Community and Economic Development
Planning Division

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PLANNING COMMISSION DATE: **August 2, 2016**

AGENDA ITEM: **#1**

CUP	**#2016-008**	**A Conditional Use Permit to allow for an aerobic digester on an existing dairy**
APN	**#020-090-002 et. al.**	**Applicant: Biorem Energy**
		Owner: Vlot, DIrk
CEQA	**MND #2016-15**	**Mitigated Negative Declaration**

REQUEST:

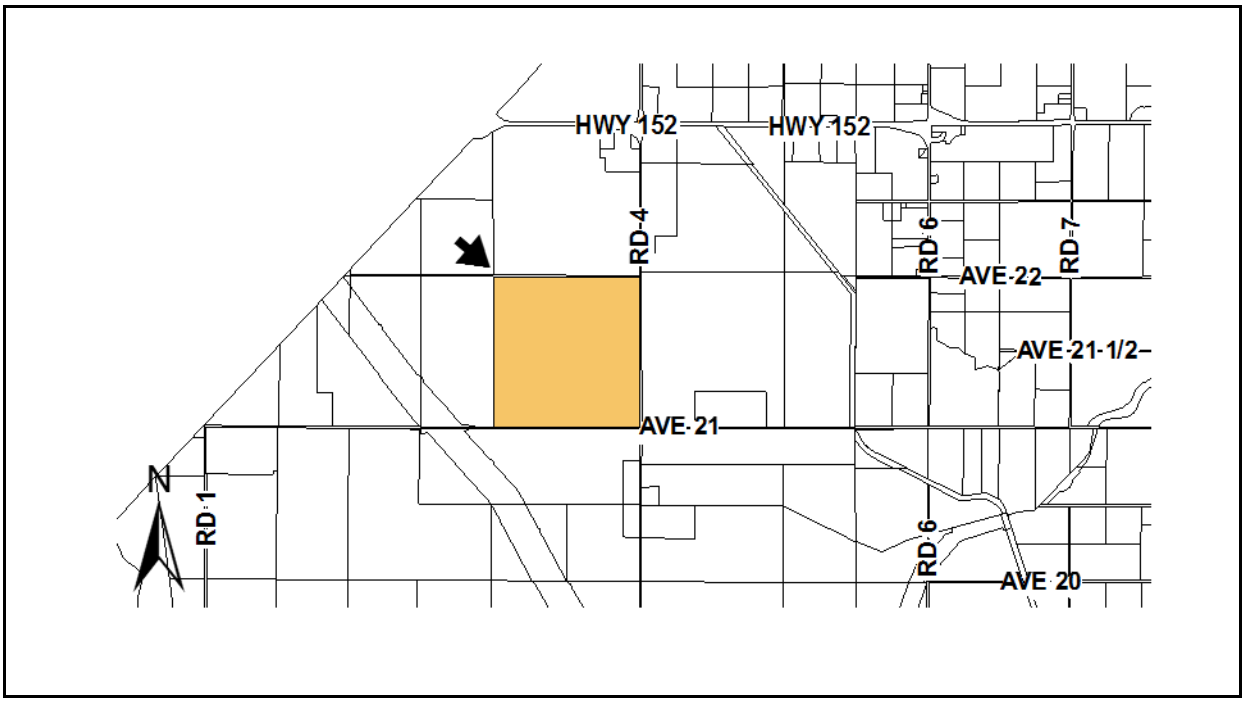
The applicant is requesting a Conditional Use Permit to allow for the construction of an anaerobic digester on an existing dairy.

LOCATION:

The subject property is located on the northwest corner of the intersection of Avenue 21 and Road 4 (3197 Avenue 21), Chowchilla.

ENVIRONMENTAL ASSESSMENT:

A Mitigated Negative Declaration (MND #2016-15) (Exhibit O) has been prepared and is subject to approval by the Planning Commission.



RECOMMENDATION: **Staff recommends approval of CUP #2016-008, Mitigated Negative Declaration #2016-15 and the Mitigation Monitoring Plan.**

GENERAL PLAN DESIGNATION (Exhibit A)**:**

SITE: AE (Agricultural Exclusive)

SURROUNDING: AE (Agricultural Exclusive) Designation; OS (Open Space) Designation

ZONING (Exhibit B)**:**

SITE: ARE-40 (Agricultural, Rural, Exclusive – 40 Acre) District

SURROUNDING: ARE-40 (Agricultural, Rural, Exclusive – 40 Acre) District; OS (Open Space); ARE-20 (Agricultural, Rural, Exclusive – 20 Acre) District

LAND USE:

SITE: Dairy

SURROUNDING: Agricultural

SIZE OF PROPERTY: 647.63 Acres

ACCESS (Exhibit A)**:** Access to the site is via Road 4.

BACKGROUND AND PRIOR ACTIONS:

Two zoning permits have been previously approved on parcels associated with the dairy. In July of 1991, Zoning Permit #91-50 was approved to allow for an exploratory gas well. In June of 1992, Zoning Permit #92-59 was approved to also allow for an exploratory gas well. No record of a conditional use permit has been found which would indicate that either of these exploratory wells were retained and operated as producing gas wells.

Conditional Use Permit #99-06 was approved on May 4, 1999 to allow for an 18,760 head custom heifer, 2,800 head dairy and 575 head support stock facility. Under the same project, the applicant also requested a zoning permit (ZP #99-23) and two variances (VA #99-04 and VA #99-05) for three additional single family residences on the project site for dairy employees.

Conditional Use Permit #2011-005 was approved on July 5, 2011 to expand the dairy herd size to 6,000 milking cows and 900 dry cows, and to allow the construction of a freestall to accommodate the increase in herd size.

PROJECT DESCRIPTION:

This is a request to allow for the construction of a dairy digester on an existing dairy facility. The system will transfer the current effluent waste stream into a “pre-treatment” system for advanced bioremediation of the waste and then transferring

that biomass accumulation into a series of energy production ponds where anaerobic digestion will create a biogas used for power on the Vlot Brothers' Dairy. After energy production, the resultant effluent solids are separated to create an organic pathogen free fertilizer which Biorem will sell to its customers. The remaining water will be used either in flush for the dairy or purified using an anode/cathode electrolysis system for re-use for the herd requirements and for wash down. Biogas collection will power two 1.1 megawatt CHP (Combined Heat Power) Cummins Cogens with tier 4 exhaust.

ORDINANCES/POLICIES:

Section 18.58 of the Madera County Zoning Ordinance outlines the uses and regulations of the ARE-40 (Agricultural, Rural, Exclusive – 40 Acre) District.

Section 18.92 of the Madera County Zoning Ordinance outlines the procedures for obtaining Conditional Use Permits.

Policy 5.A.1 of the Madera County General Plan states the County shall maintain agriculturally-designated areas for agricultural uses.

Policy 5.A.16 of the Madera County General Plan supports economic development of agriculturally related activities within the County.

Madera County Dairy Standards outlines facility operations pursuant to new and expanding dairies.

ANALYSIS:

The applicant is requesting a Conditional Use Permit to allow the construction of a dairy digester facility on an existing facility. The system will transfer the current effluent waste stream in to a pre-treatment system for advanced bioremediation of the waste and then transferring that biomass accumulation into a series of energy production ponds where anaerobic digestion will create a biogas used for power on the Vlot Brothers Dairy facility. After energy production, the resultant effluent solids are separated out to create an organic pathogen free fertilizer which Biorem, the partner in the project, will sell to its

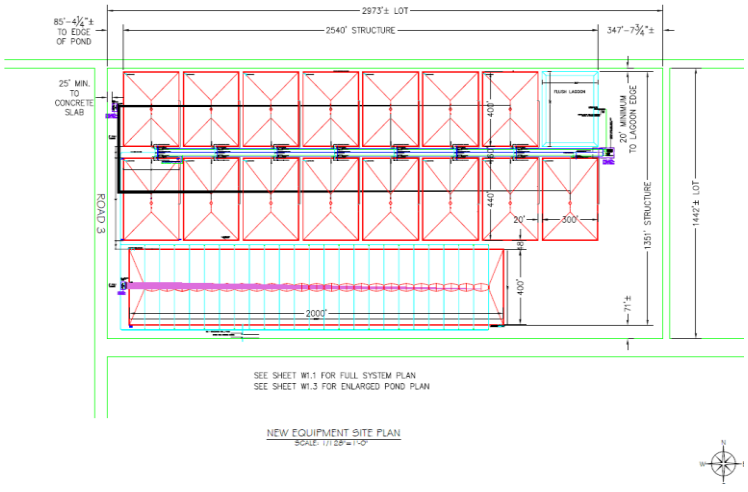


Figure 1 Digester Lagoons

customers off-site. The remaining water will be used either for flushing out of stalls for the dairy or purified using an anode/cathode electrolysis system for re-use for the herd requirements and for wash-down. Biogas collection will power two 1.1 Megawatt (MW) Combined Heat Power (CHP) Cummins Cogens with tier 4 exhaust as required. Materials utilized as a part of the project include pumps, plastic liners, PVC and CPVC plumbing, two CHP Cogens, a boiler and 16 heat exchangers.

The system is similar to what has been proposed for the Verwey Dairy recently, in which digester ponds are utilized to generate the biogas from the decomposition of manure. However, in this case the power generated here will not be sold to energy providers, but will be used to off-set power use on the Vlot Dairy.

The system is using a bio-digester which uses bacteria to break down the organic matter and capture methane released by the bacteria, a process called anaerobic fermentation. Anaerobic means that the micro-organisms work in the absence of oxygen. Other microbes that find oxygen toxic break down simple organic matter to form gases such as methane. The remaining solids can be used as fertilizer, soil supplements or further composted. Currently, of the approximately 18 pounds of cow manure generated per cow per day, 5 pounds are used for bedding, and 13 used for land application in accordance to the nutrient management plan. With the new system, this 13 pounds will be converted into a pathogen free fertilizer and sold off-site in areas such as Salinas, Santa Maria, Oxnard, and Arizona.

The digester facility will be located on the parcel where the main dairy facility is located, which is approximately 657 acres in size. The remainder of the parcels of the dairy are cropland utilized in support of the dairy. The parcel involved with this project is located in a predominately rural portion of western Madera County. Surrounding parcels average in size from 94 to over 600 acres and are in agriculturally related use, including other dairies, with some residential structures. There is an elementary school on the east side of Road 4, approximately 0.4 of a mile south of its intersection with Avenue 21 and is in the Alview-Dairyland School District.

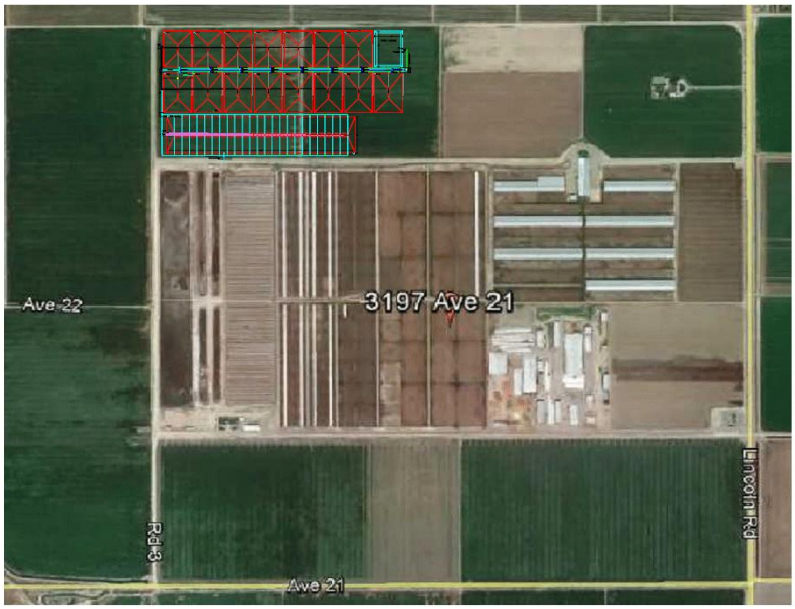


Figure 2 Dairy facility with Digester location

Water usage is expected to be reduced by approximately 500,000 gallons per day, as a part of the operations water from the system will be re-purposed and used for operations on the dairy.

According to the Madera County Transportation Commission (MCTC), the traffic counts for the area range from 160 north bound to 206 south bound vehicles along Road 4 north of its' intersection with Avenue 18 ½, which is the closest intersection to this project site for which there are traffic counts for 2012. The project anticipates generating 7 cars and 10 trucks per day between 8am and 5pm during the period of construction. Post construction, it is anticipated that one maintenance vehicle directly related to the digester system will come on site only as needed for mechanical issues. Customers who purchase the fertilizer byproduct of the system typically will not visit the site. The applicant anticipates an occasional visit as needed by customers, of which will only last about an hour. There will be no change in traffic patterns or customer visits as they relate to the actual dairy operations.

This project was circulated to the Public Works, Fire, and Environmental Health Departments of the County for comments and conditions. It was also circulated to outside agencies, including the Madera County Agricultural Commission, representatives of the Chowchilla Yokuts Tribe, California Department of Fish and Wildlife (formally known as the Department of Fish and Game), California Regional Water Quality Control Board, Alview-Dairyland Unified School District and the San Joaquin Valley Unified Air Pollution Control Board.

The Regional Water Quality Control Board's (RWQCB) comments centered on permitting requirements associated with dairy digesters. The RWQCB has adopted two general orders under their regulatory system. One is the Waste Discharge Requirements General Order for Dairies with Manure Anaerobic Digester or Co-Digester Facilities (Dairy Digester General Order, adopted in 2010); the other is the Waste Discharge Requirements General Order for Centralized Dairy Manure Anaerobic Digesters or Centralized Dairy Manure Co-digester facilities (Centralized Digester General Order, adopted in 2011). The Vlot Dairy will need to coordinate with the RWQCB on obtaining the appropriate permits and complying with other regulatory requirements as appropriate.

A review of Regional Water Quality Control Letters received by the County regarding the dairy operations showed a Notice of Violation during a routine inspection by RWQCB in January 2015. The violation indicated that the dairy had exceeded the mature herd count allowed under the 2007 General Order for dairies. The RWQCB did not make mention in their comment letter for this CUP if that has been resolved; however since they did not indicate any current violations, it can be assumed that it was. It should be noted that this CUP is not allowing any herd expansion on the dairy.

If this project is approved, the applicant will need to submit a check, made out to the County of Madera, in the amount of $2,260.25 to cover the Notice of Determination (CEQA) filing at the Clerks' office. The amount covers the current $2,210.25 Department of Fish and Wildlife fee and the County Clerk $50.00 filing fee. In lieu of the Fish and Wildlife fee, the applicant may choose to contact the Fresno office of the Department of Fish and Wildlife to apply for a fee waiver. The County Clerk Fee, Department of Fish and Wildlife Fee (or waiver if approved) is due within five days of approval of this permit.

FINDINGS OF FACT:

The following findings of fact must be made by the Planning Commission to make a finding of approval of the project. Should the Planning Commission vote to approve the project, Staff recommends that the Planning Commission concur with the following in light of the proposed conditions of approval.

1. *The proposed project does not violate the spirit or intent of the zoning ordinance* in that the property is ARE-40 (Agricultural, Rural, Exclusive 40-Acre District) which allows dairies with a Conditional Use Permit. As the applicant has an approved Conditional Use Permit for the origination of the dairy, and an amended Conditional Use Permit to allow for the expansion of herd size of the dairy, the spirit and intent of the zoning ordinance has not been violated. The General Plan Designation of AE (Agricultural Exclusive) does allow for agricultural uses such as dairies. The conditions of approval and mitigation measures from the previous Conditional Use Permits remain in effect and are unchanged. In all technicalities, the digester can be seen as a component of the dairy facility.

2. *The proposed project is not contrary to the public health, safety, or general welfare* in that the facility will adhere to all conditions of approval and mitigations as approved as they relate to the operations. The proposed project is also seen as beneficial as it is designed to reduce greenhouse gas emissions and potentially the odors associated with a typical dairy, so that any potentially existing health issues will be even further reduced as a result of the project. As this project does not affect the overall operations of the facility, neither existing Conditional Use Permits that allow for the dairy to operate are altered in any way and their conditions of approval remain the same.

3. *The proposed project is not hazardous, harmful, noxious, offensive, or a nuisance because of noise, dust, smoke, odor, glare, or similar, factors,* in that the project must adhere to local and state health and building codes. No additional odors, noise, dust, smoke, or glare is being produced by the project. While not the primary focus of the project, it would have a reducing impact of greenhouse gas emissions from the facility in the long run. No

hazardous materials are being generated. There is the potential of reduction of odors as a result of the project.

4. *The proposed project will not for any reason cause a substantial, adverse effect upon the property values and general desirability of the surrounding properties.* The surrounding parcels are agriculturally zoned and used for agricultural purposes, including other dairy facilities. This project is seen as a positive for the dairy as it will help reduce greenhouse gas emissions, potentially reduce odors in the immediate vicinity, and help generate electricity for the operations. While there are residences in the area, there are no major developments in the vicinity, and as designed the biogas system will blend in with the rest of the dairy facility.

WILLIAMSON ACT:

The property is subject to a Williamson Act contract. This project will not in any way conflict with the provisions of the Williamson Act contract.

GENERAL PLAN CONSISTENCY:

The General Plan designation for the property is AE (Agricultural Exclusive) which allows for agricultural uses as well as public and quasi-public uses. The property is zoned ARE-40 (Agricultural, Rural, Exclusive 40-Acre) District which allows for dairies with a Conditional Use Permit. The zoning and general plan designations are compatible with the use.

RECOMMENDATION:

The analysis provided in this report supports approval of the Conditional Use Permit (CUP #2016-008) and Mitigated Negative Declaration (MND #2016-15) and the Mitigation Monitoring Program.

CONDITIONS

See attached.

ATTACHMENTS:

1. Exhibit A, General Plan Map
2. Exhibit B, Zoning Map
3. Exhibit C, Assessor's Map
4. Exhibit D, Site Plan
5. Exhibit D-1, Site Plan
6. Exhibit E, Aerial Map
7. Exhibit F, Topographical Map
8. Exhibit G, Operational Statement
11. Exhibit H, Dust Control Plan
12. Exhibit I, Odor Control Management Plan
13. Exhibit J, Pest Management Plan
14. Exhibit K, Environmental Health Comments

RM

15. Exhibit L, Public Works Comments
16. Exhibit M, Regional Water Quality Control Board Comments
17. Exhibit N, Initial Study
18. Exhibit O, Mitigated Negative Declaration (MND #2016-15)

CONDITIONS OF APPROVAL

PROJECT NAME:	CUP #2016-008
PROJECT LOCATION:	northwest corner of the intersection of Avenue 21 and Road 4 (3197 Avenue 21) Chowchilla
PROJECT DESCRIPTION:	To allow for a dairy digester
APPLICANT:	Biorem Enegy - John Terry
CONTACT PERSON/TELEPHONE NUMBER:	408-505-9770

No.	Condition	Department/Agency	Verification of Compliance		
			Initials	Date	Remarks
Environmental Health					
1	The facility must comply with the San Joaquin Valley Air Pollution Control District (SJVAPCD) regulationsand permitting requirements				
2	The facility must comply with the Regional Water Quality Control Board (RWQCB) regulations and permitting requirements.				
3	Provide/Update Pest (vector) Management Plan. The Pest (vector) Management Plan must go into detail of how each known vector will be identified, tracked, eliminated or significantly reduced and how this program will be implemented. This Pest Management PLan must be provided for review and approval by this department prior to approving of this CUP to ensure that vector(s) are handled on site to effectively prevent them or at a minimum significantly reduce them from becoming an off-site nuisance				
4	Provide/update Odor and Dust Management Plans. The Management Plan must go into detail in describing how odor and dust control will be managed and implemented. The Odor and Dust Management Plans must be provided for review and approval by this department prior to approval of this CUP to ensure that each known dairy nuisance(s) are handled on site to effectively prevent them from moving off-site creating a nuisance.				
5	The owner/operator must obtain all the necessary Environmental Health Division permits prior to any construction activities on site and must comply with Madera County Code(s) Title 13 and 14 throughout the property development as it pertains to the Sewage Disposal System(s) and Water System(s).				

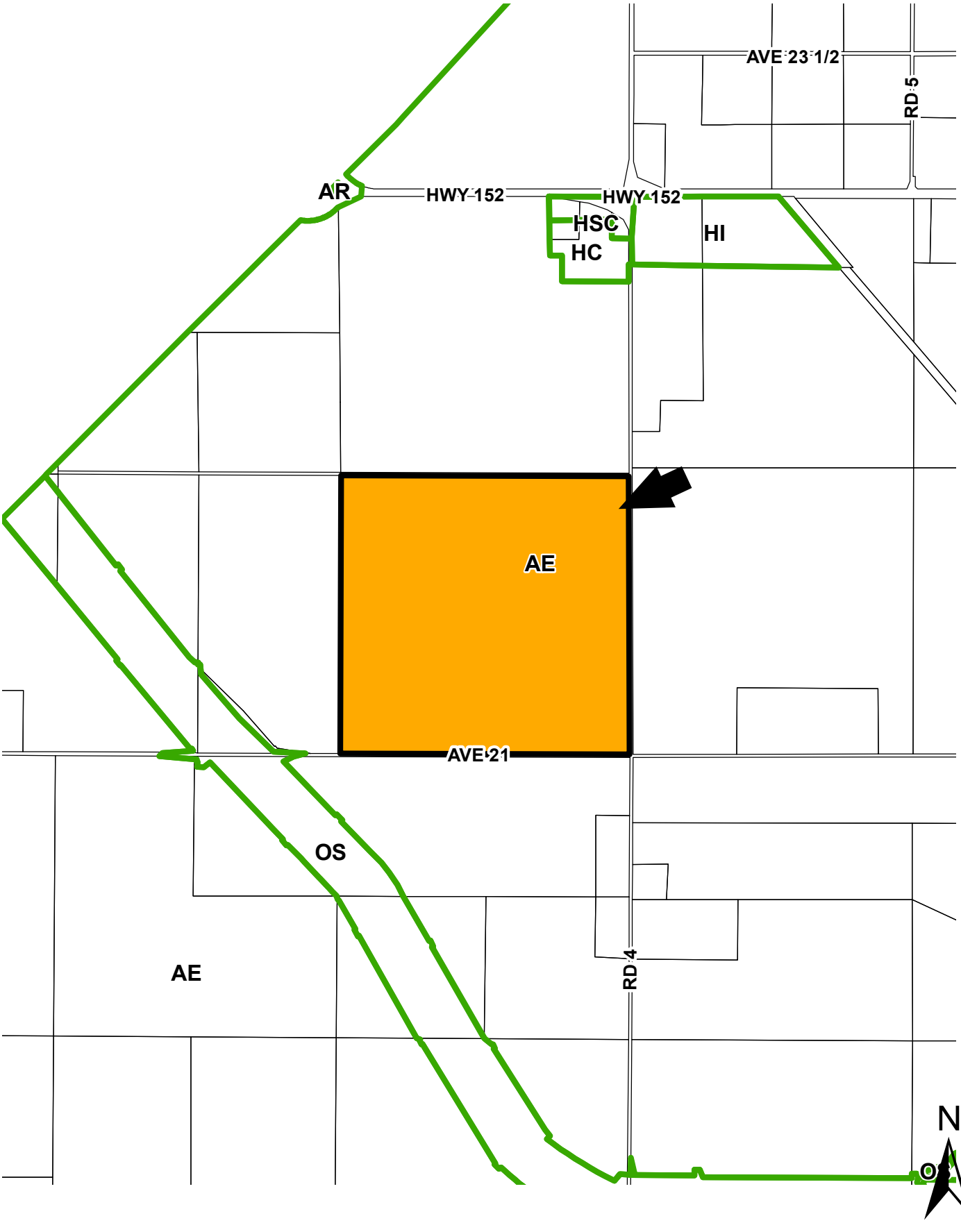
No.	Condition	Department/Agency	Verification of Compliance		
			Initials	Date	Remarks
6	If your facility handles/store any hazardous materials on-site or generates hazardous waste you may be subject to permitting requirements through our department. As of January 2013 all Certified Unified Program Agency (CUPA) regulated businesses must submit their Hazardous Materials Business Plan electronically into the California Environmental Reporting System (CERS) at www.cers.calepa.ca.gov.				
7	The construction and ongoing operations must be done in a manner that shall not allow any type of public nuisance(s) to occur including but not limited to the following nuisance(s): Dust, Odor(s), Noise(s), Lighting, Vector(s) or Litter. This must be accomplished under accepted and approved Best Management Practices (BMP) and as required by the County General Plan, County Ordinances and any other related State and/or Federal jurisdiction.				
8	During the application process for required County permits, a more detailed review of the proposed project's compliance with all current local, state & federal requirements will be reviewed by this department. The owner/operator of this property must submit all applicable permit applications to be reviewed and approved by this Division prior to commencement of any work activities.				
Fire					
	None				
Planning					
1	Facility to operate per submitted Operational Statement except where modified by conditions of approval and/or mitigation measures associated with this project.				
2	Conditions of approval in Conditional Use Permit #99-06 and CUP #2011-005 for the dairy remain in full effect.				
3	All lighting associated with this project is to be hooded and directed down and away from neighboring parcels				
4	All areas of circulation related to this project are to be constructed and maintained in a dust free manner				
5	Dairy waste material used in the normal operations of the equipment and process will be from this dairy only, no material will be shipped in from other operations or dairies				
6	Any signage associated with this project shall be approved by the Planning Department prior to placement on the project site.				

No.	Condition	Department/Agency	Verification of Compliance		
			Initials	Date	Remarks
7	Any noise generated by this project as a part of normal operations shall conform to County Ordinance				
8	Applicant shall submit a revised Nutrient Management Plan to the County's Environmental Health Department and Planning Department prior to sign off of Conditional Use Permit				
9	A parcel associated with this project is adjacent to Alview School on Road 4 south of Avenue 21. In no way shall the use of this property (including, but not limited to, the application of herbicides, pesticides, and dairy manure) put the student population in danger or harm by such actions				
10	No development or operation(s) of the dairy facility shall occur within 100' (one hundred feet) of Ash Slough or the Eastside Bypass or any of their tributaries				
11	Applicant shall not construct, repair or otherwise alter any levee in the area of the project site so as to create increased flooding upstream of the project site				
12	In no case shall enhanced levees constrain sheet flows upstream of the operations				
13	Applicant shall implement/maintain appropriate vector control measures consistent with industry practices and Madera County Dairy Standards				
14	Applicant shall implement/maintain appropriate odor control procedures consistent with industry practices and Madera County Dairy Standards.				
15	Applicant shall continue to adhere to all current permits issued by all federal, state and local agencies pursuant to the operation of this facility and its' related parcels				
16	Operator shall maintain facility per current Madera County Dairy Operational Standards				
17	All parking and circulation areas within the project area shall be surfaced with gravel, crushed rock, or other surface material as approved by the Planning Department and maintained to control dust				
18	Portions of the dairy operations are located within an Airport/Airspace Overlay (AAO) District due to proximity of a known airstrip. As s result, the facility must adhere to the following:				
19	18.78.010(A)(1)(a) no uses creating electrical or electronic interference with communication or guidance devices used by aircraft or ground control is permitted to be built or used.				

No.	Condition	Department/Agency	Verification of Compliance		
			Initials	Date	Remarks
20	18.78.010(A)(1)(b) no uses that would create glare, smoke, dust or similar factors interfering with aircraft operation to and from runways and taxiways of the airport are permitted as a part of the dairy facility operations.				
Public Works					
1	At any time during the operations of the proposed or existing development, at the County's discretion and depending on the condition of the roadways at the time, the County reserves the right to require the applicant to repair and provide any necessary improvements to the existing roadways if there are damanges to the existing pavement caused by the operations from the proposed development.				
2	Prior to construction where such construction is proposed within an existing County right-of-way, the applicant is required to apply for an Encroachment Permit from the Public Works Departmnt. Said permit must be approved prior to commencing the work.				
3	At the time of applying for the building permits, if any grading is to occur, the applicant is required to submit a grading, drainage and erosion control plan to the Public Works Department for review. Such improvement plans shall be prepared by a licensed professional,				
4	If access approaches or road improvements are to be added to the proposed development, the applicant is required to provide such improvement plans to the Public Works Department for review.				
5	If there are exisitng drainage facilities and storage pond existing on site, the developer is required to verify that the existing system and its onsite storage still have the adequate capacity and fully functional for the proposed development				
6	All National Pollution Discharge Elimination System (NPDES) storm water regulations and standards shall be met. It is possible that the quality of storm water may be affected by pollutants. The applicant shall mitigate any impacts associated with storm water contamination caused by this project. A Storm Water Pollution Prevention Plan (SWPPP) is required for all projects 1-acre or more of site disturbance.				
7	All stabilized construction on and off site access locations shall be constructed per the latest edition of the California Stormwater Quality Association (CASQA) details to effectively prevent tracking of sediment onto pavement areas. If applicable, BMPS to be inspected weekly and before and after each rain event. Repair or replace as necessary. The contractor shall abicde all of the laws, ordinances, and regulations associated with the NPDES and the Clear Water Act.				

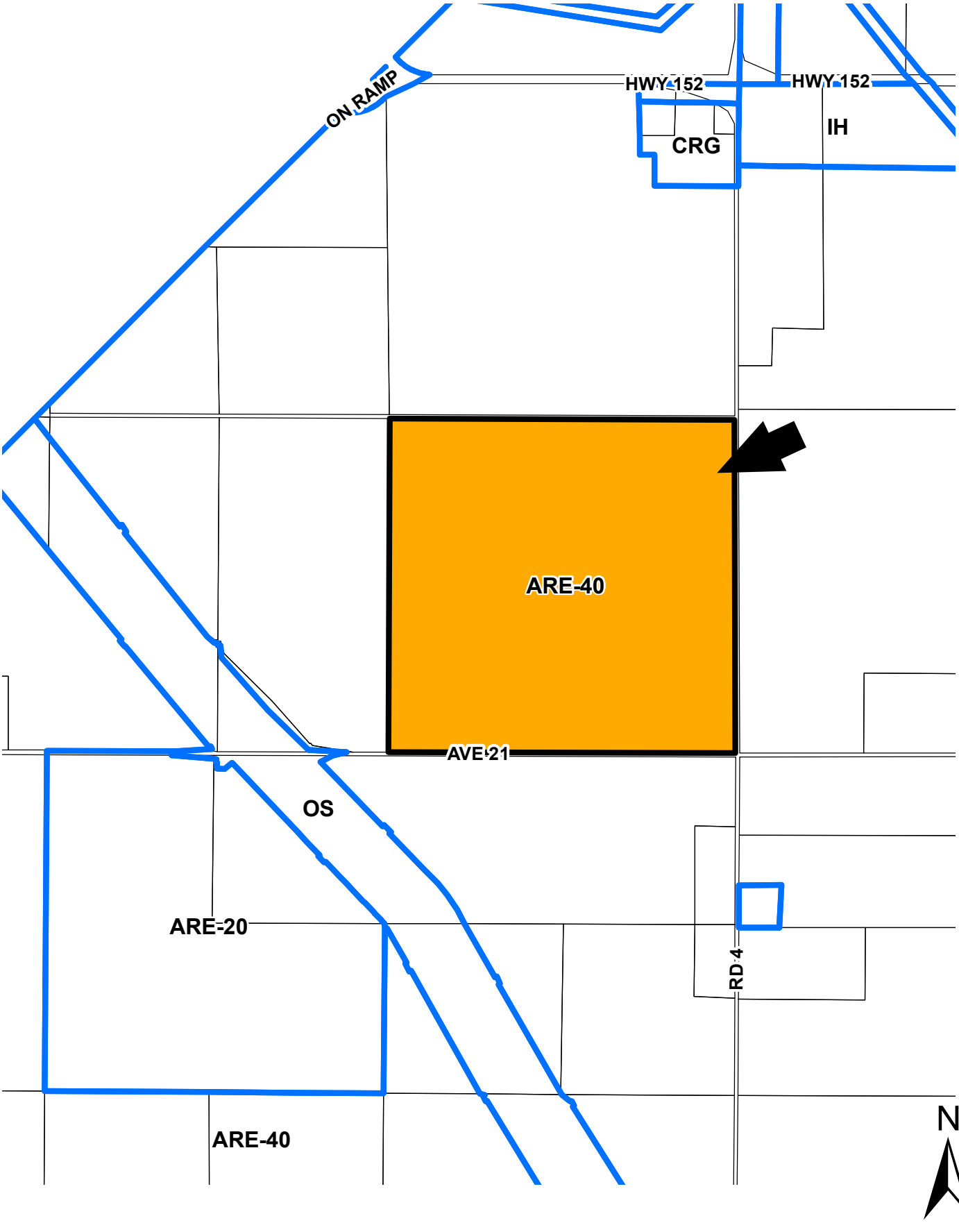
No.	Condition	Department/Agency	Verification of Compliance		
			Initials	Date	Remarks
8	Contractor shall be responsible for locating all underground utilities prior to the start of any work by contacting Underground Service Alert (USA) 48 hours prior to any excavation at 1-800-227-2600 Contractor shall be responsible for contacting the appropriate party in advance of any work for necessary inspections in compliance to these plans, standard plans and standard specifications.				
Regional Water Quality Control					
1	Comply with Regional Water Quality Control requirements.				

EXHIBIT A



GENERAL PLAN MAP

EXHIBIT B



ZONING MAP

ASSESSOR'S MAP

EXHIBIT C

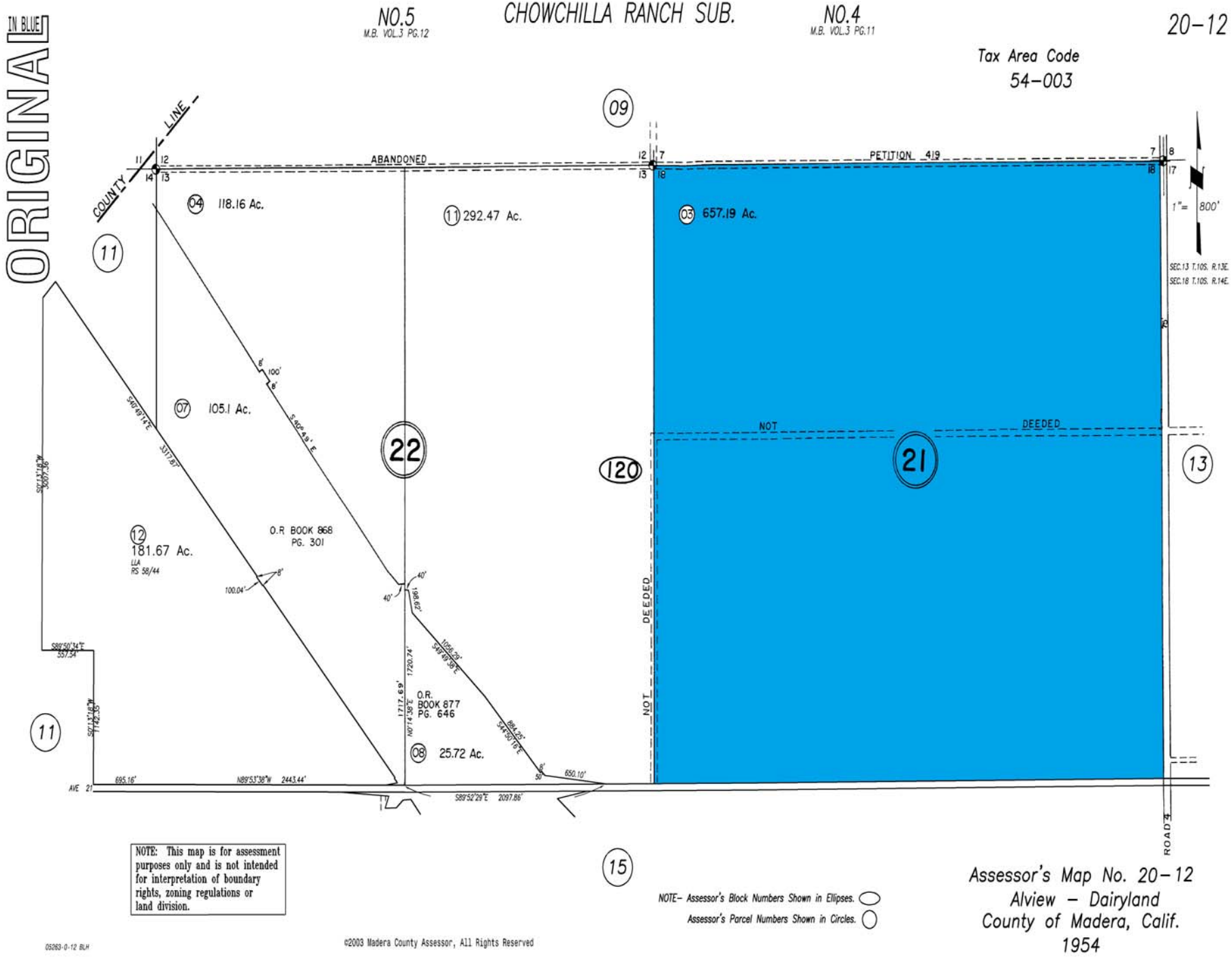
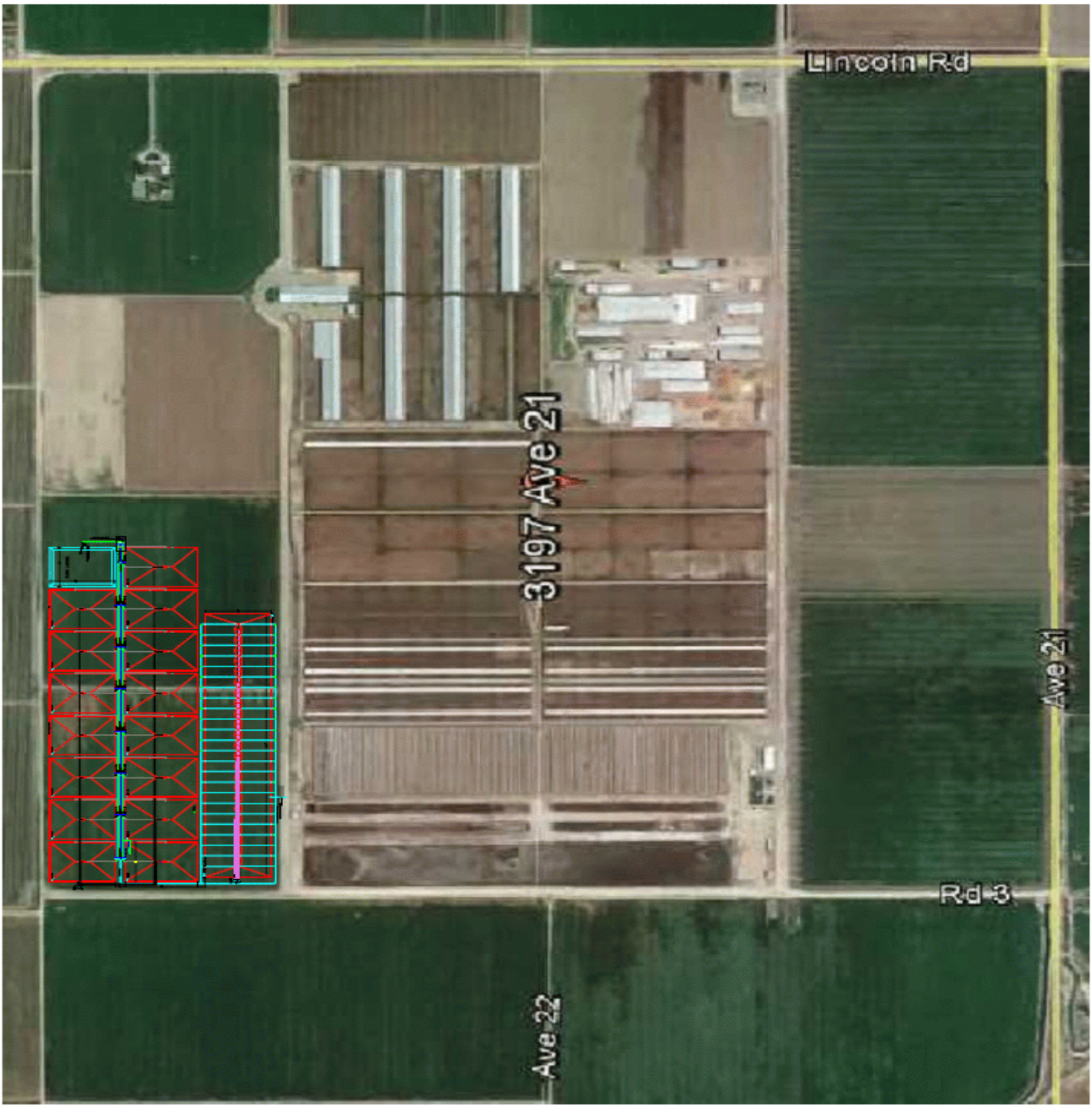
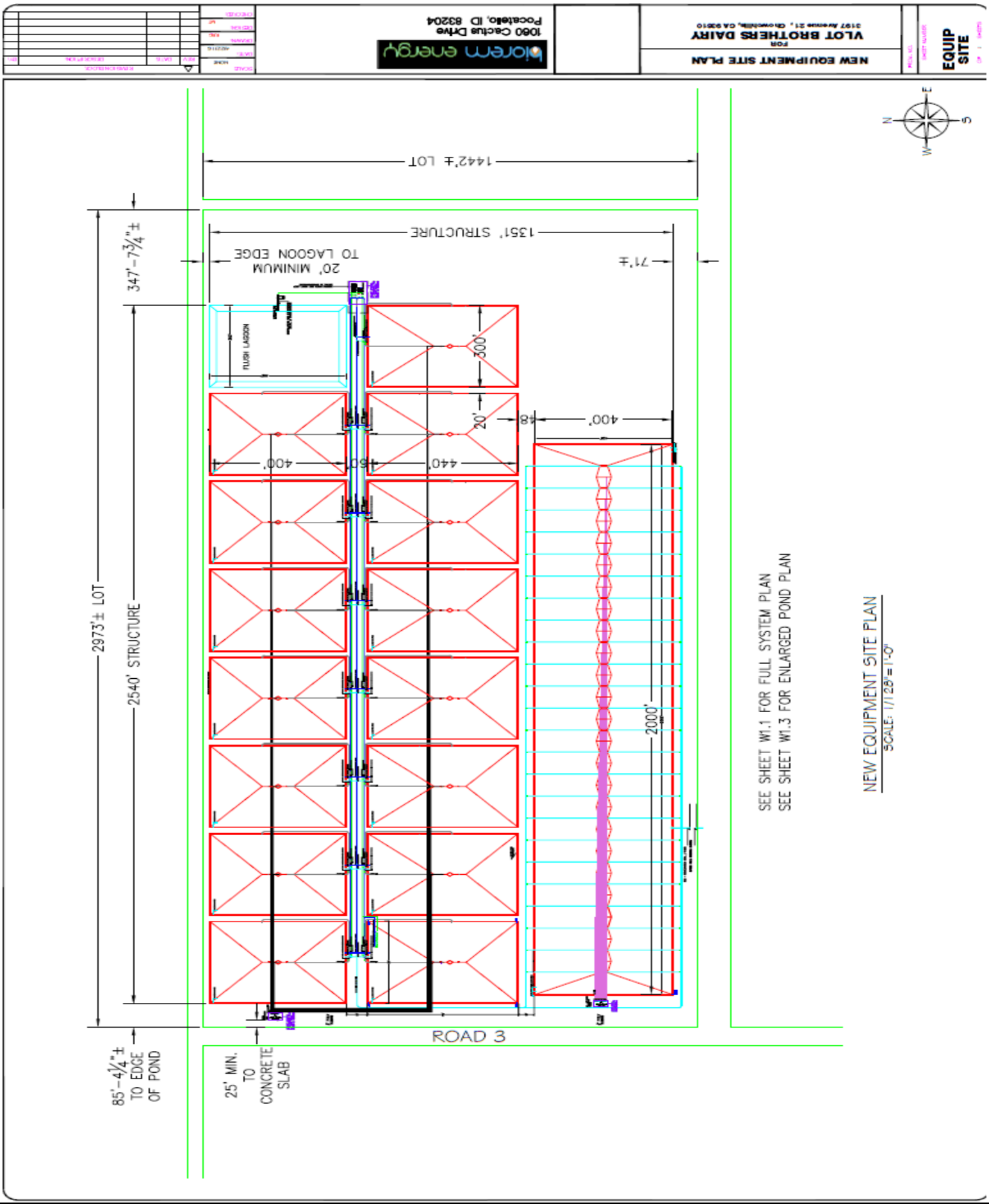


EXHIBIT D



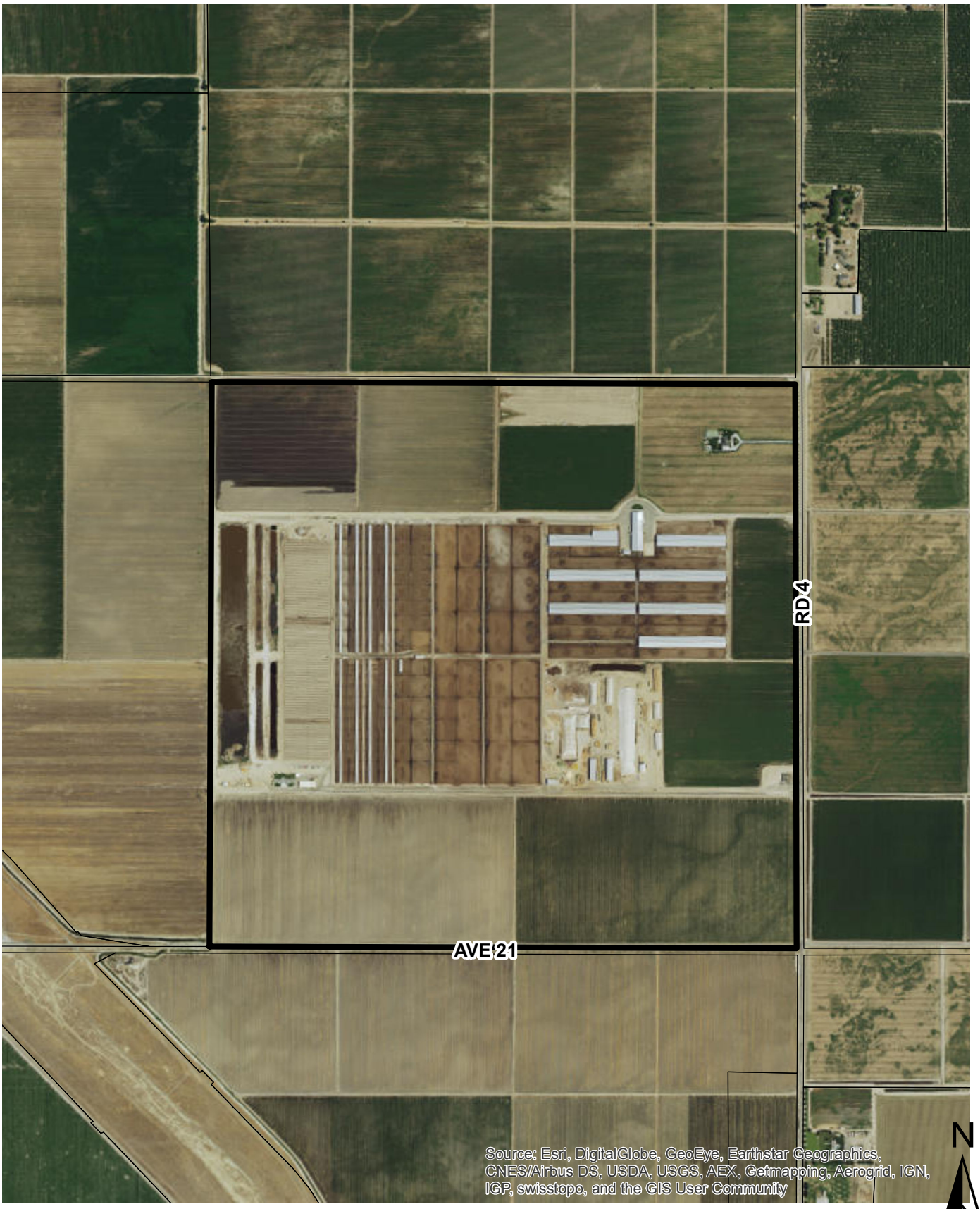
SITE PLAN

EXHIBIT D-1



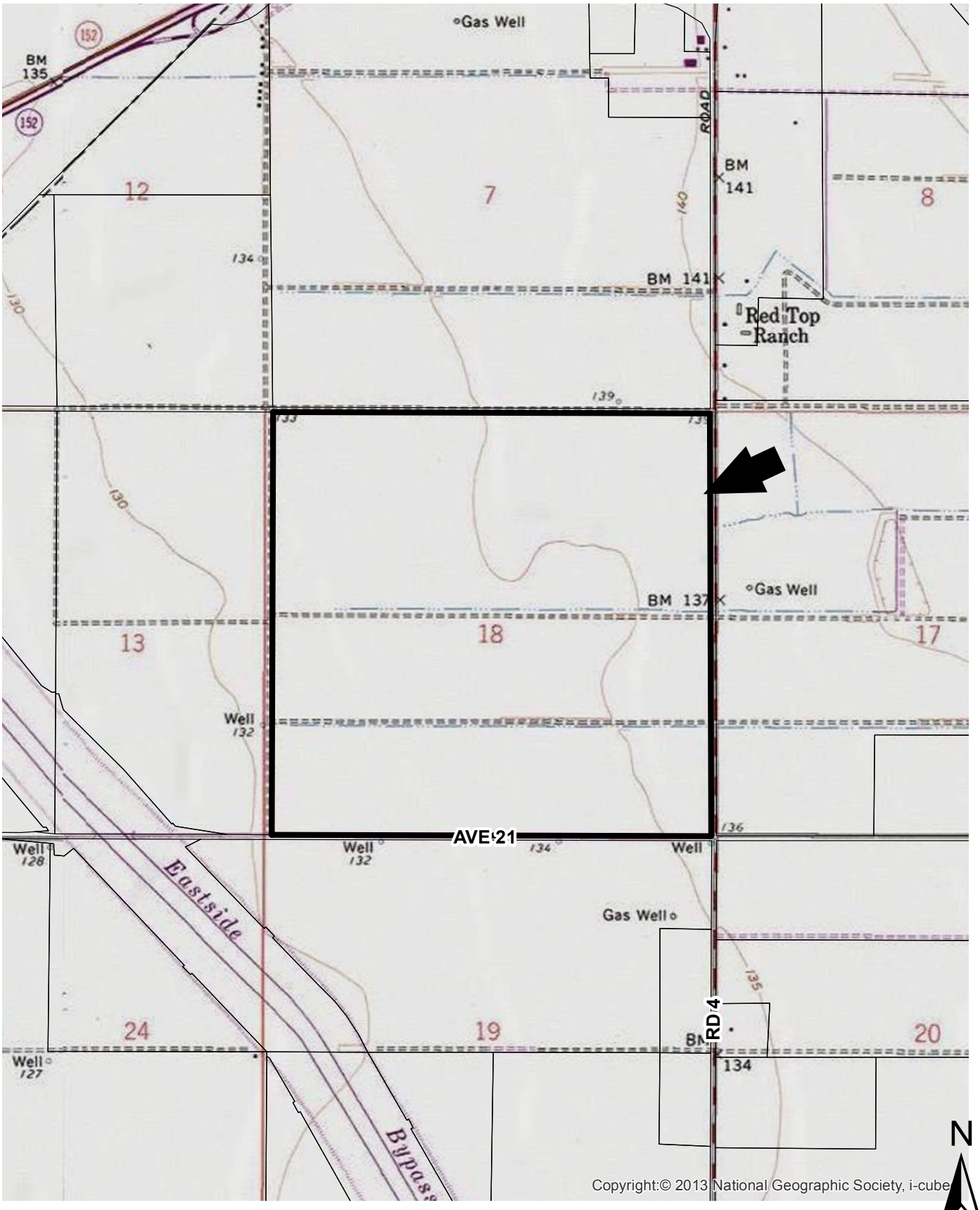
SITE PLAN

EXHIBIT E



AERIAL MAP

EXHIBIT F



TOPOGRAPHICAL MAP

Operational/Environmental Statement Checklist

1. **Please provide the following information:**

Assessor's parcel Number: APN #20-090-002, -003; 020-120-003, -004, -011; 020-150-010; 020-160-015; 020-180-005; 020-181-002; 020-210-003
Applicants Name: Vlot Brothers Dairy – Dirk Vlot
Address: 3197 Avenue 21, Chowchilla, CA 93610
Phone Number: 559-665-7601

2. **Describe the nature of your proposal/operation.**

The purpose of the Biorem Project is to re-work the current waste management system of Vlot Brothers Dairy. Our system will transfer the current effluent waste stream into a "pre-treatment system" for advanced bioremediation of the waste and then transferring that biomass accumulation into a series of energy production ponds where anaerobic digestion will create a biogas used for power on the Vlot Brothers Dairy. After energy production the resultant effluent solids are separated to create an organic pathogen free fertilizer which Biorem will sell to its customers. The remaining water will be used either in flush for the dairy or purified using an anode/cathode electrolysis system for re-use for the herd requirements and for wash-down. Biogas collection will power two 1.1 MW CHP (Combined Heat Power) Cummins Cogens with tier 4 exhaust as required.

3. **What is the existing use of the property?**

The property currently supports the dairy operations of the Vlot Brothers Dairy as described in CUP #99-06 and the amendment CUP # 2011-005.

4. **What products will be produced by the operation? Will they be produced onsite or at some other location? Are these products to be sold onsite?**

The byproducts of the operation are the same although they are repurposed and treated to create a value. Currently GHG's are emitted into the air via the open top pond systems in place. Land application of the manure waste stream occurs at various times which in some cases have been known to increase the soil salts on land and affect leaching characteristics of the soil as well as nutrient uptake into crops. The Biorem converts the biogas (approximately 2/3 methane and 1/3 carbon dioxide) into energy with the remaining exhaust filtered through tier 4 exhaust systems. The manure waste is remediated into an organic pathogen free fertilizer which has value to Biorem's customers in the Salinas area, Santa Maria area, Oxnard area and in Arizona. By eliminating the GHG emissions, via closed and covered ponds the air quality is improved over current conditions significantly. By greatly reducing land application and changing the characteristics of the manure to an organic fertilizer the surrounding soils conditions are greatly improved. By re-using the existing water consumed by the Dairy for its

operations the water usage of the Dairy is significantly reduced. Because this system is closed, there is a tremendous reduction in odors associated with Dairy operations. Overall, the air, land and water conditions are improved while providing power to the Dairy to allow for more profitability both now and in the future.

5. **What are the proposed operational time limits?**

The system will operate with similar time limits as the existing waste management system. Current hours of operation are around the clock without seasonality. The system will operate 24/7/365.

6. **How many customers or visitors are expected?**

Biorem customers will be less than 20 and most will not visit the site. In the event a site visit for fertilizer is required, it will be scheduled and would take less than one hour to see the system and its operational capacity.

7. **How many employees will be there?**

Biorem will have a floating maintenance person to attend to any mechanical issues. The system is completely automated and will signal the maintenance tech in the event of a mechanical malfunction. All equipment is new and the least warranted item has a 5-7-year operational guarantee. Vlot Dairy will not require any additional employees for system operations. In the future there will be contractor employees during construction which will provide employment for a maximum of 9 months. The employees will be employed by the general contractor and will more than likely be sourced primarily from the immediate surrounding area creating approximately 35 additional construction jobs that do not require any special expertise. General contractor jobs will require such tasks and welding plastic, installing pipe, electrical work, etc.

8. **What equipment, materials, or supplies will be used and how will they be stored? If appropriate, provide pictures or brochures.**

Materials for this project include pumps, plastic liners, PVC and CPVC plumbing; two CHP Cogens, a boiler and 16 heat exchangers. Materials will be stored onsite during construction by the General Contractor. In order to alleviate jobsite congestion, and MRP detail will odor differing lead time items to allow for a timely receipt of the materials and installation. The equipment requirements would be similar to any construction job with poly welding tools, construction tools, electrical wire and cabinets, dirt movers and graders, etc. A complete list of materials is available upon request if needed or desired.

9. **Will there be any service and delivery vehicles?**

There will be service and delivery vehicles during construction only. There will be a single maintenance vehicle if or when a mechanical issue requires attention.

10. **Number of parking spaces for employees, customers, and service/delivery vehicles. Type of surfacing on parking area.**

Construction will be out on dry land in the back of the existing facility. There is an existing access road on the property and no additional parking spaces will be required.

11. **How will access be provided to the property/project? (street name)**

Vehicles will access the construction site via an existing access road on the property. All or most vehicles will use highway 152 which runs perpendicular to highway 5 and 99. The vehicles will turn off highway 152 and travel on either Road 4 or Avenue 21.

12. **Estimate the number and type (i.e. cars or trucks) of vehicular trips per day that will be generated by the proposed development.**

This is difficult to estimate. Based on experience we assume some carpooling will occur. During construction we calculate that approximately 7 cars and 10 trucks (pickup style) will travel on Road 4 and highway 152 at various times. Tractor trucks (less than one per day on average) will haul equipment and materials to the jobsite. We assume travel to the site before 8am, travel home at 5pm on most days from the site, and possible lunch travel for those who do not bring a lunch to the site. Red Top Café is a restaurant down the street on Avenue 4 which will more than likely be their destination. If not, either Chowchilla or Los Banos will be their destination(s) during lunch hours.

13. **Describe any proposed advertising, including size, appearance and placement.**

None

14. **Will existing buildings be used or will new buildings be constructed? Indicate which building(s) or portions(s) of will be utilized and describe the type of construction materials, height, color, etc. Provide floor plan and elevations, if applicable.**

No existing buildings will be used and we will only build a new building/awning if the county would require one for CHP noise reductions. Equipment will be mounted to a cement slab at ground level, but if a building is desired by the county, we would be happy to comply to any request.

15. **Is there any landscape or fencing proposed? Describe the type and location.**

None

16. **What are the surrounding land uses to the north, south, east and west property boundaries?**

The surrounding land is used for crops to support the dairy operations. We have included the CUP information with these questions for a detailed operational description from Vlot Brothers Dairy.

17. **Will this operation or equipment used, generate noise above other existing parcels in the area.**

The only "new noise" would be in the form of the CHP Cogen. We have included the Cummins information for your perusal.

18. **On a daily bases or annual basis, estimate how much water will be used by the proposed development, and how is the water to be supplied to the proposed development.**

A part of the Biorem system is a "water conservation" piece. The resultant waste water is re-purposed for Dairy flush operations and "purified" for re-use for the herd and for milking parlor "wash-down". Current water consumption will be greatly reduced by the Vlot Brothers Dairy operation(s).

19. **On a daily or weekly basis, how much wastewater will be generated by the proposed project and how will it be disposed of?**
20. **On a daily or weekly basis, how much solid waste (garbage) will be generated by the proposed project and how will it be disposed of?**

The answers are connected so for the purpose of a greater understanding as to the benefits of the system we have chosen to group them together. Existing waste water and manure solids will be repurposed and re-used. The water consumption will reduce significantly (an estimated 500,000 gallons per day) and the existing land application will reduce significantly. Estimates are that approximately 18 pounds per cow of manure solids are generated each day. Approximately 5 pounds per cow is used for "bedding" and the remaining 13 pounds is applied to the land at various times throughout the year in accordance with the waste management plan. The remaining 13 pounds in the new system will be converted into organic pathogen free fertilizer and sold outside the area to such locations as Salinas, Santa Maria, Oxnard; Arizona, etc. thereby enhancing soil health and reducing potential groundwater risk due to excess soil salt application(s). The 5 pounds utilized for "bedding" will be pathogen (disease causing bacteria) free which will promote a better overall animal health and reduce the risk of pathogenic infection.

21. **Will there be any grading? Tree Removal? (please state the purpose, i.e. for building pads, roads, drainage, etc.)**

There will be grading. There will not be any tree removal. The grading plan was developed to "upgrade" the existing manure management plan, improve animal health and if decided in the future allow for an easily expandable section of the dairy. The existing lagoons are excavated in accordance with the permitting requirements. It is our desire to build "new" ponds to the side of the existing ponds, line the ponds with three layers (two geomembrane layers sandwiching a geotextile mesh in the middle layer for ground water and soil protection). Once the ponds are in operation, the existing pond effluent will be transferred into the new system to in effect clean out the old ponds. Once they are cleaned out the holes in the ground can be filled accomplishing two important goals. The first goal is that of the animal health. The calving operations are closest to the open lagoons. The greatest pathogenic risk occurs closest to the calves. Moving the ponds eliminates that potential exposure risk. By filling in the land we have effectively supplied an upgrade in the environmental protection barrier between manure effluent and the land, air and water. Because the ponds are covered and sealed to capture the biogas it is necessary to have a slope. We have attached drawings (W 1.1 – W 1.4, W 2.1 and W 4.1) which show the slope attachment, sealing of the liners and berm construction. All effluent is at or below ground level with a five (5) foot high bank on top for security purposes. Finally, once the initial ponds are filled in the Vlot Brothers would have a more simple expansion path if it is deemed desirable at a later date. The net gain is there will be a replacing of the exiting ponds with newer and better constructed closed ponds which are better for the environment and operations.

22. **Are there any archeological or historical significant sites located on this property? If so, describe and show the location on the site plan.**

There are not any archeological or historically significant sites located on the property.

23. **Locate and show all bodies of water on application plot plan or attached map.**

There are none on the property.

24. **Show all ravines, gullies, and natural drainage courses on the property on the plot plan.**

Understood.

25. **Will hazardous materials or waste be produced as part of this project? If so, how will they be shipped or disposed of?**

There are not.

26. **Will your proposal require use of any public services or facilities? (i.e. schools, parks, fire and police protection or special districts?)**

There will not

27. **How do you see this development impacting the surrounding area?**

We see a large scale improvement of all three of the environmental components. Land, air and water.

28. **How do you see this development impacting schools, parks, fire and police protection or special districts?**

We do not see an impact.

29. **If your proposal is for commercial or industrial development, please complete the following:**

Proposed Use: N/A
Square feet of building areas: N/A
Total number of employees: N/A
Building heights: N/A

30. **If your proposal is for a land division(s), show any slopes over 10% on the map or on an attached map.**

Any slopes are depicted on drawings W 1.1 – W 1.4, W 2.1 and W 4.1.

EXHIBIT H

Vlot Dairy Dust Control Management Plan

Vlot Brothers Dairy
3197 Avenue 21
Chowchilla, CA 936510

Mitigation Measure AIR-1: Prepare and implement a dust control plan.

Measures included in the dust control plan could include, but are not limited to:

- Pre-activity. Pre-water the work site and phase work to reduce the amount of disturbed surface area at any one time.

- Active operations.

Apply water to dry areas during leveling, grading, trenching, and earth moving activities.

Construct and maintain wind barriers and apply water or dust suppressants to the disturbed surface areas.

Inactive operations, including after work hours, weekends, and holidays.

Apply water or dust suppressants on disturbed surface areas to form a visible crust, and vehicle access will be

restricted to maintain the visible crust.

Temporary stabilization of areas that remain unused for 7 days or more.

Restrict vehicular access and apply and maintain water or dust suppressants on all un-vegetated areas.

Establish vegetation on all previously disturbed areas.

Apply gravel and maintain gravel at all previously disturbed areas.

Apply water or dust suppressants to unpaved haul and access roads.

Post a speed limit of not more than 15 miles per hour, using signs at each entrance and again every 500 feet.

Water or dust suppressants will be applied to vehicle traffic and equipment storage areas.

Windevents.

Water application equipment will apply water to control fugitive dust during wind events

unless unsafe to do so.

Outdoor construction activities that disturb the soil will cease whenever visible dust emission

cannot be effectively controlled.

Outdoor handling of bulk materials.

Water or dust suppressants will be applied when handling bulk materials.

Wind barriers with less than 50% porosity will be installed and maintained, and water

or dust suppressants will be applied.

Outdoor storage of bulk materials.

Water or dust suppressants will be applied to storage piles.

Storage piles will be covered with tarps, plastic, or other suitable material and anchored in such a manner

that prevents the cover from being removed by wind action.

Wind barriers with les sthan 50% porosity will be installed and maintained around the storage piles,

and water or dust suppressants will be applied.

A two or three-sided structure with less than 50% porosity that is at least as high as the storage piles will be used.

On-site transporting of bulk materials.

Vehicle speed will be limited on the worksite.

All haul trucks will be loaded such that the freeboard is not less than six inches when transported

across any paved public access road.

A sufficient amount of water will be applied to the top of the load to limit visible dust emissions.

Haul trucks will be covered with a tarp or other suitable cover.

Off-site transporting of bulk materials.

The following practices will be performed:

The interior of emptied truck cargo compartment swill be cleaned or covered before leaving the site.

Spillage or loss of bulk materials from holes or other openings in the cargo compartment's floor, sides,

and tailgates will be prevented.

Water spray equipment will be used to sufficiently wet the materials.

Transported materials will be washed or screened to remove fines (PM10 or smaller).

Odor Control Management Plan

Odor control measures would consist of installation of covers on the Pre-treatment bioremediation lagoon, the digester tanks and the enclosure of the solids handling processes. Vent air would be evacuated with a blower and conveyed into the aerobic digestion system where odors would be removed biologically. Vlot Brothers Dairy currently operate open air lagoon systems consisting of two primary settling lagoons, two secondary settling lagoons and one tertiary settling lagoon. Odor reduction in these areas are intended to be considerable and significant when compared to current operations.

Criteria Pollutants

The federal and state governments have established ambient air quality standards for the following criteria pollutants: ozone, CO, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (both particulate matter smaller than 10 microns or less in diameter [PM10] and particulate matter smaller than 2.5 microns or less in diameter [PM2.5]), and lead. Ozone, NO_2, and particulate matter are generally considered to be regional pollutants, as these pollutants or their precursors affect air quality on a regional scale. Pollutants such as CO, SO_2, lead, and particulate matter are considered to be local pollutants. Particulate matter is considered to be both a local and a regional pollutant. Toxic air contaminants (TAC) are also discussed below, although no state or federal ambient air quality standards exist for these pollutants. Brief descriptions of these pollutants are provided below.

Ozone

Ozone is a respiratory irritant that increases susceptibility to respiratory infections, and is a severe eye, nose, and throat irritant. It is also an oxidant that can cause substantial damage to vegetation and other materials. Ozone causes extensive damage to plants by leaf discoloration and cell damage. Ozone also attacks synthetic rubber, textiles, plants, and other materials. Ozone is primarily a summer air pollution problem. The ozone precursors reactive organic gases (ROG) and oxides of nitrogen (NO_X) are mainly emitted by mobile sources and by stationary combustion equipment.

Carbon Monoxide

Carbon monoxide is a public health concern because it combines readily with hemoglobin and reduces the amount of oxygen transported in the bloodstream. Carbon monoxide can cause

health problems such as fatigue, headache, confusion, dizziness, and even death. Motor vehicles are the dominant source of CO emissions in most areas. Data indicate that local CO concentrations do not approach the state standards; however, CO concentrations in the vicinity of congested intersections and freeways would be expected to be higher than those recorded at the monitoring station. CO concentrations are expected to continue to decline in the SJVAB because of existing controls and programs and the continued retirement of older, more polluting vehicles.

Inhalable Particulates

Inhalable particulates can damage human health and retard plant growth. Health concerns associated with suspended particulate matter focus on those particles small enough to reach the lungs when inhaled. Particulates also reduce visibility and corrode materials.

Particulate emissions are generated by a wide variety of sources, including agricultural activities, industrial emissions, dust suspended by vehicle traffic and construction equipment, and secondary aerosols formed by reactions in the atmosphere.

Toxic Air Contaminants

TACs are pollutants which may be expected to result in an increase in mortality or serious illness or which may pose a present or potential hazard to human health. Health effects include cancer, birth defects, neurological damage, damage to the body's natural defense system, and diseases which lead to death. Although ambient air quality standards exist for criteria pollutants, no standards exist for TACs. For TACs that are known or suspected carcinogens, the California Air Resources Board (CARB) has consistently found that there are no levels or thresholds below which exposure is risk-free. The TAC of most concern with regards to the proposed project is biogas combustion exhaust particulate matter. Tier 4 exhaust systems are affixed to the CHP Cogeneration exhaust systems to comply with California Emissions Requirements and have been previously permitted in the San Joaquin Valley Air Pollution Control District as well as many others throughout the State of California.

Pest Management Plan

The generation and storage of manure, manure-water, animal feed and other organic materials at dairies present the possibility of increased vector activities as stated in the current Pest Management Plan for the Vlot Brothers Dairy. Mosquito and fly infestations can be observed at dairies particularly at manure separation pits and lagoons and poorly managed feed areas. Infestations will be eliminated around the covered lagoons and digestive tanks thereby lessening the overall vector activities. Ansillary benefits of a cleaner flush water will reduce infestations in the free stall areas and flush lanes although an exact reduction is not possible to calculate at this time. The current management plan analyzed the existing impacts in area and whether or not the incremental contribution of vectors from the dairy would result in a cumulatively significant impact. Conditions of approval and mitigation measures were placed on the Vlot Brothers Dairy to control situations conducive to vector generation. Those mitigations and conditions of approval lessened the impact to that of less than significant. As those conditions and controls will continue for the life of the dairy and the availability of infestation areas will be reduced comparative to current operating conditions, this digestion project will not alter the current controls and conditions

EXHIBIT K

Community and Economic Development
Environmental Health Division
Dexter Marr, Deputy Director

200 West 4th Street
Madera, CA 93637
(559) 675-7823

MEMORANDUM

TO: Robert Mansfield

FROM: Dexter Marr, Environmental Health Division

DATE: May 27, 2016

RE: Biorem Energy - Conditional Use Permit - Chowchilla (020-120-003-000)

Comments

TO:Planning Division
FROM:Environmental Health Division
DATE:May 27, 2016
RE:Conditional Use Permit (CUP) #2016-008, Biorem Energy – Chowchilla. APN 020-120-003

The Environmental Health Division Comments:

The facility must comply the San Joaquin Valley Air Pollution Control District (SJVAPCD) regulations and permitting requirements.

The facility must comply the Regional Water Quality Control Board (RWQCB) regulations and permitting requirements.

Provide/Update Pest (vector) Management Plan. The Pest (vector) Management Plan must go into detail of how each known vector will be identified, tracked, eliminated or significantly reduced and how this program will be implemented. This Pest Management Plan must be provided for review and approval by this department prior to approving of this CUP to ensure that vector(s) are handled on site to effectively prevent them or at a minimum significantly reduce them from becoming an off-site nuisance.

Provide/Update Odor and Dust Management Plans. The Management Plans must go into detail in describing how odor and dust control will be managed and implemented. The Odor and Dust Management Plans must be provided for review and approval by this department prior to approval of this CUP to ensure that each known dairy nuisance(s) are handled on site to effectively prevent them from moving off-site creating a nuisance.

The owner/operator must obtain all the necessary Environmental Health Division permits prior to any construction activities on site and must comply with Madera County Code(s) Title 13 and 14 throughout the property development as it pertains to the Sewage Disposal System(s) and Water System(s).

If your facility handles/store any hazardous materials on-site or generates hazardous waste you may be subject to permitting requirements though our department. As of January 2013 all Certified Unified Program Agency (CUPA) regulated businesses must submit their Hazardous Material Business Plan electronically into the California Environmental Reporting System (CERS) at www.cers.calepa.ca.gov.

The construction of ongoing operations must be done in a manner that shall not allow any type of public nuisance(s) to occur including but not limited to the following nuisance(s); Dust, Odor(s), Noise(s),

Lighting, Vector(s) or Litter. This must be accomplished under accepted and approved Best Management Practices (BMP) and as required by the County General Plan, County Ordinances and any other related State and/or Federal jurisdiction.

During the application process for required County permits, a more detailed review of the proposed project's compliance with all current local, state & federal requirements will be reviewed by this department. The owner/operator of this property must submit all applicable permit applications to be reviewed and approved by this Division prior to commencement of any work activities.

If there are any questions or comments regarding these conditions/requirements or for copies of any Environmental Health Permit Application forms, please contact this Division at (559) 675-7823.

EXHIBIT L

COUNTY OF MADERA
DEPARTMENT OF PUBLIC WORKS

AHMAD M. ALKHAYYAT
INTERIM DIRECTOR

200 West 4th Street
Madera, CA 93637-8720
Main Line - (559) 675-7811
Special districts - (559) 675-7820
Fairmead Landfill - (559) 665-1310

MEMORANDUM

DATE: May 25, 2016

TO: Robert Mansfield

FROM: Phu Duong, Public Works

SUBJECT: Biorem Energy - Conditional Use Permit - Chowchilla (020-120-003-000)

Comments

The Public Works Department has reviewed the CUP#2016-008 located at 3197 Avenue 21, Chowchilla, CA 93610. The Department has the following conditions of approval:

At any time during the operations of the proposed or existing development, at the County's discretion and depending on the condition of the roadways at the time, the County reserves the rights to require the applicant to repair and provide any necessary improvements to the existing roadways if there are damages to the existing pavement caused by the operations from the proposed the development.

Prior to any construction where such construction is proposed within an existing County right-of-way, the applicant is required to apply for an Encroachment Permit from the Public Works Department. Said permit must be approved prior to commencing the work.

At the time of applying for the building permits, if any grading is to occur, the applicant is required to submit a grading, drainage, and erosion control plans to the Public Works Department for review. Such improvement plans shall be prepared by a licensed professional.

If access approaches or road improvements are to be added to the proposed development, the applicant is required to provide such improvement plans to the Public Works Department for review.

If there are existing drainage facilities and storage pond existed on site, the developer is required to verify that the existing system and its onsite storage still have the adequate capacity and fully functional for the proposed development.

All National Pollution Discharge Elimination System (NPDES) storm water regulations and standards shall be met. It is possible that the quality of storm water may be affected by pollutants. The applicant shall mitigate any impacts associated with storm water contamination caused by this project. A Storm Water Pollution Prevention Plan (SWPPP) is required for all projects 1-acre or more of site disturbance.

All stabilized construction on and off site access locations shall be constructed per the latest edition of the California Stormwater Quality Association (CASQA) details to effectively prevent tracking of sediment onto paved areas. If applicable, all BMPS to be inspected weekly and before and after each rain event. Repair or replace as necessary. The contractor shall abide all of the laws, ordinances, and regulations associated with the NPDES and the Clean Water Act.

Contractor shall be responsible for locating all underground utilities prior to the start of any work by contacting Underground Service Alert (USA) 48 hours prior to any excavation at 1-800-227-2600 Contractor shall be responsible for contacting the appropriate party in advance of any work for necessary inspections in compliance to these plans, standard plans and standard specifications

inspections in compliance to these plans, standard plans and standard specifications.

EXHIBIT M

CALIFORNIA Water Boards

Edmund G. Brown Jr.
Governor

Matthew Rodriquez
Secretary for
Environmental Protection

Central Valley Regional Water Quality Control Board

26 May 2016

Robert Mansfield
Madera County Planning Department
200 West 4th Street, Suite 3100
Madera, CA 93637

PROJECT REVIEW REQUEST, BIOREM ENERGY – CONDITIONAL USE PERMIT, VLOT DAIRY AND HEIFER RANCH, WDID 5C205037001, 20330 ROAD 4, CHOWCHILLA, MADERA COUNTY

On 18 May 2016, Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff received a project review request from your agency for a Conditional Use Permit (CUP) to allow an anaerobic digester at the Vlot Dairy and Heifer Ranch (Dairy). The Dairy is currently covered under the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2013-0122 (Reissued General Order). The Reissued General Order, which was adopted by the Central Valley Water Board on 3 October 2013 in response to a Sacramento County Superior Court decision, replaces the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (2007 General Order) and accompanying Monitoring and Reporting Program (MRP). The Reissued General Order incorporates the key provisions, specifications, and requirements of the 2007 General Order and accompanying MRP. A Notice of Adopted Reissued General Order was issued to the project proponent by the Executive Officer on 1 November 2013 that notified you of the Dairy's coverage under the Reissued General Order.

In December 2010, the Central Valley Water Board certified a final Environmental Impact Report for a Waste Discharge Regulatory Program for Dairy Manure Digester and Co-Digester Facilities (Program EIR) which can be found at http://www.waterboards.ca.gov/centralvalley/water_issues/dairies/dairy_program_regs_requirements/index.shtml. The Program EIR assesses the environmental impacts associated with manure digester and co-digester facilities throughout the Central Valley. The Program EIR is intended to provide California Environmental Quality Act (CEQA) compliance for the Central Valley Water Board's waste discharge regulatory program for these facilities. Other State and local permitting agencies such as the Madera County Planning Department may tier off the Program EIR to satisfy CEQA requirements for other permits related to dairy manure digester and co-digester projects like the one in the proposed CUP.

Under its waste discharge regulatory program for dairy digesters, the Central Valley Water Board has adopted two general orders: 1) the Waste Discharge Requirements General Order for Dairies with Manure Anaerobic Digester or Co-Digester Facilities, Order No. R5-2010-0130 (Dairy Digester General Order), adopted in December 2010; and 2) the Waste Discharge Requirements

General Order for Centralized Dairy Manure Anaerobic Digesters or Centralized Dairy Manu Co-digester Facilities, Order No. R5-2011-0039 (Centralized Digester General Order), adopted in June 2011.

Under the proposed anaerobic digester project, it is appropriate for the Dairy to obtain water quality permit coverage under the Dairy Digester General Order. The proposed Madera County CUP for the anaerobic digester should require the submittal of a Notice of Intent (NOI) to Central Valley Water Board staff applying for permit coverage under the Dairy Digester General Order. The Dairy Digester General Order and NOI application form can be viewed and downloaded at http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2010-0130_wdr_go.pdf.

We also request that any environmental review for the project contain sufficient information to answer the checklist questions in the NOI. The checklist questions in the NOI provide a means for the applicant to report on compliance with the mitigation measures identified in the Program EIR. Alternate documentation may be acceptable (e.g., Operational/Environmental Statement Checklist contained in the County's Project Review Request), provided it adequately demonstrates compliance with the Final Program EIR's mitigation measures for each covered resource area with potentially significant impacts.

If you have any questions regarding this matter, please contact Stephen Klein by email at stephen.klein@waterboards.ca.gov or by telephone at (559) 445-5558.

Dale E Essary

DALE E. ESSARY, PE
RCE No. 53216
Senior Engineer
Confined Animals Unit

cc: Madera County Environmental Health Department, Madera
Alex Riordan, The Source Group, Modesto
Dirk & Case Vlot, 3197 Avenue 21, Chowchilla, CA 93610

EXHIBIT N

Environmental Checklist Form

Title of Proposal: CUP #2016-008 – Vlot Dairy Digester project

Date Checklist Submitted: June 14, 2016

Agency Requiring Checklist: Madera County CE&D, Planning Division

Agency Contact: Robert Mansfield, AICP **Phone:** (559) 675-7821

Description of Initial Study/Requirement

The Initial Study is a public document used by the decision-making lead agency to determine whether a project may have significant effects on the environment. In the case of the proposed project, the Madera County Planning Department, acting as lead agency, will use the initial study to determine whether the project has a significant effect on the environment. In accordance with CEQA, Guidelines (Section 15063[a]), an environmental impact report (EIR) must be prepared if there is substantial evidence (such as results of the Initial Study) that a project may have significant effect on the environment. This is true regardless of whether the overall effect of the project would be adverse or beneficial. A negative declaration (ND) or mitigated negative declaration (MND) may be prepared if the lead agency determines that the project would have no potentially significant impacts or that revisions to the project, or measures agreed to by the applicant, mitigate the potentially significant impacts to a less-than-significant level.

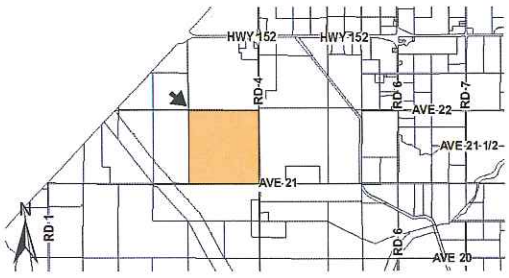
The initial study considers and evaluates all aspects of the project which are necessary to support the proposal. The complete project description includes the site plan, operational statement, and other supporting materials which are available in the project file at the office of the Madera County Planning Department.

Description of Project:

The Conditional Use Permit is to allow for the construction of a dairy digester on an existing dairy. The system will transfer the current effluent waste stream into a "pre-treatment" system for advanced bioremediation of the waste and then transferring that biomass accumulation into a series of energy production ponds where anaerobic digestion will create a biogas used for power on the Vlot Brothers' Dairy. After energy production, the resultant effluent solids are separated to create an organic pathogen free fertilizer which Biorem will sell to its customers. The remaining water will be used either in flush for the dairy or purified using an anode/cathode electrolysis system for re-use for the herd requirements and for wash down. Biogas collection will power two 1.1 megawatt CHP (Combined Heat Power) Cummins Cogens with tier 4 exhaust.

Project Location:

The subject parcel is located on the northwest corner of Road 4 and Avenue 21, (3197 Avenue 21) Chowchilla.



Applicant Name and Address:

Biorem Energy
1060 Cactus Drive,
Pocatello, Idaho, 83204

Vlot Brothers Diary - Dirk Vlot
3197 Avenue 21,
Chowchilla, CA 93610

General Plan Designation:

AE (Agricultural Exclusive)

Zoning Designation:

ARE-40 (Agricultural Rural Exclusive – 40 Acre) District

Surrounding Land Uses and Setting:

Agricultural

Other Public Agencies whose approval is required:

None

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology /Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☐ Noise
☐ Population / Housing	☐ Public Services	☐ Recreation
☐ Transportation/Traffic	☐ Utilities / Service Systems	☐ Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

☐ _____
Prior EIR or ND/MND Number

_____
Signature

June 14, 2016
Date

I. AESTHETICS -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion:

(a - b) No Impact. There are no scenic vistas or scenic resources in the vicinity of this project site. The closest areas that are being considered as scenic highways by the California Department of Transportation (CALTRANS) are Highways 41 and 49 north of Oakhurst.

There are no scenic highways in the vicinity; there are no historic buildings on the property; there are no trees, rock outcroppings or other scenic resources on the parcel.

The general height, scale, lighting and design of this facility is typical of dairy digester facilities constructed elsewhere and is consistent with other dairy buildings in the area as well as on the dairy.

(c) No Impact. The subject parcel and those surrounding it are agriculturally zoned and utilized. The structures and infrastructure related to them are consistent with that zoning. The infrastructure related to this project is designed to blend in with other infrastructure related to the dairy, therefore will not be an impact. A major portion of the digester is the digester ponds, which are covered. As they are typically at ground level, with coverings, they will not visually impact the area.

(d) Less than Significant Impact. There will be potentially new lights as a result of this project, thus increasing, albeit slightly, the "light pollution" of the area. It will not be significant in light of the whole, however with mitigations and conditions of approval associated with this project, the impact can be lessened and/or maintained to less than significant.

A nighttime sky in which stars are readily visible is often considered a valuable scenic/visual resource. In urban areas, views of the nighttime sky are being diminished by "light pollution." Light pollution, as defined by the International dark-Sky Association, is any adverse effect of artificial light, including sky glow, glare, light trespass, light clutter, decreased visibility at night, and energy waste. Two elements of light pollution may affect city residents: sky glow and light trespass. Sky glow is a result of light fixtures that emit a portion of their light directly upward into the sky where light scatters, creating an orange-yellow glow above a city or town. This light can interfere with views of the nighttime sky and can diminish the number of stars that are visible. Light trespass occurs when poorly shielded or poorly aimed fixtures cast light into unwanted areas, such as neighboring property and homes.

Light pollution is a problem most typically associated with urban areas. Lighting is necessary for nighttime viewing and for security purposes. However, excessive lighting or inappropriately designed lighting fixtures can disturb nearby sensitive land uses through indirect illumination. Land uses which are considered "sensitive" to this unwanted light include residences, hospitals, and care homes.

Daytime sources of glare include reflections off of light-colored surfaces, windows, and metal details on cars traveling on nearby roadways. The amount of glare depends on the intensity and direction of sunlight, which is more acute at sunrise and subset because the angle of the sun is lower during these times.

II.		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
	AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
	a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
	b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
	c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resource Code section 12220(g)) or timberland (as defined by Public Resources Code section 4526) or timberland zoned Timberland Protection (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
	d) Result in the loss of forest land or conversion of forest land to non-forest land?	☐	☐	☐	☒
	e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or	☐	☐	☐	☒

conversion of forest land to non-forest use?

Discussion:

(a - e) No Impact. The parcel and surrounding parcels are zoned agriculturally and are used for agriculturally oriented purposes as defined by County ordinance. The subject parcel also has approved Conditional Use Permits relating to the dairy operation. No farmland will be affected directly or indirectly as a result of this project. There is no forest land, or zoning for forest land, in the vicinity of the project site.

The property involved in this project is considered Confined Animal Agricultural in the Rural Land Mapping Project of the Farmland Mapping and Monitoring Program of the California Resources Agency. This is consistent with dairy facilities.

The project will not violate the intent of the zoning ordinance in that it is consistent with current and expanding technologies being utilized on dairy facilities. This project is not intended to take over the site from the existing use, but only supplement it and decrease potential air and water environmental impacts. The parcel is zoned ARE-40 (Agricultural, Rural, Exclusive – 40 Acre) which allows for dairies by Conditional Use Permit.

The project is on a parcel that is enrolled in the Williamson Act. This project will not be inconsistent with the provisions of the Williamson Act or with operations on site.

General Information

The California Land Conservation Act of 1965 -- commonly referred to as the Williamson Act -- enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value.

The Department of Conservation oversees the Farmland Mapping and Monitoring Program. The Farmland Mapping and Monitoring Program (FMMP) produce maps and statistical data used for analyzing impacts on California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status; the best quality land is called Prime Farmland. The maps are updated every two years with the use of a computer mapping system, aerial imagery, public review, and field reconnaissance. The program's definition of farmland classification is below:

PRIME FARMLAND (P): Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

FARMLAND OF STATEWIDE IMPORTANCE (S): Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

UNIQUE FARMLAND (U): Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four

years prior to the mapping date.

FARMLAND OF LOCAL IMPORTANCE (L): Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

GRAZING LAND (G): Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.

URBAN AND BUILT-UP LAND (D): Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

OTHER LAND (X): Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

CONFINED ANIMAL AGRICULTURE: Poultry facilities, feedlots, dairy facilities – this use may be a component of Farmland of Local Importance in some counties.

III.	AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
	a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
	b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
	c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
	d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
	e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Discussion:

(a - c) Less Than Significant Impact. This project will not obstruct implementation of any air quality plans in the County. The operation of a single dairy digester is not anticipated to exceed the thresholds of significance in most cases. Even with multiple digesters throughout the County, the chances of any impact to air quality plans would be insignificant.

Emissions associated with dairy digester operations would depend on several factors, such as the size and type of digester, any equipment needed for pre-processing manure, the increased truck traffic on local road networks, and the post processing of the biogas.

The basis of the project is the capture of gases produced by the decomposition of dairy manure and utilize them for energy production purposes. This in and of itself will have the long-term effect of reducing air quality impacts. While it is acknowledged that this is just one project, it has the long term potential of fostering other projects that will then have the ongoing effect of reducing other air quality impacts.

In regards to operational criteria air pollutant emissions, additional sources and emissions would include any additional diesel equipment on-site for pre-processing, increased truck traffic (in this case the transport of the pathogen free fertilizer that is an end component sold by the partner in this project), and post production of biogas.

Construction emissions will predominately be related to PM2.5 and PM10 (Particulate Matter of 2.5 and 10 micron in size respectively) from fugitive emissions. The PM2.5 and PM10 emissions will occur during any earthmoving (grading) activities. There will also be a limited increase in diesel emissions from the heavy equipment associated with the grading and construction activities. These emissions will be temporary in nature for the duration of the construction process.

There is no major residential development on surrounding parcels; the zoning of this parcel and surrounding parcels do however allow for at least one single family residence as a by-right use. There are no hospitals in the area. Alview Elementary School is approximately ½ mile south of the project site. It serves K – 3 grades on a 9.47 acre site. While adjacent to cropland associated with the dairy, the actual work being done for this application is more than ½ mile away.

(d) Less than Significant Impact. Sensitive receptors are facilities that "house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollution. Hospitals, schools, convalescent facilities and residential areas are examples of sensitive receptors." (GAMAQI, 2002).

Alview Elementary is approximately ½ mile south of the project site. It serves K – 3 grades on a 9.47 acre site. While adjacent to cropland associated with the dairy, the actual work being done for this application is more than ½ mile away. The project itself will not increase herd size, therefore there is no potential of increased odor generation. If anything, this project has the potential of reducing the odor generation of the project with the capture of gases from decomposing manure, therefore this is less than significant of an impact.

(e) Less than Significant Impact. Alview Elementary is approximately ½ mile south of the project site. It serves K – 3 grades on a 9.47 acre site. While adjacent to cropland associated with the property, the actual work being done is more than ½ mile away. The project itself will not increase herd size, therefore there is no potential of increased odor generation. If anything, this project has the potential of reducing the odor generation of the project with the capture of gases from decomposing manure, therefore this is less than significant of an impact.

The area surrounding the project site is sparsely populated and is agriculturally zoned and used.

Given the distances between habitation and uses, odors are not substantially concentrated. As the odors spread from their source, they tend to disperse and dilute. While there might be "faint traces" of odors, they are not as concentrated. This is typical of this type of operation.

A review of available records indicates that there have been no odor complaints from the subject project site. Aside from construction activities that are known to produce impacts to sensitive generators, the operation of this facility will not be an impact.

Odors from raising livestock are exempt from direct regulation by the local air quality jurisdiction under California state law (CHSC §41705(a)). That being said, odors can still be considered a perceived nuisance and an environmental impact. Typical manure management operations at dairies include collection, treatment, storage and reuse of the manure. Manure management at dairies without incorporation of digester facilities typically flush or scrape manure into on-site storage ponds or stockpiles, respectively, or a combination of these techniques are used. Manure in storage ponds and stockpiles would naturally undergo anaerobic decomposition, and as a result, odorous compounds like ammonia and hydrogen sulfide could be released into the environment. Especially when the surface layer of the manure is agitated. However, in the operation of a dairy digester facility, the manure would be flushed, scraped or transported into the digester, which would limit its' open air degradation. Operation of a dairy digester facility is anticipated to reduce odors currently associated with dairy waste products since anaerobic digestion occurs in a closed system. Volatile organic compounds are broken down through the anaerobic digestion process, and exhaust is generally processed in a more controlled environment.

However, the transport, storage and pre-processing activities of the odiferous cow manure could produce nuisance odors at digesters.

Global Climate Change

Climate change is a shift in the "average weather" that a given region experiences. This is measured by changes in temperature, wind patterns, precipitation, and storms. Global climate is the change in the climate of the earth as a whole. It can occur naturally, as in the case of an ice age, or occur as a result of anthropogenic activities. The extent to which anthropogenic activities influence climate change has been the subject of extensive scientific inquiry in the past several decades. The Intergovernmental Panel on Climate Change (IPCC), recognized as the leading research body on the subject, issued its Fourth Assessment Report in February 2007, which asserted that there is "very high confidence" (by IPCC definition, a 9 in 10 chance of being correct) that human activities have resulted in a net warming of the planet since 1750.

CEQA requires an agency to engage in forecasting "to the extent that an activity could reasonably be expected under the circumstances. An agency cannot be expected to predict the future course of governmental regulation or exactly what information scientific advances may ultimately reveal" (CEQA Guidelines Section 15144, Office of Planning and Research commentary, citing the California Supreme Court decision in *Laurel Heights Improvement Association* v. *Regents of the University of California* [1988] 47 Cal. 3d 376).

Recent concerns over global warming have created a greater interest in greenhouse gases (GHG) and their contribution to global climate change (GCC). However at this time there are no generally accepted thresholds of significance for determining the impact of GHG emissions from an individual

project on GCC. Thus, permitting agencies are in the position of developing policy and guidance to ascertain and mitigate to the extent feasible the effects of GHG, for CEQA purposes, without the normal degree of accepted guidance by case law.

IV. BIOLOGICAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion:

A project will be deemed to have a significant environmental impact on biological resources if it substantially reduces the number or restricts the range of a rare, threatened or endangered species or the habitat of that species; substantially interferes with the movement of resident or migratory fish or wildlife; or substantially diminishes habitat for fish, wildlife, or plants.

(a - f) No Impact. While species have been identified as being potentially in the quadrangle of this project, no impacts to those species have been identified as a result of this project, directly or indirectly.

A vernal pool is defined as a contained basin depression lacking a permanent above ground outlet. They contain water for a few months in the spring and early summer. There are no vernal pools or habitats identified on the project site, nor any that would be impacted directly or indirectly as a result of this project. There are no federally identified wetlands on the project site. The parcel already has structures on it, as does parcels in the immediate vicinity. The chances of any of the species identified in the area being on this parcel are minimal at best.

The site has been a dairy since at least the late 1990s, so development and operations have been going on for some time. As a result, the chances of any of the species listed below being on the project site are less than likely. There is still the chance of potential migration, but said migration would be brief in nature given operations.

With the exception of the San Joaquin Flood Bypass (Chowchilla Bypass) proximate to the property, which is typically dry with no observed habitats, there are no streams or rivers in the vicinity of this project, no fish migration will be impacted. While the project itself may not interfere with the migration of wildlife species, the construction of it will have a temporary effect on the migratory habit of species. This is due to the fact that most animals tend to shy away from areas that they perceive to be dangerous or hazardous. With loud noise and heavy equipment involved, this type of situation will be in effect during construction of the project. This will be temporary in nature for the duration of the construction. Operationally, noise is not anticipated to be an issue.

There are no wetlands, federally listed or otherwise, on the parcel involved with this project. There are no riparian areas (relating to or living or located on the bank of a natural watercourse (as a river) or sometimes of a lake or a tidewater) on the parcel. There are no streams or bodies of water of which migratory fish or other species that would use bodies of water would be impacted by the project. There is the San Joaquin Flood Bypass (Chowchilla Bypass) proximate to the property, but is typically dry with no observed habitats.

There are no habitats identified on this parcel, so no modifications are expected as a result. While there are candidate species identified in the quadrangle in which this project is located, given the development that has occurred in the area over the years, the chances of any of the listed species being on the parcel are less than likely.

While the list below shows a few species listed in the quadrangle in which this project is located, this does not necessarily mean that these species are actually located on the project site either in a habitat

setting or migrating through.

Special Status Species include:

- Plants and animals that are legally protected or proposed for protection under the California Endangered Species Act (CESA) or Federal Endangered Species Act (FESA);
- Plants and animals defined as endangered or rare under the California Environmental Quality Act (CEQA) §15380;
- Animals designated as species of special concern by the U.S. Fish and Wildlife Service (USFWS) or California Department of Fish and Game (CDFG);
- Animals listed as "fully protected" in the Fish and Game Code of California (§3511, §4700, §5050 and §5515); and
- Plants listed in the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California.

A review of both the County's and Department of Fish and Game's databases for special status species have identified the following species:

Species	Federal Listing	State Listing	Dept. of Fish and Game Listing	CNPS Listing
Swainson's Hawk	None	Threatened	None	None
Tricolored Blackbird	None	None	SSC	None
Hoover's Cryptantha	None	None	1A	None
Heartscale	None	None	1B.2	None
Lesser saltscale	None	None	1B.1	None
Subtle Orache	None	None	1B.1	None
Recurved Larkspur	None	None	1B.2	None

Bliss Ranch Quadrangle

List 1A: Plants presumed extinct

List 1B: Plants Rare, Threatened, or Endangered in California and elsewhere.

List 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere

List 3 Plants which more information is needed – a review list

List 4: Plants of Limited Distributed - a watch list

Ranking

0.1 – Seriously threatened in California (high degree/immediacy of threat)

0.2 – Fairly threatened in California (moderate degree/immediacy of threat)

0.3 – Not very threatened in California (low degree/immediacy of threats or no current threats known)

SSC Species of Special Concern
WL Watch List
FP Fully Protected

General Information

Effective January 1, 2007, Senate Bill 1535 took effect that has changed de minimis findings procedures. The Senate Bill takes the de minimis findings capabilities out of the Lead Agency hands and puts the process into the hands of the California Department of Fish and Wildlife (formally the California Department of Fish and Game). A Notice of Determination filing fee is due each time a NOD is filed at the jurisdictions Clerk's Office. The authority comes under Senate Bill 1535 (SB 1535) and Department of Fish and Wildlife Code 711.4. Each year the fee is evaluated and has the potential of increasing. For the most up-to-date fees, please refer to: http://www.dfg.ca.gov/habcon/ceqa/ceqa_changes.html.

The Valley elderberry longhorn beetle was listed as a threatened species in 1980. Use of the elderberry bush by the beetle, a wood borer, is rarely apparent. Frequently, the only exterior evidence of the elderberry's use by the beetle is an exit hole created by the larva just prior to the pupal stage. According to the USFWWS, the Valley Elderberry Longhorn Beetle habitat is primarily in communities of clustered Elderberry plants located within riparian habitat. The USFWS stated that VELB habitat does not include every Elderberry plant in the Central Valley, such as isolated, individual plants, plants with stems that are less than one inch in basal diameter or plants located in upland habitat.

Wetlands are defined under Title 33 §328.3 of the California Code of Regulations as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

V. CULTURAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Discussion:

(a - d) No Impact. While the County is known to potentially have historical and archaeological resources, due to the agricultural aspects of this subject parcel and that of surrounding properties, the chances of finding any archaeological or paleontological resources are less than likely.

Most of the archaeological survey work in the County has taken place in the foothills and mountains. This does not mean, however, that no sites exist in the western part of the County, but rather that this area has not been as thoroughly studied. There are slightly more than 2,000 recorded archaeological sites in the County, most of which are located in the foothills and mountains. Recorded prehistoric artifacts include village sites, camp sites, and bedrock milling stations, pictographs, petroglyphs, rock rings, sacred sites, and resource gathering areas. Madera County also contains a significant number of potentially historic sites, including homesteads and ranches, mining and logging sites and associated features (such as small camps, railroad beds, logging chutes, and trash dumps.

Public Resource Code 5021.1(b) defines a historic resource as "any object building, structure, site, area or place which is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California." These resources are of such import, that it is codified in CEQA (PRC Section 21000) which prohibits actions that "disrupt, or adversely affect a prehistoric or historic archaeological site or a property of historical or cultural significance to a community or ethnic or social groups; or a paleontological site except as part of a scientific study."

Archaeological importance is generally, although not exclusively, a measure of the archaeological research value of a site which meets one or more of the following criteria:

- Is associated with an event or person of recognized significance in California or American history or of recognized scientific importance in prehistory.
- Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable archaeological research questions.
- Has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind.
- Is at least 100 years old and possesses substantial stratigraphic integrity (i.e. it is essentially undisturbed and intact).
- Involves important research questions that historic research has shown can be answered only with archaeological methods.

Reference CEQA Guidelines §15064.5 for definitions.

VI. GEOLOGY AND SOILS -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Discussion:

(a i - iii) Less than Significant Impact. Madera County is divided into two major physiographic and geologic provinces: the Sierra Nevada Range and the Central Valley. The Sierra Nevada physiographic province in the northeastern portion of the county is underlain by metamorphic and igneous rock. It consists mainly of homogenous types of granitic rocks, with several islands of older metamorphic rock. The central and western parts of the county are part of the Central Valley province, underlain by marine and non-marine sedimentary rocks.

The foothill area of the county is essentially a transition zone, containing old alluvial soils that have been dissected by the west-flowing rivers and streams which carry runoff from the Sierra Nevada's.

Seismicity varies greatly between the two major geologic provinces represented in Madera County. The Central Valley is an area of relatively low tectonic activity bordered by mountain ranges on either side. The Sierra Nevada's, partly within Madera County, are the result of movement of tectonic plates which resulted in the creation of the mountain range. The Coast Ranges on the west side of the Central Valley are also a result of these forces, and continued movement of the Pacific and North American tectonic plates continues to elevate the ranges. Most of the seismic hazards in Madera County result from movement along faults associated with the creation of these ranges.

There are no active or potentially active faults of major historic significance within Madera County. The County does not lie within any Alquist Priolo Special Studies Zone for surface faulting or fault creep.

However, there are two significant faults within the larger region that have been and will continue to be, the principle sources of potential seismic activity within Madera County.

San Andreas Fault: The San Andreas Fault lies approximately 45 miles west of the county line. The fault has a long history of activity and is thus a concern in determining activity in the area.

Owens Valley Fault Group: The Owens Valley Fault Group is a complex system containing both active and potentially active faults on the eastern base of the Sierra Nevada Range. This group is located approximately 80 miles east of the County line in Inyo County. This system has historically been the source of seismic activity within the County.

The *Draft Environmental Impact Report* for the state prison project near Fairmead identified faults within a 100 mile radius of the project site. Since Fairmead is centrally located along Highway 99 within the county, this information provides a good indicator of the potential seismic activity which might be felt within the County. Fifteen active faults (including the San Andreas and Owens Valley Fault Group) were identified in the *Preliminary Geotechnical Investigation*. Four of the faults lie along the eastern portion of the Sierra Nevada Range, approximately 75 miles to the northeast of Fairmead. These are the Parker Lake, Hartley Springs, Hilton Creek and Mono Valley Faults. The remaining faults are in the western portion of the San Joaquin Valley, as well as within the Coast Range, approximately 47 miles west of Fairmead. Most of the remaining 11 faults are associated with the San Andreas, Calaveras, Hayward and Rinconada Fault Systems which collectively form the tectonic plate boundary of the Central Valley.

In addition, the Clovis Fault, although not having any historic evidence of activity, is considered to be active within quaternary time (within the past two million years), is considered potentially active. This fault line lies approximately six miles south of the Madera County line in Fresno County. Activity along this fault could potentially generate more seismic activity in Madera County than the San Andreas or Owens Valley fault systems. However, because of the lack of historic activity along the Clovis Fault, there is inadequate evidence for assessing maximum earthquake impacts.

Seismic ground shaking, however, is the primary seismic hazard in Madera County because of the County's seismic setting and its record of historical activity (General Plan Background Element and Program EIR). The project represents no specific threat or hazard from seismic ground shaking, and all new construction will comply with current local and state building codes. Other geologic hazards, such as landslides, lateral spreading, subsidence, and liquefaction have not been known to occur within Madera County.

According to the Madera County General Plan Background Report, groundshaking is the primary seismic hazard in Madera County. The valley portion of Madera County is located on alluvium deposits, which tend to experience greater groundshaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from groundshaking than those located in the foothill and mountain areas.

Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged ground shaking. According to the Madera County General Plan Background Report, although there are areas of Madera County where the water table is at 30 feet or less below the surface, soil types in the area are not conducive to liquefaction because they are either too coarse in texture or too high in clay content; the soil types mitigate against the potential for liquefaction.

(a – iv) No Impact. The parcel involved with this project is topographically flat, therefore landslides will not occur.

(b) Less than Significant Impact with Mitigation Incorporation. The site is already developed, with no new residential development planned as a result of this project. However, due to the existing structures, there will be some erosion pattern changes. These changes are considered minimal as topographically, the parcel is relatively flat. Erosion will occur even on topographically flat surfaces, the effect is not as great as one would expect to see on land that have any sort of incline. With the addition of the genset structure, and the covering of the lagoons used for the project, runoff will be diverted to areas that it may not have gone originally. This will create some runoff in heavy rain events, but with proper mitigations, this impact can be lessened to less than significant.

(c - e) No impact. There are no known impacts that will occur as a direct or indirect result of this project.

VII. GREENHOUSE GAS EMISSIONS - Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Discussion:

Biogas is comprised primarily of methane, with small amounts of carbon dioxide, hydrogen sulfide and ammonia.

(a) Less Than Significant Impact. Dairies by definition would generate components of greenhouse gases by the decomposition process of manure. However, this project is designed to capture the majority of those gases and in turn generate electricity. This process will reduce the greenhouse gas generation from this facility. While it is not of a significant amount when viewed in the larger context, it still is a reduction.

Benefits of digesters include the capture of biogas that would have been emitted anyway because of the nature of organic waste management at the facility where the digester is in operation. By capturing and combusting biogas, anaerobic digesters are preventing fugitive methane emissions. Methane is a potent GHG with a global warming potential 25 times that of carbon dioxide. When the captured biogas is combusted, methane is converted to carbon dioxide and water, thus resulting in a net GHG emissions reduction.

In regards to operations, the overall impact of operations of the assumed dairy digesters to be built in the next 10 years would be a net decrease in GHG emissions of 1,650,014 metric tons of Carbon Dioxide emissions per year. The majority of this reduction is due to methane capture through the closed system inherent in the dairy digester process, whereas conventional manure storage structures result in large quantities of methane release into the atmosphere from the anaerobic digestion of animal waste.

(b) No Impact. There is no anticipated impact as a result of this project.

Digester development and operations would comply with applicable County plans, policies and regulations adopted for the purpose of reducing the emissions of GHG's. The project would directly support several GHG reduction measures contained in AB 32 (increased renewables mix and high recycling/zero waste) which would also be beneficial in meeting any goals.

VIII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people	☐	☐	☒	☐

residing or working in the project area?

f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Discussion:

Biogas is comprised primarily of methane, with small amounts of carbon dioxide, hydrogen sulfide and ammonia. Methane is not toxic but is classified as a simple asphyxiate, possessing a slight inhalation hazard. If breathed in high concentrations, oxygen deficiency can result in serious injury or death. Handling methane can be hazardous due to its health risk and flammability.

(a - b) Less Than Significant Impact. The western part of Madera County has historically experienced several concerns related to hazardous materials. Typically these hazards are in line with agriculturally based operations (fertilizers, pesticides, equipment oils and grease, etc.). The use and management of chemicals, including hazardous materials, within the agricultural areas of the County are dominated by the application of fertilizer and pesticides for crop production.

Construction activities would likely require use of limited quantities of hazardous materials such as fuels for construction equipment, oils, lubricants, and the like. The improper use, storage, handling, transport or disposal of these materials could result in accidental release. The operation will include minimal use of oil as a lubricant to the engine, but no new hazardous materials are expected as a result of this project. There will be no change to the dairy facility operations in their use of materials as a result of this project.

Handling of hazardous materials is covered by federal and state laws which minimize worker safety risks from both physical and chemical hazards in the workplace. Businesses are required to submit a Hazardous Materials Management Plan with the local CUPA which performs routine inspections to ensure compliance with regulations. Transportation of materials is covered by the Department of Transportation (DOT).

(c) Less Than Significant Impact. The proposed project involves the production of biogas generated through the anaerobic digestion process. The biogas would be captured and could be combusted in a flare, used directly in internal combustion engines to produce electricity or heat, or upgraded to biomethane through the removal of certain components.

Methane is not toxic, but handling methane can be hazardous and it is flammable.

Unintentional releases of biogas from dairy digester facilities or pipelines could pose risks to human health and safety. For example, biogas could be released from a leak or rupture of the digester facility

or one of the pipe segments. If the gas reaches a combustible mixture and an ignition source is present, a fore and/or explosion could occur, resulting in injury or death.

(d) No Impact. According to the Department of Toxic Substance Control (DTSC), there are no sites on or near this project site that is or was hazardous waste sites.

(e – f) Less Than Significant Impact. The project is not located near either airport in the County, the closest is the Chowchilla Airport which is 12.43 miles north-easterly of the project site. There is, however, a private agricultural air strip in proximity to the site, thus placing the project site within an airport/airspace overlay district. As a result, the construction and operation of the project will have to conform to the mitigation provided which is derived from the Airport Land Use Commission Plan (ALUCP).

(g - h) No Impact. No impacts identified as a result of this project.

Any hazardous material because of its quantity, concentration, physical or chemical properties, pose a significant present or potential hazard to human health and safety, or the environment the California legislature adopted Article I, Chapter 6.95 of the Health and Safety Code, Sections 25500 to 25520 that requires any business handling or storing a hazardous material or hazardous waste to establish a Business Plan. The information obtained from the completed Business Plans will be provided to emergency response personnel for a better-prepared emergency response due to a release or threatened release of a hazardous material and/or hazardous waste.

Business owners that handle or store a hazardous material or mixtures containing a hazardous material, which has a quantity at any one time during the year, equal to or greater than:

1) A total of 55 gallons,
2) A total of 500 pounds,
3) 200 cubic feet at standard temperature and pressure of compressed gas,
4) Any quantity of Acutely Hazardous Material (AHM).

Assembly Bill AB 2286 requires all business and agencies to report their Hazardous Materials Business Plans to the Certified Unified Program Agency (CUPA) information electronically at http://cers.calepa.ca.gov

IX. HYDROLOGY AND WATER QUALITY – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not	☐	☐	☐	☒

	support existing land uses or planned uses for which permits have been granted)?			
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
f)	Otherwise substantially degrade water quality?	☐	☒	☐	☐
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☒	☐
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Discussion:

(a) Less Than Significant Impact. During site grading and construction related to dairy digester facilities, large areas of bare soil could be exposed to erosion by wind and water for extended periods of time. Bare soil surfaces are more likely to erode than vegetated areas due to the lack of dispersion, infiltration and retention created by covering vegetation. Soil disturbance, excavation, and grading activities could increase erosion and sedimentation to storm drains that empty to local surface waters. Construction water quality impacts are temporary and managed through the standard industry accepted Best Management Practices (BMPs). Contractors are responsible for implementing these practices during the project.

Madera County has 34 County Service Areas and Maintenance Districts that together operate 30 small water systems and 16 sewer systems. Fourteen of these special districts are located in the Valley Floor, and the remaining 20 special districts are in the Foothills and Mountains. MD-1 Hidden Lakes, Bass Lake (SA-2B and SA-2C) and SA-16 Sumner Hill have surface water treatment plants, with the remaining special districts relying solely on groundwater.

The major wastewater treatment plants in the County are operated in the incorporated cities of Madera and Chowchilla and the community of Oakhurst. These wastewater systems have been recently or are planned to be upgraded, increasing opportunities for use of recycled water. The cities of Madera and Chowchilla have adopted or are in the process of developing Urban Water Management Plans. Most of the irrigation and water districts have individual groundwater management plans. All of these agencies engage in some form of groundwater recharge and management.

Groundwater provides almost the entire urban and rural water use and about 75 percent of the agricultural water use in the Valley Floor. The remaining water demand is met with surface water. Almost all of the water use in the Foothills and Mountains is from groundwater with only three small water treatment plants relying on surface water from the San Joaquin River and its tributaries.

(b) No Impact. No impacts have been identified as a result of this project.

(c – d) Less Than Significant Impact. There will be no streams or rivers altered as a result of this project. There may be slight changes in erosion patterns as a result of any new structures and impervious surfaces being created as a result of this project. Given that the parcel is topographically flat, any erosion will be insignificant. No instances of flooding as a result of diversion is expected as a result of the project.

(e - f) Less than Significant Impact with Mitigation Incorporation. The operation of anaerobic digesters for the treatment of dairy wastes could cause environmental degradation of groundwater quality. Reductions in groundwater quality could occur as a result of digester operation and disposal of digester effluent (including both liquid and solid waste). If not properly managed, components of animal manure such as salts, nutrients (nitrogen, ammonia, phosphorus, potassium), pharmaceuticals and hormones, pathogens, chloride, boron, and heavy metals could enter into groundwater and, depending on the volume, characteristics of the waste, and duration of the release, result in short term or ongoing groundwater quality degradation.

(g – i) Less than Significant Impact. Many lowland areas of the Central Valley are prone to flooding. The addition of an anaerobic digester could be located in areas that have been identified as subject to 100-year floods. Centralized facilities and associated building, disposal fields and substrate storage could be subject to damage if located in these areas. Workers, therefore, would also be subject to injury or death as a result of flooding hazards.

The project site is located in Flood Zone "A", subject to 100 year flooding with no base elevation provided. No residential structures are proposed as a result of this project, but could potentially be impacted by flooding should it occur. As the area surrounding this project is agriculturally related and is a dairy, overall impacts will be minimal to public risks.

(j) No Impact. No impacts have been identified as a result of this project.

A seiche is an occasional and sudden oscillation of the water of a lake, bay or estuary producing fluctuations in the water level and caused by wind, earthquakes or changes in barometric pressure. A tsunami is an unusually large sea wave produced by seaquake or undersea volcanic eruption (from the Japanese language, roughly translated as "harbor wave"). According to the California Division of Mines and Geology, there are no active or potentially active faults of major historic significance within Madera County. As this property is not located near any bodies of water, no impacts are identified.

General Information

Groundwater quality contaminants of concern in the Valley Floor include high salinity (total dissolved solids), nitrate, uranium, arsenic, methane gas, iron, manganese, slime production, and dibromochloropropane with the maximum contaminant level exceeded in some areas. Despite the water quality issues noted above, most of the groundwater in the Valley Floor is of suitable quality for irrigation. Groundwater of suitable quality for public consumption has been demonstrated to be present in most of the area at specific depths.

Groundwater quality contaminants of concern in the Foothills and Mountains include manganese, iron, high salinity, hydrogen sulfide gas, uranium, nitrate, arsenic, and methylbutylethylene (MTBE) with the maximum concentration level being exceeded in some areas. Despite these problems, there are substantial amounts of good-quality groundwater in each of the areas evaluated in the Foothills and Mountains. Iron and manganese are commonly removed by treatment. Uranium treatment is being conducted on a well by the Bass Lake Water Company.

A seiche is an occasional and sudden oscillation of the water of a lake, bay or estuary producing fluctuations in the water level and caused by wind, earthquakes or changes in barometric pressure. A tsunami is an unusually large sea wave produced by seaquake or undersea volcanic eruption (from the Japanese language, roughly translated as "harbor wave"). According to the California Division of Mines and Geology, there are no active or potentially active faults of major historic significance within Madera County. As this property is not located near any bodies of water, no impacts are identified.

The flood hazard areas of the County of Madera are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare. These flood losses are caused by uses that are inadequately elevated, floodproofed, or protected from flood damage. The cumulative effect of obstruction in areas of special flood hazards which increase flood height and velocities also contribute to flood loss.

X.	LAND USE AND PLANNING – Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Conflict with any 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?	☐	☐	☐	☒
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion:

(a - c) No Impact. This project will not physically divide an existing community or be an impact on

habitat conservation plans.

Dairy digester facilities do not present a threat of physically dividing an established community since they would be located on agricultural lands. It is anticipated that facilities would be fully contained within an existing dairy area.

At the project level, dairy digester facilities would be designed to be consistent with applicable land use plans, policies and regulations. In general, the facilities would be located on sites zoned for agriculture. Dairy digester facilities would be considered an agricultural use as they support dairies by providing additional benefits from manure.

XI. MINERAL RESOURCES – Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Discussion:

(a - b) No Impact. There are no known minerals in the vicinity of the project site.

XII. NOISE – Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion:

Background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (i.e. aircraft flyovers, motor vehicles, sirens) which are identifiable to the individual.

An individual's noise exposure is a measure of noise over a period of time. A noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable.

The noise near a digester would be expected to be typical of agricultural areas and rural residences. The predominant sources of noise would include roadway traffic and equipment noise from existing agricultural operations.

(a) Less than Significant Impact. It is anticipated that there will be a temporary increase in noise during the construction phase of this project. Minimal noise may occur as a result of the operations of this facility. The engine portion of this project is to be located in an enclosed structure, which would muffle any significant amounts of noise that potentially could be generated.

Operationally, there is no anticipated increase in background noise. The surrounding area is sparsely populated. Noise from localized point sources (sources that can be identified and are at a fixed location) typically decreases by approximately 6 dBa (decibels attenuated) with each doubling of distance from the source. While there is an increase in herd size, given the location of the project, and the fact that it is not near any population centers, the amount of noise generation expected is insignificant.

(b) Less than Significant Impact. With the exception of construction related activities, there is no known instance of groundborne vibrations related to this project. What groundborne vibrations are generated as a result of construction, they will be temporary in nature for the duration of construction. No operational vibrations are expected, and if any are generated will be localized to the point of origin.

(c) Less than Significant Impact. With the inclusion of the genset, even though it's inside a structure, there is the potential of a slight increase in ambient noise levels. This will be dependent on the construction of the structure and the duration the genset runs.

(d) Less Than Significant Impact. There will be a temporary increase in ambient noise levels as a result of construction operations.

(e – f) No Impact. The project is not within proximity to a known airport. County records indicate that there is an agriculturally related airstrip, and the project is in an Airport/Airspace Overlay district. This project will not interfere with flight patterns as an overall whole, however certain design criteria will need to be adhered to to avoid interference of flight (i.e. glare, instrument interference, etc.).

General Discussion

The Noise Element of the Madera County General Plan (Policy 7.A.5) provides that noise which will be created by new non-transportation noise sources shall be mitigated so as not to exceed the Noise Element noise level standards on lands designated for noise-sensitive uses. However, this policy does not apply to noise levels associated with agricultural operations. All the surrounding properties, while include some residential units, are designated and zoned for agricultural uses. This impact is therefore considered less than significant.

Construction noise typically occurs intermittently and varies depending upon the nature or phase of construction (e.g. demolition/land clearing, grading and excavation, erection). The United States Environmental Protection Agency has found that the average noise levels associated with construction activities typically range from approximately 76 dBA to 84 dBA Leq, with intermittent individual equipment noise levels ranging from approximately 75 dBA to more than 88 dBA for brief periods.

Short Term Noise

Noise from localized point sources (such as construction sites) typically decreases by approximately 6 dBA with each doubling of distance from source to receptor. Given the noise attenuation rate and assuming no noise shielding from either natural or human-made features (e.g. trees, buildings, and fences), outdoor receptors within approximately 400 feet of construction site could experience maximum noise levels of greater than 70 dBA when onsite construction-related noise levels exceed approximately 89 dBA at the project site boundary. Construction activities that occur during the more noise-sensitive eighteen hours could result in increased levels of annoyance and sleep disruption for occupants of nearby existing residential dwellings. As a result, noise-generating construction activities would be considered to have a potentially significant short-term impact. However with implementation of mitigation measures, this impact would be considered less than significant.

Long Term Noise

Mechanical building equipment (e.g. heating, ventilation and air conditioning systems, and boilers), associated with the proposed structures, could generate noise levels of approximately 90 dBA at 3 feet from the source. However, such mechanical equipment systems are typically shielded from direct public exposure and usually housed on rooftops, within equipment rooms, or within exterior enclosures.

Landscape maintenance equipment, such as leaf blowers and gasoline powered mowers, could result in intermittent noise levels that range from approximately 80 to 100 dBA at 3 feet, respectively. Based on an equipment noise level of 100 dBA, landscape maintenance equipment (assuming a noise attenuation rate of 6 dBA per doubling of distance from the source) may result in exterior noise levels of approximately 75 dBA at 50 feet.

MAXIMUM ALLOWABLE NOISE EXPOSURE FOR
NON-TRANSPORTATION NOISE SOURCES*

		Residential	Commercial	Industrial (L)	Industrial (H)	Agricultural
Residential	AM	50	60	55	60	60
	PM	45	55	50	55	55
Commercial	AM	60	60	60	65	60
	PM	55	55	55	60	55
Industrial (L)	AM	55	60	60	65	60
	PM	50	55	55	60	55
Industrial (H)	AM	60	65	65	70	65
	PM	55	60	60	65	60
Agricultural	AM	60	60	60	65	60
	PM	55	55	55	60	55

*As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers at the property line.

AM = 7:00 AM to 10:00 PM
PM = 10:00 PM to 7:00 AM
L = Light
H = Heavy

Note: Each of the noise levels specified above shall be lowered by 5 dB for pure tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g. caretaker dwellings).

Sensitive Noise Receptors include residential areas, hospitals, schools, performance spaces, businesses, and religious congregations.

Vibrating objects in contact with the ground radiate energy through the ground. Vibrations from large and/or powerful objects are perceptible by humans and animals. Vibrations can be generated by construction equipment and activities. Vibrations attenuate depending on soil characteristics and distance. Vibration perception threshold: The minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such direct means as, but not limited to, sensation by touch or visual observation of moving objects. The perception threshold shall be presumed to be a motion velocity of one-tenth (0.1) inches per second over the range of one to one hundred Hz.

Reaction of People and Damage to Buildings from Continuous Vibration Levels		
Velocity Level, PPV (in/sec)	**Human Reaction**	**Effect on Buildings**
0.006 to 0.019	Threshold of perception; possibility of intrusion	Damage of any type unlikely

0.08	Vibration readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Continuous vibration begins to annoy people	Virtually no risk of architectural damage to normal buildings
0.20	Vibration annoying to people in buildings	Risk of architectural damage to normal dwellings such as plastered walls or ceilings
0.4 to 0.6	Vibration considered unpleasant by people subjected to continuous vibrations vibration	Architectural damage and possibly minor structural damage
Source: Whiffen and Leonard 1971		

XIII. POPULATION AND HOUSING -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion:

(a - c) No Impact. The construction of and operation of the facility will not have an impact on housing or population needs for the County or the area specifically. The surrounding area is predominately agriculturally zoned and sparsely populated.

According to the California Department of Finance, in January of 2012, the County wide population was 152,074 with a total of 49,334 housing units. This works out to an average of 3.33 persons per housing unit. The vacancy rate was 11.84%.

XIV. PUBLIC SERVICES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	☒	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Discussion:

(a – i) Less than Significant Impact. The Madera County Fire Department exists through a contract between Madera County and the CALFIRE (California Department of Forestry and Fire Prevention) and operates six stations for County responses in addition to the state-funded CALFIRE stations for state responsibility areas. Under an "Amador Plan" contract, the County also funds the wintertime staffing of four fire seasonal CALFIRE stations. In addition, there are ten paid-call (volunteer) fire companies that operate from their own stations. The administrative, training, purchasing, warehouse, and other functions of the Department operate through a single management team with County Fire Administration.

The facility is not near any fire station. It will need to be constructed pursuant to most current building and life safety codes at time of construction.

There is the minimal chance of "flare off" from the generation of gases as a result of decomposition of manure. However, if properly constructed and maintained, the chances are minimal of that occurring.

(a - ii) Less than Significant Impact. The proposed project in and of itself would not result in any additional demands for police protection with the exception of ancillary need for potential events of vandalism and theft.

Crime and emergency response is provided by the Madera County Sherriff's Department. There will be an incidental need for law enforcement in the events of theft and vandalism on the project site.

A Federal Bureau of Investigations 2009 study suggests that there is on average of 2.7 law enforcement officials per 1,000 population for all reporting counties. The number for cities had an

average of 1.7 law enforcement officials per 1,000 population.

(a iii - v) No Impact. No impacts are anticipated as a result of this project as it does not relate to any educational programs, or increase the surrounding population.

Single Family Residences have the potential for adding to school populations. The average per Single Family Residence is:

Grade	Student Generation per Single Family Residence
K – 6	0.425
7 – 8	0.139
9 – 12	0.214

No impacts are anticipated as a direct, indirect, short or long term impact as a result of this project.

The Madera County General Plan allocates three acres of park available land per 1,000 residents' population.

XV. RECREATION	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion:

(a - b) No Impact. No impacts have been identified to recreational facilities as a result of this project.

The Madera County General Plan allocates three acres of park available land per 1,000 residents' population.

XVI. TRANSPORTATION/TRAFFIC -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒
b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures or other standards, established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

Discussion:

(a - f) No Impact. In the area around the proposed project, opportunities for bicycles and pedestrians, especially as an alternative to the private automobile, are significantly limited by lack of developed shoulders, sidewalks or pavement width accommodating either mode. The condition is not uncommon in rural areas where distances between origins and destinations are long and the terrain is either rolling or mountainous. In the locations outside urbanized portions of the County, the number of non-recreational pedestrians/cyclists would likely be low, even if additional facilities were provided.

As with most rural areas, Madera County is served by limited alternative transportation modes. Currently, only limited public transportation facilities or routes exist within the area. Volunteer systems such as the driver escort service, as well as the senior bus system, operate for special purpose activities and are administered by the Madera County Action Committee. The rural densities which are prevalent throughout the region have typically precluded successful public transit systems, which require more concentrated populations in order to gain sufficient ridership.

Local circulation is largely deficient with these same State Highways and County Roads composing the only existing network of through streets. Most local streets are dead-end drives, many not conforming to current County improvement standards. Existing traffic, particularly during peak hour and key intersections, already exhibits congestion.

During the period of construction of the project, it is expected that there will be some construction related vehicles. The digester proposed in this project will not impact transportation or circulation concerns in the area.

Madera County currently uses Level Of Service "D" as the threshold of significance level for roadway and intersection operations. The following charts show the significance of those levels.

Level of Service	Description	Average Control Delay (sec./car)
A	Little or no delay	0 – 10
B	Short traffic delay	>10 – 15
C	Medium traffic delay	> 15 – 25
D	Long traffic delay	> 25 – 35
E	Very long traffic delay	> 35 – 50
F	Excessive traffic delay	> 50

Unsignalized intersections.

Level of Service	Description	Average Control Delay (sec./car)
A	Uncongested operations, all queues clear in single cycle	< 10
B	Very light congestion, an occasional phase is fully utilized	>10 – 20
C	Light congestion; occasional queues on approach	> 20 – 35
D	Significant congestion on critical approaches, but intersection is functional. Vehicles required to wait through more than one cycle during short peaks. No long-standing queues formed.	> 35 – 55
E	Severe congestion with some long-standing queues on critical approaches. Traffic	> 55-80

	queues may block nearby intersection(s) upstream of critical approach(es)	
F	Total breakdown, significant queuing	> 80

Signalized intersections.

Level of service	Freeways	Two-lane rural highway	Multi-lane rural highway	Expressway	Arterial	Collector
A	700	120	470	720	450	300
B	1,100	240	945	840	525	350
C	1,550	395	1,285	960	600	400
D	1,850	675	1,585	1,080	675	450
E	2,000	1,145	1,800	1,200	750	500

Capacity per hour per lane for various highway facilities

Madera County is predicted to experience significant population growth in the coming years (62.27 percent between 2008 and 2030). Accommodating this amount of growth presents a challenge for attaining and maintain air quality standards and for reducing greenhouse gas emissions. The increase in population is expected to be accompanied by a similar increase in vehicle miles traveled (VMT) (61.36 percent between 2008 and 2030).

Horizon Year	Total Population (thousands)	Employment (thousands)	Average Weekday VMT (millions)	Total Lane Miles
2010	175	49	5.4	2,157
2011	180	53	5.5	NA
2017	210	63	6.7	NA
2020	225	68	7.3	2,264
2030	281	85	8.8	2,277

Source: MCTC 2007 RTP

The above table displays the predicted increase in population and travel. The increase in the lane miles of roads that will serve the increase in VMT is estimated at 120 miles or 0.94 percent by 2030. This indicates that roadways in Madera County can be expected to become much more crowded than is currently experienced.

Emissions of CO (Carbon Monoxide) are the primarily mobile-source criteria pollutant of local concern. Local mobile-source CO emissions near roadway intersections are a direct function of traffic volume, speed and delay. Carbon monoxide transport is extremely limited; it disperses rapidly with distance from the source under normal meteorological conditions. Under certain meteorological conditions, however, CO concentrations close to congested roadway or intersection may reach unhealthy levels, affecting local sensitive receptors (residents, school children, hospital patients, the elderly, etc.). As a result, the SJVAPCP recommends analysis of CO emissions of at a local rather than regional level. Local CO concentrations at intersections projected to operate at level of service (LOS) D or better do not typically exceed national or state ambient air quality standards. In addition, non-signalized

intersections located within areas having relatively low background concentrations do not typically have sufficient traffic volumes to warrant analysis of local CO concentrations.

No structures associated with this project will interfere with air flight patterns. The project is not within proximity to a known airport. County records indicate that there is an agriculturally related airstrip, and the project is in an Airport/Airspace Overlay district. This project will not interfere with flight patterns as an overall whole, however certain design criteria will need to be adhered to to avoid interference of flight (i.e. glare, instrument interference, etc.).

There will be a temporary insignificant increase in local traffic for the duration of construction of the digester facility. After construction, that traffic will decrease back to what is considered typical for the area, as there will only be an occasional maintenance visit on an as needed basis.

XVII. UTILITIES AND SERVICE SYSTEMS – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒

g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Discussion:

(a - g) No Impact. No impacts identified as a result of this project.

The proposed digester is a covered lined pond that is a plug flow, which means as material is added, the same amount leaves. The pond liner shall meet the Tier 1 Double Lined Pond requirements of the Regional Water Quality Control Board.

General Discussion

Madera County has 34 County Service Areas and Maintenance Districts that together operate 30 small water systems and 16 sewer systems. Fourteen of these special districts are located in the Valley Floor, and the remaining 20 special districts are in the Foothills and Mountains. MD-1 Hidden Lakes, Bass Lake (SA-2B and SA-2C) and SA-16 Sumner Hill have surface water treatment plants, with the remaining special districts relying solely on groundwater.

The major wastewater treatment plants in the County are operated in the incorporated cities of Madera and Chowchilla and the community of Oakhurst. These wastewater systems have been recently or are planned to be upgraded, increasing opportunities for use of recycled water. The cities of Madera and Chowchilla have adopted or are in the process of developing Urban Water Management Plans. Most of the irrigation and water districts have individual groundwater management plans. All of these agencies engage in some form of groundwater recharge and management.

Groundwater provides almost the entire urban and rural water use and about 75 percent of the agricultural water use in the Valley Floor. The remaining water demand is met with surface water. Almost all of the water use in the Foothills and Mountains is from groundwater with only three small water treatment plants relying on surface water from the San Joaquin River and its tributaries.

In areas of higher precipitation (Oakhurst, North Fork, and the topographically higher part of the Coarsegold Area), groundwater recharge is adequate for existing uses. However, some problems have been encountered in parts of these areas due to well interference and groundwater quality issues. In areas of lower precipitation (Raymond-Hensley Lake and the lower part of the Coarsegold area), groundwater recharge is more limited, possibly requiring additional water supply from other sources to support future development.

Madera County is served by a solid waste facility (landfill) in Fairmead. There is a transfer station in North Fork. The Fairmead facility also provides for Household Hazardous Materials collections on Saturdays. The unincorporated portion of the County is served by Red Rock Environmental Group. Above the 1000 foot elevation, residents are served by EMADCO services for solid waste pick-up.

XVIII MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Discussion:

CEQA defines three types of impacts or effects:

- Direct impacts are caused by a project and occur at the same time and place (CEQA §15358(a)(1).

- Indirect or secondary impacts are reasonably foreseeable and are caused by a project but occur at a different time or place. They may include growth inducing effects and other effects related to changes in the pattern of land use, population density or growth rate and related effects on air, water and other natural systems, including ecosystems (CEQA §15358(a)(2).

- Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts (CEQA §15355(b)). Impacts from individual projects may be considered minor, but considered retroactively with other projects over a period of time, those impacts could be significant, especially where listed or

sensitive species are involved.

(a) Less Than Significant Impact. Construction of the project would not substantially degrade the quality of the environment or reduce the habitat of fish or wildlife species. There are no wetlands identified, so impacts would not occur. The proposed project would not cause population numbers of any special status species to drop below self-sustaining levels or threaten to eliminate a plant or animal community. The construction and eventual operation will not reduce the number or restrict the range of a rare plant or animal.

(b) Less Than Significant Impact. Overall construction and operation of this project will be minimal in light of the whole.

(c) No Impact. The project would not adversely affect human beings either directly or indirectly. Environmental parameters with potential to impact human health would include impacts from changes in air quality and existing hazards and hazardous materials use. Potential impacts from hazards and hazardous materials or air quality, and other environmental resources that could affect human beings, would be reduced to a less than significant level with the implementation of mitigation measures identified in this document.

Documents/Organizations/Individuals Consulted
In Preparation of this
Initial Study

California Department of Finance

California Department of Toxic Substance Control (DTSC) http://dtsc.ca.gov/database/index.cfm

California Department of Transportation (CALTRANS)

California Integrated Waste Management Board

California Environmental Quality Act Guidelines

United States Environmental Protection Agency

Caltrans website http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm accessed October 31, 2008

California Department of Fish and Game "California Natural Diversity Database" http://www.dfg.ca.gov/biogeodata/cnddb/

ESA. *Dairy Manure Digester and Co-Digester Facilities Draft Environmental Impact Report.* July, 2010.

Madera County Dairy Standards

Madera County Department of Public Works

Madera County Environmental Health Department

Madera County Fire Marshall's Department

Madera County General Plan

Madera County Integrated Regional Water Management Plan

Regional Water Quality Control Board

State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011 and 2012, with 2010 Benchmark.* Sacramento, California, May 2012

EXHIBIT O

MITIGATED NEGATIVE DECLARATION MND

RE: CUP #2016-008 – Vlot Dairy

LOCATION AND DESCRIPTION OF PROJECT:

The subject property is located on the northwest corner of the intersection of Avenue 21 and Road 4 (3197 Avenue 21), Chowchilla. This is a request to allow for the construction of a dairy digester on an existing dairy facility. The system will transfer the current effluent waste stream into a "pre-treatment" system for advanced bioremediation of the waste and then transferring that biomass accumulation into a series of energy production ponds where anaerobic digestion will create a biogas used for power on the Vlot Brothers' Dairy. After energy production, the resultant effluent solids are separated to create an organic pathogen free fertilizer which Biorem will sell to its customers. The remaining water will be used either in flush for the dairy or purified using an anode/cathode electrolysis system for re-use for the herd requirements and for wash down. Biogas collection will power two 1.1 megawatt CHP (Combined Heat Power) Cummins Cogens with tier 4 exhaust.

ENVIRONMENTAL IMPACT:

No adverse environmental impact is anticipated from this project. The following mitigation measures are included to avoid any potential impacts.

BASIS FOR NEGATIVE DECLARATION:

See attached

Madera County Environmental Committee

A copy of the negative declaration and all supporting documentation is available for review at the Madera County Planning Department, 200 West Fourth Street, Ste. #3100, Madera, California.

DATED: June 14, 2016
FILED:
PROJECT APPROVED:

MITIGATION MONITORING REPORT

MND # 2016-15

No.	Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Verification of Compliance		
						Initials	Date	Remarks
Aesthetics								
Agricultural Resources								
Air Quality								
	minimize idling time of all vehicles associated with contruction							
	maintain all equipment associated with operations in proper working order according to manufacturer's specifications							
	use equipment meeting at a minimum Tier II emission standards							
	Update odor management plans for the dairy to incorporate use of the digester							
Biological Resources								
Cultural Resources								
Geology and Soils								
Hazards and Hazardous Materials								
	18.78.010(A)(1)(a) no uses creating electrical or electronic interference with communication or guidance devices used by aircraft or ground control is permitted to be built or used.							
	18.78.010(A)(1)(b) no uses that would create glare, smoke, dust or similar factors interfering with aircraft operation to and from runways and taxiways of the airport are permitted as a part of the dairy facility operations.							

No.	Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Verification of Compliance		
						Initials	Date	Remarks
Hydrology and Water Quality								
	solid wastes are to be stored on impermeable surfaces							
	hazardous waste, mammalian tissues, dead animals, and human waste are prohibited from discharge							
	incorporate lined disgester substrate storage facilities that meet antidegradation provisions into project design							
	Digester facility shall include design requirements to protect them from 100-year flood events. Such desgns include but are not limited to: siting, access, grading foundation soils above projected water elevation and site protection.							
Land Use and Planning								
Mineral Resources								
Noise								
Population and Housing								
Public Services								
Recreation								
Transportation and Traffic								
Utilities and Service Systems								