weller, Air Resources Board	4-43
4-4	Dan Weller, Air Resources Board	4-46
4-5	Dan Weller, Air Resources Board	4-46
4-6	Dan Weller, Air Resources Board	4-49
4-7	Dan Weller, Air Resources Board	4-50
4-8	Dan Weller, Air Resources Board	4-51
5-1	Justin Ellerby, California Center for Cooperative Development	4-39
5-2	Justin Ellerby, California Center for Cooperative Development	4-43
5-3	Justin Ellerby, California Center for Cooperative Development	4-45
5-4	Justin Ellerby, California Center for Cooperative Development	4-46
6-1	Bill Van Dam, Alliance of Western Milk Producers	4-48
6-2	Bill Van Dam, Alliance of Western Milk Producers	4-48

4-1 The dairy digesters ESA toured during the preparation of the draft Program EIR were Tollenaar Holsteins Dairy in Elk Grove, Castelanelli Brothers Dairy in Lodi, and Fiscalini Dairy in Modesto.

4-2 The draft Program EIR focused on three types of basic anaerobic digestion (AD) systems, but noted that there are many variations and gradations and that the basic digestion processes covered by these are likely to be used in any digester design. This concept is described in Section 3.4.5 on page 3-12 of the draft Program EIR as shown below.

" 3.4.5 Digestion

The three types of basic AD systems that are the most suitable for California dairies at this time include ambient-temperature anaerobic covered lagoons, plug-flow digesters, and complete mix systems (Krich, et al., 2005; Anders, 2007). An example of each type of digester is depicted in **Figure 3-5.** There are many variations and gradations between these basic types of AD systems, however, the basic digestion processes covered

by these three types are likely to be used in any digester design. The three basic digester types are described below."

4-3 The estimated number of dairy digesters was selected after a review of many factors that could affect the future growth rate of dairy digester in Region 5. As answered in the public meeting several factors were considered in estimating the future growth of dairy digesters (200 dairy digesters over the next 10 years in Region 5). These factors included a review of the growth rate of digesters nationwide from the Ag Star database and also the European growth rate. The estimate also considered state initiatives to develop local, renewable energy sources.

4-4 Impact 6.1 analyzes air quality impacts resulting from construction. This discussion begins on page 6-22 of the draft Program EIR.

4-5 Impact 6.2 deals with air quality impacts resulting from increased truck traffic on the local roadway network (including haul trucks for co-digester facilities and for potential waste or biogas transport to centralized facilities). This discussion begins on page 6-24 of the draft Program EIR.

4-6 The catalysts discussed would be used in the electrical generation engines. If catalysts are fouled they would have to be replaced or cleaned to meet the engine specifications of the local air district. The draft Program EIR does not explore the catalysts that may be used or the interaction of co-digestion materials with the catalysts. Specific information on the control technologies will need to be included in the air permits for individual and approved by the local air district. The air permits will contain provisions for monitoring of the exit gases (continuously or at specified times) to identify that the air pollution control system are functioning properly. If fouling occurs than modification may be needed in the co-digestion materials or the gas clean-up systems.

4-7 The EIR did not consider the co-digestion of animal mortalities as they are expected to be prohibited under the waste discharge regulatory program.

4-8 The Program EIR efforts for CalRecycle and the Central Valley Water Board cover two fairly distinct areas of opportunity with regard to the anaerobic digestion of waste. CalRecycle is preparing a statewide Program EIR for anaerobic digestion facilities for mixed solid waste either co-located with other solid waste facilities (i.e., compost facilities, transfer stations or landfills) or within industrial zoned locations. The Central Valley Water Board is preparing a region-wide Program EIR for manure digester and co-digester facilities at individual dairies and centralized locations in areas that are predominately agricultural in nature.

5-1 As answered in the meeting, the Program EIR itself is part of the solutions to expediting projects. Projects will be able to use the Program EIR or tier off the Program EIR with supplemental analysis to comply with CEQA.

The commenter also referred to permit challenges of co-digestion substrates. As noted in the draft Program EIR (see page 3-18) CalRecycle may require a Composting Permit or Transfer Processing Permit for projects that add co-digestion substrates. See also responses to Comments D-1 and I-1.

5-2 The dairies operating in compliance are Cottonwood Dairy (Gallo) and Fiscalini Dairy. This information shown below was received on May 17, 2010 in a correspondence from Dave Warner, Director of Permit Services at the San Joaquin Valley Air Pollution Control District.

Cottonwood Dairy (Gallo) – New rich burn engine with catalyst. Did not have problems meeting the Rule 4702 NOx limit but had difficulty meeting the 9 ppmv Best Available Control Technology (BACT) limit for new equipment. Now operating in compliance with the 9 ppm limit.

Fiscalini Dairy – New lean burn engine with Selective Catalytic Reduction. Engine currently operating and SCR system has recently been achieving less than 11 ppmv NOx to comply with BACT. The new engine did not have problems meeting 4702 NOx limits but was subject to the BACT limit for NOx. (Note: 11 ppm from a lean burn engine is equivalent to 9 ppm from a rich burn engine.)

5-3 As indicated in the public meeting, the draft Program EIR analyzed the Thermal Conversion Alternative, which included pyrolysis and gasification processes. The EIR analysis starts on page 17-8. Some of the potential impacts of the Thermal Conversion Alternative were identified as potentially greater than the dairy anaerobic digesters (see Table 17-1 starting on page 17-14 of the draft Program EIR). As indicated at bottom of page 17-9 of the draft program EIR:

> "Thermal conversion technologies only treat the screened/dried, solid portion of manure. This alternative would limit opportunities for on-site treatment of dairy manure process water. This could undermine the objective to create alternate waste treatment methods for dairy manure and other organic waste streams to the extent it would exclude the liquid component of the dairy manure. While the Thermal Conversion Alternative still meets the alternate waste treatment method objective, it does not meet it as efficiently as the project."

5-4 Preparation of the draft Program EIR included the review of literature on dairy digesters, outreach effort through the Technical Advisory Group (TAG) and outreach to other states, including calls to New York to discuss their regulations. The review of co-digestion restrictions and limits being implemented in other states was one source of information researched to define the Additional Co-digestion Substrate Restrictions Alternative (see pages 17-6 and 17-7 of the draft Program EIR).

6-1 Although Mr. Weller did not have a response at the meeting, some percentage restrictions from other states are based on volume. The draft Program EIR does not limit co-digester feedstocks by weight or volume.

6-2 As indicated in the meeting there is a separate economic study being conducted for dairy digesters but it is not part of the environmental analysis in the draft Program EIR. CEQA Guidelines §15131 states that economic or social information may be included in an EIR or may be presented in another form. Reports looking at the economic feasibility of dairy digesters have been presented to the Technical Advisory Group (TAG) and revised based on comments from the TAG, which includes representatives from federal, state, and local agencies, academia, environmental organizations, environmental justice organizations, investor owned utilities, the dairy industry, digester developers, and individuals. The Technical Advisory Committee Members are identified in Section 18.2 of the draft Program EIR.

ORIGINAL

WATER QUALITY CONTROL BOARD

DIGESTERS & CO-DIGESTERS SCOPING MEETING

TUESDAY, AUGUST 3, 2010

6:30 P.M.

-oOo-

REPORTED BY: MIRANDA K. CRAIN, CSR NO. 13453

Fresno Court Reporters & Legal Videography

MR. KLEIN: I'd like to welcome everyone here tonight. This is the dairy digester and draft E.I.R. public meeting. There will be a second meeting tomorrow night at the same time in Rancho Cordova. I'd like to thank everyone for coming tonight, we really appreciate it here.

We are fortunate tonight to have a board member present, Julian Isham with the Water Board; he is present here with us. On the left here is Paul Miller, he's the project manager from ESA. I'm Stephen Klein, I'm the project manager with the Central Valley Water Board. We have, kind of, a small group tonight. So I think some introductions would be nice. If we want to go around the room.

VOICE: Completely voluntary.

(Whereupon, introductions were made.)

MR. KLEIN: Thank you. Now I'm going to turn over the meeting to Paul Miller. He's going to give a short presentation on the E.I.R. and then, after that, we'll open the floor to your comments. It's a pretty small group, so if you want to make your comments here, or if you're more comfortable, come up to the podium, as well, and give your comments.

MR. MILLER: Okay. Tonight, as part of the CEQA process, they recommend you have public meetings where people can give comments on the draft E.I.R. And this is the first of those meetings. The Central Valley Water Board is the lead agency

under the CEQA process for the program E.I.R. And Stephen is their project manager in this process. I work for Environmental Science Associates out of the Sacramento office, and we're consultants hired by the Central Valley Water Board to help prepare the CEQA documents. Our company specializes in preparing E.I.R.s of all kinds. Right now we're also preparing another E.I.R. for an anaerobic digester project for Cal Recycling. We're actually working on two projects with anaerobic digestion at this point.

Other subconsultants on ESA's team, we've got several specialists; Integrated Waste Management Consulting, which is a composting specialist; Smithline Group, Scott Smithline with part of the City of Los Angeles Technology Review on their around the world trip where they looked at anaerobic digesters in other countries. CirclePoint's our other public facilitator group and also handle the technical advisory group for this project. And if you ever have any questions about this process, you can contact CirclePoint and they'll make sure they direct you to the right place.

Carolla Engineers is on our team. Carolla, one of the largest waste water engineering firms in the United States, they've got a lot of experience with complete mix anaerobic digesters as they're used in the waste water treatment world. And Parus Consulting is another subconsultant that helps us with the CEQA work.

What we've done so far on the E.I.R. is to prepare notice of preparation and initial study that went out March 18th. That was followed up immediately with public scoping meetings to cover what should be in the E.I.R. and comments on the notice of preparation. Those were held in Fresno and in Rancho Cordova. And then, geez, about three weeks ago, we published the draft E.I.R. on July 8th. So right now we're in the middle of a 45-day review period for comments on that draft E.I.R.

One of the parts of this process that's been very helpful is we formed a technical advisory group, which is comprised of almost 80 members right now. We've had three meetings of the Tag, and at the meetings, we've had about -- oh, any place from 15 to 30 people at the Tag meetings and several, also, attending by conference calls. And the Tag had helped the E.I.R. team to focus on the potential environmental impacts of the dairy manure digesters and co-digester facilities. Also, the Tag has helped to identify economic and regulatory challenges for dairy digester and co-digester facilities.

Part of the program overview, the main purpose of the E.I.R. is for the Central Valley Water Board to develop waste discharge regulatory program for dairy manure digesters and co-digesters within Region 5. The waste discharge regulatory program will involve adoption of water board waste discharge requirements, general orders to regulate the discharge of

1 digestate to lay in.
2 The program E.I.R. evaluates the environmental effects of
3 the digester, so the waste discharge program should help the
4 ability of digesters to be permitted in California. So the
5 E.I.R. looks at the environmental effects of dairy digesters
6 and co-digesters. Not just in terms of water quality, but we
7 also looked at other environmental topics; such as, air
8 quality, land use, cultural resources, traffic; they're all in
9 the program E.I.R.
10 So the boundaries -- Region 5 goes from the Oregon border
11 up in Modoc County all the way down to the great five for the
12 boundaries in the Region 5; and that's the area that's being
13 looked at for this program E.I.R. Some of, sort of,
14 characteristics of Region 5, about 1.6 million cows, 1400
15 dairies are in the region; dairy cows, on the average, produce
16 about 112 pounds of manure a day, which equates to about
17 180 million pounds of manure generated per day in Region 5.
18 So this is a substantial amount of manure; it has the
19 potential to produce biogas, which is a renewable source of
20 energy.
21 And this shows where the dairies are located in the
22 Central Valley. And in this -- this picture is also in the --
23 in the draft E.I.R., and it shows the locations of some of the
24 existing dairy digesters in the state. So there's a
25 clustering of both where the dairies are and also where the

1 dairy digesters are located right now. And this was helpful
2 because there's actually digesters that are out there working
3 right now, and our team was able to go review some of those
4 facilities.
5 Now, the primary objectives of the program, which are
6 spelled out in the project description of E.I.R., is to
7 protect the beneficial uses of surface and groundwater within
8 the Central Valley region from the discharges that would be
9 associated with dairy manure digesters and co-digesters, and
10 these could be located both on dairies or off-site of dairies.
11 Other primary objectives to provide a regulatory
12 framework that water quality aspects of dairy manure digesters
13 and co-digesters and to assist the state in meeting greenhouse
14 gas reduction measures in support of AB 32 through the
15 production of biogases from dairy manure.
16 Not only do they produce biogas from the dairy manure,
17 but in that process it reduces the amount of methane that
18 would be produced currently from dairy operations. And these
19 objectives are important because in the E.I.R. that's one of
20 the things we look at; what are the objectives, how you look
21 at the effects from the objectives. And when we have to look
22 at alternatives to the project, the objectives are important.
23 And the last -- the next two objectives, one is for
24 renewable green energy resources to help meet renewable
25 portfolio standard in California. The utilities are required

to have certain percentages of their electricity provided by renewable sources, and the utilities are struggling to get those renewable sources. So dairy digesters qualified and could help in that regard.

The last one on this slide is to reduce the time required to develop and issue water quality permits for dairy manure digesters and co-digesters. And this draft E.I.R. should help that process by getting some of the information out and the feedback we receive on the draft E.I.R.

Last objective is to reduce the permitting time for other state and local agencies with discretionary permits, because they can also rely upon the E.I.R., or tier off the E.I.R., in preparing documents for CEQA that they're required to prepare. Oops, I guess I fell behind. Okay.

Now, general processes in facilities in the dairy digester operation, on the left-hand side, we have the pre-processing. And if co-digestion is involved that could bring co-digestion substraight to the dairy. The digester, which we didn't find many impacts from the actual digester, because that's enclosed and controlled. And then on the back end, there's the handling of the gas, the liquids and the solids. There's several things that can happen there and this flowchart sort of helped different parts of the E.I.R. consider each of those portions.

The types of digesters; we looked at the three basic

1 types; I have digesters that we think will occur in California
2 that are out there right now that covered a good digester,
3 plug flow digesters and complete mix digesters. This is a
4 picture of the electrical generators at three of the dairy
5 digesters that we visited. And it -- it's the most common use
6 of the gas throughout the U.S. is to use it to make
7 electricity. So that had to be considered in this process.
8 The types of facilities that are looked at in the E.I.R.,
9 we have got individual dairy digesters, the three types we
10 just discussed. Centralized facilities; centralized
11 facilities could be either on or off of the dairy, and the
12 centralized facilities could be centralized digester or a
13 centralized biogas cleanup facility to produce a different
14 fuel from the biogas. Feed stocks, there's the manure only
15 digesters.
16 And then we look at -- for co-digesters, we looked at a
17 broad group of materials that could be used for co-digestion.
18 And in the meetings we had with the Tag, this was pretty clear
19 that there were folks on the Tag that thought that could -- a
20 lot of materials could be used for co-digestion, and so they
21 didn't want to see that limited; it was not limited in the
22 E.I.R.
23 E.I.R. analysis, if you look at the E.I.R., which is
24 available on download on the website from the Central Valley,
25 chapters one through four sort of layout the E.I.R., they're

the fundamentals of the E.I.R. Chapters five through fifteen are the key resources area water quality, air quality, et cetera. And then cumulative impacts are also considered.

And the cumulative scenario, we spent a lot of time working on that, and came up looking at a scenario of up to 200 dairy digesters built over a ten-year period. Right now there's 15 or 20 digesters out there and maybe 15 operating right now. And so, that's a lot of growth that we looked at in the cumulative scenario.

Also one of the things that an E.I.R. needs to do is look at alternatives to the project; it's one of the requirements of the CEQA regulations, and we looked at four alternatives. No project alternative; alternative called the co-digester substraight restriction alternative. We looked at thermal conversion alternative; use a thermal process rather than anaerobic digestion. And we looked at reduced nox emissions alternatives, which was ways to use the gas without creating so much nox in the air district.

The conclusion that was reached at the end of all these alternatives were that none of the alternatives were found to be clearly superior to the project. And this was because some of the positive aspects of the digesters could be reduced by each of the alternatives. So none of the alternatives were considered to be environmentally superior. The E.I.R. really does identify the environmental benefits from what dairy

digesters do.

And other conclusions that are important to the E.I.R., it's suggested the mitigations were identified to avoid or reduce all but two of the potentially significant impacts. The E.I.R.s look for significant impacts and try to analyze those and reduce those. All were reduced for two, and the two that remains significant and unavoidable were the cumulative impact from air quality and the cumulative impact from water quality. On an individual project basis, all the impacts were determined to be able to be mitigated.

The next steps in the CEQA process, the comment period will close August 23rd at the end of the day; I think -- that's a Monday. Verbal and written comments will be considered and responded to as appropriate in the final program E.I.R. So if you make comments about the E.I.R., we'll respond to those point by point in the final E.I.R. And we really encourage, if you have comments, to make the E.I.R. better, better mitigations that you know, other clarifications, please submit those; those will be good to have as part of the final E.I.R. We encourage that.

Verbal comments that you give tonight, we've got a court reporter here and she's recording what's said tonight, and those will have the same weight as the written comments, 'cause we'll get a transcript from tonight's meeting and we'll respond to those. So if you give the comments verbally, they

will be responded to in the final E.I.R. So both written and verbal are the same.

After the final E.I.R. is produced, the Central Valley Water Board will decide in a public hearing whether to certify the program E.I.R. and whether to approve the program that's proposed in the E.I.R. Individual projects under the program E.I.R. would be approved or tiered from the program E.I.R. So that's sort of the next steps, that's how we get to project approval.

Public comments -- I think, we just did that slot; either tonight or by August 23rd. This is in your package, want to make sure you knew of the website, it's on their pressroom portion of the Central Valley Water Board website, you can download the entire E.I.R. I think what's interesting about the E.I.R., the new technologies, if you have a computer, you can download that all, it's one file; you can search in that file for any word you want to search for; if you're looking for a particular document, you can search the whole document in minutes to find out what's in there and not in there.

And with that, we can open up to public comments. We'd really like to hear what your specific comments about the E.I.R. or also about the program that's being produced by the Water Board.

Stephen, do you have any other comments?

MR. KLEIN: No. Just like to open the floor and offer

forward, if you want, just say your name clearly so that the court reporter can hear. And if you like, you can come up to the podium.

Would anyone like to start off here?

CRAIG HARTMAN: Craig Hartman with 4 Creeks. I haven't really read the whole document, so excuse me.

One of the things I wanted to make sure, the manure only to have co-digestion working with developers and such, they have to cash flow these projects, and sometimes it's easier to start one or the other and not both. So if there's some language in there, such that you can go from one to the other with doing some requirements and such, that would be helpful. 1-1

MR. KLEIN: Anybody else have any comments they want to make tonight?

NETTY DRAKE: Well, I will. Netty Drake. I read most of it, I took the highlights.

MR. MILLER: I don't think anybody's read all of it yet.

NETTY DRAKE: It's good bedtime material, if nothing else.

Couple things and more general statements at this point. I will have individual itemized things prepared and submitted by the 23rd. But one comment -- one thing that's come up, because I work not only with this office but work with the Rancho Cordova and Redding office for various projects. And comments have been made at those other two offices that have 2-1

been a bit concerning, because I've seen it happen with other issues related to water in this big, huge valley that Region 5 has to do with. 2-1 (cont)

And that's -- when I mentioned the E.I.R., people in both offices said, "Well, that's not our problem, that's being handled at the Fresno office."

And I said, "Isn't it just for the whole region and not just the south?"

And they're, like, "Yes" -- there's real animosity toward it; and that's real concerning, because if the other two offices feel like they don't have a role in this, perceived or otherwise, when someone has got to go to two other offices and they don't see this thing the way this office sees it, that's going to create a lot of havoc for projects; both in attitude and approach. And I don't know how that would be dealt with through, you know, the infrastructure within the agency itself.

But that is definitely something that's going to come up. And if there's not consistency between the three offices, that's going to, you know, become very difficult to deal with from both sides; from your side and from some, you know, project side, as well. So that's one concern, only because I've seen it really screw up other things in the past.

The only other comment is the biggest concern of any of the area of this E.I.R. is the air side. And there's not a 2-2

lot anyone in this room can do about it, and I do understand that. But there are quite a few assumptions that are made, quite a few statements that are made, that are very questionable, I suppose, would be a good way to say it. And I'll have more individual comments. 2-2 (cont)

But some of the technologies that are being stated to me -- and I don't know on the E.I.R., perhaps I'm off on this. But on an E.I.R., I thought it was supposed to stay more general. And there's some specific technologies that should -- could potentially be used. And, you know, the ones that are recommended -- not "recommended." The ones that are identified have not proven themselves to be totally efficient or effective in what we need them to do on these dairies. And I -- there's -- I'd like to see this a little more general in stating "These are the goals we need to meet." Not necessarily identifying specific technologies, because there are some that will come, some that will go and some we don't know right now. And when you start putting stuff like this in a project, we can go sideways pretty quick. So those are generally speaking.

MR. KLEIN: Thank you.

MARVIN MEARS: My name is Marvin Mears, and I'll submit some written comments.

But there are a couple of things that somewhat perplex me in the -- in the E.I.R. And they're relative to things like 3-1

scenic view. There's nothing that I can do to control that. I'm going to try to stay within the height limits that would be normal for a dairy. I'm not going to -- I'm not going to be distracting. All of the technology will be closed in a building. So that kind of a thing. 3-1 (cont)

And one of the -- I guess the other thing that frightens me, because I was in a project a number of years ago and it has to do with biologicals and plants and critters, and we got stopped cold on a project that we were into for a couple of million dollars because somebody had reported this area as being habitat to the Macedonia blue butterfly. 3-2

We never found one; we never really knew what one looked like; there was no real encyclopedia that we could go to to find out. And yet, the project was stopped cold, and that's been almost 20 years ago. And we had -- we had sign-off and buy in by everybody we needed to do this project, they wanted it, and out of nowhere, after we had, like I said, spent years and a lot of money and the project just cratered and went away.

And we're going to do projects on dairies that are the central part of the dairy. And if we as developers and you as regulators have all of our dreams come true, we're still going to have 1200 dairies that haven't done nearly as much with mitigation, waste and converting and contributing.

And then I have one last comment, and I don't know how do

1 this yet, I haven't figured it out. But I'm going to work on
2 it. And that is the dairy projects that we're looking at 3-3
3 could basically offset the carbon footprint for the population
4 of Kings County. And we need to be able to make that
5 pronouncement and sell it and show that the dairies are
6 contributing in a significant way; not only by producing
7 energy, but helping the county become carbon neutral.
8 And I've read the document, I don't really totally
9 understand it. But it -- it's a lot to read. I've learned a
10 lot. It's been a very, very good educational tool.
11 I have one last question: Is there a fee when we make 3-4
12 our applications? Is there a fee structure involved?
13 MR. KLEIN: Yes, correct. There is a fee structure.
14 MARVIN MEARS: Okay. That's --
15 MR. KLEIN: At the Water Board for a permit there is a
16 fee; generally there's an application fee, and then --
17 MARVIN MEARS: So there's a schedule I can look at?
18 MR. KLEIN: There will be a schedule that you can look
19 at, yes.
20 MARVIN MEARS: I couldn't imagine that we'd get this far
21 without there being a fee.
22 MR. MILLER: And the air quality section does say some
23 very positive things about the carbon footprint, the
24 greenhouse savings.
25 MARVIN MEARS: And I think that we can promote that and

be a positive influence in the community.

MR. MILLER: Any other comments? You guys have all been helpful.

MR. KLEIN: Don't be shy.

MR. MILLER: Don't be shy. We're all here and anxious to hear what people think about the future of the digesters.

MR. KLEIN: Well, that looks like it for tonight.

MR. MILLER: Looks like it.

MR. KLEIN: So, again, everybody, thank you for coming. Both Paul and I really appreciate it, taking your time out of your day to be here with us tonight. Thanks.

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(Whereupon, the meeting concluded at 7:06 p.m.)

-oOo-

STATE OF CALIFORNIA)
) ss.
COUNTY OF FRESNO)

I, MIRANDA K. CRAIN, a Certified Shorthand Reporter of the State of California, do hereby certify:

That the foregoing proceedings were taken at the time and place herein set forth; that any witnesses in the foregoing proceedings, prior to testifying, were placed under oath; that a verbatim record of the proceedings was made by me using machine shorthand which was thereafter transcribed under my direction; further, that the foregoing is an accurate transcription thereof.

I further certify that I am neither financially interested in the action nor a relative or employee of any attorney of any of the parties.

In witness whereof, I have subscribed my name.

MIRANDA K. CRAIN, CSR NO. 13453

PUBLIC MEETING

DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT FOR A WASTE DISCHARGE REGULATORY PROGRAM FOR DAIRY MANURE DIGESTER AND DAIRY MANURE CO-DIGESTER FACILITIES WITHIN CENTRAL VALLEY REGION (REGION 5)

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ORIGINAL

Central Valley Regional Water Quality Control Board

Sacramento Main Office

11020 Sun Center Drive, Suite 200

Rancho Cordova, California

Wednesday, August 4, 2010

6:30 p.m.

REPORTED BY: WENDY E. ARLEN, CSR #4355, CRR, RMR
JOB 429968

1 A T T E N D E E S

2

3 PROJECT TEAM:

4 Paul Miller, ESA

5 Stephen Klein, ESA

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PROCEEDINGS

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MR. KLEIN: Good evening. Welcome to the second dairy digester and co-digester facilities public Draft EIR public meeting. This is the second meeting. We had a meeting yesterday in Fresno at the same time at our Fresno office.

I'd first like to thank everybody here tonight for coming in the evening. We appreciate it. I think we had about -- how many people did we have in Fresno?

MR. MILLER: About 20.

MR. KLEIN: About 20? Yeah. Tonight we're fortunate to have a board member with us, Dan Odenweller. Dan, we appreciate you coming tonight.

Over here is Paul Miller. He's the project manager with ESA Consultants. They are the ones who are preparing the EIR document.

My name is Stephen Klein. I'm a project manager with the Central Valley Water Board.

We have a small group tonight. I'd like to go around and have everybody introduce themselves.

MR. MAYER: I'm Alex Mayer, staff counsel, Central Valley Water Board.

MR. GARNER: James Garner of Dolphin Group.

1 MR. VAN DAM: Bill Van Dam, Alliance of Western
2 Milk Producers manager and chairman of Dairy Cares.
3 MR. ROGERS: Clay Rogers, Central Valley Water
4 Board.
5 MR. FISHER: Eric Fisher, project director ESA.
6 MR. ODENWELLER: Dan Odenweller again.
7 MS. SPARKS: Gen Spark, Central Valley Water
8 Board.
9 MR. CHAN: Victor Chan, Solano County.
10 MR. SPERBER: Michael Sperber.
11 MR. WELLER: I'm Dan Weller, Air Resources
12 Board.
13 MR. KLEIN: With that, I'm going to turn the
14 meeting over to Paul Miller. He's going to give a short
15 presentation on the Draft EIR and after that we'll open
16 up the floor and you can talk from your seats. If you
17 want to come up and talk from the podium, that's fine,
18 too. Whatever you're comfortable with.
19 MR. MILLER: As Stephen mentioned, this is the
20 second meeting. We met last night in Fresno. It was
21 the first meeting for the Draft EIR public meeting and
22 tonight is the second meet and the final meeting for the
23 verbal comments on the Draft EIR.
24 Introductions we just went through. Stephen's
25 the project manager for the water board and the Central

1 Valley Water Board is the lead agency for the Program
2 EIR.
3 ESA is the consultant hired by the Central
4 Valley Water Board to help prepare the EIR. ESA has
5 been preparing CEQA documents for California public
6 agencies for 40 years now, and I'd like to note that we
7 are also now preparing a similar EIR, Program EIR for
8 CalRecycle for anaerobic digesters that would process
9 mixed solid waste. So that's another place that we've
10 seen the impacts of digesters.
11 Our subconsultant team also includes five other
12 groups, Integrated Waste Management Consulting,
13 primarily the principal, Matt Cotton, who is an expert,
14 nationwide expert in composting. The Smithline Group,
15 Scott Smithline, some good experience he brought to the
16 team. Went to the city of Los Angeles around the world
17 tour looking at various conversion technologies.
18 Several of those were anaerobic digesters.
19 CirclePoint is the public involvement firm
20 that's helping to coordinate this overall effort.
21 CirclePoint, if you have any questions about the
22 process, you can call Jennifer Tencati at CirclePoint
23 and she'll make sure that those questions all get
24 answered.
25 Carollo Engineers is a nationwide company that

1 does a lot of wastewater treatment plant engineering and
2 Carollo has substantial experience using complete mix
3 digesters in the wastewater treatment arena.
4 And finally Parus Consulting, who is another
5 firm that helps us in preparing some of the EIR
6 resources sections.
7 What we've done so far in the process, the
8 process kicked off in December last year on March 18th,
9 we issued the Notice of Preparation Initial Study.
10 Shortly following that meeting we had public scoping
11 meetings, one in Fresno and two in Rancho Cordova, to go
12 over the content of the EIR, get public comments on
13 that. So that helped modify our approach.
14 And most recently we published the Draft
15 Program EIR on July 8th. Now, the Draft EIR has a
16 45-day comment period, and so we're about halfway
17 through that comment period now, and that's the purpose
18 of this meeting. We're in the comment period.
19 The overall development effort for this project
20 included forming a Technical Advisor Group. We call it
21 the TAG. It now includes about 80 members. We've had
22 three meetings of the TAG. There have been anyplace
23 between 15 and 30 TAG members at each of those meetings
24 attending in person and several over teleconference. So
25 those have been very important meetings for the process.

The TAG helped the EIR focus on the potential impacts of dairy manure digesters and co-digester facilities. The TAG also helped identify the real world economic and regulatory challenges faced by dairy digester and co-digester projects.

Now, I will run through a program overview these next several slides. The Central Valley Water Board is proposing to develop a waste discharge regulatory program for dairy manure digesters and co-digesters within the regional boundaries of the Central Valley region, which is Region 5.

The waste discharge regulatory program will involve the adoption of one or more waste discharge requirements, WDR's, general orders to regulate the discharge of digestate to land.

The Program EIR evaluates the environmental effects that could result from the development and operation of dairy digesters.

The map here shows -- it's a little faint up on the screen there, but it shows the outline of Region 5 which goes from the Oregon border down to the Grapevine just north of Los Angeles, and it's the largest of the regions in California.

Within that region there are approximately 1.6 million cows and 1400 dairies. Dairy cows on

1 average produce approximately 112 pounds of manure per
2 day, which would equate to about 180 million pounds of
3 manure generated per day within Region 5. This
4 substantial quantity of manure has the potential to
5 produce biogas, which is a renewable source of energy.
6 This next slide shows the location of the
7 dairies in Region 5. The yellow dots, there's about a
8 dozen yellow dots on that page as well, and those are
9 locations of existing dairy digesters. So there are
10 several digesters already in operation and our team got
11 to visit three of those dairies during the process.
12 The next few slides will look at the primary
13 objectives for the project, and these are outlined in
14 Chapter 3 of the EIR, and they're sort of -- they are
15 the objectives of the project.
16 First is to protect the beneficial uses of
17 surface and groundwater within the Central Valley region
18 from discharges to land associated with dairy manure
19 digester and co-digesters on or offsite dairies; to
20 provide a regulatory framework for the water quality
21 aspects of dairy manure digesters and co-digesters; and
22 assist the state in meeting greenhouse gas reduction
23 measures. That would be part of AB 32 goals.
24 That would be done in a couple ways. One is
25 that these projects will produce biogas, which is a

1 renewable fuel, and the other is that these projects
2 would also reduce fugitive emissions, methane emissions
3 from current dairy operations. Methane, the manure
4 would be more contained.
5 Next objective, provide a renewable green
6 energy source to help meet the California Renewables
7 Portfolio Standard. The utilities are required to have
8 certain percentage of their utility electricity
9 generated from renewable green energy sources, and this
10 project would qualify for that. So all the utilities
11 are challenged by meeting the RPS goals set for 2010 and
12 2020.
13 Next one is to reduce the time required to
14 develop and issue water quality permits for dairy manure
15 digesters and co-digesters. That is one of the concerns
16 that was identified during the TAG meetings.
17 And the next objective is to reduce the
18 permitting time for other state and local agencies with
19 discretionary permit responsibilities by providing a
20 Program EIR that can be relied upon or tiered from by
21 the other agencies. So this EIR will have value to
22 other agencies as well as the water board.
23 Now, the next slide shows the -- it's a figure,
24 actually -- shows the general processes and facilities
25 that we reviewed in the EIR, and on the far left side

are the preprocessing activities of the materials before they go into the digester and we've sort of put a box around the co-digestion only. If co-digestion is used, there is actually traffic that would come, bring offsite materials. So we looked at that as well. And there's the digestion phase.

And on the right-hand side to the right of the digester is the post processing activities. And we considered the potential impacts that would occur from the gas, the liquids and also the solids in the EIR.

The Draft EIR covers the three basic types of digesters that are expected to be proposed in California, which are the covered lagoon digester shown at the top of this slide, and in the middle is the plug flow digester, and then the bottom the buildings there with the white caps, those are complete mix digesters, and there are many different types of complete mix digesters that are being developed at this point.

The next slide shows electrical generation components, and the EIR considers these because the main use of biogas through our research and nationwide is the generation of electricity, and in California right now the generation of electricity is also the main use of the biogas, the digesters that have been developed and are in operation.

1 Types of facilities that we looked at,
2 individual dairy digesters which we showed in that
3 earlier slide, all three types, and then also we looked
4 at centralized facilities which are centralized dairy
5 digesters which could get manure from various farms and
6 also centralized biogas cleanup facilities, and those
7 facilities the biogas would be basically piped from
8 farms to the centralized facility. And in these cases,
9 the centralized facilities could be either on a dairy or
10 offsite of dairies.
11 The EIR analysis. When you get the EIR --
12 Stephen has a hard copy of it there -- the Notice of
13 Preparation helped us to determine the topics that would
14 be fully analyzed in the Draft EIR. The first four
15 chapters identify, sort of go through the process what
16 we looked at. We have the executive summary in one,
17 there's an introduction that gives an overview of CEQA
18 and the CEQA requirements, project description or the
19 program description describes in detail what I've just
20 gone through. Some of those photos were pulled from the
21 program description, and then there's an analysis of the
22 approach to environmental analysis.
23 Chapters 5 through 15 are the key environmental
24 resource areas. Certainly 5 is water quality and 6 is
25 air quality. Within each of the chapters, cumulative

1 impacts are considered. The cumulative scenario which
2 is described in Chapter 4 looks at a cumulative
3 build-out of 200 dairy digesters over the next ten
4 years, approximately 20 digesters per year, and that's
5 described in Chapter 4.
6 Another important chapter in the ER is the
7 alternatives analysis, Chapter 15, and in that chapter
8 we are required by CEQA to look at a range of reasonable
9 alternatives. We've got a no project alternative in
10 there that's required by CEQA which basically is what
11 would happen if the program is not approved. So we
12 describe that. It would be pretty much the status quo
13 was the result of that analysis.
14 We looked at three other reasonable
15 alternatives that could be considered. One is
16 restrictions on co-digestion substrates, one is thermal
17 conversion alternatives rather than using anaerobic
18 digestion process, and the fourth alternative was to
19 restrict the uses of the biogas to low NOx emissions
20 alternatives.
21 The conclusion that was reached in the
22 alternatives was that although there were some benefits
23 of these various alternatives, none of the alternatives
24 were found to be clearly superior to the project. This
25 was mainly because of the positive environmental aspects

1 of the project would in some way be reduced by the
2 alternatives if the restrictions were added.
3 In the EIR, the potential impacts, we found
4 that there are mitigation measures that would avoid or
5 reduce all but two of the potentially significant
6 impacts to a less than significant level. In all cases
7 the individual project impacts could be mitigated.
8 The significant unavoidable impacts were the
9 cumulative impacts from water quality on groundwater and
10 also the cumulative impacts from air pollutants related
11 to the build-out of the 200 digesters and the use of
12 what we assume to be the energy generation and the NOx
13 emissions that would come off of the cumulative
14 scenario.
15 The next steps we have in the CEQA process are
16 that the comment period will close on August 23rd,
17 that's a Monday, 5:00 o'clock. We will receive verbal
18 and written comments, and we will respond to those as
19 appropriate in the Final EIR. The Central Valley water
20 board will decide at a public hearing whether to certify
21 the Program EIR and to approve the program.
22 After that , if it is certified, then
23 individual projects could be approved under the Program
24 EIR or tiered from the Program EIR.
25 Your chance for verbal comments is tonight.

1 Get ready. We're anxious to hear what everybody has to
2 say this evening. And written comments will be mailed
3 in to Stephen Klein at the address shown on this slide
4 by August 23rd.
5 The EIR is available for download at the Web
6 site of the Central Valley Water Board. We put the
7 address up there. And I do want to note that it's in
8 PDF format and it's all in one file. So if you're
9 interested in a particular topic, you can search the
10 entire PFD and look for information on that topic. I
11 think that's a really nice approach to finding what
12 you're looking for in the document.
13 And with that, I've given my introduction to
14 the Draft EIR now and we are available to take public
15 comments at this time.
16 MR. KLEIN: Does someone want to start out
17 tonight?
18 MR. WELLER: Did you mention that we have a
19 court reporter? We have a court reporter present
20 tonight. So any comments you made will be fully
21 recorded, you know, so they carry the same weight as
22 your written comments.
23 You mentioned you visited three dairies with 4-1
24 digesters. Could you tell us what those were, just out
25 of curiosity.

1 MR. MILLER: Tollenaar, Castelanelli Brothers
2 and Fiscalini. They all have different processing flows
3 at each of those digesters.
4 John Menke from State Water Resources Control
5 Board joined us during the presentation.
6 MR. MENKE: I promised not to make problems at
7 the meeting tonight. So I'm going to not have any
8 questions right now but probably written questions later
9 on, and hopefully they won't be problematic for you, but
10 I don't have any comments for the public session really.
11 I've read the darn thing. It hasn't been an
12 easy read. I see some issues I'll be discussing with
13 your guys through the Technical Advisor Group process,
14 but I don't think there is anything I would want to
15 bring up as a public issue because it looks to me like
16 it's going along pretty good.
17 MR. ELLERBY: Is this the appropriate place for
18 a question?
19 MR. MILLER: We were hoping for comments.
20 We'll try questions.
21 MR. ELLERBY: I'm Justin Ellerby from
22 California Center for Cooperative Development. We've
23 been approached by numerous organizations wanting to
24 start cooperative manure digesters in dairy and outside
25 of dairy.

1 One question that I have is what does it take 5-1
2 to -- well, I understand that you have to have a solid
3 waste handler's permit if you take a single ounce of
4 material onto a digester which would be co-digestate
5 facility if it's from off of your facility. What is it
6 going to take to see more of those facilities built in
7 cooperation, in coordination with municipalities and
8 other entities that would be contributing substrate?
9 MR. WELLER: Do you want to rephrase that
10 question so we can follow it?
11 MR. ELLERBY: My question is there is an awful
12 lot of interest in developing co-digestion facilities.
13 Municipalities, schools, all kinds of people generating
14 organic waste are interested in linking up with dairies,
15 from what I've heard and people I've talked about, but
16 my understanding is it's very difficult to do that right
17 now with the regulatory regime that's in place because
18 it requires you to get a solid waste handler's permit.
19 Even though your principal business may be that of a
20 dairy, you are required to now get a permit for an
21 operation that is really only meant to help the
22 feasibility of taking care of your own waste streams.
23 What are some possible solutions or possible
24 streamlining to that process?
25 MR. ROGERS: My name is Clay Rogers with the

1 Central Valley Water Board. I don't know that I can
2 answer all your questions, but let me tell you a little
3 bit and reiterate a little bit about what the purpose of
4 our EIR is.
5 The purpose of the EIR is that we understand
6 that there is a very large regulatory maze to be able to
7 permit these facilities from a number of different
8 regulatory agencies. One of the major hurdles that has
9 to be cleared for anybody, just like our permits are
10 discretionary permits, is to you have meet the
11 requirements of the California Environmental Quality
12 Act.
13 The purpose of this EIR is to get an
14 environmental document out there that either those
15 agencies can use to meet their CEQA requirements, or if
16 they feel they need to add some supplemental analysis
17 that they can tier off of in order to satisfy CEQA so
18 that they can proceed with their discretionary permits.
19 That really is one of the big goals here. We
20 tried to incorporate all of the agencies that we're
21 knowledgeable of into the Technical Advisor Group so
22 that we can address as many of those issues as possible
23 within this document to minimize that.
24 It is an effort along -- we're going to be
25 preparing at least one general order and maybe multiple

1 general orders to streamline our permitting process. We
2 think these projects have a lot of environmental
3 benefits, and so that, you know, we don't have to write
4 individual permits for every facility, we can streamline
5 that and then bring facilities in underneath that meet
6 the conditions of those individual ones.
7 So I think that's the primary purpose here is
8 to try and -- I hesitate to use the word a little bit,
9 but to streamline the permitting process so that we can
10 get the benefits of that, but at the same time so that
11 the agencies can fulfill their regulatory
12 responsibilities, as with the water board, to be
13 protective of surface and groundwater quality.
14 So I think that's the effort. You know, how
15 that's going to be accomplished will have to be achieved
16 by the individual agencies that are responsible for
17 their own permitting, but we are trying to do that so
18 that there is a more concerted effort so that we can
19 minimize the regulatory maze to get those facilities
20 permitted that can meet the requirements of the CEQA
21 document and the different orders that are being
22 proposed.
23 MR. WELLER: I was curious, you guys were in
24 Fresno last night, right?
25 MR. MILLER: Yes.

1 MR. WELLER: Did you guys have anybody there
2 from San Joaquin Valley, the Air Pollution Control
3 District?
4 MR. MILLER: No.
5 MR. WELLER: I was kind of curious to see if
6 they had any comments on that, especially considering
7 they're about to change their designation for ozone and
8 all that. Just wanted to throw that in there.
9 MR. MILLER: They've been very active with
10 comments up to this point on the process.
11 MR. WELLER: I would assume so. I want to make
12 sure.
13 MR. MILLER: I'm sure we'll get a full letter
14 from them on the Draft EIR.
15 MR. WELLER: Yeah, I would assume.
16 MR. KLEIN: Just to make it clear, the San
17 Joaquin Air Pollution Control District has had
18 representation on the TAG. They've been very active
19 with the TAG group in this process.
20 MR. WELLER: I think that will be pretty
21 helpful. Also, I know you guys probably don't deal with
22 this as much as I probably deal with it on the Air
23 Resources Board. We are getting calls on modular 4-2
24 digesters, everything from cement pipes and seal off,
25 you know, that sort of situation. I don't know if you

1 considered those.

2 Essentially from my point of view a digester is 4-2 (cont)

3 a digester. Depends on where the gas goes. This might

4 be a water issue. I'm not sure. I've gotten a few

5 calls on those lately. I don't know if you've

6 considered those.

7 Then my main concern just out of curiosity is 4-3

8 why you based your cumulative scenario to 200 dairy

9 digesters. Is that just an arbitrary number?

10 MR. MILLER: We tried to look at the growth

11 rate of digesters nationwide from the Ag Star database

12 and also the European growth rate, and we also wanted to

13 make sure we didn't underrepresent the number of

14 digesters that might be covered by the process. We felt

15 200 was a pretty good number that perhaps shouldn't

16 understate the impacts.

17 MR. KLEIN: We're also looking at state

18 initiatives on the state level. We represented that in

19 the objectives. So those were considered in terms of

20 that 200 because there obviously is a push to have

21 digesters in California in interest to the state.

22 MR. ELLERBY: In the summary of areas of 5-2

23 controversy and unresolved issues, it mentions San

24 Joaquin Valley Air Pollution Control District has found

25 that the two newest facilities that they were looking at

5-2 (cont)

actually did meet their famously stringent standards. What are those two facilities?

MR. MILLER: I don't have that data right now. We got a letter that sort of indicated that.

MR. WELLER: Gallo and Fiscalini. That's what my assumption would be. Last I understood Gallo was operating under a variable permit for a while to basically demonstrate compliance. Last I talked to San Joaquin, they were compliant. And Fiscalini put in a whole new setup. Some of these guys are definitely on flexible permit at this point trying out new technologies and that sort of thing. So I'm not sure how that will fit in, but it's possible.

MR. MILLER: It's certainly one of the challenges that the TAG brought up. To get to the 200 dairy digesters, certainly we understood that there could be a need for public funding to help capitalize the facilities.

MR. WELLER: Realistically speaking, 200 is pretty optimistic without some sort of funding. We have 12 or 13 tops in the state right now, and to my knowledge, every one of those has been pretty substantially subsidized. Really, you know, it's a capital expense. Two or three four or five million dollars or more. Hopefully the streamlining the permit

1 process will bring the price down.
2 MR. ROGERS: I think in that 200 number, too,
3 that also includes some centralized facilities that
4 would actually incorporate more than 200 dairies in that
5 total.
6 MR. WELLER: Yeah, it's definitely possible. I
7 just worry that San Joaquin is going to get heart
8 failure over a couple hundred number. Because
9 realistically speaking there's only maybe 10 or
10 15 percent of the dairies that are going to be pipeline
11 injectable, if at all. Realistically at this point fuel
12 cells are kind of out of the picture and microturbines
13 are not necessarily proven yet. Talking about a lot of
14 engines and in San Joaquin Valley and the air quality
15 situation, not interested in firing up another motor.
16 That's why I say, I mean, I'm glad you've been in
17 contact with San Joaquin. That's going to help quite a
18 bit.
19 MR. ELLERBY: I'm curious if this project
20 before it's first started whether other -- what kinds of 5-3
21 biogas technologies were assessed or if there are other
22 assessments out there like for pyrolytic gasification,
23 technologies that have less of an impact or potentially
24 have less of an impact on water quality.
25 MR. MILLER: That is one of the alternatives we

1 looked at in there, a thermal alternative. It didn't
2 seem extremely well suited for the dairy manure because
3 it starts out so wet. So the thermal systems have a lot
4 of liquid to overcome.
5 And we have seen a lot of movement and progress
6 in some of the other states on dairy digesters. So it
7 seem like it can get some momentum. So this is just one
8 step in that process.
9 MR. WELLER: Our process might be a little more
10 complicated, though. We do have some special issues in
11 California.
12 MR. MILLER: We do.
13 MR. WELLER: I think that's kind of the hangup
14 here. When you guys looked at the air and water 4-4
15 impacts -- I mean, I haven't looked at this yet, so
16 forgive me -- you guys took into consideration all the
17 construction and that sort of stuff; is that correct?
18 MR. MILLER: Yes.
19 MR. WELLER: In your scenarios you're looking 4-5
20 at co-digesters, you're also looking at offsite truck
21 traffic, that sort of stuff.
22 MR. MILLER: Uh-huh.
23 MR. WELLER: Okay. Good.
24 MR. ELLERBY: Speaking of other states, is 5-4
25 there any work being done towards a dairy group and

5-4 (cont)

1 working with comparing notes, if you will, the work
2 that's being done in New York state by the Dairy
3 Sustainability Council, I believe it's called, and the
4 work that they're doing on organizing not just
5 digesters, but the entire system from cow to electrical
6 outlet?
7 MR. MILLER: I don't think so. I don't think
8 we followed up on that much. We did talk to New York
9 because they had one of the provisions -- one of the
10 alternatives we have talks about co-digestion
11 restrictions, and New York is one of the states that has
12 a restriction that you can do co-digestion just as long
13 as the co-digestion material is less than a certain
14 percentage. So they're one of the states we looked at
15 and got that information from.
16 MR. ELLERBY: Is that a relatively high level
17 that they have allowable?
18 MR. MILLER: I think it was 10 or 15 percent.
19 MR. WELLER: It's fairly low.
20 MR. MILLER: And that's what we saw in all the
21 states. It seemed like that that low percentage really
22 was so that these remain dairy digesters and not mixed
23 solid waste digesters. If that percentage went up very
24 high, then all the sudden they might be primarily used
25 for something else. So I think the low percentage was

1 meant that they would stay on farms and be dairy
2 digesters, and that 10 percent, what we've seen in the
3 research is that the 10 or 15 percent addition of a
4 co-digestion substrate can dramatically increase the
5 methane production in the system. That was an important
6 feature. A lot of economic reports indicate that's
7 critical to long-term sustainability of the project.
8 MR. VAN DAM: Bill Van Dam, Alliance of Western
9 Milk Producers. When you were looking at that 6-1
10 co-digestion and you used a percentage, was that a
11 percentage on a dry matter basis? Do you know, Dan?
12 MR. WELLER: I don't know right off the top of
13 my head.
14 MR. MILLER: I think it's a weight. I think it
15 was weight, the ones I saw. I'm not sure about that.
16 MR. VAN DAM: I read something about it. 6-2
17 Forgive me. One other question. I believe what you
18 were required to do here is a technical analysis of the
19 emissions and all the inputs and disposals thereof, but
20 you did not do an economic analysis of this.
21 MR. MILLER: There's a separate economic
22 activity that's going on in the TAG, but CEQA really
23 doesn't --
24 MR. VAN DAM: Doesn't even see that.
25 MR. MILLER: Doesn't look at the economics.

1 MR. VAN DAM: That's what I thought. I'm
2 trying to get a perspective what you're working on here.
3 MR. MILLER: So this is mainly the
4 environmental impacts.
5 MR. WELLER: Going back to the co-digestion
6 real quick. Co-digestion, food waste issues and who 4-6
7 knows what else because who knows what goes into some of
8 the stuff you're digesting, so probably end up with some
9 certain things that might create unknown constituents in
10 your biogas. I mean, that could be leading to a fouling
11 of catalysts, things like that. I mean, have you guys
12 considered that?
13 MR. MILLER: The fouling of the catalysts?
14 MR. WELLER: The catalysts.
15 MR. MILLER: That's discussed in there a little
16 bit. There's a little bit of a discussion there. And
17 the materials likely to come to the dairy digesters we
18 don't think are materials that would likely have
19 siloxates that cause all the problems at the wastewater
20 treatment plants. Those pretty much come down from the
21 sewer system, as I understand it, that's the toothpaste,
22 shampoos, things like that, personal hygiene items that
23 end with the siloxates that have been such a problem. I
24 don't think what we've seen in the literature of dairy
25 digesters, those aren't the type of co-digestion

materials folks did.

MR. WELLER: Typically not. You don't know.

MR. MILLER: But you don't know.

MR. WELLER: Have you guys considered like animal mortalities also? I mean, is that considered in co-digestion? 4-7

MR. MILLER: We didn't add those. Those are expected to be restricted. That is a problem, but this project didn't believe that we could solve that.

MR. WELLER: I was curious whether you addressed it at all.

MR. MILLER: Anybody want to make any formal comments at this point then? Any other questions from the group?

MR. VAN DAM: This is a bit of a formal comment. I was in on the very first meetings on this thing and got my arm twisted in several places politically that this had to happen. But I am impressed that you guys pushed through this as quickly and put together a pretty impressive piece of work that will be a good foundation for going through.

I guess you can sense from the few questions and comments I made that I'm concerned about the economics of this whole thing and whether it can work or not, but we can't even test those without having this

solved first. So my commendations to you. This was pulled together nicely. Nice to see something like that done as quickly as that. So kudos.

MR. KLEIN: We appreciate that.

MR. VAN DAM: Sometimes a little pat on the back is worth it, isn't it? I had one once. I liked it.

MR. WELLER: Could you potentially give us a little idea on how it might fit with the other CalRecycle protocol for a DEIR, Program EIR? 4-8

MR. MILLER: They are quite different, the two, just the whole nature of dairy manure on a dairy and the land application that they do now. It's just the CalRecycle EIR will be really completely different. I think they won't have that same setting. So they'll need to figure out how to manage the digestates. It won't be so obvious how to manage those. They just have got a different waste stream and a lot of contamination. The manure, the way the dairies operate now, is a pretty good source of materials to get the digesters started.

MR. KLEIN: Anything else before we close the meeting? Okay. Thank you for coming tonight. We'll close the meeting now. Thank you.

(Whereupon the Public Meeting was adjourned at 7:19 p.m.)

1 CERTIFICATE OF CERTIFIED SHORTHAND REPORTER
2
3 I, WENDY E. ARLEN, hereby certify that I am a
4 Certified Shorthand Reporter; that I reported in
5 shorthand writing the foregoing matter at the time and
6 place therein stated; that the foregoing pages are a
7 full, true and complete transcript of my said shorthand
8 notes and is a full, true and correct record of the
9 proceedings had in said matter at said time and place.
10
11
12 Dated: AUGUST 10, 2010
13
14
15
16
17
18
19 WENDY E. ARLEN, CSR NO. 4355, CRR, CMR
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23
24
25

CHAPTER 5
Text Changes to the Draft Program EIR

The California Environmental Quality Act (CEQA) provides that a Final Program EIR shall include revisions to the draft Program EIR and any other information added by the lead agency. This Section includes revisions to the draft Program EIR based on responses to comment letters received during the public review period, as well as staff initiated text changes. Where responses have resulted in changes to the text of the draft Program EIR (DEIR), the changes are shown within quoted portions of the draft Program EIR text using the following conventions:

1. Text added to the wording in the draft Program EIR is shown in underline;
2. Text deleted from the wording in the draft Program EIR is shown in ~~strikeout~~; and
3. Text changes are shown in "quotation marks" and indented paragraphs.

All page number and paragraph references pertain to the published draft Program EIR. Original footnotes from the draft Program EIR are not included in the text revisions presented in this chapter unless the footnotes themselves are being revised.

The following are all of the official revisions to the draft Program EIR (DEIR):

Changes to Chapter 1. Executive Summary

Page 1-5 of the DEIR, second paragraph is revised as follows:

> "***Centralized Locations***
>
> There are two categories of centralized location facilities for dairies that will be assessed in this Program EIR: (1) Central AD Facility, whereby individual dairies would collect manure and transport the manure by pipeline or truck to a central facility; and (2) a Central Biogas Clean-Up Facility, whereby raw biogas from individual dairies (including dairies linked via underground gas pipelines) is piped to a central facility. These types of centralized facilities may be sited on or off-site of dairies. For both location options, the central facility would have the potential to receive manure, manure plus co-digestion substrate, and/or raw biogas. Biogas at centralized facilities could be used to generate electricity using internal combustion engines/turbines or fuel cells or used for boilers, transportation fuel, or for utility pipeline injection."

Page 1-5 of the DEIR, the second sentence of the third paragraph is revised as follows:

> "The feedstocks for co-digestion could include food processing ~~residues~~residuals, the organic fraction of municipal solid waste, fats, oils, grease, agricultural residues, and biomass energy crops."

Page 1-5 of the DEIR, the fourth sentence of the third paragraph is revised as follows:

> "Co-digestion substrates can increase the electrical capacity of a proposed system by ~~a magnitude~~ two to five times or greater than that of dairy manure alone (ECOregon, 2010)."

Page 1-5 of the DEIR, the last sentence of the third paragraph is revised as follows:

> "The use of co-digestion substrates is generally considered by dairy digester project developers as an important element that can be used to help achieve project viability. Where additional scientific research on co-digestion with organic feedstocks is necessary, California Department of Food and Agriculture's Specialty Crop Block Grant Program is a potential funding source."

Page 1-7 of the DEIR, an additional area of controversy has been added to the end of Section 1.4 as follows:

> "Concern has been raised by TAG members about CalRecycle involvement in review and permitting of dairy AD facilities. There is concern about the additional permitting and regulatory requirements. There is concern that CalRecycle's reliance on existing transfer station and composting regulations are inappropriate for regulating anaerobic digesters, because anaerobic digestion is a fundamentally different process than the "aerobic" process of composting. Other stakeholders indicate that adding an additional agency to the review process will work against the intent of the Program EIR to help streamline the permitting of dairy digester facilities and co-digester facilities."

Page 1-9 of the DEIR, Mitigation Measure 5.2, first bullet is revised as follows:

> "Prohibitions against any surface water discharges (unless exempt from NPDES permitting requirements or covered by separate NPDES permit),"

Page 1-9 of the DEIR, Mitigation Measure 5.2, seventh bullet is revised as follows:

> "Requirements for tailwater return systems or other effective methods to minimize offsite discharges;"

Page 1-9 of the DEIR, Mitigation Measure 5.3, first bullet is revised as follows:

> "Prepare and implement site-specific Salt Minimization Plan (SMP) as approved by the Central Valley Water Board. The SMP shall consider the elimination, decommissioning, or the reduction in use of regenerative water softeners on process water distribution

networks or, alternatively, evaluate and install alternate technology that reduces or eliminates on-site brine disposal;"

Page 1-9 of the DEIR, Mitigation Measure 5.3, second bullet is revised as follows:

"Prepare and implement a site-specific NMP that incorporates analytical data for soils, wastewater, manure, digester solids, groundwater and/or surface water supply. The required analytical data is to be generated by a site-specific monitoring and reporting program. In the case of groundwater, data from an approved representative groundwater monitoring program may be substituted for some or all site-specific groundwater monitoring, if appropriate. The NMP will be reconciled annually based on results of the monitoring and reporting program and site-specific measurements of agronomic rates; ~~includes a soils and groundwater monitoring and reporting program that include a variety of waste constituents, as well as yearly reconciliation based on sampling results that measure agronomic rates;~~"

Page 1-9 of the DEIR, Mitigation Measure 5.3, fourth bullet is revised as follows:

"~~Prohibit, decommission, or reduce use of regenerative water softeners on process water distribution networks or, alternatively, evaluate and install alternate technology that reduces or eliminates on-site brine disposal;~~"

Page 1-10 of the DEIR, Mitigation Measure 5.3, 13th bullet is revised as follows:

"Perform vector control and ~~Develop and implement a vector attraction~~ reduction ~~plan~~;"

Page 1-10 of the DEIR, Mitigation Measure 5.3, 14th bullet is revised as follows:

"Monitor ~~digestate, and~~ groundwater for pathogen indicator organisms;"

Page 1-10 of the DEIR, Mitigation Measure 5.3, 15th bullet is revised as follows:

"Require that solid wastes be stored on ~~impermeable~~ surfaces designed in accordance with a site-specific Waste Management Plan prepared for the facility by an appropriate California registered professional in accordance with WDR requirements;"

Page 1-10 of the DEIR, Mitigation Measure 5.3, 16th bullet is revised as follows:

"Maintain a neutral or alkaline pH for dairy digestate waste water applied to cropland unless conditions warrant otherwise as detailed in the NMP;"

Page 1-10 of the DEIR, Mitigation Measure 5.3, 17th bullet is revised as follows:

"Prohibit hazardous waste, mammalian tissues (with the exception of mammalian tissue as contained in compostable material from the food service industry, grocery stores, or

residential food scrap collection), dead animals, and human waste from all discharges; and"

Page 1-10 of the DEIR, Mitigation Measure 5.3, the first sentence of the last paragraph is revised as follows:

"Each facility shall prepare a site-specific ~~BPTC~~Waste Management Plan ~~plan~~ in accordance with the WDR requirements for review and approval to the Central Valley Water Board prior to commencement of operations."

Page 1-10 of the DEIR, Mitigation Measure 5.4 is revised as follows:

"**Measure 5.4:** WDRs for digester and co-digester facilities shall include design requirements for individual or centralized anaerobic digester or co-digester facilities~~, application croplands,~~ and associated facilities to protect them from FEMA 100-year flood events. Design measures may include, but are not limited to: facility sitting, access placement, grading foundation soils above projected water elevation, and site protection."

Page 1-11 of the DEIR, Mitigation Measure 6.1b, the fifth bullet is revised as follows:

"Maintain all equipment in proper working condition according to manufacturer's specifications. ~~The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.~~"

Page 1-12 of the DEIR, Mitigation Measure 6.3b is revised as follows:

"**Measure 6.3b:** AD facilities that handle compostable material and are classified as a compost facility must develop an Odor Impact Minimization Plan (OIMP) pursuant to 14 CCR 17863.4. Otherwise, a~~A~~pplicants shall implement a~~n~~ site-specific Odor Management Plan (OMP) as part of each application submitted to establish digester and co-digester facilities under the waste discharge regulatory program. The OMP will specifically address odor control associated with digester operations and will include:

- A list of potential odor sources.
- Identification and description of the most likely sources of odor.
- Identification of potential, intensity, and frequency of odor from likely sources.
- A list of odor control technologies and management practices that could be implemented to minimize odor releases. These management practices shall include the establishment of the following criteria as appropriate:
    - Establish time limit for on-site retention of undigested odiferous co-substrates (i.e., organic co-substrates must be put into the digester within 48 hours of receipt).

- Provide negative pressure buildings for indoor unloading of odiferous co-digestion substrates. Treat collected foul air in a biofilter or air scrubbing system.
- Establish contingency plans for operating downtime (e.g., equipment malfunction, power outage).
- Manage delivery schedule to facilitate prompt handling of odorous co-substrates.
- Modification options for land application practices if land application of digestate results in unacceptable odor levels.
- Protocol for monitoring and recording odor events.
- Protocol for reporting and responding to odor events."

Page 1-12 of the DEIR, Mitigation Measure 6.4c is revised as follows:

"**Measure 6.4c:** H_2S contained in the biogas shall be ~~scrubbed~~ controlled before emission to air can occur."

Page 1-13 of the DEIR, Mitigation Measure 7.4 is revised as follows:

"**Measure 7.4:** Whenever feasible, project related facilities off-site ~~project related facilities~~of a dairy should not be sited on Important Farmland as defined by the California Department of Conservation's Farmland Mapping and Monitoring Program."

Page 1-14 of the DEIR, Mitigation Measure 8.5a is revised as follows:

"**Measure 8.5a:** Prior to construction, for installation of pipelines in existing roadways, the project sponsor will coordinate with the appropriate local government departments, Caltrans, and utility districts and agencies regarding the timing of construction projects that would occur near project sites. Specific measures to mitigate potential significant impacts will be determined as part of the interagency coordination, and could include measures such as employing flaggers during key construction periods, designating alternate haul routes, and providing more outreach and community noticing."

Page 1-15 of the DEIR, Mitigation Measure 9.1a is revised as follows:

"**Measure 9.1a:** The project applicant or agency(s) responsible shall document that ~~submit , as part of the NOI,~~ a site assessment report for dairy digester and co-digester facilities to be constructed (including the location of digestate application) has been submitter to CDFG for its review. ~~in areas that contain undisturbed land and/or any agricultural fields that have been fallow for more than 1 year~~. This report shall be prepared by a qualified biologist. It shall evaluate the project site's potential to support special-status plant and wildlife species (including critical habitat) and whether special-status species could be affected by dairy digester and co-digester development, including construction and operations. If

there are no special-status species or critical habitat present, no additional mitigation would be required."

Page 1-15 of the DEIR, Mitigation Measure 9.2a is revised as follows:

"Measure 9.2a: The project applicant or agency(s) responsible shall submit~~, with the NOI,~~ a site assessment report prepared by a qualified biologist that determines if the project is likely to affect biologically unique or sensitive natural communities. This information could be included in the report prepared under Mitigation Measure 9.1a. If there are no biologically unique or sensitive natural communities present, no further mitigation is required. "

Page 1-15 of the DEIR, Mitigation Measure 9.3a is revised as follows:

"Measure 9.3a: The project applicant or agency(s) responsible shall submit~~, with the NOI,~~ a site assessment report prepared by a qualified biologist that evaluates if the project is likely to affect waters of the State and/or U.S., including wetlands. This information could be included in the report prepared under Mitigation Measure 9.1a. If there are no waters present, no further mitigation would be required."

Page 1-16 of the DEIR, Mitigation Measure 10.1 is revised as follows:

"**Mitigation Measure 10.1:** Prior to final project design and any earth disturbing activities, the applicant or agency(s) responsible shall conduct a standard "Phase I Type" electronic record search. If no incidents are identified within a quarter mile of the construction area, standard construction practices can be implemented. If the record search identifies soil or water quality contamination open cases within a quarter mile of the construction area, a ~~Site Assessment. The~~ Phase I Environmental Site Assessment (ESA) shall be prepared by a Registered Environmental Assessor (REA) or other qualified professional to assess the potential for contaminated soil or groundwater conditions at the project site; specifically in the area proposed for construction of dairy digester or co-digester facilities…"

Starting on page 1-18 of the DEIR, Mitigation Measures 12.1a and 12.1b have been modified to make them more straight forward and completely replace those included in the DEIR, as follows:

"Measure 12.1a: In order to determine whether a project may cause a significant impact to cultural resources, and therefore, have an adverse effect on the environment, the Central Valley Water Board shall require each application submitted for a discharge permit for a digester or co-digester facility to identify the project's potential impacts to cultural resources.

Prior to ground-disturbing activities, the project applicant shall retain a qualified archaeologist to (1) conduct a record search at the appropriate information center of the California Historical Resources Information System (CHRIS) to determine whether the project area has been previously surveyed and whether cultural resources were identified; and (2) request a sacred lands search from the NAHC. The results of the record search and sacred lands

search shall be included in the Cultural Resources Inventory Report provided to the Central Valley Water Board.

In the event the CHRIS records search indicates that no previous survey has been conducted, the qualified archaeologist shall recommend whether a survey is warranted to satisfy the requirements of CEQA based on the sensitivity of the project area for cultural resources. If, for example, the existing dairy or agricultural land proposed for establishment of a digester or co-digester facility was constructed entirely on fill, as shown by original and final contour drawings, a surface survey for archaeological resources would not be warranted. Similarly, a surface survey may not be warranted if the project area has been extensively disturbed by dairy or agricultural use.

For projects that constitute federal undertakings, as described in the Federal Agencies section of the Introduction (Chapter 2), the cultural resources study shall be prepared in accordance with Section 106 of the NHPA. The cultural resources study and inclusive mitigation measures shall form the basis for the cultural resources component of the project-level environmental documentation prepared for the project under Section 106.

If the survey, CHRIS record search, or NAHC search indicate cultural resources are located within a project area, the Cultural Resources Inventory Report shall include an assessment of the significance of the resources according to applicable federal, state, and local significance criteria. If the cultural resources are determined significant historical resources, the Lead Agency (usually the Central Valley Water Board) must review and approve the applicant's proposed treatment measures to ameliorate any "substantial adverse change" in the significance of each historical resource, in consultation with a qualified archaeologist or architectural historian, and other concerned parties. Treatment measures may include preservation through avoidance or project redesign, incorporation within open space or conservation easements, data recovery excavation of archaeological resources, formal documentation of built environment resources, public interpretation of the resource, or other appropriate treatment, and may be described in a project-level Cultural Resources Mitigation Plan included in the Cultural Resources Inventory Report to be approved by the Lead Agency.

Should the project area contain standing, built environment resources now 50 years of age, a qualified architectural historian shall be retained to evaluate the integrity and significance of the resource(s) unless the building(s) or structure(s) were covered in the existing survey report and determined not significant according to applicable federal, state, and local criteria. The results of that evaluation shall be included in the Cultural Resources Inventory Report.

If cultural resources identified within a project area are neither a historical resource nor unique archaeological resource, there would be no significant effect to the environment and no further treatment of those known resources would be required.

Measure 12.1b: Inadvertent discovery measures for cultural resources shall be implemented during all construction activities within the project area. Measures shall include procedures for discovery and protection of cultural resources, including human remains, during construction or earth-disturbing activities.

Within project areas of identified archaeological sensitivity, discovery measures would include: (1) a worker education course for all construction personnel; (2) monitoring of all earth-disturbing activities by a qualified archeologist; and (3) procedures for discovery of cultural resources, including human remains, during construction or ground-disturbing activities if an archaeological monitor is not present. Monitoring by a Native American with knowledge in cultural resources may also be required, as appropriate. Monitoring within recent fill deposits or non-native soil would not be required.

All construction or ground-disturbing activities shall be halted within 100 feet of a cultural resources discovery, including human remains, whether or not a monitor is present, until a qualified professional archaeologist can evaluate the find. If the find is determined to be a significant historical resource and cannot be avoided, then impacts on that resource will require mitigation. During evaluation or mitigative treatment, ground disturbance and construction work could continue on other parts of the project area.

If known or suspected human remains are discovered, in addition to halting all construction or ground-disturbing activities within 100 feet, the following steps must be taken before construction activities may be resumed within the stop-work area:

- The County Coroner has been immediately notified and has determined that no investigation of the cause of death is required; and
- If the remains are of Native American origin, the following steps have been taken:
    - The applicant has 24 hours to notify the NAHC, who should, in turn, notify the person identified as the proper descendant of any human remains. Under existing law, the descendant then has 24 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery.
    - If the NAHC is unable to identify a descendant or if the descendant does not make recommendations within 24 hours, the applicant shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance.
    - Should the applicant not accept the descendant's recommendations, the applicant or the descendant may, under existing law, request mediation by the NAHC."

Changes to Chapter 2. Introduction

Page 2-2 of the DEIR, third paragraph is revised as follows:

"…The order affects projects such as the one proposed in this Program EIR and the anticipated Program EIR being prepared by the Department of Resources Recycling and

Recovery (CalRecycle) for anaerobic digester facilities that would use food waste, green material, and mixed solid waste as feedstocks; thus diverting these materials from landfills. CalRecycle will be analyzing the development and operation of AD facilities that would be sited at solid waste facilities and in industrial areas. The CalRecycle Program EIR will not cover AD facilities sited at dairies and other agricultural areas."

Page 2-4 of the DEIR, the sixth bullet is revised as follows:

"General Order Dairies with manure only digesters using only manure generated by onsite animals will remain under the Dairy General Order but may, if required, submit a ~~Notice of Intent~~ Report of Waste Discharge seeking coverage under a dairy digester G~~eneral~~ O~~rder~~ or Individual WDRs."

Changes to Chapter 3. Program Description

Page 3-2 of the DEIR, the first sentence of the first paragraph is revised as follows:

"Liquid and solid digestate application to land is considered to be a "discharge of waste" ~~to waters of the state~~, as defined in the Porter-Cologne Water Quality Act."

Page 3-3 of the DEIR, the second sentence of the fourth paragraph is revised as follows:

"Based on calculations developed by Krich, it is ~~It has been~~ estimated that the ~~estimates dairies~~ 1.6 million cows in Region 5 could potentially generate approximately ~~14~~ 13 billion cubic feet of methane per year through manure only anaerobic digestion, which would correspond to ~~140~~ 130 megawatts of ~~annual~~ electrical capacity (Krich, et al., 2005)[2]."

Page 3-6 of the DEIR, the second, third, and fourth paragraphs have been revised as follows:

"Dairies in Region 5 employ manure handling practices as a matter of manure management and general animal husbandry. Manure handling practices include: vacuuming, dry scrape, flush, or some combination of the ~~two~~ three. Each of these manure collection methods may be employed to some degree on specific areas of most dairies, and in some cases may be substituted for each other as conditions warrant. ~~Dry scrape operations occur at dairies where stock are housed in open corrals and manure is scraped from the corrals several times during the year. Stormwater runoff and process wastewater generated within the milk barn at these facilities are piped directly to the wastewater retention system.~~

Dairy cows are generally housed in two different types of housing. In freestall housing the cows lay in areas that are partitioned to orient them in a specific direction to ease in manure collection and provide a clean, dry place to lie. There are paved lanes where the cows stand to eat and lanes used to access the freestall resting areas. At freestall dairies, most of the animal manure is deposited on the concrete lanes. Freestall facilities often have exercise pens where the cows can go during good weather. Cows are also housed in open lot corrals with or without shades. Open lot corrals also have a paved feed lane

where the cows stand to eat. At open lot dairies, most of the animal manure is deposited in the corrals.

Manure from the paved lanes at both freestall facilities and open lot facilities can be collected by scrape, vacuum or flush systems or a combination of the three. Manure from the open lot corrals and exercise pens is scraped several times during the year and handled as a dry material. When flushing is used, the lanes are flushed daily with process wastewater from the milk barn and recycled wastewater from the wastewater retention system. Stormwater may be routed through the flush system or piped directly to the wastewater retention system depending on the dairy.

~~Flush operations occur at dairies that house their stock in flushed free stalls and allow only intermittent access to open loafing pens. At flush dairies, most of the animal waste is deposited on concrete flush lanes, which are flushed with process wastewater from the milk barn and recycled wastewater from the wastewater retention system. Stormwater is routed through the flush system into the wastewater retention system. Flush manure management practices tend to occur at newer larger dairies.~~

~~Dairies that employ both dry scrap and flush are dairies that house their herds in open corrals with flushed concrete lanes designed to capture manure deposited while the cows are eating. At these facilities, the corrals are scraped several times a year while the lanes are flushed daily with process wastewater from the milk barn and recycled wastewater from the wastewater retention system. Stormwater is routed through the flush system or piped directly to the wastewater retention system.~~"

Page 3-10 of the DEIR, the environmental and economic benefits have been revised as follows:

"AD facilities at dairies provide a number of potentially environmental and economic benefits (Burke, 2001), which are summarized below. Environmental benefits are currently understood to include, but are not limited to:

- Reduction in the mass of solid wastes;
- Generation of ~~clean~~ liquid effluent that can be blended with irrigation water for irrigation and fertilization of crops, or recycled water use;
- Concentration of nutrients in condensed solid for export or storage when AD process includes solids separation;
- Reduction of pathogens in the solid and liquid waste;
- Reduction in GHG emissions;
- Generation of renewable energy from the biogas;
- Diversion of organic materials (for co-digestion systems) from sewer systems and landfills to generate biogas, soil amendments and compost;
- Reduction or elimination of odors associated with waste products; and

- Reduction in flies.

The economic benefits of AD facilities at dairies include, but are not limited to:

- Diversion of organic materials from sewer systems and landfills;
- Time needed to move, handle, and process manure is reduced;
- Biogas can be used for energy recovery;
- Waste heat can be used to meet the heating and cooling requirements of the dairy;
- Concentration of nutrients through solids separation generates a high nutrients soil amendment, which can be sold to the public, nurseries, or other agricultural facilities;
- Reduction in the mass of solid waste also reduces the amount of export needed;
- Income can be obtained from the processing of imported food or agricultural wastes for co-digestion (tipping fees), the sale of organic fertilizer, potential GHG credits, and the sale of energy generated by biogas processing;
- Energy tax credits may be available for power produced;
- Greenhouse gas tax credits may be available for each ton of carbon reduction; and
- Other federal and State incentives available now or in the future related to generation of renewable energy and reduction of GHG emissions."

Page 3-10 of the DEIR, the footnote is revised as follows:

"As described in Section 4.3 'General Order Dairies with manure only digesters using only manure generated by onsite animals will remain under the Dairy General Order but may, if required, submit a Report of Waste Discharge~~Notice of Intent~~ seeking coverage under a dairy digester GO or Individual WDRs.'"

Page 3-11 of the DEIR, second paragraph is revised as follows:

"***Centralized Locations***

There are two categories of centralized location facilities for dairies that will be assessed in this Program EIR: (1) Central AD Facility, whereby individual dairies would collect manure and transport the manure by pipeline or truck to a central facility; and (2) a Central Biogas Clean-Up Facility, whereby raw biogas from individual dairies (including dairies linked via underground gas pipelines) is piped to a central facility. These types of centralized facilities may be sited on or off-site of dairies. For both location options, the central facility would have the potential to receive manure, manure plus co-digestion substrate, and/or raw biogas. Biogas at centralized facilities could be used to generate electricity using internal combustion engines/turbines or fuel cells or used for boilers, transportation fuel, or for utility pipeline injection."

Page 3-11 of the DEIR, Section 3.4.2 is revised as follows:

"In addition to the total number of cows at a dairy, specific ~~dairy operations affect the amount and quality of manure that are processed~~ operational variables at a dairy affect the amount

and quality of manure that are processed at a dairy digester. Operational variables include, but are not limited to, animal housing, manure transport, manure pre-processing, animal bedding, and stormwater management (Burke, 2001). In regards to animal housing, free stall barns provide greater manure collection and quality compared to corral or open lot facilities. Manure handling practices which affect the dilution of waste include: vacuuming, dry scrape, flush, or some combination of the three. ~~A flush system for manure transport, which affects the dilution of waste, would require larger AD facilities than if the manure were collected using a scrape or vacuum system.~~ For manure pre-processing, the removal of organic solids through screening and sedimentation would reduce the amount of biomass available to undergo biogas conversion through AD…"

Page 3-11 of the DEIR, the fourth sentence of the last paragraph is revised as follows:

"Co-digestion substrates can increase the electrical capacity of a proposed system by ~~a magnitude~~ two to five times or greater than that of dairy manure alone (ECOregon, 2010)."

Page 3-11 of the DEIR, the last sentence of the last paragraph is revised as follows:

"Co-digestion is considered to be ~~essential~~ an important element for dairy digester project financial viability (ECOregon, 2010)."

Page 3-12 of the DEIR, the second sentence of the fourth paragraph is revised as follows:

"…The lagoons are covered by an ~~floating,~~ impermeable cover that captures the biogas generated by AD…"

Page 3-16 of the DEIR, the schematic for Alternative 1: Raw Combustion in Internal Combustion (IC) Engine or Flare is revised as follows:

Page 3-16 of the DEIR, last paragraph is revised as follows:

"…The separated solids and liquids would then be applied pursuant to the applicable nutrient management plan. As an example, the solids could be used for land application, compost, fertilizer, or potentially landfill alternative daily cover and the liquid portion of the effluent could be recycled for flush water, used for land application, or at a centralized facility it could potentially be sent to a sanitary sewer. If a landfill operator proposes to use the

solid digestate as Alternative Daily Cover (ADC), a site-specific demonstration project would be required in compliance with Title 27 Section 20690(b)."

Page 3-17 of the DEIR, Section 3.5.3 is revised as follows:

"Development of AD facilities ~~will~~may require the construction of various supporting infrastructure including, but not limited to, lined waste storage ponds and/or upgrades to existing dairy ponds, pipelines for transporting effluent to ~~disposal fields~~cropland, bypass valves, and ~~processes for~~ stormwater management facilities."

Page 3-18 of the DEIR, Table 3-2, first row under the "State Permits/Approvals" heading is revised as depicted in the following excerpt:

TABLE 3-2
PERMITS AND APPROVALS POTENTIALLY NEEDED FOR PROGRAM IMPLEMENTATION OF MANURE DIGESTER AND CO-DIGESTION FACILITIES

Permit	Permitting Authority	Potentially Affected Resources
State Permits/Approvals		
Composting Permit or, Transfer Processing Permit	Local Enforcement Agency; with concurrence required by the California Department of Resources Recycling and Recovery (CalRecycle)	Incoming co-digestion substrates

Changes to Chapter 4. Approach to Environmental Analysis

Page 4-2 of the DEIR, the sixth bullet is revised as follows:

- "General Order Dairies with manure only digesters using only manure generated by onsite animals will remain under the Dairy General Order but may, if required, submit a ~~Notice of Intent~~ Report of Waste Discharge seeking coverage under a dairy digester G~~eneral~~ O~~rder~~ or Individual WDRs."

Page 4-7 of the DEIR, the bullet list is revised as follows:

- "Competitive electricity and renewable natural gas/biomethane prices;
- Increased demand for new energy sources;
- Increased demand for local renewable energy sources;
- Increased incentives for co-digester facilities;
- Improvements in dairy digester technologies; and
- Public financial support or the development of profitable business models; or

- Governmental measures (e.g., regulatory or otherwise) that incentivize the development of dairy digesters. ~~Regulations that require the development of energy-producing dairy digester facilities for specified dairies.~~"

Page 4-7 of the DEIR, the next to last sentence is revised as follows, including deletion of the footnote:

> "~~Potentially,~~ Based on calculations developed by Krich, it is estimated that the 1.6 million cows ~~dairies~~ in Region 5 could potentially generate approximately ~~14.6~~ 13 billion cubic feet of methane per year through manure only anaerobic digestion, which would correspond to ~~140~~ 130 megawatts[3] of ~~annual~~ electrical capacity (Krich, et al., 2005)."
>
> "~~[3] This was based on an estimate of 1.7 million cows.~~"

Page 4-8 of the DEIR, Table 4-1 is revised as follows:

TABLE 4-1
EXISTING DAIRY DIGESTERS IN CALIFORNIA

Facility	Digester Type	Biogas End Use(s)	Operational Status
Blakes Landing Dairy	Covered Lagoon	Electricity	Operational
Bob Giacomini Dairy	Covered Lagoon	Cogeneration	Operational
Bullfrog Dairy	Covered Lagoon	Electricity	Operational
~~Cal Poly Dairy~~	~~Covered Lagoon~~	~~Electricity~~	~~Not Operating~~ Digester removed
CAL-Denier Dairy	Covered Lagoon	Electricity	Operational
Castelanelli Bros. Dairy	Covered Lagoon	Electricity	Operational
CottonWood Dairy	Covered Lagoon	Cogeneration; Boiler/Furnace Fuel	Operational
Edenvale Dairy	Horizontal Plug Flow	Electricity	Not Operating
Fiscalini Farms	Complete Mix	Cogeneration	Operational
Hilarides Dairy	Covered Lagoon	Electricity; Vehicle Fuel	Operational
Inland Empire Utilities Agency - Reg Plant 5	Horizontal Plug Flow; Complete Mix	Electricity	Not Operating
Koetser Dairy	Horizontal Plug Flow	Electricity	Not Operating
Langerwerf Dairy	Horizontal Plug Flow	Cogeneration	Operational
Lourenco Dairy	Covered Lagoon	~~Flared Full Time~~ Electricity	Not Operating
Meadowbrook Dairy	Horizontal Plug Flow	Electricity	Operational
St. Anthony Dairy	Covered Lagoon	Cogeneration	Not Operating
~~Strauss Family Dairy~~	~~Covered Lagoon~~	~~Cogeneration~~	~~Operational~~ Same as Blakes Landing
Tollenaar Holsteins Dairy	Complete Mix	Cogeneration; Boiler/Furnace Fuel	Operational
Van Ommering Dairy	Horizontal Plug Flow	Electricity	~~Operational~~ Not Operating
~~Van Warmerdam Dairy~~	~~Unknown~~	~~Electricity~~	~~Operational~~ Never Built
Vintage Dairy	Covered Lagoon	Pipeline Gas	Not Operating

SOURCE: Western United Dairymen, 2010

Changes to Chapter 5. Hydrology and Water Quality

Page 5-11 of the DEIR, the second sentence of the third paragraph is revised as follows:

> "The region is bound on the north by the Delta, the east by the Sierra Nevada, the west by the Diablo Range and the south by the ~~Tehachapi Mountains~~San Joaquin River."

Page 5-18 of the DEIR, the second sentence of the second paragraph is revised as follows:

> "Toxicity ~~increases~~ decreases as pH decreases and as temperature decreases."

Page 5-27 of the DEIR, the first sentence of the bottom paragraph is revised as follows:

> "The Central Valley Water Board is responsible for establishing and implementing the Basin Plans for the Sacramento, and San Joaquin Rivers, and the Tulare Lake Basin."

Page 5-28 of the DEIR, the third sentence of the fourth paragraph is revised as follows:

> "In particular, the purpose of this policy is to protect~~s~~ water bodies where existing quality is higher than necessary for the protection of beneficial uses."

Page 5-29 of the DEIR, the second sentence of the second paragraph is revised as follows:

> "The Plan will serve as the basis for amendments to the three Basin Plans that cover the Central Valley Region (Sacramento River and San Joaquin River Basin Plan, the Tulare Lake Basin Plan and the ~~Sacramento/San Joaquin Rivers Bay-Delta Plan~~San Francisco Bay Basin Water Quality Control Plan)."

Page 5-35 of the DEIR, Mitigation Measure 5.2, first bullet is revised as follows:

> "Prohibitions against any surface water discharges (unless exempt from NPDES permitting requirements or covered by separate NPDES permit),"

Page 5-35 of the DEIR, Mitigation Measure 5.2, seventh bullet is revised as follows:

> "Requirements for tailwater return systems or other effective methods to minimize offsite discharges;"

Page 5-36 of the DEIR, the second paragraph is revised as follows:

> "Based on a study conducted by J.L. Meyer in 1973, ~~"reasonable"~~ salt loading rates ~~under normal situations~~ of no more than 2,000 pounds per acre for single-cropped land and 3,000 pounds per acre for double-cropped land may help ~~were determined to help~~ prevent the vertical migration of salts within the soil profile (Meyer, 1973 as cited in RWQCB, 2008). ~~Unless environmental conditions show differently, "reasonable" is~~

~~accepted to be a maximum annual non-nitrate salt loading rate of 2,000 pounds per acre for single-cropped land and 3,000 pounds per acre for double-cropped land.~~"

Page 5-36 of the DEIR, the beginning of the last paragraph is revised as follows:

"The amount of salt that is contained in digester effluent depends on the substrate that is input into the digester. The digestion process neither adds nor reduces the total salt content of the substrate that it processes, but simply passes salt from the substrate through to the digester effluent. For every unit of salt that is fed into a digester from dairy wastes or other substrates, that same unit of salt is released from the digester in its solid and liquid effluent which may be managed separately……"

Page 5-37 of the DEIR, numbers 3 and 4 at the top of the page, are revised as follows:

3. Centralized digesters that serve~~ing~~ one or more dairies and are located on or off-site of~~from~~ a dairy, which ~~that are~~ accept~~ing~~ manure substrate only (*manure only*); and
4. Centralized digesters that serve~~ing~~ one or more dairies~~,~~ and are located on or off-site of a dairy, which accept~~ing~~ additional non-dairy waste co-digestion substrates (*manure plus other substrates*).

Page 5-37 of the DEIR, the third paragraph is revised as follows:

"**Centralized digesters serving one or more dairies (*manure only*).** Centralized dairy digester facilities ~~located offsite~~ that treat only dairy waste from two or more dairies, would also result in the release of salts in digester effluent."

Page 5-37 of the DEIR, the fourth paragraph is revised as follows:

"**Centralized digesters serving one or more dairies (*manure plus other substrates*).** Centralized ~~For off-site~~ digesters that also accept an additional or supplemental co-digestion substrate, all of the salt contained in that additional co-digestion substrate would be processed through the digester, and would be released as digester effluent."

Page 5-39 of the DEIR, the first sentence of the last paragraph is revised as follows:

"**Pathogens**

Pathogens including bacteria, viruses, and parasites most commonly associated with ~~diary~~dairy manure include cryptosporidium, E. Coli 0157, and salmonella."

Page 5-41 of the DEIR, the third bullet is revised as follows:

"In ground ~~digester tanks~~vessel (e.g., lagoon, pond, tank, etc.),"

Page 5-42 of the DEIR, Mitigation Measure 5.3, first bullet is revised as follows:

> "Prepare and implement site-specific Salt Minimization Plan (SMP) as approved by the Central Valley Water Board. The SMP shall consider the elimination, decommissioning, or the reduction in use of regenerative water softeners on process water distribution networks or, alternatively, evaluate and install alternate technology that reduces or eliminates on-site brine disposal;"

Page 5-42 of the DEIR, Mitigation Measure 5.3, second bullet is revised as follows:

> "Prepare and implement a site-specific NMP that incorporates analytical data for soils, wastewater, manure, digester solids, groundwater and/or surface water supply. The required analytical data is to be generated by a site-specific monitoring and reporting program. In the case of groundwater, data from an approved representative groundwater monitoring program may be substituted for some or all site-specific groundwater monitoring, if appropriate. The NMP will be reconciled annually based on results of the monitoring and reporting program and site-specific measurements of agronomic rates; ~~includes a soils and groundwater monitoring and reporting program that include a variety of waste constituents, as well as yearly reconciliation based on sampling results that measure agronomic rates;~~"

Page 5-42 of the DEIR, Mitigation Measure 5.3, fourth bullet is revised as follows:

> "~~Prohibit, decommission, or reduce use of regenerative water softeners on process water distribution networks or, alternatively, evaluate and install alternate technology that reduces or eliminates on-site brine disposal;~~"

Page 5-42 of the DEIR, Mitigation Measure 5.3, 13th bullet is revised as follows:

> "Perform vector control and ~~Develop and implement a vector attraction~~ reduction ~~plan~~;"

Page 5-42 of the DEIR, Mitigation Measure 5.3, 14th bullet is revised as follows:

> "Monitor ~~digestate, and~~ groundwater for pathogen indicator organisms;"

Page 5-42 of the DEIR, Mitigation Measure 5.3, 15th bullet is revised as follows:

> "Require that solid wastes be stored on ~~impermeable~~ surfaces designed in accordance with a site-specific Waste Management Plan prepared for the facility by an appropriate California registered professional in accordance with WDR requirements;"

Page 5-42 of the DEIR, Mitigation Measure 5.3, 16th bullet is revised as follows:

> "Maintain a neutral or alkaline pH for dairy digestate waste water applied to cropland unless conditions warrant otherwise as detailed in the NMP;"

Page 5-42 of the DEIR, Mitigation Measure 5.3, 17th bullet is revised as follows:

> "Prohibit hazardous waste, mammalian tissues (with the exception of mammalian tissue as contained in compostable material from the food service industry, grocery stores, or residential food scrap collection), dead animals, and human waste from all discharges; and"

Page 5-43 of the DEIR, Mitigation Measure 5.3, the first sentence of the paragraph preceding the Impact Significance After Mitigation heading, is revised as follows:

> "Each facility shall prepare a site-specific ~~BPTC~~Waste Management Plan ~~plan~~ in accordance with the WDR requirements for review and approval to the Central Valley Water Board prior to commencement of operations."

Page 5-44 of the DEIR, Mitigation Measure 5.4 is revised as follows:

> "**Measure 5.4:** WDRs for digester and co-digester facilities shall include design requirements for individual or centralized anaerobic digester or co-digester facilities~~, application croplands,~~ and associated facilities to protect them from FEMA 100-year flood events. Design measures may include, but are not limited to: facility sitting, access placement, grading foundation soils above projected water elevation, and site protection."

Page 5-45 of the DEIR, the sixth sentence of the first paragraph under Impact 5.6 is revised as follows:

> "However, the operation of digesters and co-digesters, as required by Mitigation Measure 5.2, would be prohibited from discharging into surface waters unless exempt from NPDES permitting requirements or covered by a separate NPDES permit with effluent limitations to protect surface water quality."

Changes to Chapter 6. Air Quality and Greenhouse Gas Emissions

Page 6-5 of the DEIR, the fourth sentence of the first paragraph is revised as follows:

> "The term "natural greenhouse effect" refers to how greenhouse gases trap heat with the ~~system~~ surface-troposphere system; the term "enhanced greenhouse effect" refers to an increased concentration of greenhouse gases, which results in an increase in temperature of the surface-troposphere system."

Page 6-7 of the DEIR, the third sentence of the first paragraph is revised as follows:

> "Anthropogenic sources of nitrous oxide include fertilizer application, production of nitrogen fixing crops~~, nitric acid production~~, animal manure management, sewage treatment, combustion of fossil fuels, and nitric acid production (CAT, 2006; CAPCOA, 2009)."

Page 6-24 of the DEIR, Mitigation Measure 6.1b, the fifth bullet is revised as follows:

> "Maintain all equipment in proper working condition according to manufacturer's specifications. ~~The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.~~"

Page 6-27 of the DEIR, Mitigation Measure 6.3b is revised as follows:

> "**Measure 6.3b:** AD facilities that handle compostable material and are classified as a compost facility must develop an Odor Impact Minimization Plan (OIMP) pursuant to 14 CCR 17863.4. Otherwise, a~~A~~pplicants shall implement a~~n~~ site-specific Odor Management Plan (OMP) as part of each application submitted to establish digester and co-digester facilities under the waste discharge regulatory program. The OMP will specifically address odor control associated with digester operations and will include:
>
> - A list of potential odor sources.
> - Identification and description of the most likely sources of odor.
> - Identification of potential, intensity, and frequency of odor from likely sources.
> - A list of odor control technologies and management practices that could be implemented to minimize odor releases. These management practices shall include the establishment of the following criteria as appropriate:
> - Establish time limit for on-site retention of undigested odiferous co-substrates (i.e., organic co-substrates must be put into the digester within 48 hours of receipt).
> - Provide negative pressure buildings for indoor unloading of odiferous co-digestion substrates. Treat collected foul air in a biofilter or air scrubbing system.
> - Establish contingency plans for operating downtime (e.g., equipment malfunction, power outage).
> - Manage delivery schedule to facilitate prompt handling of odorous co-substrates.
> - Modification options for land application practices if land application of digestate results in unacceptable odor levels.
> - Protocol for monitoring and recording odor events.
> - Protocol for reporting and responding to odor events."

Page 6-29 of the DEIR, Mitigation Measure 6.4c is revised as follows:

> "**Measure 6.4c:** H_2S contained in the biogas shall be ~~scrubbed~~ controlled before emission to air can occur."

Changes to Chapter 7. Land Use and Agricultural Resources

Page 7-9 of the DEIR, Mitigation Measure 7.4 is revised as follows:

> "**Measure 7.4:** Whenever feasible, project related facilities off-site ~~project related facilities~~of a dairy should not be sited on Important Farmland as defined by the California Department of Conservation's Farmland Mapping and Monitoring Program."

Changes to Chapter 8. Transportation and Traffic

Page 8-10 of the DEIR, Mitigation Measure 8.5a is revised as follows:

> "**Measure 8.5a:** Prior to construction, for installation of pipelines in existing roadways, the project sponsor will coordinate with the appropriate local government departments, Caltrans, and utility districts and agencies regarding the timing of construction projects that would occur near project sites. Specific measures to mitigate potential significant impacts will be determined as part of the interagency coordination, and could include measures such as employing flaggers during key construction periods, designating alternate haul routes, and providing more outreach and community noticing."

Changes to Chapter 9. Biological Resources

Page 9-13 of the DEIR, Mitigation Measure 9.1a is revised as follows:

> "**Measure 9.1a:** The project applicant or agency(s) responsible shall document that ~~submit~~ ~~, as part of the NOI,~~ a site assessment report for dairy digester and co-digester facilities to be constructed (including the location of digestate application) has been submitter to CDFG for its review. ~~in areas that contain undisturbed land and/or any agricultural fields that have been fallow for more than 1 year~~. This report shall be prepared by a qualified biologist. It shall evaluate the project site's potential to support special-status plant and wildlife species (including critical habitat) and whether special-status species could be affected by dairy digester and co-digester development, including construction and operations. If there are no special-status species or critical habitat present, no additional mitigation would be required."

Page 9-14 of the DEIR, Mitigation Measure 9.2a is revised as follows:

> **"Measure 9.2a:** The project applicant or agency(s) responsible shall submit~~, with the NOI,~~ a site assessment report prepared by a qualified biologist that determines if the project is likely to affect biologically unique or sensitive natural communities. This information could be included in the report prepared under Mitigation Measure 9.1a. If there are no biologically unique or sensitive natural communities present, no further mitigation is required. "

Page 9-14 of the DEIR, Mitigation Measure 9.3a is revised as follows:

> **"Measure 9.3a:** The project applicant or agency(s) responsible shall submit~~, with the NOI,~~ a site assessment report prepared by a qualified biologist that evaluates if the project is likely to affect waters of the State and/or U.S., including wetlands. This information could be included in the report prepared under Mitigation Measure 9.1a. If there are no waters present, no further mitigation would be required."

Page 9-16 of the DEIR, the Impact 9.6 discussion is revised as follows:

> "While it is not expected that implementation of the project would lead to conversion of habitat to dairy farms, the project could facilitate additional development such as centralized facilities and associated pipelines, near dairies that would incrementally deplete native habitats and other biological resources. Most of the dairy digester and co-digester facilities would be constructed on, or in proximity to, existing dairies, on land that is unlikely to support sensitive biological resources. However, centralized facilities and associated pipelines that could be constructed on land not currently in active agricultural use could affect biological resources. In combination with other development in the project area, this conversion of potential habitat land represents a significant cumulative impact."

Changes to Chapter 10. Hazards and Hazardous Materials

Page 10-9 of the DEIR, Mitigation Measure 10.1 is revised as follows:

> "**Mitigation Measure 10.1:** Prior to final project design and any earth disturbing activities, the applicant or agency(s) responsible shall conduct a standard "Phase I Type" electronic record search. If no incidents are identified within a quarter mile of the construction area, standard construction practices can be implemented. If the record search identifies soil or water quality contamination open cases within a quarter mile of the construction area, a ~~Site Assessment. The~~ Phase I Environmental Site Assessment (ESA) shall be prepared by a Registered Environmental Assessor (REA) or other qualified professional to assess the potential for contaminated soil or groundwater conditions at the project site; specifically in the area proposed for construction of dairy digester or co-digester facilities…"

Page 10-10 of the DEIR, the Impact Significance After Mitigation discussion for Impact 10.1 is revised as follows:

> "**Impact Significance After Mitigation:** Less than Significant
>
> Mitigation Measure 10.1 requires ~~preparation of a~~ Phase I ESA record reviews to identify the potential for known soil or groundwater contamination on or in the vicinity of proposed construction of dairy digester or co-digester facilities…"

Changes to Chapter 12. Cultural Resources

Starting on page 12-18 of the DEIR, Mitigation Measures 12.1a and 12.1b have been modified to make them more straight forward and completely replace those included in the DEIR, as follows:

> **"Measure 12.1a:** In order to determine whether a project may cause a significant impact to cultural resources, and therefore, have an adverse effect on the environment, the Central Valley Water Board shall require each application submitted for a discharge permit for a digester or co-digester facility to identify the project's potential impacts to cultural resources.
>
> Prior to ground-disturbing activities, the project applicant shall retain a qualified archaeologist to (1) conduct a record search at the appropriate information center of the California Historical Resources Information System (CHRIS) to determine whether the project area has been previously surveyed and whether cultural resources were identified; and (2) request a sacred lands search from the NAHC. The results of the record search and sacred lands search shall be included in the Cultural Resources Inventory Report provided to the Central Valley Water Board.
>
> In the event the CHRIS records search indicates that no previous survey has been conducted, the qualified archaeologist shall recommend whether a survey is warranted to satisfy the requirements of CEQA based on the sensitivity of the project area for cultural resources. If, for example, the existing dairy or agricultural land proposed for establishment of a digester or co-digester facility was constructed entirely on fill, as shown by original and final contour drawings, a surface survey for archaeological resources would not be warranted. Similarly, a surface survey may not be warranted if the project area has been extensively disturbed by dairy or agricultural use.
>
> For projects that constitute federal undertakings, as described in the Federal Agencies section of the Introduction (Chapter 2), the cultural resources study shall be prepared in accordance with Section 106 of the NHPA. The cultural resources study and inclusive mitigation measures shall form the basis for the cultural resources component of the project-level environmental documentation prepared for the project under Section 106.
>
> If the survey, CHRIS record search, or NAHC search indicate cultural resources are located within a project area, the Cultural Resources Inventory Report shall include an assessment of the significance of the resources according to applicable federal, state, and local significance criteria. If the cultural resources are determined significant historical resources, the Lead Agency (usually the Central Valley Water Board) must review and approve the applicant's proposed treatment measures to ameliorate any "substantial adverse change" in the significance of each historical resource, in consultation with a qualified archaeologist or architectural historian, and other concerned parties. Treatment measures may include preservation through avoidance or project redesign, incorporation within open space or conservation easements, data recovery excavation of archaeological resources, formal documentation of built environment resources, public interpretation of the resource, or

other appropriate treatment, and may be described in a project-level Cultural Resources Mitigation Plan included in the Cultural Resources Inventory Report to be approved by the Lead Agency.

Should the project area contain standing, built environment resources now 50 years of age, a qualified architectural historian shall be retained to evaluate the integrity and significance of the resource(s) unless the building(s) or structure(s) were covered in the existing survey report and determined not significant according to applicable federal, state, and local criteria. The results of that evaluation shall be included in the Cultural Resources Inventory Report.

If cultural resources identified within a project area are neither a historical resource nor unique archaeological resource, there would be no significant effect to the environment and no further treatment of those known resources would be required.

Measure 12.1b: Inadvertent discovery measures for cultural resources shall be implemented during all construction activities within the project area. Measures shall include procedures for discovery and protection of cultural resources, including human remains, during construction or earth-disturbing activities.

Within project areas of identified archaeological sensitivity, discovery measures would include: (1) a worker education course for all construction personnel; (2) monitoring of all earth-disturbing activities by a qualified archeologist; and (3) procedures for discovery of cultural resources, including human remains, during construction or ground-disturbing activities if an archaeological monitor is not present. Monitoring by a Native American with knowledge in cultural resources may also be required, as appropriate. Monitoring within recent fill deposits or non-native soil would not be required.

All construction or ground-disturbing activities shall be halted within 100 feet of a cultural resources discovery, including human remains, whether or not a monitor is present, until a qualified professional archaeologist can evaluate the find. If the find is determined to be a significant historical resource and cannot be avoided, then impacts on that resource will require mitigation. During evaluation or mitigative treatment, ground disturbance and construction work could continue on other parts of the project area.

If known or suspected human remains are discovered, in addition to halting all construction or ground-disturbing activities within 100 feet, the following steps must be taken before construction activities may be resumed within the stop-work area:

- The County Coroner has been immediately notified and has determined that no investigation of the cause of death is required; and
- If the remains are of Native American origin, the following steps have been taken:
    - The applicant has 24 hours to notify the NAHC, who should, in turn, notify the person identified as the proper descendant of any human remains. Under existing

law, the descendant then has 24 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery.

- If the NAHC is unable to identify a descendant or if the descendant does not make recommendations within 24 hours, the applicant shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance.
- Should the applicant not accept the descendant's recommendations, the applicant or the descendant may, under existing law, request mediation by the NAHC.

Changes to Chapter 14. Noise

Page 14-10 of the DEIR is revised as follows:

> "… During these times, outdoor activities at the affected residences would be negatively affected by noise and indoor activities (typically 20 to 25 ~~20~~ dBA quieter than outdoor noise levels) could be negatively affected…"

Appendix A

Mitigation Monitoring and Reporting Plan

ESA

MITIGATION MONITORING AND REPORTING PLAN

Impact	Mitigation Measure	Responsibility for Compliance	Method for Compliance	Timing of Compliance
5. Hydrology and Water Quality				
Impact 5.2: Digester and co-digester development could adversely affect surface waters.	**Measure 5.2:** WDRs for digester and co-digester facilities shall include design and operational requirements to manage all wastes and discharges to protect surface waters. Requirements shall include the following: • Prohibitions against any surface water discharges (unless exempt from NPDES permitting requirements or covered by separate NPDES permit), • Prohibitions against any discharges that would cause exceedance of surface water quality objectives, • Setbacks from surface water bodies • Drainage requirements for co-digestion substrates/waste storage/receiving/handling areas to drain to on-site wastewater retention ponds, • Lining requirements for retention ponds in new facilities and operational dairies, • Monitoring requirements that include sampling data of soils, retention water, and waste streams to reconcile annually with Nutrient Management Plan (NMP), • Requirements for tailwater return systems or other effective methods to minimize offsite discharges; • Prohibitions against any unreasonable effects on beneficial uses of nearby surface waters.	Applicant	Submit a site specific Facility Information Report (FIR) describing the waste discharge and containing sufficient information to demonstrate that the discharger can comply with Mitigation Measure 5.2.	RWD Review
		CVRWQCB	Review FIR for completeness.	RWD Review
		Applicant	Comply with water quality permit conditions for digester and co-digester facilities.	Operations
		CVRWQCB	Enforce water quality permit conditions for digester and co-digester facilities.	Operations
Impact 5.3: Digester and co-digester development could adversely affect groundwater quality.	**Measure 5.3:** WDRs for the discharge to land from dairy digester and co-digester facilities shall include the following BPTC requirements or equivalent: • Prepare and implement site-specific Salt Minimization Plan (SMP) as approved by the Central Valley Water Board. The SMP shall consider the elimination, decommissioning, or the reduction in use of regenerative water softeners on process water distribution networks or, alternatively, evaluate and install alternate technology that reduces or eliminates on-site brine disposal; • Prepare and implement a site-specific NMP that incorporates analytical data for soils, wastewater, manure, digester solids, groundwater and/or surface water supply. The required analytical data is to be generated by a site-specific monitoring and reporting program. In the case of	Applicant	Submit a site specific FIR describing the waste discharge and containing sufficient information to demonstrate that the discharger can comply with Mitigation Measure 5.3.	RWD Review
		CVRWQCB	Review RWD for completeness.	RWD Review
		Applicant	Comply with water quality permit conditions for digester and co-digester facilities.	Operations
		CVRWQCB	Enforce water quality permit conditions for digester and co-digester facilities.	Operations

LEA – Lead Enforcement Agency NAHC – Native American Heritage Commission CVRWQCB – Central Valley Regional Water Quality Control Board RWD – Report of Waste Discharge

FIR – Facility Information Report

MITIGATION MONITORING AND REPORTING PLAN

Impact	Mitigation Measure	Responsibility for Compliance	Method for Compliance	Timing of Compliance
	groundwater, data from an approved representative groundwater monitoring program may be substituted for some or all site-specific groundwater monitoring, if appropriate. The NMP will be reconciled annually based on results of the monitoring and reporting program and site-specific measurements of agronomic rates; • Require all drainage be directed to a retention wastewater pond that has been designed to meet antidegradation provisions of Resolution 68-16 by an appropriately licensed professional; • To the extent practicable, use crops that maximize salt uptake; • Apply liquid digestate consistently with crop water uptake rates; • Prohibit hazardous substances in co-digestion substrates processed by each facility as verified by laboratory analytical testing; • Apply digestate at an approved rate commensurate with agronomic rate; • Properly time application of digestate in accordance with crop requirements; • Avoid excess irrigation; • Maintain cover crops and vegetative buffer zones; • Develop co-substrate acceptance criteria; • Perform vector control and reduction; • Monitor groundwater for pathogen indicator organisms; • Require that solid wastes be stored on surfaces designed in accordance with a site-specific Waste Management Plan prepared for the facility by an appropriate California registered professional in accordance with WDR requirements; • Maintain a neutral or alkaline pH for dairy digestate waste water applied to cropland unless conditions warrant otherwise as detailed in the NMP; • Prohibit hazardous waste, mammalian tissues (with the exception of mammalian tissue as contained in compostable material from the food service industry, grocery stores, or residential food scrap collection), dead animals, and human			

LEA – Lead Enforcement Agency NAHC – Native American Heritage Commission CVRWQCB – Central Valley Regional Water Quality Control Board RWD – Report of Waste Discharge

FIR – Facility Information Report

MITIGATION MONITORING AND REPORTING PLAN

Impact	Mitigation Measure	Responsibility for Compliance	Method for Compliance	Timing of Compliance
	waste from all discharges; and • Incorporate lined digester and co-digestion substrate storage facilities that meet the antidegradation provisions of Resolution 68-16, as relevant, into project design in order to prevent groundwater contamination with salts, nutrients, and other constituents. Each facility shall prepare a site-specific Waste Management Plan in accordance with the WDR requirements for review and approval to the Central Valley Water Board prior to commencement of operations. Annual monitoring reports shall be reviewed by the Central Valley Water Board and any revisions deemed necessary to the handling, storage, or land application of wastes shall be incorporated into facility operations.			
Impact 5.4: Development of dairy digester and co-digester facilities could be exposed to flooding hazards.	**Measure 5.4:** WDRs for digester and co-digester facilities shall include design requirements for individual or centralized anaerobic digester or co-digester facilities and associated facilities to protect them from FEMA 100-year flood events. Design measures may include, but are not limited to: facility sitting, access placement, grading foundation soils above projected water elevation, and site protection.	Applicant	Submit a site specific FIR describing the waste discharge and containing sufficient information to demonstrate that the discharger can comply with Mitigation Measure 5.4.	RWD Review
		CVRWQCB	Review FIR for completeness.	RWD Review
		Applicant	Comply with water quality permit conditions for digester and co-digester facilities.	Operations
		CVRWQCB	Enforce water quality permit conditions for digester and co-digester facilities.	Operations
Impact 5.6: Development of dairy digester and co-digester facilities could contribute to cumulative impacts to water quality.	**Measure 5.6:** Implement Mitigation Measures 5.2, 5.3 and 5.4.	Applicant	Implement Mitigation Measures 5.2, 5.3, and 5.4.	On-going
6. Air Quality and Greenhouse Gas Emissions				
Impact 6.1: Construction of dairy digester and co-digester facilities within Region 5 would generate short-term emissions of criteria air pollutants: ROG, NOx, CO, SO_2, PM10, and PM2.5 that could contribute to existing nonattainment conditions and further degrade air quality.	**Measure 6.1a:** Applicants shall prepare and submit an Air Quality Technical Report as part of the environmental assessments for the development of future dairy digester or co-digester facilities on a specific project-by-project basis. The technical report shall include an analysis of potential air quality impacts (including a screening level analysis to determine if construction and operation related criteria air pollutant emissions would exceed applicable air district thresholds, as well as any health risk associated with TACs from all dairy digester or co-digester facility sources) and reduction measures as necessary associated with	Applicant	Submit Air Quality Technical Report.	RWD Review
			Implement Construction Agreement with Air Quality BMPs.	Pre-construction
		Local Air District	Enforce construction and operational air quality rules and regulations (including Regulation VIII in SJVAPCD).	Construction and Operations

LEA – Lead Enforcement Agency NAHC – Native American Heritage Commission CVRWQCB – Central Valley Regional Water Quality Control Board RWD – Report of Waste Discharge

FIR – Facility Information Report

MITIGATION MONITORING AND REPORTING PLAN

Impact	Mitigation Measure	Responsibility for Compliance	Method for Compliance	Timing of Compliance
	digester developments through the environmental review process. Preparation of the technical report should be coordinated with the appropriate air district and shall identify compliance with all applicable New Source Review and Best Available Control Technology (BACT) requirements. The technical report shall identify all project emissions from permitted (stationary) and non-permitted (mobile and area) sources and mitigation measures (as appropriate) designed to reduce significant emissions to below the applicable air district thresholds of significance, and if these thresholds cannot be met with mitigation, then the individual digester project could require additional CEQA review or additional mitigation measures. **Measure 6.1b:** Applicants shall require construction contractors and system operators to implement the following Best Management Practices (BMPs) as applicable during construction and operations: • Facilities shall be required to comply with the rules and regulations from the applicable AQMD or APCD. For example, development of dairy digester and co-digester facilities in the SJVAPCD jurisdiction shall comply with the applicable requirements of Regulation VIII (Fugitive PM10 Prohibitions) and Rule 9510 (Indirect Source Review). • Use equipment meeting, at a minimum, Tier II emission standards, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations. • Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes (as required by the state airborne toxics control measure [Title 13, §2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site. • Comply with state regulations to minimize truck idling. • Maintain all equipment in proper working condition according to manufacturer's specifications. • Use electric equipment when possible. • Payment into an AQMD or APCD operated Voluntary Emission Reduction Agreement (VERA). • Incorporate fuel cells where feasible as an alternative to internal combustion engines, which generate NOx emissions, to generate energy from the biogas produced at	CVRWQCB	Confirm submittal of Air Quality Technical Report to Local Air District.	Pre-construction

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	dairy digester and co-digester facilities. • Where feasible as an alternative to internal combustion engines, which generate NOx emissions, use biogas from dairy manure digester and co-digester projects as a transportation fuel (compressed biomethane) or inject biomethane into the utility gas pipeline system.			
Impact 6.2: Pre-processing, digestion, and post-processing operational activities of dairy digester and co-digester facilities in Region 5 would result in emissions of criteria air pollutants at levels that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.	**Measure 6.2:** Implement Mitigation Measures 6.1a and 6.1b.	Applicant	Implement Mitigation Measure 6.1a.	On-going
Impact 6.3: Operation of dairy digester and co-digester facilities in Region 5 could create objectionable odors affecting a substantial number of people.	**Measure 6.3a:** Applicants for the development of digester facilities shall comply with appropriate local land use plans, policies, and regulations, including applicable setbacks and buffer areas from sensitive land uses for potentially odoriferous processes.	Applicant	Submit information on compliance with local plans, policies, and regulations (e.g., setback requirements) as part of Odor Impact Minimization Plan or Odor Management Plan (see Measure 6.3b).	RWD Review
		CVRWQCB	Confirm submittal of Odor Impact Minimization Plan or Odor Management Plan to Local Air District, Local Planning Department, and LEA if applicable.	RWD Review
	Measure 6.3b: AD facilities that handle compostable material and are classified as a compost facility must develop an Odor Impact Minimization Plan (OIMP) pursuant to 14 CCR 17863.4. Otherwise, applicants shall implement a site-specific Odor Management Plan (OMP) as part of each application submitted to establish digester and co-digester facilities under the waste discharge regulatory program. The OMP will specifically address odor control associated with digester operations and will include: • A list of potential odor sources. • Identification and description of the most likely sources of odor. • Identification of potential, intensity, and frequency of odor from likely sources. • A list of odor control technologies and management practices that could be implemented to minimize odor	Applicant	Submit Odor Impact Minimization Plan or Odor Management Plan to Local Air District, Local Planning Department, CVRWQCB, and LEA if applicable.	RWD Review
		CVRWQCB	Confirm submittal of Odor Impact Minimization Plan or Odor Management Plan to Local Air District, Local Planning Department and LEA if applicable.	RWD Review
		Local Air District, Local Planning Department, CVRWQCB, and LEA if applicable.	Provide feedback to applicant on Odor Impact Minimization Plan or Odor Management Plan.	RWD Review

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	releases. These management practices shall include the establishment of the following criteria as appropriate: - Establish time limit for on-site retention of undigested odiferous co-substrates (i.e., organic co-substrates must be put into the digester within 48 hours of receipt). - Provide negative pressure buildings for indoor unloading of odiferous co-digestion substrates. Treat collected foul air in a biofilter or air scrubbing system. - Establish contingency plans for operating downtime (e.g., equipment malfunction, power outage). - Manage delivery schedule to facilitate prompt handling of odorous co-substrates. - Modification options for land application practices if land application of digestate results in unacceptable odor levels. - Protocol for monitoring and recording odor events. - Protocol for reporting and responding to odor events.	Applicant Local Air District, Local Planning Department, CVRWQCB, and LEA if applicable.	Control odors from digester facilities. Review odor log books.	Operations Operations
Impact 6.4: Construction and operation of dairy digester and co-digester facilities in Region 5 could lead to increases in chronic exposure of sensitive receptors in the vicinity to certain toxic air contaminants from stationary and mobile sources.	**Measure 6.4a:** Implement Mitigation Measures 6.1a and 6.1b. **Measure 6.4b:** Based on the Air Quality Technical Report (specified in Measure 6.1a), if the health risk is determined to be significant on a project-by-project basis with DPM as a major contributor, then the applicants shall either use new diesel engines that are designed to minimize DPM emissions (usually through the use of catalyzed particulate filters in the exhaust) or retrofit older engines with catalyzed particulate filters, which will reduce DPM emissions by 85%. **Measure 6.4c:** H_2S contained in the biogas shall be controlled before emission to air can occur.	Applicant Operator Local Air District	Implement Mitigation Measures 6.1a and 6.1b. Scrub H_2S as required. Verify H_2S removal meets Local Air District Rules and Regulations.	RWD Review Operations Operations Operations
Impact 6.6: Development of dairy digester and co-digester facilities in Region 5, together with anticipated cumulative development in the area, would contribute to regional criteria pollutants.	**Measure 6.6:** Implement Mitigation Measures 6.1a and 6.1b.	CVRWQCB	Confirm compliance with Mitigation Measures 6.1, 6.2, 6.3 and 6.4.	On-going

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7. Land Use and Agricultural Resources				
Impact 7.4: Implementation of the project could result in the permanent conversion of land designated by the Department of Conservation FMMP as Prime Farmland, Farmland of Statewide Importance or Unique Farmland.	**Measure 7.4:** Whenever feasible, project related facilities off-site of a dairy should not be sited on Important Farmland as defined by the California Department of Conservation's Farmland Mapping and Monitoring Program.	Applicant	Provide documentation determining whether off-site facilities are located on Important Farmland, and in the event that an off-site facility is situated on Important Farmland the applicant will provide over-riding justification for the choice of location.	RWD Review
8. Transportation and Traffic				
Impact 8.1: Construction of dairy digester and co-digester facilities would intermittently and temporarily increase traffic levels and traffic delays due to vehicle trips generated by construction workers and construction vehicles on area roadways.	**Measure 8.1:** The contractor(s) will obtain any necessary road encroachment permits prior to installation of pipelines within the existing roadway right-of-way. As part of the road encroachment permit process, the contractor(s) will submit a traffic safety / traffic management plan (for work in the public right-of-way) to the agencies having jurisdiction over the affected roads. Elements of the plan will likely include, but are not necessarily limited to, the following: • Develop circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible. Use flaggers and/or signage to guide vehicles through and/or around the construction zone. • To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours. • Limit lane closures during peak traffic hours to the extent possible. Restore roads and streets to normal operation by covering trenches with steel plates outside of allowed working hours or when work is not in progress. • Limit, where possible, the pipeline construction work zone to a width that, at a minimum, maintains alternate one-way traffic flow past the construction zone. • Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones. • Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator	Applicant CVRWQCB	Obtain road encroachment permits for construction within roadway right-of-ways. Confirm applicant has received encroachment permits.	Prior to Construction Prior to Construction

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	of the timing, location, and duration of construction activities. • To the maximum extent feasible, maintain access to private driveways located within construction zones. • Coordinate with the local public transit providers so that bus routes or bus stops in work zones can be temporarily relocated as the service provider deems necessary.			
Impact 8.3: Construction and operation of dairy digester and co-digester facilities could potentially cause traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways, and could increase traffic hazards due to possible road wear or to accident spills of manure, or co-digestion feedstocks or digestate.	**Measure 8.3a:** Implement Measure 8.1, which stipulates actions required of the contractor(s) to reduce potential traffic safety impacts to a less-than-significant level.	Applicant	Implement Mitigation Measure 8.1.	Prior to Construction
	Measure 8.3b: Prior to construction, the contractor(s), in cooperation with the agencies having jurisdiction over the affected roadways, will survey and describe the pre-construction roadway conditions on rural roadways and residential streets. Within 30 days after construction is completed, the affected agencies will survey these same roadways and residential streets in order to identify any damage that has occurred. Roads damaged by construction will be repaired to a structural condition equal to the condition that existed prior to construction activity.	Agency issuing encroachment permit and other agencies having jurisdiction over affected roadways.	Confirm roads damaged by construction are repaired to a structurally condition equal to the condition that existed prior to construction activity.	30 Days after Construction
Impact 8.4: Construction of dairy digester and co-digester facilities could intermittently and temporarily impede access to local streets or adjacent uses (including access for emergency vehicles), as well as disruption to bicycle/pedestrian access and circulation.	**Measure 8.4:** Implement Measure 8.1, which stipulates actions required of the contractor(s) to reduce potential access impacts to a less-than-significant level.	Applicant	Implement Mitigation Measure 8.1.	Prior to Construction.
Impact 8.5: Construction and operation of dairy digester and co-digester facilities could contribute to cumulative impacts to traffic and transportation (traffic congestion, traffic safety, and emergency vehicle access).	**Measure 8.5a:** Prior to construction, for installation of pipelines in existing roadways, the project sponsor will coordinate with the appropriate local government departments, Caltrans, and utility districts and agencies regarding the timing of construction projects that would occur near project sites. Specific measures to mitigate potential significant impacts will be determined as part of the interagency coordination, and could include measures such as employing flaggers during key construction periods, designating alternate haul routes, and providing more outreach and community noticing. **Measure 8.5b:** Implement Mitigation Measures 8.1 and 8.3b.	Applicant	Coordinate with appropriate local government departments and identify any additional measures needed as a result of other projects under construction at the same time. Forward memo of results and measures to CVRWQCB. Implement identified traffic control measures during construction.	Prior to Construction Prior to Construction Construction
		CVRWQCB	Confirm (from memo) that coordination occurred and that appropriate traffic control measures for construction will be implemented.	Prior to Construction.

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9. Biological Resources				
Impact 9.1: The project could impact special-status plant or wildlife species or their habitats.	**Measure 9.1a:** The project applicant or agency(s) responsible shall document that a site assessment report for dairy digester and co-digester facilities to be constructed (including the location of digestate application) has been submitted to CDFG for its review. This report shall be prepared by a qualified biologist. It shall evaluate the project site's potential to support special-status plant and wildlife species (including critical habitat) and whether special-status species could be affected by dairy digester and co-digester development, including construction and operations. If there are no special-status species or critical habitat present, no additional mitigation would be required.	Applicant CVRWQCB	Submit biological site assessment report. Verify submittal of biological site assessment report to California Department of Fish and Game for review.	RWD Review RWD Review
	Measure 9.1b: If the site assessment determines that special-status species could be affected by facilities development, the project would not be eligible as part of the project (for the Central Valley Water Board discharge permit) unless the applicant submits a plan, prepared by a qualified biologist, to mitigate or avoid any significant impacts on special-status species. This plan must be forwarded to the appropriate regional office of the CDFG, the Endangered Species Unit of the USFWS in Sacramento, and/or NMFS for review and approval of the mitigation strategy, when appropriate. If the site assessment determines that a State or federally listed species would be affected by facilities development, the project applicant shall consult with CDFG, the Endangered Species Unit of the USFWS in Sacramento, and/or NMFS, as appropriate.	Applicant CVRWQCB CDFG/USFWS/ or NMFS	Submit biological site assessment report. Verify submittal of biological site assessment report to California Department of Fish and Game for review and forwarding of the biological site assessment report to the appropriate regional office of CDFG, the Endangered Species Unit of the USFWS in Sacramento, and/or NMFS for review and approval of mitigation strategy, when appropriate. Review and approval of mitigation strategy, as appropriate.	RWD Review RWD Review RWD Review
Impact 9.2: The project could result in impacts on biologically unique or sensitive natural communities.	**Measure 9.2a:** The project applicant or agency(s) responsible shall submit a site assessment report prepared by a qualified biologist that determines if the project is likely to affect biologically unique or sensitive natural communities. This information could be included in the report prepared under Mitigation Measure 9.1a. If there are no biologically unique or sensitive natural communities present, no further mitigation is required.	Applicant CVRWQCB	Submit biological site assessment report. Verify submittal of biological site assessment report to California Department of Fish and Game for review.	RWD Review RWD Review
	Measure 9.2b: If biologically unique or sensitive natural communities are present and would be disturbed, the project would not be authorized under the project unless the applicant or agency(s) responsible submits a plan to avoid or mitigate for any significant impacts on biologically unique or sensitive natural communities and agrees to implement the mitigation. This report must be forwarded to the appropriate regional office of the CDFG and/or the Endangered	Applicant CVRWQCB CDFG/USFWS/ or	Submit biological site assessment report. Verify submittal of biological site assessment report to California Department of Fish and Game for review. Review and approval of mitigation strategy,	RWD Review RWD Review RWD Review

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	Species Unit of the USFWS in Sacramento (as appropriate) for review and approval of the mitigation strategy. As described above, this portion of the report could be incorporated into the report prepared under Mitigation Measure 9.1a.	NMFS	as appropriate.	
Impact 9.3: The project could result in impacts on waters of the State and/or the U.S., including wetlands.	**Measure 9.3a:** The project applicant or agency(s) responsible shall submit a site assessment report prepared by a qualified biologist that evaluates if the project is likely to affect waters of the State and/or U.S., including wetlands. This information could be included in the report prepared under Mitigation Measure 9.1a. If there are no waters present, no further mitigation would be required.	Applicant	Submit preliminary wetlands assessment report.	RWD Review
	Measure 9.3b: If waters of the State and/or U.S. are present in the project area, the project applicant or agency(s) responsible shall either re-design the project to avoid affecting the waters, or obtain the appropriate permits to allow for the impact. For waters that cannot be avoided, the permit process shall start with the preparation of a jurisdictional wetland delineation, prepared by a qualified biologist that will be submitted to the Corps for verification. Following verification, if jurisdictional waters occur within the project site, the project applicant or agency(s) responsible shall obtain and comply with federal and State permit requirements. This could include obtaining a Clean Water Act Section 404 permit, Section 401 Water Quality Certification or Waiver, a Section 1602 Streambed Alteration Agreement, and any other applicable permits.	Applicant	Submit report showing avoidance or obtain wetlands 404 permit from the Army Corps of Engineers.	RWD Review
		Corps of Engineers	Process 404 Permit.	RWD Review
		CVRWQCB	Process 401 Permit.	After 404 Permit has been issued.
		CDFG	Process Section 1602 Streambed Alteration Agreement, if required.	RWD Review
Impact 9.6: Development of dairy digester and co-digester facilities could contribute to cumulative impacts to biological resources.	**Measure 9.6:** Implement Measures 9.1a, 9.1b, 9.2a, 9.2b, 9.3a, and 9.3b.	Applicant	Compliance with Mitigation Measures 9.1, 9.2 and 9.3.	RWD Review
10. Hazards and Hazardous Materials				
Impact 10.1: Construction of dairy digester and co-digester facilities could result in the potential exposure of construction workers, the public and the environment to preexisting soil and/or groundwater contamination.	**Measure 10.1:** Prior to final project design and any earth disturbing activities, the applicant or agency(s) responsible shall conduct a standard "Phase I Type" electronic record search. If no incidents are identified within a quarter mile of the construction area, standard construction practices can be implemented. If the record search identifies soil or water quality contamination open cases within a quarter mile of the construction area, a Phase I Environmental Site Assessment (ESA) shall be prepared by a Registered Environmental Assessor (REA) or other qualified professional to assess the potential for contaminated soil or groundwater conditions at the project site; specifically in the area proposed for construction of dairy digester or co-digester facilities. The	Applicant	Submit a standard "Phase I Type" electronic record search that identifies any active soil or groundwater contamination cases within a quarter mile of the dairy digester.	RWD Review
			Conduct site inspection determine appropriate mitigation measures prior to (which could include a Phase II Study) and/or during construction.	Prior to and during construction
			If recommended in Phase I report, conduct follow-up sampling and report of construction	Prior to construction

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	Phase I ESA shall include a review of appropriate federal and State hazardous materials databases, as well as relevant local hazardous material site databases for hazardous waste on-site and off-site locations within a one quarter mile radius of the project site. This Phase I ESA shall also include a review of existing or past land uses and areal photographs, summary of results of reconnaissance site visit(s), and review of other relevant existing information that could identify the potential existence of contaminated soil or groundwater. If no contaminated soil or groundwater is identified or if the Phase I ESA does not recommend any further investigation then the project applicant or agency(s) responsible shall proceed with final project design and construction. OR If existing soil or groundwater contamination is identified and if the Phase 1 ESA recommends further review, the applicant or agency(s) responsible shall retain a REA to conduct follow-up sampling to characterize the contamination and to identify any required remediation that shall be conducted consistent with applicable regulations prior to any earth disturbing activities. The environmental professional shall prepare a report that includes, but is not limited to, activities performed for the assessment, summary of anticipated contaminants and contaminant concentrations at the proposed construction site, and recommendations for appropriate handling of any contaminated materials during construction.	CVRWQCB	recommendations. Implement recommended actions for construction phase. Contact CVRQQCB if contaminants are discovered during construction. Review Phase I report and all site inspection and follow-up sampling reports. Coordinate with developer regarding appropriate actions if contaminants are discovered during construction.	Construction RWD Review Construction
Impact 10.6: Installation of biogas pipelines in public rights-of-way could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	**Measure 10.6:** Implement Mitigation Measure 8.1.	CVRWQCB and agency issuing encroachment permit and other agencies have jurisdiction over roadways	Confirm compliance with Mitigation Measure 8.1.	RWD Review
11. Aesthetic Resources				
Impact 11.1: Implementation of the project, including operation of dairy digester and co-digestion facilities, could result in impacts to scenic highways and/or scenic vistas.	**Measure 11.1a:** Centralized biogas processing facilities shall be sited in locations that do not conflict with local polices for preservation of vistas or scenic views.	Applicant CVRWQCB / Third Party Consultant/ Local Planning and	Provide a Visual Assessment Report indicating project compliance with existing local regulations regarding scenic resources to the local CVRWQCB and local Planning Department. Confirm individual project compliance with the local regulations.	RWD Review RWD Review

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		Building Departments		
	Measure 11.1b: When feasible considering the scale of the facilities and the site specific topography, site specific landscape design, including berms and/or tree rows, shall be constructed in order to minimize potentially sensitive views of both digester facilities at dairies or off dairies at centralized facilities.	Applicant	Provide a Visual Assessment Report to determine the need for any site specific mitigations identified in Mitigation Measure 11.1b.	RWD Review
		CVRWQCB / Third Party Consultant/ Local Planning and Building Departments	Confirm project compliance with local regulation.	RWD Review
	Measure 11.1c: Centralized biogas processing facilities shall be designed similarly in massing and scale to other nearby agricultural buildings in agricultural areas, in order to retain the character of the surrounding visual landscape.	Applicant	Provide a Visual Assessment Report indicating project consistency with surrounding visual landscape.	RWD Review
		CVRWQCB / Third Party Consultant/Local Planning and Building Departments	Confirm project consistency with surrounding visual landscape.	RWD Review
Impact 11.2: Construction of the project could result in impacts to scenic highways and/or scenic vistas.	**Measure 11.2:** The project shall incorporate into all construction contracts for the proposed project and ensure implementation of the following measures: • Main construction staging areas and the storage of large equipment shall be situated on individual sites in such a manner to minimize visibility to nearby receptors. As feasible, staging areas and storage shall occur away from heavily traveled designated scenic roadways, in areas where it will be least visible from the surrounding roads. • Construction staging areas shall be onsite and remain clear of all trash, weeds and debris, etc. Construction staging areas shall be located in areas that limit visibility from scenic roadways and sensitive receptors to the extent feasible.	Applicant	Provide a Visual Assessment Report indicating project compliance with Mitigation Measure 11.2.	RWD Review
		CVRWQCB / Third Party Consultant/ Local Planning and Building Departments/Local Code Enforcement	Confirm project compliance with Mitigation Measure 11.2.	RWD Review

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Impact 11.3: Implementation of the project could result in substantial creation of or change in light or glare.	**Measure 11.3:** Whenever possible, flares shall be situated on individual sites in such a manner to minimize visibility to nearby receptors. Site specific design shall discourage placement of flares at higher elevations, or within the line of site of nearby residential buildings or scenic highways. In the event that site design does not provide adequate coverage, an enclosed flare design shall be used or landscaping, such as berms or tree rows, shall be constructed to minimize light impacts.	Applicant	Provide a Visual Assessment Report indicating project compliance with Mitigation Measure 11.3.	RWD Review
		CVRWQCB / Third Party Consultant/Local Planning and Building Departments/Local Code Enforcement	Confirm project compliance with Mitigation Measure 11.3.	RWD Review
Impact 11.4: Development of dairy digester and co-digester facilities could contribute to cumulative impacts to aesthetics.	**Measure 11.4:** Implement Mitigation Measures 11.1a, 11.1b, 11.1c, 11.2, and 11.3.	Applicant / CVRWQCB / Third Party Consultant/ Local Planning and Building Departments / Local Code Enforcement	See Mitigation Measures 11.1a, 11.1b, 11.1c, 11.2, and 11.3.	RWD Review
12. Cultural Resources				
Impact 12.1: Construction of dairy digester and co-digester facilities could result in the adverse change in the significance of a historical or archaeological resource, pursuant to §15064.5.	**Measure 12.1a:** In order to determine whether a project may cause a significant impact to cultural resources, and therefore, have an adverse effect on the environment, the Central Valley Water Board shall require each application submitted for a discharge permit for a digester or co-digester facility to identify the project's potential impacts to cultural resources. Prior to ground-disturbing activities, the project applicant shall retain a qualified archaeologist to (1) conduct a record search at the appropriate information center of the California Historical Resources Information System (CHRIS) to determine whether the project area has been previously surveyed and whether cultural resources were identified; and (2) request a sacred lands search from the NAHC. The results of the record search and sacred lands search shall be included in the Cultural Resources Inventory Report provided to the Central Valley Water Board. In the event the CHRIS records search indicates that no previous survey has been conducted, the qualified archaeologist shall recommend whether a survey is warranted to satisfy the requirements of CEQA based on the sensitivity of the project area for cultural resources. If, for example, the existing dairy or agricultural land proposed for establishment of a digester or co-	Applicant	Submit Cultural Resources Inventory Report	RWD Review
		CVRWQCB / Third Party Consultant	Confirm compliance with local, State, and Federal regulation and confirm compliance with Mitigation Measures 12.1a and 12.1b.	RWD Review

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	digester facility was constructed entirely on fill, as shown by original and final contour drawings, a surface survey for archaeological resources would not be warranted. Similarly, a surface survey may not be warranted if the project area has been extensively disturbed by dairy or agricultural use. For projects that constitute federal undertakings, as described in the Federal Agencies section of the Introduction (Chapter 2), the cultural resources study shall be prepared in accordance with Section 106 of the NHPA. The cultural resources study and inclusive mitigation measures shall form the basis for the cultural resources component of the project-level environmental documentation prepared for the project under Section 106. If the survey, CHRIS record search, or NAHC search indicate cultural resources are located within a project area, the Cultural Resources Inventory Report shall include an assessment of the significance of the resources according to applicable federal, state, and local significance criteria. If the cultural resources are determined significant historical resources, the Lead Agency (usually the Central Valley Water Board) must review and approve the applicant's proposed treatment measures to ameliorate any "substantial adverse change" in the significance of each historical resource, in consultation with a qualified archaeologist or architectural historian, and other concerned parties. Treatment measures may include preservation through avoidance or project redesign, incorporation within open space or conservation easements, data recovery excavation of archaeological resources, formal documentation of built environment resources, public interpretation of the resource, or other appropriate treatment, and may be described in a project-level Cultural Resources Mitigation Plan included in the Cultural Resources Inventory Report to be approved by the Lead Agency. Should the project area contain standing, built environment resources now 50 years of age, a qualified architectural historian shall be retained to evaluate the integrity and significance of the resource(s) unless the building(s) or structure(s) were covered in the existing survey report and determined not significant according to applicable federal, state, and local criteria. The results of that evaluation shall be included in the Cultural Resources Inventory Report. If cultural resources identified within a project area are neither a historical resource nor unique archaeological resource, there would be no significant effect to the environment and no further treatment			

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	of those known resources would be required.			
	Measure 12.1b: Inadvertent discovery measures for cultural resources shall be implemented during all construction activities within the project area. Measures shall include procedures for discovery and protection of cultural resources, including human remains, during construction or earth-disturbing activities. Within project areas of identified archaeological sensitivity, discovery measures would include: (1) a worker education course for all construction personnel; (2) monitoring of all earth-disturbing activities by a qualified archeologist; and (3) procedures for discovery of cultural resources, including human remains, during construction or ground-disturbing activities if an archaeological monitor is not present. Monitoring by a Native American with knowledge in cultural resources may also be required, as appropriate. Monitoring within recent fill deposits or non-native soil would not be required. All construction or ground-disturbing activities shall be halted within 100 feet of a cultural resources discovery, including human remains, whether or not a monitor is present, until a qualified professional archaeologist can evaluate the find. If the find is determined to be a significant historical resource and cannot be avoided, then impacts on that resource will require mitigation. During evaluation or mitigative treatment, ground disturbance and construction work could continue on other parts of the project area. If known or suspected human remains are discovered, in addition to halting all construction or ground-disturbing activities within 100 feet, the following steps must be taken before construction activities may be resumed within the stop-work area: • The County Coroner has been immediately notified and has determined that no investigation of the cause of death is required; and • If the remains are of Native American origin, the following steps have been taken: o The applicant has 24 hours to notify the NAHC, who should, in turn, notify the person identified as the proper descendant of any human remains. Under existing law, the descendant then has 24 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery.	CVRWQCB / Third Party Consultant	In the event of inadvertent discovery, perform site inspections to verify applicant/discharger compliance.	Construction

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Impact	Mitigation Measure	Responsibility for Compliance	Method for Compliance	Timing of Compliance
	o If the NAHC is unable to identify a descendant or if the descendant does not make recommendations within 24 hours, the applicant shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Should the applicant not accept the descendant's recommendations, the applicant or the descendant may, under existing law, request mediation by the NAHC.			
Impact 12.2: Construction of dairy digester and co-digester facilities could result in the disruption of human remains, including those interred outside formal cemeteries.	**Measure 12.2:** Implement inadvertent discovery measures for the protection of cultural resources, including human remains (Measure 12.1b).	CVRWQCB / Third Party Consultant	In the event of inadvertent discovery, perform site inspections to verify applicant/discharger compliance.	Construction
Impact 12.3: Construction of dairy digester and co-digester facilities could result in direct or indirect disturbance or destruction of a unique paleontological resource or site or unique geologic feature.	**Measure 12.3:** If paleontological resources, such as fossilized bone, teeth, shell, tracks, trails, casts, molds, or impressions are discovered during ground-disturbing activities, all ground disturbing activities within 50 feet of the find shall be halted until a qualified paleontologist can assess the significance of the find and, if necessary, develop appropriate salvage measures in consultation with the lead agency and in conformance with Society of Vertebrate Paleontology Guidelines (SVP, 1995; SVP, 1996). Additional guidance may be found in *Standard Guidelines for the Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources* (SVP 2010).	CVRWQCB / Third Party Consultant	In the event of inadvertent discovery, perform site inspections to verify applicant/discharger compliance.	Construction
Impact 12.4: Development of dairy digester and co-digester facilities could contribute to cumulative impacts related to archaeological, historical, and/or paleontological resources.	**Measure 12.4:** Implement Measures 12.1a, 12.1b, 12.2, and 12.3.	Applicant	Submit Cultural Resources Inventory Report and will comply with inadvertent discovery measures for human remains, archaeological and paleontological resources**.**	RWD Review
		CVRWQCB / Third Party Consultant	Confirm compliance with local, State, and Federal regulation regarding treatment of cultural resources.	RWD Review
13. Geology				
Impact 13.1: The project could expose people to injury and structures to damage resulting from seismic activity.	**Measure 13.1:** Prior to construction, project applicants or agency(s) responsible shall ensure that dairy digester facilities are designed and construction techniques are used that comply with relevant local, State and federal regulations and building code requirements. Requirements could include, but might not be limited to: • Preparation of site-specific soil and geotechnical	Applicant	Submit of Construction Plans detailing project compliance with local, State, and Federal regulation regarding building code requirements.	RWD Review

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	engineering studies performed by a licensed professional including, but not limited to, a geologist, engineering geologist, certified soil scientist, certified agronomist, registered agricultural engineer, registered civil or structural engineer, and/or certified professional erosion and sediment control specialist with expertise in geotechnical engineering issues who is registered and/or certified in the State of California, to determine site specific impacts and to recommend site specific mitigations. The site specific soil and geotechnical engineering studies shall be submitted to the all appropriate State and local regulatory agencies including, but not limited to, the CVRWQCB and the city or county engineering department for review and approval. The project applicant or agency(s) responsible shall implement all feasible recommendations addressing potential seismic hazards and soil constraints; and • Implementation of CBC design requirements	CVRWQCB Local Building Department	Confirm submittal of Construction Plans Report to local building department. Confirm individual project compliance with local, State, and Federal regulation regarding building code requirements.	RWD Review Prior to Construction
Impact 13.2: The project could expose people to injury and structures to damage resulting from unstable soil conditions.	**Measure 13.2:** Implement Mitigation Measure 13.1.			
14. Noise				
Impact 14.1: Construction of dairy digester and co-digester facilities could temporarily increase noise levels at nearby sensitive receptor locations or result in noise levels in excess of standards in local general plans, noise ordinance, or other applicable standards.	**Measure 14.1a:** Construction activities shall be limited to daytime hours, between 7 a.m. and 6 p.m., Monday through Saturday, or an alternative schedule established by the local jurisdiction.	Applicant	Prepare Acoustic Report that addresses construction and operational compliance with Mitigation Measures 14.1 through 14.4 and indicating project compliance with existing local noise regulations**.**	RWD Review
	Measure 14.1b: Construction equipment noise shall be minimized by muffling and shielding intakes and exhaust on construction equipment to a level no less effective than the manufacture's specifications, and by shrouding or shielding impact tools.		Implement construction Mitigation Measures 14.1a – d. Maintain logs onsite verifying compliance with construction noise requirements in Acoustic Report.	Construction
	Measure 14.1c: Construction contractors within 750 feet of sensitive receptors shall locate fixed construction equipment, such as compressors and generators, and construction staging areas as far as possible from nearby sensitive receptors.	CVRWQCB / Third Party Consultant/Local Planning and Building Departments/Local Code Enforcement	Review Acoustic Report for completeness. Review construction noise logs.	RWD Review Construction
	Measure 14.1d: Construction contractors shall comply with all local			

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	noise ordinances and regulations.			
Impact 14.2: Noise from operation of dairy digester and co-digester facilities or centralized facilities could substantially increase ambient noise levels at nearby land uses or result in noise levels in excess of standards in local general plans, local noise ordinances, or other applicable standards.	**Measure 14.2:** Any continuous equipment operating at night within 1,000 feet of a sensitive receptor must be enclosed. Furthermore, an acoustic study and follow-up measurements must be performed (after construction) to prove that the noise from any continuous equipment operating at night would comply with all local noise regulations. If no local regulations are available, noise levels must be below 45 dBA at the nearest sensitive receptor. If the sound level exceeds local regulations, or 45 dBA if applicable, additional sound-proofing shall be installed to meet the required sound level.	Applicant	Prepare Acoustic Report that addresses construction and operational compliance with Mitigation Measures 14.1 through 14.4 and indicating project compliance with existing local regulations with regard to noise.	RWD Review
			Verify nighttime noise levels are in compliance with local regulations or below 45 dBA, if required.	Operations
			Forward noise complaints to the CVRWQCB.	Operations
		CVRWQCB / Third Party Consultant/ Local Planning and Building Departments/Local Code Enforcement	Review noise complaints and respond as appropriate.	
Impact 14.4: Development of dairy digester and co-digester facilities could result in a cumulative increase in noise levels.	**Measure 14.4a:** Implement Mitigation Measures 14.1a through Measure 14.1d and Measure 14.2, above.	Applicant	Implement Mitigation Measures 14.1a - d and Measure 14.2.	On-going
15. Public Services				
Impact 15.3: The project could result in significant environmental effects from the construction and operation of new water and wastewater treatment facilities or expansion of existing facilities.	**Measure 15.3a:** If the project proposes to obtain water from a water supplier (irrigation district, municipal system or other public water entity), the developer would enter into an agreement for service with the supplier.	Applicant	Provide documentation detailing the agreement for service for the project facility.	RWD Review
		CVRWQCB	Review documentation for completeness.	RWD Review
	Measure 15.3b: If the project proposes to obtain wastewater service from a wastewater treatment provider (municipal or other public entity), the developer would enter into an agreement for service with the provider.	Applicant	Provide documentation detailing the agreement for service for the project facility.	RWD Review
		CVRWQCB	Review documentation for completeness.	RWD Review
Impact 15.6: The project could result in exceeding the capacity of a wastewater treatment provider.	**Measure 15.6:** If the project proposes to obtain wastewater service from a wastewater treatment provider (municipal or other public entity), implement Mitigation Measure 15.3b.	Applicant	Provide documentation detailing the agreement for service for the project facility.	RWD Review
		CVRWQCB	Review documentation for completeness.	RWD Review
Impact 15.7: The project could result in the construction new energy supplies and	**Measure 15.7:** Implement Mitigation Measures for construction of energy infrastructure including Mitigation Measures 6.1b, 9.1a, 9.1b,	Applicant / CVRWQCB	See Mitigation Measures 6.1b, 9.1a, 9.1b, 9.2a, 9.2b, 9.3b, 12.1b, 12.2, 12.3, and	Prior to issuing permits /

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could require additional energy infrastructure.	9.2a, 9.2b, 9.3b, 12.1b, 12.2, 12.3, and 14.1a-c.		14.1a-c.	Operations

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