A. PROJECT BACKGROUND INFORMATION

1. Project Title:
Cilion, Inc. – Ethanol Plant. District Project Number N1062063

2. Lead Agency Name and Address:
San Joaquin Valley Unified Air Pollution Control District
1990 E. Gettysburg Avenue
Fresno CA 93726-0244

3. Contact Person:
Planning/CEQA: Daniel Barber, Ph.D. (559) 230-5800
Permit Services: Rick Dyer (209) 557-6400

4. Project Location:
The facility will be located at 4209 Jessup Road, Ceres, CA. The site is south of Ceres, near the unincorporated town of Keyes and just west of CA Highway 99 on Jessup Road. The District has verified that the proposed project location is not within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

5. Project Sponsor's Name and Address:
Cilion, Inc.
P.O. Box 1029
Goshen, CA 93327

6. Assessor's Parcel Number:
The proposed facility is on Assessors parcels numbered: 45-29-14, 34 and 35

7. General Plan Designation/Zoning:
The General Plan designations are "Industrial" and "Planned Development" respectively APN 045-026-35 is also zoned "PD 123", The General Plan Designation is "Planned Development". The proposed Ethanol Plant is consistent with both the Zoning and General Plan on all 3 APN's.

8. Project Description:

Cilion, Inc. is proposing to install a new ethanol production facility at 4209 Jessup Road, Ceres, CA. Stanislaus County has determined that the proposed ethanol plant will be located in an area zoned for an Industrial Planned Development. The Development Standards for this Planned Development require a "Staff Approval Permit" for all uses. The County typically considers staff approvals to be ministerial actions and exempt from

CEQA. Cilion has applied to the San Joaquin Valley Unified Air Pollution Control District (District) for 21 Authority to Construct (ATC) permits for the proposed equipment. Since the District is not aware of any other agency with discretionary approval authority for the project, the District is serving as the Lead Agency.

The proposed project will use fermentation and distillation processes to produce up to 55 million gallons of fuel grade ethanol per year from corn. The facility will receive corn via an enclosed conveyor from A.L. Gilbert Company, an adjoining feed manufacturer. The facility will also have multiple large storage tanks to store intermediate and final product and a loading rack to ship the product by truck. The District's evaluation of the project concludes that the potential impact on air quality will be reduced to less than significant through compliance with District Rule 2201 (New Source Review) and implementation of voluntary mitigation measures.

Background on Ethanol Plants:

The principals of Cilion Inc. built the first corn-to-ethanol plant in California two years ago in Goshen (near Visalia). In August 2005, the United States Senate & Congress passed an Energy Bill, which was signed by the President. This new law requires an increase in ethanol production that will double production and use in the United States over the next 7 years, from 4 billion to 8 billion gallons per year. Ethanol is used in California gasoline today as an oxygenate, reducing emissions and helping improve air quality. Currently ethanol demand is being met by rail cars of ethanol being transported from the Mid-West, Canada and South America to the California fuel hubs where it is then trucked to the local markets. The Keyes project will reduce the need for this rail and truck service and supplement it with direct truck service from Keyes to the Bay Area fuel blenders. The project also provides the added benefit of reducing California's reliance on imported fuel.

The United States has a goal to:
1. Reduce dependence on imported oil,
2. Reduce the trade deficit that is negatively impacted by importing oil,
3. Increase the supply of refined fuel to reduce prices to the consumer, and
4. Improve air quality and reduce greenhouse gases.

The ethanol plant in Keyes will help accomplish these goals.

Process Description:

The production of ethanol involves the conversion of starch to sugars and then the conversion of those sugars to ethanol (i.e. grain alcohol). Cilion Inc. proposes to process 571,000 tons of corn to produce 55 million gallons of fuel grade ethanol and 306,000 tons of wet distillers grain (WDG). Based on a simplified process flow diagram provided by the applicant, the ethanol production process can be broken down as follows:

Grain Receiving and Handling Operation:
Grain (corn) is received via an enclosed conveyor from the adjoining business, A.L. Gilbert, into an enclosed elevator and is stored in a 200-ton whole corn storage bin served by 2 bin vent filters. Grain is removed from the storage bin and elevated by an enclosed elevator and processed through the bin weigh system and the grain scalper/cleaner. The grain is then elevated by another enclosed elevator to a 50-ton whole corn surge bin. The 50-ton whole corn surge bin is also served by 2 bin vent filters. This equipment generates particulate matter (PM_{10}) emissions. The elevators and scalping equipment is served by a fabric filter baghouse, a Donaldson Torit Model 81 MBT 8, or equal.

Grain Grinding Operations:
Grain is transferred from the 50-ton surge bin to one of three hammermills, which grind the grain in preparation for the liquefaction process. The ground grain is conveyed via enclosed conveyors and an enclosed elevator to a 100-ton ground grain storage bin. The 100-ton ground grain storage bin is served by 2 bin vent filters. This equipment generates particulate matter (PM_{10}) emissions. The hammermills and conveyors are vented to a shared fabric filter baghouse, a Donaldson Torit Model 162 MBT 10, or equal.

Cooking and Liquefaction Process:
The ground grain is transferred from the hammermills to the slurry mixing tank and combined with dilution water/recycled streams (thin stillage, spent lees, and process steam condensate) from the cook tank and enzymes from the enzyme dosing tank to form a slurry. After processing in the slurry mixing tank, the slurry is pumped to the initial liquefaction tank where it is mixed with water and enzymes and then cooked using process steam. The slurry is then transferred to the final liquefaction tank where the liquefaction is completed. The resulting mash is then cooled prior to being sent to the fermentation process. This process generates volatile organic (VOC) emissions. The cook tank, the liquefying enzyme dosing tank, the slurry mixing tank and the 2 liquefaction tanks are fixed roof tanks that are vented to the 2-unit CO_2 aqueous wet scrubber. Water that is removed from the 2-unit CO_2 wet scrubber is sent to the scrubbed water tank and recycled to the pre-fermentation tanks. The CO_2 is vented to the atmosphere. There are minimal, unquantifiable emissions in this process due to recycled processing water flows that enter the Recycle Streams Collection Tank. The applicant is venting all of the tanks in this process to the scrubbers to ensure that all emissions are controlled.

Fermentation Process:
A portion of the mash from the final liquefaction tank is then transferred to one of the two pre-fermentation tanks to prepare a yeast culture. There it is mixed with additional enzymes to break the starches down to sugars. Active dry yeast is then added to the pre-fermentation tank. The yeast culture is then added to the main fermentation tanks to initiate the fermentation process.

The main portion of the mash is from the final liquefaction tank is transferred to one of the four main fermentation tanks. The yeast culture is then added to the main fermentation tank to start the fermentation. This process is designed to be a continuous flow process. After fermenting for approximately 48-60 hours, the resultant liquid, called beer or distilling material (DM), contains approximately 15% ethanol by weight. The beer is stored in the 1,485,058 gallon beer well (fixed roof storage tank). The fermentation process generates carbon dioxide (CO_2) and volatile organic (VOC) emissions. Each fermentation tank and the beer well storage tank are fixed roof tanks that are vented to the shared 2-unit CO_2 wet scrubber.

Distillation Process:
The DM from the beer well storage tank is distilled in a two-column distillation process that consists of a degasifying/mash stripper column, and a rectifier column. The fermented mash depleted of ethanol from the mash stripper column is called whole stillage and is pumped to the decantation operation. The top product of the distillation process (from the rectifier column) contains approximately 95% ethanol (190-proof) and 5% water. The 190-proof ethanol is sent to the day storage tank or the molecular sieve for dehydration. The molecular sieve is used to remove the remaining 5% water from the 190-proof ethanol resulting in 100% ethyl alcohol (200-proof ethanol). In this process hydrous ethanol is pumped from the distillation process or the 190-proof day storage tank, dehydrated, and sent to one of the 200-proof ethanol storage tanks.

Decantation Operation:
The whole stillage removed from the bottom of the mash stripper column is conveyed to one of five decanter centrifuges or stored in the fixed-roof whole stillage holding tank. The centrifuges concentrate the slurry to a 30% solids Wet Distillers' Grain (WDG). The WDG is stored in a partially enclosed building and shipped to local dairies as a high-value animal feed. The remaining water, which contains residual amounts of organic material, is collected in a fixed-roof thin stillage storage tank. The thin stillage is then processed in the steam-heated evaporator. The result is an organic syrup, which is then combined with the WDG, and process water, which is returned to cook tank for reuse in the slurry mixing tank.

From the storage area the WDG will be loaded into trucks via front-end loaders for delivery to farms in the local region as an animal feed. The WDG handling and load-out are not expected to be sources of PM_{10} emissions since the WDG will have a high moisture content, approximately 70%. The decantation operation generates volatile organic compound (VOC) emissions. VOC emissions from the centrifuges and thin stillage tank are vented to the CO_2 wet scrubber.

Ethanol Storage Tanks:
Ethanol from the molecular sieves is transferred to one of the fixed roof ethanol storage tanks. There are two 210,000 gallon and one 1,050,000 gallon 200-proof ethanol storage tanks. There is also one 63,000 gallon 190-proof storage tank. The storage of

ethanol generates volatile organic compound (VOC) emissions. All of the tanks will have a natural gas blanket to eliminate the emissions from the tank operation (filling and emptying the tanks). The tanks are vented to the Tank Vapor Recovery (TVR) system where condensables are returned to product storage and the non-condensable vapors are routed to the boilers or the standby flare for incineration.

Gasoline Storage Tanks with Unloading Racks:
The 200-proof ethyl alcohol is mixed with 5% denaturant (usually gasoline) to create denatured ethanol. The denaturant is unloaded from trucks via one of the two racks and stored in two 30,000-gallon storage pressure vessels. The tanks and unloading racks are vented to the (TVR) system where condensables are returned to product storage and vapors are routed to the boilers or the standby flare for incineration.

Ethanol Loading Racks:
During ethanol truck loading, the 200-proof ethyl alcohol is mixed with 5% denaturant (usually gasoline) to create denatured ethanol. This will be accomplished by blending the gasoline directly into the ethanol as the truck is being loaded at the rack. The loading of trucks generates VOC emissions as residual organic vapors are displaced. The truck loading racks will be equipped with a vapor balance system that will return all the displaced vapors from the trucks to the ethanol storage tanks.

Boilers:
The 3 natural gas-fired boilers provide process steam for the various operations and also serve as control devices for the emissions from ethanol and gasoline (denaturant) storage tanks, via the TVR system. The boilers trigger BACT and must meet NOx emissions of 9 ppmv @ 3% O_2 per Rule 4306. The applicant stated they will have no trouble meeting the 9 ppmv limit even while operating as a control device for the TVR system. This has been proven from source tests at another plant they operate with the same configuration of the boiler controlling any emissions for the TVR system (Goshen, CA). The applicant has stated that only 2 of the boilers will be in operation at any time. Conditions will be added to the permits for the 3 boilers to allow only 2 of the 3 units to operate simultaneously.

Standby Flare:
This is an air-assisted 280,000 scf/day flare that will be used for emissions control only when the boilers are not operating. The applicant has proposed that potential emissions for this unit be based upon operating 24 hr/day and 500 hr/yr. The pilot uses 2,400 scf/day of natural gas and its emissions will be based upon operating 24 hr/day, 365 day/yr.

Cooling Tower:
The 34,000 gal/min cooling tower is utilized to remove waste heat from various process streams. The unit will be an induced draft counter-flow design with a manufacturer guaranteed drift factor of 0.0015% of the designed recirculation water flow rate.

Wet Distillers' Grain (WDG) Storage and Load-out:

The WDG is conveyed to a partially enclosed storage building and loaded by front-end loader into trucks for use as animal feed. Approximately 306,000 ton/yr of WDG will be produced. Per the applicant, the WDG will remain at the pile for only a short period, usually not longer than 24 hours. Spoilage problems can develop after four or five days. The applicant has requested that permit conditions allow the on-site storage of WDG for 48 hours. This will allow for any upsets that might occur with trucking operations on weekends. The applicant states the maximum throughput of WDG is 50 ton/hr and 1,200 ton/day.

Process Emission Offsets:

Offsets are the use of Emission Reduction Credits (ERC) to mitigate emission increases of an affected pollutant from a new or modified source subject to District Rule 2201 (New and Modified Stationary Source Review). Offsets are examined on a pollutant-by-pollutant basis. Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. Since this is a new facility, there are no valid ATCs, PTOs, or ERCs at this Stationary Source. Therefore, the SSPE1 is set equal to zero for all criteria pollutants.

Pursuant to Section 4.10 of District Rule 2201, the Post-Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. Offsets are triggered for any pollutant with a SSPE2 equal to or greater than threshold values established in section 4.5.3. Pursuant to section 4.7.2 of District Rule 2201, offsets shall be provided for all increases in Stationary Source emissions above the offset trigger levels, calculated as the difference between the SSPE2 and the offset trigger level.

As illustrated in Table 1, the proposed project triggers offsets for VOC emissions. The quantity of emissions that must be mitigated is presented in the Table 2.

Table 1. Post-Project Stationary Source Potential to Emit (SSPE2)

Pollutant	Offset Thresholds (lb/yr)	SSPE2 (lb/yr)	Offsets Triggered?
NO_x	20,000	19,189	No
SO_x	54,750	4,963	No
PM_{10}	29,200	15,341	No
CO	200,000	21,563	No
VOC	20,000	44,897	**Yes**

Table 2. Required Emission Offsets

Pollutant	SSPE2 (lb/yr)	Offset Trigger Levels (lb/yr)	Quantity of Emissions to be Mitigated (lb/yr)
VOC	44,897	20,000	24,897

As summarized in Table 3, the applicant has proposed to use ERC Certificates to offset the VOC emissions from this project. The applicant's proposal satisfies the offset requirements of District Rule 2201.

Table 3. ERC Certificates to Offset VOC Emissions From This Project.

VOC (lb)	Quarter 1	Quarter 2	Quarter 3	Quarter 4
PE	6,224	6,224	6,224	6,225
PE @1.5 offset ratio	9,336	9,336	9,336	9,338
ERC S-1956-1	9,701	9,702	9,702	9,701
Difference (will be reissued to applicant under a separate certificate number)	+365	+366	+366	+363

Area and Operational Emissions From Mobile Sources:

Mobile sources are pollution sources that move, such as trucks, bulldozers, and trains. These sources pollute the air through combustion and fuel evaporation. Pollutants resulting from combustion and fuel evaporation include oxides of nitrogen, particulate matter, hydrocarbons and carbon monoxide. Mobile sources also produce other important air pollutants, such as air toxics and greenhouse gases.

Area and operational emissions from mobile sources were characterized, using URBEMIS, for the following activities: employee vehicles (cars and light trucks), corn deliveries (Unit trains of 110 cars), grain shipments (heavy-heavy trucks), removal of wet distillers grain (heavy-heavy trucks), ethanol shipments (heavy-heavy trucks), production supplies (miscellaneous trucks), and CO_2 shipments (heavy-heavy trucks). The analysis was based on information submitted in support of Cilion's ethanol production facility located in Famoso, CA, which for the purpose of this analysis is

considered representative of the proposed project. Total area and operational emissions from mobile sources are presented in Table 4.

Table 4. Total Mobile Source Emissions Before Mitigation

Emissions Source	Pollutant (tons/year)				
	ROG	NOx	CO	SOx	PM_{10}
Area Source Emissions[1]	0.15	0.15	0.12	0.00	0.00
Operational (Vehicle) Emissions[1]	0.91	14.69	10.30	0.02	0.57
Total Long-Term Emissions[2]	1.06	14.84	10.43	0.02	0.57

NOTES:
[1] Area Source and Operational (Vehicle) Emissions are shown as "mitigated" based on results obtained through the URBEMIS 2002 for Windows 8.7.0 Modeling Program.
[2] Numbers may not add due to rounding by the URBEMIS 2002 for Windows 8.7.0 Modeling Program.

Area and Operational Emissions Offsets:

If unmitigated, emissions of NOx will exceed the District's significance threshold of 10 tons per year. Mobile source emissions are not subject to Rule 2201 and any reduction would be voluntary mitigation. Cilion has proposed to voluntarily mitigate the mobile source emissions to less than significant by surrendering to the District 5 tons of NOx ERCs (Certificate No. S-2364-2). Total mobile source emissions after mitigation are presented in Table 5.

Table 5. Total Mobile Source Emissions After Mitigation

Emissions Source	Pollutant (tons/year)				
	ROG	NOx	CO*	SOx*	PM_{10}
Area Source Emissions[1]	0.15	0.15	0.12	0.00	0.00
Operational (Vehicle) Emissions[1]	0.91	14.69	10.30	0.02	0.57
Total Long-Term Emissions[3]	1.06	14.84	10.43	0.02	0.57
SJVUAPCD-Certified Emissions Reductions[2]	-	5.00	-	-	-
Total Mitigated Long-Term Emissions	1.06	9.84	10.43	0.02	0.57
SJVAPCD/Kern County CEQA Thresholds	10	10	NA	NA	15
Either Threshold Exceeded After Mitigation?	No	No			No

NOTES:
[1] Area Source and Operational (Vehicle) Emissions are shown as "mitigated" based on results obtained through the URBEMIS 2002 for Windows 8.7.0 Modeling Program.
[2] NOx Emissions Reduction Credits to offset project emissions have been purchased and will be surrendered to the SJVUAPCD with project approval.
[3] Numbers may not add due to rounding by the URBEMIS 2002 for Windows 8.7.0 Modeling Program.
* The SJVAPCD has not established significance thresholds for CO or SOx.

9. Other Agencies Whose Approvals Are Required and Permits Needed:

Stanislaus County Planning and Community Development: Planning Department staff has determined the proposed use is permitted within the zone and as such, no discretionary approval of the project is required. Planning staff will process this request through the issuance of mechanical and electrical permits. Issuance of these permits is a ministerial action.

Stanislaus County Department of Environmental Resources: Permits for water supplies and Storm Water Pollution Prevention will be required.

California Regional Water Quality Control Board:

Keyes Community Services District: Approvals for water and sewer service will be required.

To the District's knowledge, the above permitting actions are ministerial; consequently, the District is the lead agency under CEQA.

10. Name of Person Who Prepared Initial Study:

Daniel T. Barber, Ph.D.
San Joaquin Valley Unified Air Pollution Control District
1990 E. Gettysburg Ave.
Fresno, CA 93726
(559) 230-5800

Figure 1

Project Location within San Joaquin Valley Air Basin

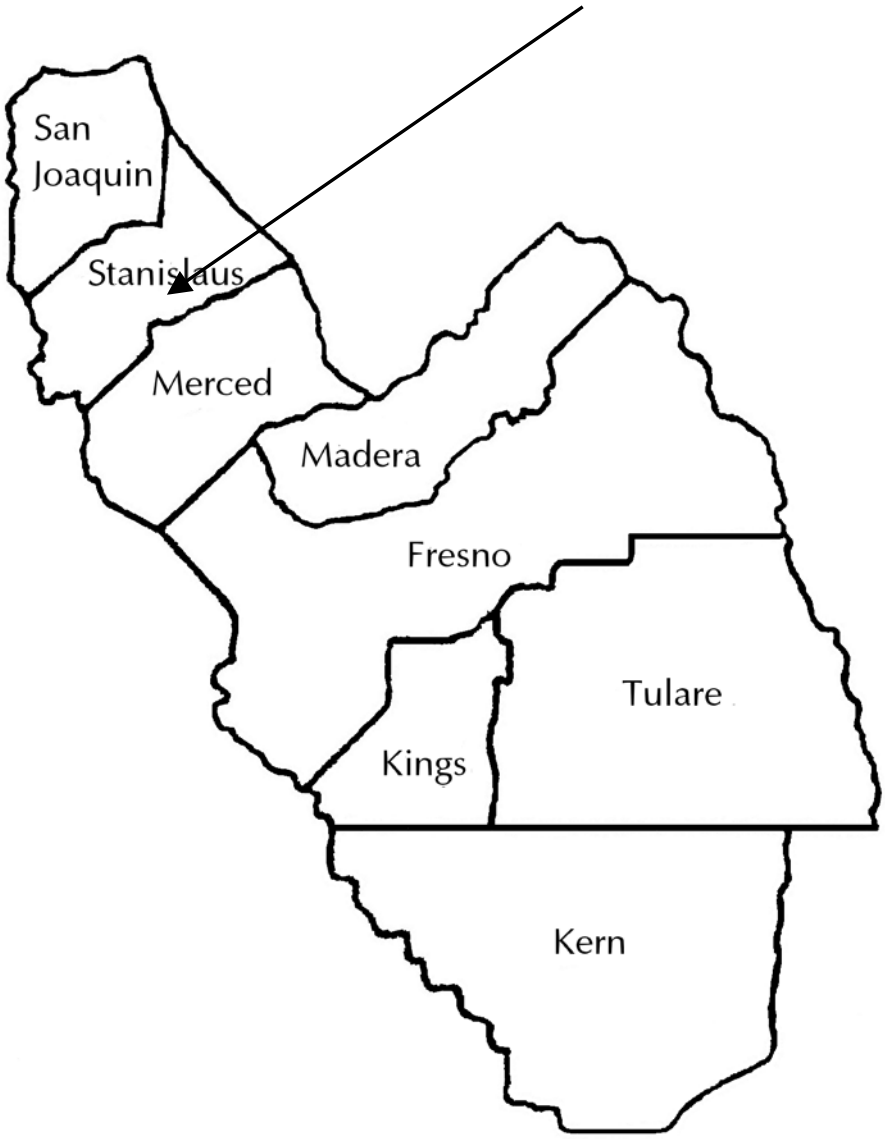
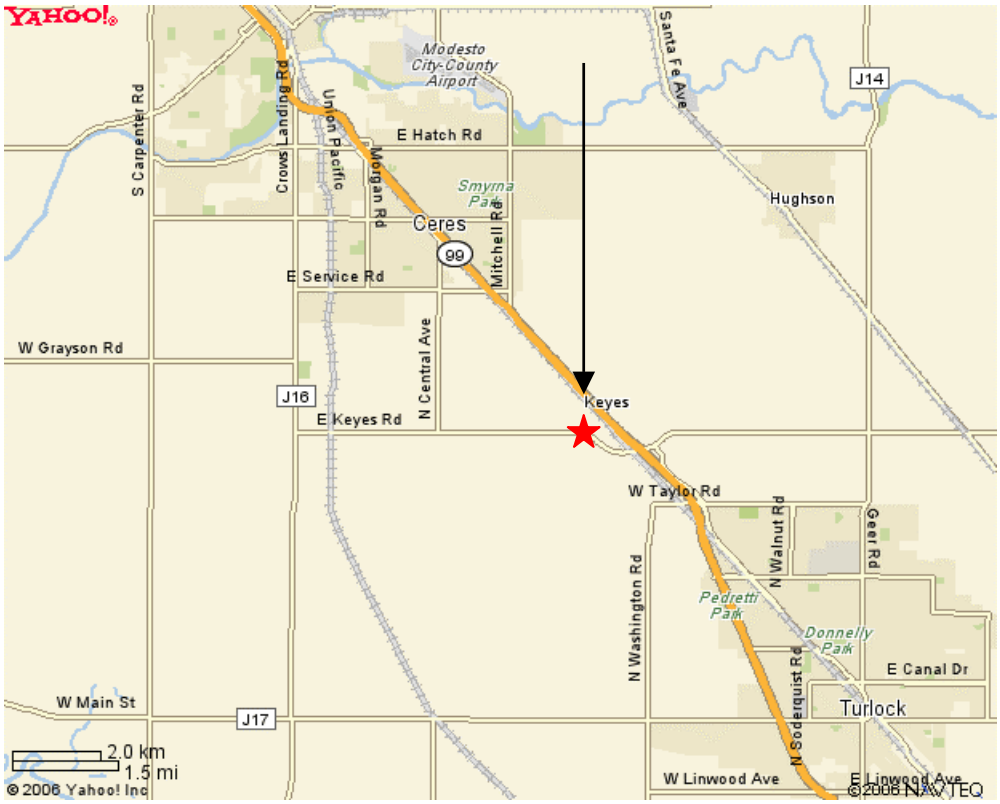


Figure 2

Project Location: 4209 Jessup Road, Ceres, CA



B. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

☐ Aesthetics	☐ Agriculture Resources	☒ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ 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	

C. DETERMINATION

I certify that this project was independently reviewed and analyzed and that this document reflects the independent judgment of the District.

☐ 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 the mitigation measures described on an attached sheet have been added to the project. A 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 significant effect(s) 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, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

Signature: _____ Date: _____

Printed name:
Title:

D. ENVIRONMENTAL IMPACT CHECKLIST

I. AESTHETICS Would the proposal:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
a) Affect a scenic vista or scenic highway?			**X**	
b) Have a demonstrable negative aesthetic effect?			**X**	
c) Create light or glare?			**X**	
Discussion: The affected site is adjacent to an existing industrial facility, Farmers Warehouse, a sacked feeds division of A.L. Gilbert Company. The existing industrial facility formulates, manufactures and distributes feeds for all breeds of animals. Existing structures includes grain silos, rail sidings, and access roads, which may already impact aesthetics.				
Mitigation: None				

II. AGRICULTURE 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. Would the project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
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?				**X**
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				**X**
c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				**X**
Discussion: There will be no significant adverse impacts on agricultural resources. The County of Stanislaus has determined that the proposal can be accommodated under the existing land use entitlements. The project can be completed without conflicting with existing zoning for agricultural use, or Williamson Act Contracts.				
Mitigation: None				
Reference: Personal Communications with Kirk Ford, Deputy Director, Stanislaus County Department of Planning and Community Development.				

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**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
a) Conflict with or obstruct implementation of the applicable air quality plan?			**X**	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			**X**	
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)?		**X**		
d) Expose sensitive receptors to substantial pollutant concentrations?			**X**	
e) Create objectionable odors affecting a substantial number of people?			**X**	

Discussion: The project site is within the San Joaquin Valley Air Basin, which has been classified as "Non-attainment" for ozone and respireable particulate matter (PM-10 and PM-2.5) as defined by the Federal Clean Air Act. The San Joaquin Valley Air Pollution Control District has been established by the State of California in an effort to control and minimize air pollution. As such, the District maintains permit authority over stationary sources of air pollution.

Emissions from the project have the potential to result in a significant impact on air quality. However, the potential impact can be reduced to less than significant through compliance with applicable State, Federal and District Rules.

Emissions of volatile organic compounds (VOC) from Stationary Source would exceed the District's offset threshold of 10 tons per year for VOCs. VOC emissions from the Stationary Source project can be offset to less than significant by surrendering to the District Emission Reduction Credits (ERC).

Emissions of nitrogen oxides (NOx) from mobile sources would exceed the District's significance threshold of 10 tons per year for NOx. NOx emissions from the mobile sources can be offset to less than significant by surrendering to the District Emission Reduction Credits (ERC).

Mitigation: Stationary Source emissions of volatile organic compounds (VOC) will be offset by surrendering 12.8 tons VOC of ERC (prior to applying the Distance Offset Ratio requirement).

Mobile sources emissions of nitrogen oxides (NOx) will be offset by surrendering 5.0 tons NOx of ERC.

Cilion has secured the required amounts of ERCs to mitigate both Stationary Source and mobile source emissions, and Cilion must surrender the ERCs to the District before operating the equipment proposed under the Authority to Construct permit.

Reference: A summary of stationary source and mobile source emissions for the project is presented in Table 1 through Table 5 of this document. A list of applicable State, Federal and District Rules rules can be found in the District's Engineering Evaluation of Cilion Inc.'s Application for Authority to Construct: District Project Number**:** N1062063.

IV. BIOLOGICAL RESOURCES Would the project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**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?				**X**
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?				**X**
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?				**X**
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?				**X**
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				**X**
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?				**X**
Discussion: The project would be located adjacent to an existing industrial site. There is no evidence to suggest this project would result in impacts to endangered species or habitats, locally designated species, or wildlife dispersal or migration corridors. There are no known sensitive or protected species or natural communities located on the site and/or surrounding area.				
Mitigation: None				

V. CULTURAL RESOURCES Would the project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?				**X**
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?				**X**
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				**X**
d) Disturb any human remains, including those interred outside of formal cemeteries?				**X**
Discussion: Cultural resources are not known to exist on the project site. The project would be located adjacent to an existing industrial site; however, there is the possibility of discovering unknown cultural resources during construction activities related to the project. If this should occur, the contractor or project official shall consult Central California Information Center (CCIC), the State Office of Historic Preservation in Sacramento, or the Native American Heritage Commission in Sacramento for recommended procedures, as required under Section 7050 of the Health and Safety Code and Section 5097 of the Public Resources Code.				
Mitigation: None				

VI. GEOLOGY/SOILS Would the project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**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:				**X**
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.				**X**
ii) Strong seismic ground shaking?				**X**
iii) Seismic-related ground failure, including liquefaction?				**X**
iv) Landslides?				**X**
b) Result in substantial soil erosion or the loss of topsoil?				**X**

VI. GEOLOGY/SOILS Continued:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
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?				**X**
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?				**X**
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				**X**
Discussion: Any structures resulting from this project shall be built according to Local, State, and Federal building standards. Compliance with existing regulations is considered adequate to ensure that the proposed project would not increase the exposure of people or property to geologic hazards.				
Mitigation: None				

VII. HAZARDS & HAZARDOUS MATERIALS Would the project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**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?				**X**
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?				**X**
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				**X**
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?				**X**
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?				**X**
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?				**X**

VII. HAZARDS & HAZARDOUS MATERIALS Continued:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				**X**
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?				**X**
Discussion: Operators must comply with federal, state, and local safety and environmental regulations. Compliance with existing regulations is considered adequate to minimize significant worker exposure and potential environmental hazards.				
Mitigation: None				

VIII. HYDROLOGY/WATER QUALITY Would the project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
a) Violate any water quality standards or waste discharge requirements?				**X**
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)?			**X**	
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?				**X**
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?				**X**
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?				**X**
f) Otherwise substantially degrade water quality?			**X**	
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?				**X**

VIII. HYDROLOGY/WATER QUALITY Continued:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				**X**
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?				**X**

Discussion: The manufacturing process is estimated to generate a maximum daily discharge of 236,808 gallons of waste constituents. It is undetermined if waste constituents will be sent to the City of Turlock for processing, or processed on site in evaporative ponds. Thus, the project may result in a discharge of waste constituents to land in a manner that may affect the quality of waters of the State (e.g., cooling water discharge, as well as the collection and impoundment of storm water containing waste constituents from contact with stockpiled materials). Accordingly, the discharge of these waste streams is subject to regulation by the California Central Valley Regional Water Quality Control Board (Regional Water Board). Section 13264 of the California Water Code requires individuals proposing to discharge waste that may affect water quality to submit a complete report of waste discharge (RWD) to the appropriate Regional Water Board office at least 140 days prior to the initiation of the discharge. To be determined complete by the Regional Water Board, the RWD shall include a technical supplement that characterizes the proposed discharge, as well as existing water quality (groundwater and, if appropriate, surface water), and evaluates the extent to which the proposed discharge may degrade water quality. Discharges that degrade, or threaten to degrade, high quality water are required to be conducted in a manner consistent with State Water Quality Control Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California. The RWD should contain sufficient information for Regional Water Board staff to determine the discharge's consistency with this policy. The discharge of cooling water to land may be eligible for coverage under the Regional Water Board's Low Threat General Waiver, Resolution No. R5 2003-0008 for the category of Air Conditioner, Cooling, and Elevated Temperature Waters Discharged to Land. The discharge of the project's storm water may be covered under individual waste discharge requirements. Compliance with existing regulations is considered adequate to minimize any environmental impact resulting from discharge of waste constituents.

The manufacturing process is estimated to consume 1,017,960 gallons of water per day, which the project proponent proposes to source from a well system to be installed on site. Installation of wells is subject to review and approval by the Stanislaus County Department of Environmental Resources (DER). Compliance with DER requirements is considered adequate to ensure that the project's potential impact on groundwater is less than significant.

Mitigation: None

IX. LAND USE/PLANNING Would the project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
a) Physically divide an established community?				**X**
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				**X**

avoiding or mitigating an environmental effect?				
IX. LAND USE/PLANNING Continued:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				**X**
Discussion: The County of Stanislaus has determined that the proposal can be accommodated under existing land use entitlements. The proposed project will not conflict with any applicable habitat conservation plan or natural community conservation plan and will not physically divide an established community				
Mitigation: None				
Reference: Stanislaus County General Plan and Support Documentation.				
X. MINERAL RESOURCES Would the project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**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?				**X**
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?				**X**
Discussion: The location of all commercially viable mineral resources in Stanislaus County has been mapped by the State Division of Mines and Geology in Special Report 173. There are no known significant resources in or around the project area.				
Mitigation: None				
Reference: Stanislaus County General Plan and Support Documentation, and State Division of Mines and Geology Special Report 173.				
XI. NOISE Would the project result in:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**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?			X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				**X**
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			**X**	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			**X**	

XI. NOISE Continued:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
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?				**X**
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?				**X**
Discussion: The Stanislaus County General Plan identifies noise levels up to 75 dbL_{dn} (or CNEL) as the normally acceptable level of noise for industrial, manufacturing, utility, and agricultural uses. On-site grading and construction resulting from this project may result in a temporary increase in the area's ambient noise levels. The project's impact on noise associated with on-site activities and traffic are not anticipated to exceed normally acceptable noise levels. The site itself is impacted by noise generated from nearby Highway 99 and the Union Pacific Railroad.				
Mitigation: None				
Reference: Stanislaus County General Plan and Support Documentation.				

XII. POPULATION/HOUSING Would the project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**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)?				**X**
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				**X**
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				**X**
Discussion: The proposed use of the site will not create significant service extensions or new infrastructure that could be considered growth inducing. No housing or persons will be displaced by the project.				
Mitigation: None				
Reference: Stanislaus County General Plan and Support Documentation.				

XIII. PUBLIC SERVICES Would the project	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
a) 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:				**X**
Fire protection?			**X**	
Police protection?			**X**	
Schools?				**X**
Parks?				**X**
Other public facilities?				**X**
b) Cumulatively exceed official regional or local population projections?				**X**
c) Induce substantial growth in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?				**X**
d) Displace existing housing, especially affordable housing?				**X**
Discussion: Stanislaus County has adopted Public Facilities Fees, as well as one for the Fire Facility Fees on behalf of the appropriate fire district, to address impacts to public services. Such fees are required to be paid at the time of building permit issuance. Compliance with County requirements is considered adequate ensure that the project's potential impact on public services is less than significant.				
Mitigation: None				
Reference: Stanislaus County General Plan and Support Documentation.				

XIV. RECREATION	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**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?				**X**
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?				**X**
Discussion: The proposed project is not anticipated to significantly increase demand on recreational facilities.				
Mitigation: None				

Reference: Stanislaus County General Plan and Support Documentation.

XV. TRANSPORTATION/TRAFFIC Would the project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			**X**	
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				**X**
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?				**X**
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				**X**
e) Result in inadequate emergency access?				**X**
f) Result in inadequate parking capacity?				**X**
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				**X**

Discussion: The site is adjacent to an existing industrial facility, Farmers Warehouse, a sacked feeds division of A.L. Gilbert Company. The existing industrial facility is served by access roads connecting to nearby Highway 99 and by rail sidings of the Union Pacific Railroad. The project is not anticipated to have a significant traffic impact to local County roads associated with this project.

Mitigation: None

XVI. UTILITIES/SERVICE SYSTEMS Would the project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				**X**
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?				**X**
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?				**X**
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements				**X**

needed?				
XVI. UTILITIES/SERVICE SYSTEMS Continued:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
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?				**X**
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				**X**
g) Comply with federal, state, and local statutes and regulations related to solid waste?				**X**
Discussion: Limitations on providing services have not been identified. The project proponent has received approval from the Keyes Community Services District for sewer and potable water sources serving the office and sanitary facilities. It is anticipated that process water will come from a well system to be installed on site and process waste constituents will be processed by either the City of Turlock's municipal waste treatment facilities or on-site evaporative ponds. Well construction, discharge of waste constituents and connections to municipal services are subject to review and approval by the respective agencies. Compliance with conditions of approval and/or permit requirements is considered adequate to ensure that the project's potential impact on utilities/service systems is less than significant.				
Mitigation: None				

XVII. MANDATORY FINDINGS OF SIGNIFICANCE	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**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?				**X**
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)?			**X**	
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?				**X**
Discussion: Review of this project has not indicated any features which might significantly impact the environmental quality of the site and/or adjacent areas.				