

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 02/13)

CALIFORNIA ENERGY COMMISSION

New Agreement ARV-10-053 (To be completed by CGL Office)

Division	Agreement Manager:	MS-	Phone
500 Energy Research and Development Division	Sarah Williams	27	916-651-9866

Recipient's Legal Name	Federal ID Number
Pixley Biogas	-

Title of Project
Pixley Biogas Anaerobic Digester

Term and Amount	Start Date	End Date	Amount
	4 / 1 / 2014	3 / 31 / 15	\$ 4,672,798

Business Meeting Information
 ARFVTP agreements under \$75K delegated to Executive Director.

Proposed Business Meeting Date	3 / 12 / 2014	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	Sarah Williams	Time Needed:	5 minutes

Please select one list serve. Altfuels (AB118- ARFVTP)

Agenda Item Subject and Description

Possible approval of Agreement ARV-10-053 to proceed with the entire scope with Pixley Biogas for a \$4,672,798 grant to construct an anaerobic digestion facility that will produce biogas from dairy manure to power the adjacent Calgren Renewable Fuels Biorefinery, an ethanol facility, to lower Calgren's carbon intensity.

California Environmental Quality Act (CEQA) Compliance

1. Is Agreement considered a "Project" under CEQA?
 Yes (skip to question 2) No (complete the following (PRC 21065 and 14 CCR 15378)):
 Explain why Agreement is not considered a "Project":
 Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because .
2. If Agreement is considered a "Project" under CEQA:
 a) Agreement **IS** exempt. (Attach draft NOE)
 Statutory Exemption. List PRC and/or CCR section number: _____
 Categorical Exemption. List CCR section number: _____
 Common Sense Exemption. 14 CCR 15061 (b) (3)
 Explain reason why Agreement is exempt under the above section: _____
- b) Agreement **IS NOT** exempt. (Consult with the legal office to determine next steps.)
 Check all that apply
 Initial Study Environmental Impact Report
 Negative Declaration Statement of Overriding Considerations
 Mitigated Negative Declaration

List all subcontractors (major and minor) and equipment vendors: (attach additional sheets as necessary)

Legal Company Name:	Budget
Andgar Corporation	\$ 4,455,397
Calgren Renewable Fuels LLC	\$ 22,515
Rentech Bioler Systems	\$ 2,290,800

List all key partners: (attach additional sheets as necessary)

Legal Company Name:
Four J Dairy
DVO Inc

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Budget Information			
Funding Source	Funding Year of Appropriation	Budget List No.	Amount
Funding Source	2010	601.118B	\$4,672,798
Funding Source			\$
R&D Program Area:	Select Program Area	TOTAL:	\$4,672,798
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Recipient's Administrator/ Officer				Recipient's Project Manager						
Name:	Same as PM			Name:	Daryl Maas					
Address:				Address:	2097 Maudray Way					
City, State, Zip:				City, State, Zip:	Redding, CA 96003					
Phone:	-	-	Fax:	-	-	Phone:	210-527-7631	Fax:	-	-
E-Mail:				E-Mail:	daryl@maasenergy.com					

Selection Process Used	
<input checked="" type="checkbox"/> Competitive Solicitation	Solicitation #: PON-09-003
<input type="checkbox"/> First Come First Served Solicitation	

The following items should be attached to this GRF	
1. Exhibit A, Scope of Work	<input checked="" type="checkbox"/> Attached
2. Exhibit B, Budget Detail	<input checked="" type="checkbox"/> Attached
3. CEC 105, Questionnaire for Identifying Conflicts	<input checked="" type="checkbox"/> Attached
4. Recipient Resolution	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Attached
5. CEQA Documentation	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Attached

Agreement Manager

Date

Office Manager

Date

Deputy Director

Date

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

Under PON-09-003 the Energy Commission proposed for funding ARV-10-053 Pixley Biogas. The project is a anaerobic digester that will process dairy manure from nearby farms. The digester's biogas will supply fuel to the adjacent Calgren Renewable Fuels ethanol biorefinery, which currently runs on natural gas co-generation. The biogas supply will reduce Calgren's fossil fuel consumption and lower the full cycle carbon footprint of the ethanol produced by their biorefinery.

The local lead agency for this project is the County of Tulare, and Tulare has conducted an environmental impact report (EIR). The report can be found here:

<http://www.tularecounty.ca.gov/rma/index.cfm/documents-and-forms/planning-documents/environmental-planning/environmental-impact-reports/>

As a funding source for this project the Energy Commission is a responsible agency. To that end Energy Commission staff has examined the EIR. It is the staffs understanding that the EIR is a complete description of the project and full addresses potential environmental impacts from the project, and that the conclusion that the project will have less than significant impact with mitigation is accurate.

AESTHETICS

Significant Effect:

Substantially degrade the existing visual character or quality of the site and its surroundings?

Landscaping and design work will ensure that the final project will fit within the scenic view of the surrounding area. The buildings as described would fit within the scenic view of the surrounding area, and the landscaping plan will provide shrubs and trees for further screening between the project and Road 120 and Hesse Ave and from adjacent properties west and north of the subject Site.

The site looks like this:



Findings ARV-10-053
Pixley Biogas Anaerobic Digester



There is standard mitigation done for the construction phase of the project and that is Mitigation Measure 1-1:

1-1 Construction staging areas shall be on-site and remain clear of all trash, weeds, and debris, etc. Construction staging areas shall be located in areas that limit visibility from scenic roadways and sensitive receptors to the extent feasible.

This will ensure that the aesthetic of the area is not unduly disturbed during construction. This project is similar in look to the surrounding and will not significantly degrade the existing visual character.

Significant Effect:

Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Although there are existing nighttime lights in the area, there is the potential for impacts from lighting by the Project unless the lighting is contained within the immediate site. In order to minimize the creation of lighting impacts as a result of the Project, Mitigation Measure 1-2 requires lighting to be adjusted as to minimize impacts on surrounding uses.

Glare is typically a daytime occurrence caused by light reflecting off highly polished surfaces, such as window glass or polished metallic surfaces. It is not anticipated that the new structures will result in appreciable glare, since the proposed Project does not have a large amount of above grade surface area. To ensure the minimization of glare, the Project will reduce its impacts to *Less Than Significant* with Mitigation Measure 1-3.

Mitigation Measures:

1-2 All exterior lighting shall be adjusted and/or shielded as to deflect direct light beams away from public roadways, adjacent properties, and the night sky.

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

1-3 The mechanical building and loading structure shall be treated (such as painting) with muted colors, with a matte finish, to reduce glare prior to the final inspection by the building department.

This will ensure that there is not a substantial new source of light which would adversely affect nighttime views in the area. The existing Calgren facility already has nighttime lights the additional lighting will be minimal, and the adjustment and shielding of the lighting will protect the roadway, adjacent properties, and the night sky so the only area effected by the lighting will be the facility it is intended to light.

This will ensure that there is not a substantial new source of glare which would adversely affect day time views in the area. The project structures will not have a large amount of above grade surface area, and what structures there are will be screened by landscaping. The Mechanical building will be tall enough that it is not screened by the landscaping. Having it and the loading structure treated with muted colors, with matte finish, will keep the structures from producing substantial glare.

AIR QUALITY

Significant Effect:

Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

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)?

The proposed Project includes a number of components that would require Air District Permits. These Project components and the Air District Rules that would apply are described as follows.

“Boiler: The project would include the installation of a boiler or other combustion equipment for converting biogas to steam on the existing Calgren Renewable Fuels site that would use the biogas produced by the anaerobic digester. Other types of devices that could be used include a Heat Recovery Steam Generator (HRSG) with duct burner. The boiler or other device would be subject to SJVAPCD rules and regulations and must meet SJVAPCD best available control technology (BACT) requirements for emissions exceeding the SJVAPCD BACT threshold of 2 pounds per day of any criteria pollutant. The pollutant of primary concern with biogas combustion is oxides of nitrogen (NO_x).”¹ Air District Rule 4320 is designed to control NO_x emissions from these sources (boilers with greater than 5 Million British Thermal Units (MMBTU)/Hr) thus, compliance with this Rule would address this potential air emissions source.

“Gas Scrubber: The biogas contains hydrogen sulfide that must be scrubbed from the gas stream to meet SJVAPCD requirements for H₂S control. H₂S emissions are toxic and when combusted in the boiler, HRSG, or flare would produce the criteria pollutant sulfur dioxide (SO₂). The specifications for the H₂S scrubber have not been determined.”² Air District Rule 4320 is designed to control SO₂ emissions from these sources (boilers with greater than 5 Million British Thermal Units (MMBTU)/Hr) thus, compliance with this Rule would address this potential air emissions source.

“Flare: During periods of maintenance and at times when the biogas cannot be combusted in the boiler, HRSG, or other device, it will be routed to a flare for combustion. The flare is subject to SJVAPCD rules and regulations and will be required to meet SJVAPCD BACT requirements for pollutants exceeding the BACT threshold. The project proposes to use an Andgar Corporation semienclosed flare. The top of the flare would be approximately 20 feet above the ground and would have an opening of 8 inches.”³ Air District Rule 4311 is designed to control VOC, NO_x, and SO₂ emissions from flares thus, compliance with this Rule would address this potential air emissions source.

¹ Air Quality and Greenhouse Gas Analysis Report, page 19 and 20

² Ibid. Page 20

³ Ibid.

“Four J Farms Dairy Permits: The changes to the Four J Farms Dairy lagoons and manure management practices will require a modification to their air quality permits. Emissions are expected to decline at Four J Farms Dairy, but the SJVAPCD requires that changes to permitted facilities be reflected in the permits. This project does not include any herd expansion at Four J Farms. If Four J Farms expands its herd limits, air permits will require revision to reflect the change.”⁴ Air District Rule 4570 is designed to control VOC emissions from confined animal facilities (such as dairies), thus compliance with this Rule would address this potential air emissions source.

In addition to the Project-specific elements, potential air quality impacts from construction and traffic generation are also analyzed. Because ozone is a regional pollutant (SJVAPCD 2002), the pollutants of concern for localized impacts are CO and PM10 from construction. See discussion below. Ozone impacts and PM10 operational impacts are addressed under the Response to Checklist item 3.3 c).

Construction Activities - Localized PM10

Localized PM10 emissions will be generated by Project construction-related activities, which would include earthmoving or other earth disturbing-related activities. The Air District indicates that all control measures in Regulation VIII are required for all construction sites by regulation. The Air District’s GAMAQI (SJVAPCD 2002) lists additional measures that may be required of very large projects or projects close to sensitive receptors. If all appropriate “enhanced control measures” in the GAMAQI are not implemented for very large projects or those close to sensitive receptors, then construction impacts would be considered significant (unless the Lead Agency provides a satisfactory detailed explanation as to why a specific measure is unnecessary). The GAMAQI also lists additional control measures (Optional Measures) that may be implemented if further emission reductions are deemed necessary by the Lead Agency. The Air District’s Regulation VIII (Fugitive PM10 Prohibitions) has been updated and expanded since the GAMAQI guidance was written in 2002. Regulation VIII currently includes the “enhanced control measures” contained in the GAMAQI.

The proposed Project will be required to comply with the SJVAPCD’s Regulation VIII Fugitive PM10 Prohibitions including the following rules:

- Rules 8011: General Requirements
- Rules 8021: Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities
- Rules 8041: Carryout and Trackout
- Rules 8071: Unpaved Vehicle/Equipment Traffic Areas

Compliance with these regulations will reduce the potential for localized PM10 emission to *Less than Significant Impact* levels.

Traffic Congestion - CO Hotspot

⁴ Ibid.

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

Localized high levels of CO (Carbon Monoxide) are associated with traffic congestion and idling or slow-moving vehicles. The Air District provides screening criteria to determine when to quantify local CO concentrations based on impacts to the level of service (LOS) of roadways in the project vicinity. This proposed Project will result in the construction of an anaerobic digester on 1.28 acres and appurtenant pipelines. Construction of the proposed Project will result in minor increases in traffic for the surrounding road network during the 5 months of construction-related activities. Operational vehicle traffic is estimated to add 6 truck trips and 2 light-duty auto vehicle trips to the local roadways per day, resulting in approximately 1,300 annual trips from operations. The minor increase in daily trips will not reduce the LOS. As discussed in Chapter 3.16 (Transportation/Traffic), the Project will not generate, or substantially contribute to, additional traffic that will reduce the LOS on local roadways. Therefore, the Project will not significantly contribute to the operation of an exceedance that would result in an of state or federal CO standards. To address ensuring that these components don't violate any air quality standards or contribute substantially to an existing or projected air quality violation there have been two mitigation measures adopted.

Mitigation measures:

3-1 The applicant shall obtain all required permits from the Air District prior to implementing any elements of the proposed Project.

3-2 The Project applicant shall require construction contractors and system operators to implement the following Best Management Practices (BMPs) as applicable during construction and operations-related activities:

- **The applicant shall comply with the applicable rules and regulations from the Air District.**
- **The operator shall use equipment meeting, at a minimum, Tier II emission standards, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations.**
- **Truck Drivers and equipment operators shall minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes (as required by the state airborne toxics control measure [Title 13, §2485 of the California Code of Regulations]).**
- **The applicant shall provide clear signage that posts this requirement for workers at the entrances to the site.**
- **Truck drivers shall comply with state regulations to minimize truck idling.**
- **The operator shall maintain all equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.**
- **The operator shall use electric equipment in place of diesel or gasoline powered equipment when possible.**

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

- **The operator shall make payments into an AQMD or APCD operated Voluntary Emission Reduction Agreement (VERA).**
- **The operator shall incorporate fuel cells where feasible as an alternative to internal combustion engines, which generate NOx emissions, to generate energy from the biogas produced at dairy digester and co-digester facilities.**
- **The operator shall, where feasible as an alternative to internal combustion engines (which generate NOx emissions), use biogas from dairy manure digester and co-digester projects as a transportation fuel (compressed biomethane) or inject biomethane into the utility gas pipeline system.**

These measures in addition to compliance with local permitting will ensure that the project does not violate any air quality standards, or contribute substantially to any existing or projected air quality violations. This is particularly important because of the need to improve the air quality in the San Joaquin Valley Air Basin. In general this project will improve the air quality of the area, but it is important to ensure that the process does not hurt air quality. The requirements laid out will minimize any effects on air quality, and the identified interaction with permitting authority will allow the project participants to monitor the situation and ensure that the project does not contribute substantially to violations in any air quality standards.

Significant Effect:

Expose sensitive receptors to substantial pollutant concentrations?

The proposed Project will not expose sensitive receptors to substantial concentrations of localized PM10, carbon monoxide, diesel particulate matter, or hazardous pollutants, naturally occurring asbestos, or valley fever, as discussed below. The areas surrounding the Project site are designated Valley Agriculture or Planned Development Manufacturing; however, residential uses are located east from the Project site east of State Route 99. These residential uses are considered the nearest sensitive receptors as they are located approximately 750 feet from the Project site.

The Project will not result in a significant impact for construction-related activities generated, localized PM10. Therefore, the Project will not expose sensitive receptors to exceed PM10 emissions levels.

The Project will not result in a CO hotspot. Ambient CO levels in the San Joaquin Valley Air Basin are low and are no longer monitored by ARB in Tulare County. The nearest monitoring stations in Fresno and Kern County reported 8-hour CO levels of 1.84 and 1.97 parts per million (ppm), respectively. The 8-hour State and Federal CO standard is 9 ppm. In addition, CO disperses rapidly and the nearest sensitive receptor is approximately 750 feet away from the Project site east of State Route 99. Therefore, the Project will not expose sensitive receptors to unhealthy levels of CO.

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

The assessment of the project's toxic air contaminants applied the USEPA AERMOD air dispersion model to determine the concentrations of the toxic air contaminants at nearby sensitive residential locations surrounding both the project site and the boiler or other steam generator located at the Calgren facility as well as at the Cal Dairies facility located north of the project. The AERMOD model is required by the SJVAPCD in making such assessments. Two types of health risk assessments were performed. The first assessment quantified the potential cancer risks attributable to the diesel particulate matter emissions from the delivery trucks; diesel particulate matter emissions from the operation of the off-road front-end loader in support of the project loading activities; and the identified toxic air contaminants which are emitted during the combustion of the biogas in the flare, boiler, or other steam generator. A second health risk assessment quantified the potential impacts of the emitted H₂S from the flare, boiler or other steam generator during the combustion of the biogas.”?

Two health risk significance thresholds adopted by the Air District were applied in determining the significance of the project's health risk impacts. These thresholds are:

- Cancer risk of 10 in one million.
- Hydrogen sulfide threshold of 0.03 ppm (42 µg/m³), which is also the California ambient air quality standard average over a 1-hour exposure time period.

The locations of the various emission sources and sensitive receptors included in the assessment are shown in Exhibit 3 [of the Air Quality and Greenhouse Gas Analysis Report] and a close up of the Project emissions sources are shown in Exhibit 4 [of the Air Quality and Greenhouse Gas Analysis Report]. Table 3.3-11 summarizes the assumptions used in the air dispersion model. The cancer risks and hydrogen sulfide impacts do not exceed the Air District's significance thresholds.

Construction equipment generates diesel particulate matter (DPM), identified as a carcinogen by the ARB. The State of California has determined that DPM from diesel-fueled engines poses a chronic health risk with chronic (long-term) inhalation exposure. The California Office of Environmental Health Hazard Assessment recommends using a 70-year exposure duration for determining residential cancer risks. Because of the Project size and short duration, and the distance to the nearest sensitive receptor, the Project construction-related activities will not pose a toxic risk to nearby residents. For Project operations, the Project will result in an average of 5 truck trips per day. Trucks were conservatively estimated to idle for a maximum of 15 minutes, although it is anticipated that idling time would be less than five minutes. The data was processed through the Air District's truck screening spreadsheet to determine the potential cancer risk from the project. The cancer risk would be under the significance threshold of 10 in 1 million. Therefore, no significant cancer risks are anticipated from implementation of the project

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

There are asbestos areas in Tulare County; however, these areas are east of SR 65. The Project site is located on the east side of Avenue 120 between State Route 99 and Road 120 and, according to the General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos, does not appear to be located in naturally occurring asbestos-containing area.

Valley Fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, *Coccidioides immitis*. The spores live in soil and can live for an extended time in harsh environmental conditions. Activities or conditions that increase the amount of fugitive dust contribute to greater exposure, and include dust storms, grading, and recreational off-road activities. By geographic region, hospitalizations for coccidioidomycosis in the San Joaquin Valley increased from 230 (6.9 per 100,000 population) in 2000 to 701 (17.7 per 100,000 population) in 2007. Within the region, Kern County reported the highest hospitalization rates, increasing from 121 (18.2 per 100,000 population) in 2000 to 285 (34.9 per 100,000 population) in 2007, and peaking in 2005 at 353 hospitalizations (45.8 per 100,000 population). The Centers for Disease Control and Prevention indicates that 752 of the 8,657 persons (8.7 percent) hospitalized in California between 2000 and 2007 for coccidioidomycosis died. Construction activities are anticipated to generate fugitive dust. The project will minimize the generation of fugitive dust by complying with the SJVAPCD's Regulation VIII. Dust-disturbing activities will be limited in scope and duration. Therefore, valley fever exposure is less than significant.

While these items don't suggest any exposure to sensitive receptors to substantial pollutant concentration Mitigation Measure 3-3 is adopted.

Mitigation Measure:

3-3 Hydrogen sulfide (H₂S) contained in the biogas shall be scrubbed (i.e., via iron sponge or other technology) before emission to air can occur.

This measure in addition to the low pollutant concentrations, compliance with SJVAPCD's Regulations, and the practices described will ensure that the project does not expose sensitive receptors to substantial pollutant concentrations. Sensitive receptors include, but are not limited to, hospitals, schools, daycare facilities, elderly housing and convalescent facilities. These are areas where the occupants are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants. Extra care must be taken when dealing with contaminants and pollutants in close proximity to areas recognized as sensitive receptors. Thus, considering residential use as a sensitive receptor is especially cautious.

Significant Effect:

Create objectionable odors affecting a substantial number of people?

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

The potential for odors to affect people is dependent upon the location of sensitive receptors. There are existing residential uses within one mile of the Project site; however these residences are also within one mile of existing dairies. There are a couple of industrial uses in the area which have employees that could be impacted by potential odor. However, there are not a substantial number of people that would be impacted by any odor emissions. The butter and milk products processing plant owned by California Dairies (CDI) is located within 900 feet of the Project site. However, the Project is designed to be enclosed with a H₂S Scrubber to prevent odor emissions. There is slight potential for odor emissions from an incident. Given this, with the provision of a Spill Management Plan, there will be less than significant impact.

The potential sources of odor include dairy manure and food waste feedstock. The Dairy at Four J Farms is an existing source of potential dairy manure odors. 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 onsite 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, such as certain volatile organic compounds (VOC) and H₂S, could be released into the environment, especially when the surface layer of the manure is agitated. Ammonia is not created by the digestion process, but can become dissolved in the liquid manure and can be emitted when volatilized. The typical manure odors; however, would not emanate from the digester as the chambers will be sealed air tight during normal operations.

To further reduce odors, the applicant has provided an Odor Impact Minimization Plan (OIMP). The OIMP addressed potential land application of liquid residuals, spills, leaks, and other upset conditions. The applicant also provided a Spill Management Plan.

The OIMP identifies 7 potential sources of odor: manure reception, organic waste reception, anaerobic digester vessel, dewatering and storage of digester fiber, biogas treatment and transport, liquid effluent storage and land application, and facility maintenance. For each of these there is a description, discussion of likelihood and intensity, and frequency of potential sources of odors, and a plan to manage the potential. Management involves creating and following procedures related to operation and maintenance of the equipment. Without the management required the risk of odors range from moderate to low to very low with frequencies ranging from 10-20 times per year for low intensity spills related to organic waste reception to less than once per year.

The OIMP in addition to the low risk of significant objectionable odor, the small number of people affected, and odor factors outside the project like the interstate, local farms, and dairies

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

mean that this project will not create objectionable odors affecting a substantial number of people.

BIOLOGICAL RESOURCES

Significant Effect:

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?

“Results of the habitat assessment conducted on April 13, 2011 indicate that the Project site has a history of human activity and has been highly modified from natural conditions that existed more than 40 years ago. Nonetheless, the proposed site of the digester is directly adjacent to an area that supports potentially suitable, albeit marginal, habitat for the burrowing owl (*Athene cunicularia*; BUOW), indicated by the presence of California ground squirrel (*Spermophilus beecheyi*) and their burrows. None of the species listed above were observed within the footprint of the Project or within the vicinity of the site.”⁵

“The Project site supports a compacted soil lot that was previously used in row crop and orchard production. No sensitive plant communities were present within the Project site, and no additional action is recommended.”⁶

“The Project site does not provide a corridor for regional wildlife movement. In fact, the site supports very little foraging habitat or other use for species. There was no sign (e.g., prints or scats) of opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), or striped skunk (*Mephitis mephitis*), species commonly found near areas of human activity, or any other species other than those described earlier. Therefore, no additional action is required for potential impacts to wildlife movement corridors.”⁷

To be prudent, Mitigation Measures 4-1 is outlined to ensure avoidance and minimization of any encounters with burrowing owl should an errant individual occur on-site between the date of this report and the beginning of construction.

Mitigation measures:

⁵ Biological Resources Assessment, page 1

⁶ Biological Resources Assessment, page 15

⁷ Ibid.

4-1 To avoid potential impacts to individual BUOW (should they occur onsite at sometime in the future before the beginning of construction), a qualified biologist should conduct preconstruction surveys for owls within 30 days of the onset of ground disturbance. These surveys would be conducted consistent with the recommended protocols as outlined by the CDFG's Staff Report on Burrowing Owl Mitigation (1995), and the Burrowing Owl Survey Protocol and Mitigation Guidelines (Burrowing Owl Consortium 1997). In summary, these protocols recommend conducting pedestrian surveys in such a way as to allow 100% visual coverage of the subject parcel. If pre-construction surveys determine that BUOW occupy the site during the non-breeding season (September 1 through January 31), then an eviction effort (i.e., blocking burrows with one-way doors and leaving them in place for a minimum of three days) may be necessary to ensure that the owls are not harmed or injured during construction. If burrowing owls were detected on the site during future breeding seasons (February 1 through August 31), a construction-free buffer of at least 250 feet should be established around all active owl nests. The buffer areas should be enclosed with temporary fencing, and construction equipment and workers should not enter the enclosed setback areas. Buffers should remain in place for the duration of the breeding season or until a qualified biologist determines young are independent of their parents. After the breeding season, an eviction process for any remaining owls may take place as described earlier.

This measure in addition to the lack of indication of any species identified as a candidate, sensitive, or special status species on the project site, will ensure that the project does not 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.

CULTURAL RESOURCES

Significant Effect:

Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Disturb any human remains, including those interred outside of formal cemeteries?

The results of the records search indicated that there had been one previous cultural resources study conducted within the Project area and two additional studies within a 0.50-mile radius of

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

the Project area. The records search also indicated no prehistoric or historic sites have been formally recorded within the Project site or a 0.50-mile radius beyond the Project site. Additionally, the Project site is not listed on any of the aforementioned registers.

On April 4, 2011, MBA sent a letter to the Native American Heritage Commission (NAHC) in an effort to determine whether any sacred sites are listed on its Sacred Lands File within the Project site or within 0.25-mile radius beyond the Project site. The response from the NAHC, received on April 12, 2011, noted that the search did not indicate the presence of Native American cultural resources within a 0.50-mile radius beyond the Project site.

To ensure that all Native American resources are adequately addressed, MBA sent letters to each of the nine listed tribal contacts on April 18, 2011, requesting information regarding the presence of any known cultural resources on the Project site or within 0.50-mile radius beyond the Project site. No responses were received from any of the Native American representatives.

Review of historic aerial photographs and topographic maps from the Phase I site assessment indicates that the subject property has been in agricultural use since 1952. The intensity of agricultural use has varied over the time period.

The record search conducted for the proposed Project indicated that there are no structures within the proposed Project area and no historical resources have been previously recorded within 0.50-miles of the Project site.

Although considered unlikely, since there is no indication of any historic resources on the Project site, subsurface construction activities such as trenching and grading associated with the proposed Project could potentially affect previously undiscovered historic resources. This is considered a potentially significant impact. Mitigation is proposed requiring implementation of standard inadvertent discovery procedures to reduce potential impacts to previously undiscovered subsurface historic resources.

As noted in Response to 3.5 a), it is unlikely that significant cultural resources will be found on the site. No archaeological resources have been previously recorded within the Project site or within a 0.50-mile radius beyond the Project site. Although the survey did not indicate the presence of any subsurface archaeological resources, there remains the possibility of causing a substantial adverse change in the significance of previously undiscovered subsurface archaeological resources, which could result from subsurface construction activities such as trenching and grading associated with the proposed Project. Accordingly, this is a potentially significant impact.

Mitigation measures:

- 5-1 In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the property owner shall retain a qualified archaeologist/paleontologist to provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recover, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.
- 5-2 Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during Project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:
1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
 - a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and
 - b. If the coroner determines the remains to be Native American:
 - i. The coroner shall contact the Native American Heritage Commission within 24 hours.
 - ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
 - iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or
 2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - b. The descendant fails to make a recommendation; or
 - c. The landowner or his authorized representative rejects the recommendation of the descendent.

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

These measures in addition to the records search, and work with CAHC and the tribal contacts will ensure that the project will not cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5, will not Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5, and will not disturb any human remains, including those interred outside of formal cemeteries.

Significant Effect:

Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The Project site is highly disturbed. No paleontological resources or sites, or unique geologic features have previously been encountered on the Project site. However, since it cannot conclusively be demonstrated that no subsurface paleontological resources are present, it is possible to mitigate potentially significant impacts with the following mitigation measure.

Mitigation measures:

5-3 The property owner shall avoid and minimize impacts to paleontological resources. If a potentially significant paleontological resource is encountered during ground disturbing activities, all construction within a 100-foot radius of the find shall immediately cease until a qualified paleontologist determines whether the resources requires further study. The owner shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Tulare County Resource Management Agency and the Project proponent of the procedures that must be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the Tulare County Resource Management Agency determines avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with applicable standards. The plan shall be submitted to the Tulare County Resource Management Agency for review and approval. Upon approval, the plan shall be incorporated into the Project.

This mitigation measure will ensure that the project does not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

HAZARDS AND HAZARDOUS MATERIALS

Significant Effects:

Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

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?

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?

Project Construction

Project construction-related activities may involve the use and transport of hazardous materials. These materials may include fuels, oils, mechanical fluids, and other chemicals used during construction-related activities. Construction-related activities will also be required to comply with the California fire code to reduce the risk of potential fire hazards. The local fire agency will be responsible for enforcing the provisions of the fire code. As noted in the June 15, 2010 memo by Al Miller, Tulare County Fire Inspector, the Fire Department had no recommendations for the proposed Project. As such, these materials are not anticipated to expose human health or the environment to undue risks associated with their use and no significant impacts will occur during construction activities.

Transportation, storage, use, and disposal of hazardous materials during construction activities will be required to comply with applicable federal, state, and local statutes and regulations. Transportation of hazardous materials is regulated by DOT and Caltrans. Together, federal and State agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release. In addition, Cal/OSHA is responsible for developing and enforcing workplace safety standards, including the handling and use of hazardous materials.

Project Operation

Construction and operation-related activities of facilities will comply with the California fire code, local building codes (including requirements for fire suppression systems), and gas pipeline regulations. The Tulare County Fire Department will be responsible for enforcing provisions of the fire code. The California Public Utilities Code regulates the safety of gas transmission pipelines. Standard safety measures for anaerobic treatment facilities that will minimize the potential of biogas include safety flares to reduce excess gas capacity. If released to the environment, methane will be dispersed rapidly in air, thus minimizing the hazards of exposure. Any biogas transmission pipelines will be designed, constructed, and operated consistent with State and federal regulations to minimize the risk of rupture and accidental release. By adhering to the applicable laws and policies related to buildings and materials practices, the operation of the Project is not expected to expose human health or the environment to undue risks associated with their use and no significant impacts will occur

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

during operational activities.

The proposed Project involves the production of biogas generated through the anaerobic digestion process. The biogas will be used in a combustion device such as a boiler or heat recovery steam generator with a duct burner to create steam. As a backup, the biogas will be combusted in a flare to prevent excess storing. Biomethane will be used by the Calgren Renewable Fuels Facility to create steam. The biomethane will be transported via low-pressure gas pipelines to from the digester to the adjacent biogas cleanup equipment and thence to the Calgren site. Biogas is comprised primarily of methane. Methane is not toxic, but handling methane can be hazardous and flammable. Methane has an ignition temperature of 1,000 degrees Fahrenheit (°F) and is flammable at concentrations between 5 percent and 15 percent in air. Unconfined mixtures of methane in air are not explosive; however, a flammable concentration within an enclosed space in the presence of an ignition source can explode. Methane is buoyant at atmospheric temperatures and disperses rapidly in air. Unintentional releases of biogas from dairy digester facilities or pipelines could pose risks to human health and safety. In the unlikely event that biogas is accidentally released into the atmosphere, and it reaches a combustible mixture with an ignition source present, a fire or explosion could occur resulting in injury or fatality. In addition, operation and maintenance of the dairy digester facility will involve the transport, use, storage, and disposal of small quantities of hazardous materials such as fuels, lubricants, and hydraulic fluids. Handling of hazardous materials are regulated by federal and State laws which minimize risks of physical and chemical hazards in the workplace.

The scrubber facility is needed for cleaning the biogas and to remove hydrogen sulfide. Flushing of the scrubbers will produce sulfur biogas scrubber effluent. One potential use of this effluent could be as a soil amendment. As a soil amendment, it would be subject to the California Department of Food and Agriculture Code covering fertilizing materials (Food and Agricultural Code Division 7, Chapter 5). Compliance with existing safety regulations and widely-accepted industry standards will minimize the hazard to the public and the environment.

As required by the County of Tulare Environmental Health Division, a hazardous materials business plan will be required. This requirement is noted as Mitigation Measure 8-1. With implementation of this Mitigation Measure, impacts related to hazardous materials usage will be reduced to a level considered less than significant.

As of July 2, 2103, the Project site was not identified on any Cortese List of hazardous materials.

Mitigation measures:

8-1 The owner/operator of the facility site is required to submit a Hazardous

Materials Business Plan to the TCEHSD if the facility will handle or store quantities of hazardous materials in excess of 55 gallons, 500 pounds, or 300 cubic feet of a compressed gas; or any amount of hazardous waste.

- 8-2 The applicant shall test the soils for petroleum along the edge of the Project adjacent to the Union Pacific Railroad Right-Of-Way. If petroleum is found, the soil shall be cleaned of all petroleum to Central Valley Regional Water Quality Control Board Regulations and Standards, and Tulare County Environmental Health Departments Requirements. Testing and clean up shall be conducted prior to the issuance of building permits.**

These measures will ensure that the applicant is aware of any potential hazardous materials on the site, and has a plan to address them, and any issues with hazardous materials related to the project. The applicant has also provided the document "*Phase I Environmental Site Assessment of Proposed Air Liquide Expansion 11704 Road 120, Pixley, Tulare County, California*" produced by AECOM in April 2012. While this does not appear to be the specific site where the project is expected, it is within the Calgren facility, and suggests a study of the specific site would include similar results of no evidence of RECs, HRECs, or DMCs in connection with the subject property. The work described and compliance with local permits and regulations will ensure that the project does not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, does not 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, and is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and will not, as a result, create a significant hazard to the public or the environment

HYDROLOGY AND WATER QUALITY

Significant Effect:

Violate any water quality standards or waste discharge requirements?

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?

The proposed Project has the potential to result in potential short-term and long-term impacts to effluent stormwater. Short-term impacts may occur from on-site construction-related activities (such as grading), and off-site from trenching (for installation of the pipelines used to transport the manure slurry to the digester and return wastewater from the digester to the dairy). These construction-related activities could potentially result in erosion and siltation both on- and off- site. The proposed Project's construction-related activities require the use of

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

gasoline and diesel-powered heavy-equipment such as bulldozers, backhoes, water pumps, and air compressors. Chemicals such as gasoline, diesel fuel, lubricating oil, hydraulic oil, lubricating grease, automatic transmission fluid, and other substances would be utilized during construction-related activities. An accidental release of any of these substances has the potential to degrade the water quality of the surface water runoff and add sources of pollution into the drainage system.

The proposed Project would be subject to the construction-related storm water permit requirements of the Federal Clean Water Act (CWA), and National Pollutant Discharge Elimination System (NPDES) general permit issued by the Central Valley Regional Water Quality Control Board. In compliance with the requirements of the State General Construction Activity Storm Water Permit, the Project applicant is required to prepare a Stormwater Pollution Prevention Plan (SWPPP). SWPPPs are required to include the identification of potential pollutant sources, controls to reduce pollutants, maintenance/inspection procedures, records of inspections, and follow-up maintenance of BMPs. With approval and implementation of the SWPPP, impacts would be less than significant. The Project applicant has prepared a SWPPP to reduce the potential for water quality impacts. Mitigation Measure 9-2 will ensure that the Project protects surface water during project operation.

The 4J Farms facility will retain all stormwater in a retention basin, and all water that has the potential to contact manure in a dairy lagoon. The Pixley Facility site will be graded for water to drain into the adjacent 6.9-acre stormwater retention basin, located south of the site on the Calgren property. The Storm Water Analysis requires a retention pond capacity of 0.31 acre feet. The retention pond demand for Calgren is 5.02 acre feet. (See Appendix M, Storm Water Analysis). Therefore the retention pond has an available capacity of 1.88 acre feet, of which the Project will use 0.31 acre feet.

All drainage into bays and unloading areas will be captured and sent to the digestate pond at 4J Farms where it is mixed with digestate and land applied at agronomic rates. No septic systems will be located on-site.

In the long term, the proposed digester will apply for waste discharge permitting for the dairy digester under the General Order for Dairies with Manure Anaerobic Digester or Co-digester facilities. This General Order outlines specifications, prohibitions, regulatory considerations, land application, reporting and notification requirements. Adhering to the requirements of this General Order would reduce potential water quality impacts to a level considered less than significant. If the applicant does not pursue receiving a permit under the General Order, the applicant will need to apply for an individual discharge permit which would be more restrictive than a General Order permit.

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

The Nutrient Management Plan (NMP) has been updated for Four J Jersey Dairy (4J Farms), under the General Order for Existing Milkcow Dairies, R5-2007-0035. (See **Appendix K**) “The NMP update shows this facility can easily manage the expected waste, within the confines of the RWQCB laws... further analysis shows that only 300 acres are needed to manage the processed wastewater on [4J Farms]. With over 890 acres available for processed wastewater application, this facility has significant capacity to increase its wastewater application rates.”⁸

No streams or rivers are located on or near the Project site. The proposed Project would alter 1.28 acres of land of an 8.16 acre parcel that is relatively flat. The proposed Project will not add a significant amount of impervious areas that would cause significant impacts related to drainage. In addition, the drainage plan proposed to divert stormwater to an existing 6.9 acre-foot basin on the adjacent property. The proposed Project will also be required to implement a Stormwater Pollution Prevention Plan (SWPPP) as part of their National Pollutant Discharge Elimination System (NPDES) permit as contained in Mitigation Measure 9-2.

Mitigation measures:

9-1 Measure 5.2: WDRs for digester and co-digester facilities shall include design and operational requirements to manage all wastes and discharges to protect surface waters. Requirements shall include the following:

- **Prohibitions against any surface water discharges (unless exempt from NPDES permitting requirements or covered by separate NPDES permit),**
- **Prohibitions against any discharges that would cause exceedance of surface water quality objectives,**
- **Setbacks from surface water bodies,**
- **Drainage requirements for co-digestion substrates/waste storage/receiving/handling areas to drain to on-site wastewater retention ponds,**
- **Lining requirements for retention ponds in new facilities and operational dairies,**
- **Monitoring requirements that include sampling data of soils, retention water, and waste streams to reconcile annually with Nutrient Management Plan (NMP),**
- **Requirements for tailwater return systems or other effective methods to minimize offsite Discharges,**
- **Prohibitions against any unreasonable effects on beneficial uses of nearby surface waters.**

Measure 5.3: WDRs for the discharge to land from dairy digester and co-digester facilities shall include the following BPTC requirements or equivalent:

- **Prepare and implement site-specific Salt Minimization Plan (SMP) as approved by the Central Valley Water Board. The SMP shall consider the elimination,**

⁸ Nutrient Management Plan Letter, See January 9, 2012, Appendix K

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

- decommissioning, or the reduction in use of regenerative water softeners on process water distribution networks or, alternatively, evaluate and install alternate technology that reduces or eliminates on-site brine disposal;
- Prepare and implement a site-specific NMP that incorporates analytical data for soils, wastewater, manure, digester solids, groundwater and/or surface water supply. The required analytical data is to be generated by a site-specific monitoring and reporting program. In the case of groundwater, data from an approved representative groundwater monitoring program may be substituted for some or all site-specific groundwater monitoring, if appropriate. The NMP will be reconciled annually based on results of the monitoring and reporting program and site-specific measurements of agronomic rates;
 - Require all drainage be directed to a retention wastewater pond that has been designed to meet antidegradation provisions of Resolution 68-16 by an appropriately licensed professional;
 - To the extent practicable, use crops that maximize salt uptake;
 - Apply liquid digestate consistently with crop water uptake rates;
 - Prohibit hazardous substances in co-digestion substrates processed by each facility as verified by laboratory analytical testing;
 - Apply digestate at an approved rate commensurate with agronomic rate;
 - Properly time application of digestate in accordance with crop requirements;
 - Avoid excess irrigation;
 - Maintain cover crops and vegetative buffer zones;
 - Develop co-substrate acceptance criteria;
 - Perform vector control and reduction;
 - Monitor groundwater for pathogen indicator organisms;
 - Require that solid wastes be stored on surfaces designed in accordance with a site-specific Waste Management Plan prepared for the facility by an appropriate California registered professional in accordance with WDR requirements;
 - Maintain a neutral or alkaline pH for dairy digestate waste water applied to cropland unless conditions warrant otherwise as detailed in the NMP;
 - Prohibit hazardous waste, mammalian tissues (with the exception of mammalian tissue as contained in compostable material from the food service industry, grocery stores, or residential food scrap collection), dead animals, and human waste from all discharges; and
 - Incorporate lined digester and co-digestion substrate storage facilities that meet the antidegradation provisions of Resolution 68-16, as relevant, into project design in order to prevent groundwater contamination with salts, nutrients, and other constituents. Each facility shall prepare a site-specific BPTC plan in accordance with the WDR requirements for review and approval to the Central Valley Water Board prior to commencement of operations. Annual monitoring reports shall be reviewed by the Central Valley Water Board and any revisions deemed necessary to the handling, storage, or land application of wastes shall be incorporated into facility operations.

Each facility shall prepare a site-specific Waste Management Plan in accordance with the WDR requirements for review and approval to the Central Valley Water Board prior to commencement of operations. These mitigation measures address waste discharge requirements (WDRs) set the Central Valley Water Board.

- 9-2 CalRecycle Measure 6.2a: During pre-processing, all water that contacts digester feedstock, including stormwater from feedstock handling and storage facilities and water from equipment washdown and feedstock wetting shall be contained until appropriately disposed or utilized. Best Management Practices (BMPs) may be used to reduce loading of sediment, nutrients, trash, organic matter, and other pollutants. These BMPs may include, but are not limited to, trash grates and filters, oil-water separators, mechanical filters such as sand filters, vegetated swales, engineered wastewater treatment wetlands, settling ponds, and other facilities to reduce the potential loading of pollutants into surface waters or groundwater. All discharges of stormwater are prohibited unless covered under the General Industrial Stormwater Permit, other National Pollutant Discharge Elimination System (NPDES) permit, or are exempted from NPDES permitting requirements. The NPDES permits will generally require implementation of management measures to achieve a performance standard of best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT), as appropriate. The General Industrial Stormwater Permit also requires the development of a storm water pollution prevention plan (SWPPP) and a monitoring plan, in compliance with permit requirements. Other liquid and solid wastes may only be discharged pursuant to an NPDES permit or wastedischarge requirement (WDR) order.

CalRecycle Measure 6.2b: In order to minimize the amount of fugitive trash or feedstock released to surface waters, the following measures shall be implemented. When feasible, the project proponent shall preferentially select feedstocks that contain minimal amounts of trash that could become entrained in surface water, either via direct contact with stormwater flows or via other accidental release, such as due to wind. Processing of such feedstocks may, however, be unavoidable, such as in support of an AD facility that processes MSW. Therefore, the project applicant shall ensure that (1) drainage from all feedstock loading, unloading, and storage areas is contained onsite or treated to remove trash and stray feedstock, and sediment prior to release as permitted; (2) in all feedstock loading and unloading areas, and all areas where feedstock is moved by front loaders or other uncovered or uncontained transport machinery, the applicant shall ensure that mechanical sweeping and/or equivalent trash control operational procedures are performed at least daily, during operations; and (3) the facility operator shall train all employees involved in feedstock handling so as to discourage, avoid, and minimize the release of feedstock or trash during operations.

CalRecycle Measure 6.2c: In order to minimize water quality degradation associated with accidental spills at AD facilities, the applicant for individual projects that would be implemented under the Program EIR shall require project proponents to complete and adhere to the requirements of a Spill Prevention, Control, and Countermeasure (SPCC) Plan, which is based on the federal SPCC rule. Notification of the SPCC Plan shall be provided to the local Certified Unified Program Agency (CUPA). The SPCC Plan shall contain measures to prevent, contain, and otherwise minimize potential spills of pollutants during facility operation, in accordance with U.S. EPA requirements. For individual projects that would utilize wet digestion systems, in which processing and holding tanks would contain the (aqueous) digestion reaction and liquid digestate containing fats and oils, the SPCC Plan shall provide for installation and monitoring of secondary containment and/or leak detection systems to ensure that AD liquids are not accidentally discharged to navigable waters or adjoining shorelines. Monitoring of these systems shall be in accordance with SPCC Plan requirements.

CalRecycle Measure 6.2d: Any proposed discharge to a pond for an individual project would require the project applicant to acquire WDRs from the appropriate regional board. The project applicant shall ensure that all ponds and discharges to such ponds adhere to all requirements under applicable WDRs. The need for pond liners in order to protect groundwater quality would be assessed during the regional board's review of the project, and requirements for pond liners would be included in the WDRs, as warranted. If appropriate, the WDRs would impose requirements for Class II surface impoundments as presented in Title 27 of the California Code of Regulations. Requirements include, but are not limited to, groundwater monitoring, double liner systems with leachate collection, water balance, a preliminary closure plan for clean closure, seismic analysis, and financial assurances. Compliance with WDRs may require the installation of facilities such as tanks and containers to store and process the digestate, the use of filterpresses, and implementation of other water quality protection practices.

CalRecycle Measure 6.2e: This measure would reduce potential for the movement of nutrients and other pollutants to groundwater and surface water for individual projects that would employ land application for liquid digestate or residual solids. The operators of individual projects implemented under this Program EIR shall ensure that land application of liquid digestate and/or residual solids adheres to all requirements of applicable WDRs. WDR requirements include but are not limited to, groundwater monitoring, completion of an anti-degradation analysis, and in some cases best practicable treatment and control to achieve salinity reduction in materials prior to discharge to land. WDRs would be issued by the appropriate regional board,

and would consider site-specific conditions and waste characteristics, in order to determine applicable control measures and procedures that protect water quality.

CalRecycle Measure 6.2f: This measure would reduce the potential for water quality degradation from projects that include discharge of liquid digestate to surface waters. The applicant for individual projects implemented under this Program EIR shall ensure that the discharge of liquid digestate to surface waters adheres to all NPDES permitting recommendations and requirements, as established by the appropriate regional board. Specific measures may include, but are not limited to, limitations on discharge volumes, seasonal discharge restrictions, limitations on loading rates and/or concentrations of specific constituents, and other facility-specific water quality control measures designed to protect receiving water quality and preserve beneficial uses identified in Basin Plans.

9-3 Evidence (e.g., an active permit) of Water Board approval of the proposed Project shall be submitted to the Tulare County Building Department prior to the issuance of grading and/or building permits.

These measures will ensure that there is a plan in place to keep the project from violating any water quality standards or waste discharge requirements. They will also ensure that the appropriate regulating agencies are aware of the project, and able to monitor the situation. The most likely place for water contamination is Four J Farms Dairy where the manure is collected and treated before it is piped to the anaerobic digester. Four J Farms has provided their NMP, and has experience with appropriate use of such waste, and has ample capacity to cover the levels produced by the project.

These measures will ensure that the project does not substantially alter the existing drainage pattern of the site or area. Since the project site does not include streams or rivers no measure is necessary to ensure that the alteration of such does not result in substantial erosion or siltation on or off-site.

Significant Effect:

Substantially degrade water quality?

The Project will be designed and constructed to comply with Central Valley Water Board (CVWB) regulations designed to protect groundwater from degradation. In addition, this EIR incorporates the Mitigation Measures from the CVWB PEIR for Dairy Manure Digester and Co-Digester Facilities thereby protecting water quality from degradation.

Mitigation measure:

9-4 The proposed digester system shall be designed by an Engineer, Registered Environmental Health Specialist, Geologist or other qualified person.

This measure in cooperation with measures 9-1, 9-2, and 9-3 will ensure that the project is designed, planned, and monitored to ensure that it does not substantially degrade water quality.

NOISE

Significant Effect:

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?

A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

A Noise Impact Assessment was prepared for the proposed Project. This assessment reviewed both potential construction and potential operational noise impacts. Existing noise levels are provided in Table 3.12-1 of the EIR.

“The nearest existing residences to the project site are located approximately 525 feet or more away. At this distance, maximum noise levels from construction activities (based on an average construction noise level of 84 dBA Lmax at a distance of 50 feet) would be expected to be approximately 63.6 dBA Lmax.”⁹ Construction noise is temporary in nature. As noted in General Plan Policy HS-8.11, construction would not be allowed outside normal business hours. To reduce construction noise levels mitigation measures have been outlined below.

Long term permanent noise impacts are generally associated with operational noise. “Operational activities associated with the project that would generate noise include maintenance vehicle circulation, delivery truck vehicle circulation, and the operation of certain mechanical equipment such as stationary pumps, motors, compressors, fans, heaters, and other equipment. All equipment with moving parts, except the effluent pump and the digester agitators, will be located inside an enclosed control room. Operation of pipelines would not result in any discernible noise.”¹⁰

According to the Noise Impact Assessment, the equipment will be enclosed in a steel building which will reduce noise levels by more than 12 dBA. As such, noise levels will be lower than what is noted in Table 3.12-2 which identifies unmitigated operational equipment noise levels.

Construction-related activities of the proposed Project could generate significant noise, corresponding to the particular phase of construction and the noise-generating equipment used during construction-

⁹ Noise Impact Assessment, page 8

¹⁰ Ibid. Page 9

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

related activities. The nearest sensitive receptors to the Project site are residences located approximately 500 feet east of the Project site east of State Route 99. Since certain pieces of construction equipment can generate noise levels of 85 dBA or louder at a distance of 50 feet, Project-related construction activities will temporarily raise ambient noise levels within the project vicinity. Construction hours are limited from 7AM to 7PM in the General Plan. No further mitigation is required to address construction hour noise.

Mitigation measures:

- 12-1 Construction equipment noise shall be minimized by muffling and shielding intakes and exhaust on construction equipment (in accordance with the manufacturer's specifications) and by shrouding or shielding impact tools.**
- 12-2 Construction contractors operating within 750 feet of a residence, shall stage stationary construction equipment as far as possible from the boundary of the residential use.**
- 12-3 All noise generating equipment shall be place inside the maintenance building/loading structure to minimize ambient noise impacts.**

These measures in addition to the relatively low noise levels of the equipment will ensure that the project will not expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The maximum noise levels for this industrial use is 75 dBA. For residential uses, the maximum acceptable noise level is 60 dBA. This project is located in an Industrial Area, and the unmitigated operational equipment noise levels will be a combined 57.2 dBA, with the loudest single item at 58.7 dBA. This is within the 60 dBA of the residential use requirement not to mention the industrial use requirement (75 dBA). This project is taking the additional step of ensuring that equipment will be enclosed in a steel building which will reduce noise levels by more than 12 dBA. During construction the noise levels will be higher, so construction hours are limited to 7 a.m. to 7 p.m. in accordance with the general plan.

TRANSPORTATION/TRAFFIC

Significant Effect:

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?

The Tulare County General Plan Policy TC-1.16 calls for a Tulare County LOS Standards calls for an LOS of "D" or better. This will not be a problem during the operation of the project, but the construction period will involve some blockage of traffic, related to the placement of the piping.

Mitigation measure:

- 16-1 Measure 8.1: The contractor(s) will obtain any necessary road encroachment permits prior to installation of pipelines within the existing roadway right-of-way. As part of the road**

encroachment permit process, the contractor(s) will submit a traffic safety / traffic management plan (for work in the public right-of-way) to the agencies having jurisdiction over the affected roads. Elements of the plan will likely include, but are not necessarily limited to, the following:

- Develop circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible. Use flaggers and/or signage to guide vehicles through and/or around the construction zone.
- To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.
- Limit lane closures during peak traffic hours to the extent possible. Restore roads and streets to normal operation by covering trenches with steel plates outside of allowed working hours or when work is not in progress.
- Limit, where possible, the pipeline construction work zone to a width that, at a minimum, maintains alternate one-way traffic flow past the construction zone.
- Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.
- Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.
- To the maximum extent feasible, maintain access to private driveways located within construction zones.
- Coordinate with the local public transit providers so that bus routes or bus stops in work zones can be temporarily relocated as the service provider deems necessary.

This measure will ensure that the project is in compliance with any applicable congestion management programs, ensuring adequate level of service standards and travel demand measures.

Significant Effect:

Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The existing roadway system has been designed in accordance with County of Tulare roadway standards to avoid roadway hazards and other traffic-related hazardous features. In addition, Mitigation Measure 16-2 requires construction of curb and gutter along the street frontage (Road 120) of the subject site, which will provide a more defined roadway and increase roadway safety.

Mitigation measure:

- 16-2 The applicant shall build out the curb and gutter along the street frontage of the subject site prior the final inspection of the project.**

Findings ARV-10-053
Pixley Biogas Anaerobic Digester

This measure in addition to the current lack of traffic-related hazardous features will ensure that the project does not substantially increase hazards due to a design feature or incompatible uses, and because of the addition of a curb and gutter along the frontage street will actually make that section of frontage street less of a hazard.

MANDATORY FINDINGS OF SIGNIFICANCE

Significant Effect:

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?

This is addressed above under Biological Resources and Cultural Resources. It is not anticipated that the project site will have a significant impact on fish or wildlife, or plant or animal communities, or restrict the range of a rare or endangered plant or animal. Mitigation measure 4-1 is adopted to ensure that any such resource identified on the site of the project is properly protected. It is also not anticipated that important examples of the major periods of California history or prehistory, are on the site since it has been thoroughly disturbed and used in recent history. Mitigation measures 5-1, 5-2, and 5-3 are adopted to ensure that any such resource identified on the site of the project is properly protected and recovered.

EXHIBIT A SCOPE OF WORK

TECHNICAL TASK LIST

Task #	CPR	Task Name
1	N/A	Administration
2	X	Pre-Construction
3		Construction
4		Operations
5		Data Collection and Analysis

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Participants
1	Daryl Maas Lyle Schlyer	4 Creeks Engineering Andgar Corporation, Calgren	Four J Dairy DVO Inc (formerly GHD Inc)
2	Daryl Maas Lyle Schlyer	4 Creeks Engineering Andgar Corporation, Calgren	DVO Inc Four J Dairy
3	Daryl Maas Lyle Schlyer	4 Creeks Engineering Andgar Corporation, Calgren 4C Global	DVO Inc Four J Dairy
4	Daryl Maas Lyle Schlyer	4 Creeks Engineering Andgar Corporation, Calgren	Four J Dairy DVO Inc
5	Daryl Maas Lyle Schlyer	4 Creeks Engineering Calgren	Four J Dairy

GLOSSARY

Specific terms and acronyms used throughout this scope of work are defined as follows:

Term/ Acronym	Definition
ARFVT	Alternative and Renewable Fuel and Vehicle Technology
CPR	Critical Project Review
Effluent	Any substance (solid or liquid) processed by an anaerobic digester
Energy Commission	California Energy Commission
FTD	Fuels and Transportation Division
mmBTU	Million British Thermal Units

Background:

Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007), created the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVT Program). The statute, subsequently amended by AB 109 (Núñez, Chapter 313, Statutes of 2008), authorizes the Energy Commission to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change policies. The Energy Commission has an annual program budget of approximately \$100 million and provides financial support for projects that:

- Develop and improve alternative and renewable low-carbon fuels;
- Optimize alternative and renewable fuels for existing and developing engine technologies;
- Produce alternative and renewable low-carbon fuels in California;
- Decrease, on a full fuel cycle basis, the overall impact and carbon footprint of alternative and renewable fuels and increase sustainability;
- Expand fuel infrastructure, fueling stations, and equipment;
- Improve light-, medium-, and heavy-duty vehicle technologies;
- Retrofit medium- and heavy-duty on-road and non-road vehicle fleets;
- Expand infrastructure connected with existing fleets, public transit, and transportation corridors; and
- Establish workforce training programs, conduct public education and promotion, and create technology centers.

The California Energy Commission issued solicitation PON-09-003 to provide funding opportunities under the ARFVT Program for projects that involve the design, construction, and operation of biomethane facilities. To be eligible for funding under PON-09-003, the projects must also be consistent with the ARFVT Investment Plan updated annually.

In response to PON-09-003, Recipient submitted application #17, which was proposed for funding in the Energy Commission's Notice of Proposed Awards issued April 7, 2010, and is incorporated by reference to this Agreement in its entirety.

Problem Statement:

Anaerobic digesters offer tremendous potential for renewable energy generation, greenhouse gas reduction, and protection of air and water quality. However the market, environmental, and technical barriers present in the San Joaquin Valley and elsewhere in the state have prevented widespread adoption of digester technology. Air and water regulations have drastically slowed farmers' implementation of digester projects in the San Joaquin Valley and reduced the potential gains for those who do. The market for digester biogas has been slow to emerge since farms cannot normally use the biogas that digesters generate without investing in additional expensive infrastructure.

Goal of the Agreement:

The goal of this Agreement is to reduce the full fuel cycle carbon footprint and increase the sustainability of ethanol produced by Calgren Renewable Fuels' refinery by producing biogas generated from local dairy manure.

Objectives of the Agreement:

The objectives of this Agreement are to construct a biogas facility, consisting of a Manure Collection and Transport System, an Anaerobic Digester, a Biogas Utilization System, and a Post-Digester Separation System, that will produce biogas, reduce natural gas consumption, reduce methane emissions from manure storage, and prove the viability of farm anaerobic digestion in the San Joaquin Valley. The quantitative objectives are:

- Produce up to 8,000 mmBTU per month of biogas via anaerobic digestion using manure feedstock from nearby dairies.
- Reduce natural gas consumption on the Calgren Renewable Fuels biorefinery by up to 12,000 mmBTU per month as adjusted for plant output
- Create up to 20,000 tons of carbon dioxide reductions through avoided emissions from participating farms' manure storage and reduced natural gas consumption at the Calgren facility.

TASK 1 ADMINISTRATION**Task 1.1 Attend Kick-off Meeting**

The goal of this task is to establish the lines of communication and procedures for implementing this Agreement.

The Recipient shall:

- Attend a "Kick-Off" meeting with the Commission Project Manager, the Grants Officer, and a representative of the Accounting Office. The Recipient shall bring its Project Manager, Agreement Administrator, Accounting Officer, and others designated by the Commission Project Manager to this meeting.
- Discuss the following administrative and technical aspects of this Agreement:
 - Agreement Terms and Conditions
 - Critical Project Review (Task 1.2)
 - Match fund documentation (Task 1.6) No reimbursable work may be done until this documentation is in place.
 - Permit documentation (Task 1.7)
 - Subcontracts needed to carry out project (Task 1.8)
 - The CAM's expectations for accomplishing tasks described in the Scope of Work
 - An updated Schedule of Products and Due Dates
 - Monthly Progress Reports (Task 1.4)

- Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
- Final Report (Task 1.5)

Recipient Products:

- Updated Schedule of Products
- Updated List of Match Funds
- Updated List of Permits

Commission Project Manager Product:

- Kick-Off Meeting Agenda

Task 1.2 Critical Project Review (CPR) Meetings

The goal of this task is to determine if the project should continue to receive Energy Commission funding to complete this Agreement and to identify any needed modifications to the tasks, products, schedule or budget.

CPRs provide the opportunity for frank discussions between the Energy Commission and the Recipient. CPRs generally take place at key, predetermined points in the Agreement, as determined by the Commission Project Manager and as shown in the Technical Task List above. However, the Commission Project Manager may schedule additional CPRs as necessary, and any additional costs will be borne by the Recipient.

Participants include the Commission Project Manager and the Recipient and may include the Commission Grants Officer, the Fuels and Transportation Division (FTD) team lead, other Energy Commission staff and Management as well as other individuals selected by the Commission Project Manager to provide support to the Energy Commission.

The Commission Project Manager shall:

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the Energy Commission, but they may take place at another location.
- Send the Recipient the agenda and a list of expected participants in advance of each CPR. If applicable, the agenda shall include a discussion on both match funding and permits.
- Conduct and make a record of each CPR meeting. One of the outcomes of this meeting will be a schedule for providing the written determination described below.
- Determine whether to continue the project, and if continuing, whether or not modifications are needed to the tasks, schedule, products, and/or budget for the remainder of the Agreement. Modifications to the Agreement may require a formal amendment (please see the Terms and Conditions, Section 8). If the Commission Project Manager concludes that

satisfactory progress is not being made, this conclusion will be referred to the Transportation Committee for its concurrence.

- Provide the Recipient with a written determination in accordance with the schedule. The written response may include a requirement for the Recipient to revise one or more product(s) that were included in the CPR.

The Recipient shall:

- Prepare a CPR Report for each CPR that discusses the progress of the Agreement toward achieving its goals and objectives. This report shall include recommendations and conclusions regarding continued work of the projects. This report shall be submitted along with any other products identified in this scope of work. The Recipient shall submit these documents to the Commission Project Manager and any other designated reviewers at least 15 working days in advance of each CPR meeting.
- Present the required information at each CPR meeting and participate in a discussion about the Agreement.

Commission Project Manager Products:

- Agenda and a list of expected participants
- Schedule for written determination
- Written determination

Recipient Product:

- CPR Report(s)

Task 1.3 Final Meeting

The goal of this task is to closeout this Agreement.

The Recipient shall:

- Meet with Energy Commission staff to present the findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement.

This meeting will be attended by, at a minimum, the Recipient, the Commission Grants Office Officer, and the Commission Project Manager. The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be two separate meetings at the discretion of the Commission Project Manager.

The technical portion of the meeting shall present an assessment of the degree to which project and task goals and objectives were achieved, findings, conclusions, recommended next steps (if any) for the Agreement, and recommendations for improvements. The Commission Project Manager will determine the appropriate meeting participants.

The administrative portion of the meeting shall be a discussion with the Commission Project Manager and the Grants Officer about the following Agreement closeout items:

- What to do with any equipment purchased with Energy Commission funds (Options)
- Energy Commission's request for specific "generated" data (not already provided in Agreement products)
- Need to document Recipient's disclosure of "subject inventions" developed under the Agreement
- "Surviving" Agreement provisions
- Final invoicing and release of retention
- Prepare a schedule for completing the closeout activities for this Agreement.

Products:

- Written documentation of meeting agreements
- Schedule for completing closeout activities

Task 1.4 Monthly Progress Reports

The goal of this task is to periodically verify that satisfactory and continued progress is made towards achieving the research objectives of this Agreement on time and within budget.

The objectives of this task are to summarize activities performed during the reporting period, to identify activities planned for the next reporting period, to identify issues that may affect performance and expenditures, and to form the basis for determining whether invoices are consistent with work performed.

The Recipient shall:

- Prepare a Monthly Progress Report which summarizes all Agreement activities conducted by the Recipient for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Each progress report is due to the Commission Project Manager within 10 days of the end of the reporting period. The recommended specifications for each progress report are contained in Section 6 of the Terms and Conditions of this Agreement.
- In the first Monthly Progress Report and first invoice, document and verify match expenditures and provide a synopsis of project progress, if match funds have been expended or if work funded with match share has occurred after the notice of proposed award but before execution of the grant agreement. If no match funds have been expended or if no work funded with match share has occurred before execution, then state this in the report. All pre-execution match expenditures must conform to the requirements in the Terms and Conditions of this Agreement.

Product:

- Monthly Progress Reports

Task 1.5 Final Report

The goal of the Final Report is to assess the project's success in achieving its goals and objectives, advancing science and technology, and providing energy-related and other benefits to California.

The objectives of the Final Report are to clearly and completely describe the project's purpose, approach, activities performed, results, and advancements in science and technology; to present a public assessment of the success of the project as measured by the degree to which goals and objectives were achieved; to make insightful observations based on results obtained; to draw conclusions; and to make recommendations for further projects and improvements to the FTD project management processes.

The Final Report shall be a public document. If the Recipient has obtained confidential status from the Energy Commission and will be preparing a confidential version of the Final Report as well, the Recipient shall perform the following activities for both the public and confidential versions of the Final Report.

The Recipient shall:

- Prepare an Outline of the Final Report.
- Prepare a Final Report following the approved outline and the latest version of the Final Report guidelines which will be provided by the Commission Project Manager. The Commission Project Manager shall provide written comments on the Draft Final Report within fifteen (15) working days of receipt. The Final Report must be completed at least 60 days before the end of the Agreement Term.
- Submit one bound copy of the Final Report with the final invoice.

Products:

- Draft Outline of the Final Report
- Final Outline of the Final Report
- Draft Final Report
- Final Report

Task 1.6 Identify and Obtain Matching Funds

The goal of this task is to ensure that the match funds planned for this Agreement are obtained for and applied to this Agreement during the term of this Agreement.

The costs to obtain and document match fund commitments are not reimbursable through this Agreement. Although the Energy Commission budget for this task will be zero dollars, the Recipient may utilize match funds for this task. Match funds shall be spent concurrently or in advance of Energy Commission funds for each task during the term of this Agreement. Match funds must be identified in writing and the associated

commitments obtained before the Recipient can incur any costs for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a letter documenting the match funding committed to this Agreement and submit it to the Commission Project Manager at least 2 working days prior to the kick-off meeting. If no match funds were part of the proposal that led to the Energy Commission awarding this Agreement and none have been identified at the time this Agreement starts, then state such in the letter. If match funds were a part of the proposal that led to the Energy Commission awarding this Agreement, then provide in the letter a list of the match funds that identifies the:
 - Amount of each cash match fund, its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied.
 - Amount of each in-kind contribution, a description, documented market or book value, and its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient shall identify its owner and provide a contact name, address and telephone number, and the address where the property is located.
- Provide a copy of the letter of commitment from an authorized representative of each source of cash match funding or in-kind contributions that these funds or contributions have been secured. For match funds provided by a grant a copy of the executed grant shall be submitted in place of a letter of commitment.
- Discuss match funds and the implications to the Agreement if they are reduced or not obtained as committed, at the kick-off meeting. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide the appropriate information to the Commission Project Manager if during the course of the Agreement additional match funds are received.
- Notify the Commission Project Manager within 10 days if during the course of the Agreement existing match funds are reduced. Reduction in match funds must be approved through a formal amendment to the Agreement and may trigger an additional CPR.

Products:

- A letter regarding match funds or stating that no match funds are provided
- Copy(ies) of each match fund commitment letter(s) (if applicable)
- Letter(s) for new match funds (if applicable)
- Letter that match funds were reduced (if applicable)

Task 1.7 Identify and Obtain Required Permits

The goal of this task is to obtain all permits and CEQA documentation required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track.

Permit and CEQA costs and the expenses associated with obtaining permits or CEQA review are not reimbursable under this Agreement. Although the Energy Commission budget for this task will be zero dollars, the Recipient shall budget match funds for any expected expenditures associated with obtaining permits. Permits must be identified in writing and obtained before the Recipient can make expenditures for which a permit is required.

The Recipient shall:

- Prepare a letter documenting the permits required to conduct this Agreement and submit it to the Commission Project Manager at least 2 working days prior to the kick-off meeting. If there are no permits required at the start of this Agreement, then state such in the letter. If it is known at the beginning of the Agreement that permits will be required during the course of the Agreement, provide in the letter:
 - A list of the permits that identifies the:
 - Type of permit
 - Name, address and telephone number of the permitting jurisdictions or lead agencies
 - The schedule the Recipient will follow in applying for and obtaining these permits.
- Discuss the list of permits and the schedule for obtaining them at the kick-off meeting and develop a timetable for submitting the updated list, schedule and the copies of the permits. The implications to the Agreement if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in the Progress Reports and will be a topic at CPR meetings.
- If during the course of the Agreement additional permits become necessary, provide the appropriate information on each permit and an updated schedule to the Commission Project Manager.
- As permits are obtained, send a copy of each approved permit to the Commission Project Manager.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the Commission Project Manager within 5 working days. Either of these events may trigger an additional CPR.

Products:

- Letter documenting the permits or stating that no permits are required
- A copy of each approved permit (if applicable)
- Updated list of permits as they change during the term of the Agreement (if applicable)

- Updated schedule for acquiring permits as changes occur during the term of the Agreement (if applicable)

Task 1.8 Obtain and Execute Subcontracts

The goal of this task is to ensure quality products and to procure subcontractors required to carry out the tasks under this Agreement consistent with the Agreement Terms and Conditions and the Recipient's own procurement policies and procedures. It will also provide the Energy Commission an opportunity to review the subcontracts to ensure that the tasks are consistent with this Agreement, and that the budgeted expenditures are reasonable and consistent with applicable cost principles.

The Recipient shall:

- Manage and coordinate subcontractor activities.
- Submit a draft of each subcontract required to conduct the work under this Agreement to the Commission Agreement Manager for review.
- Submit a final copy of the executed subcontract.
- If Recipient decides to add new subcontractors, then the Recipient shall notify the CAM.

Products:

- Draft subcontracts
- Final subcontracts

TECHNICAL TASKS

TASK 2 PRE-CONSTRUCTION

The goal of this task is to finalize the project design and construction costs prior to incurring major construction expenses.

The Recipient shall:

- Prepare and submit a Construction and Equipment List documenting the comprehensive construction costs and equipment needed. The Construction and Equipment List will include all items to be purchased, constructed, or installed on the project. For each item, the letter shall provide:
 - The name of the item
 - The make, model, size, capacity or other information as appropriate to the item
 - The name of the entity that will be carrying out the purchase and/or installation of the item
 - The estimated cost to purchase and install the item

- The schedule for obtaining a bid from the supplying or installing entity
- Finalize design of the biogas facility, including obtaining all appropriate sign-offs
- Prepare and submit a letter verifying completion of design work
- Develop proposed Construction Timeline running from the intended date to begin construction until the commercial operation date of the project—defined as when the project boiler first begins supplying steam to the Calgren refinery with at least 25% of its design capacity.

[CPR WILL BE HELD AT THE END OF THIS TASK. See Task 1.2 for details]

Products:

- Construction and Equipment List
- Letter of Verification of Design Work
- Construction Timeline

TASK 3 CONSTRUCTION

The goal of this task is to construct the biogas facility and prepare it for commercial operations.

The Recipient shall:

- Prepare and submit a Written Notification of Readiness to Construct stating the project has obtained all permits, third party agreements, binding construction and equipment bids, and all other items necessary to begin construction.
- Construct the biogas facility according to the finalized design and as outlined in the Construction Timeline and Construction and Equipment list. This construction shall include the following major components:
 - Manure Collection and Transport System
 - Anaerobic Digester
 - Biogas Utilization System
 - Post-Digester Separation System
- Document construction progress and activities, any issues encountered, and updates to the construction timeline in the Monthly Progress Reports
- Prepare and submit a Written Notification of Commercial Operation and submit it to the Commission Agreement Manager within ten working days of commercial operation of the project. The Written Notification shall contain the following elements:
 - The date the project achieved commercial operations
 - A narrative on the current status of the project and initial operations

Products:

- Written Notification of Readiness to Construct
- Written Notification of Commercial Operation

TASK 4 OPERATIONS

The goal of this task is to operate the project as designed and to collect data to document the project's fulfillment of its objectives.

The Recipient shall:

- Operate facility to produce maximum biogas and comply with all applicable regulatory and design standards.
- Collect six months of operational data for inclusion in Operations Reports and for the Task 5 analyses
- Prepare and submit Operations Report. The Operations Report shall include but is not limited to the following information:
 - A narrative on operational highlights including any stoppages in production and a statement as to the project's compliance with regulatory requirements.
 - The average operating temperature of the digester
 - The total amount of biogas produced
 - The average BTU content of the biogas
 - The total amount of pumped manure liquids received
 - The total pounds of manure solids recovered from the effluent on site
 - The total amount of liquid manure returned to dairy
 - The nutrient content of the liquid manure returned to dairy
 - The natural gas consumed by Calgren Renewable Fuels as adjusted for plant output
 - The direct operational costs of the project
 - Operational data from the anaerobic digester system to include:
 - time operating (up and down time),
 - efficiency of digestion of feedstock,
 - biogas production rate,
 - quality of biogas produced,
 - water quality of digester effluent.
 - Operational data from the biogas upgrading system to include:
 - time operating (up and down time),
 - quality of biogas after treatment,
 - volume of biogas before and after treatment

Products:

- Operations Report

TASK 5 DATA COLLECTION AND ANALYSIS

The goal of this task is to analyze the operational data collected in Task 4 to determine the economic viability and environmental impact of the project, and to include that analysis in the Final Report.

The Recipient Shall:

- Using the operational data collected in Task 4:

- Estimate gasoline and/or petroleum-based diesel fuel that will be displaced annually.
- Explain how this work will reduce criteria air pollutants and air toxics and reduce or avoid multimedia environmental impact, and lead to a decrease, on a life cycle basis, in emissions of water pollutants or any other substances known to damage human health or the environment.
- Provide a quantified estimate of the project's carbon intensity values for life-cycle scale greenhouse gas emissions.
- Quantify any water efficiency and water use reduction measures used in the project including, but not limited to, the use of recycled or reclaimed water and the reduction or elimination of point and nonpoint source wastewater discharge.
- Describe any use of renewable energy or cogeneration in the project.
- Describe any potential energy efficiency measures used in the project that would exceed Title 24 standards in Part 6 of the California Code of Regulations.
- Provide data on expected job creation, economic development, and increased state revenue.
- Compare any project performance and expectations provided in the proposal to Energy Commission with actual project performance and accomplishments.
- Describe how the project supports new technology advancement for vehicles, vessels, engines, and other equipment, and promote the deployment of such technologies in the marketplace. To the extent possible describe how the project, provided a measurable transition from the nearly exclusive use of petroleum fuels to a diverse portfolio of viable alternative fuels that meets California's petroleum reduction and alternative fuel use goals.
- Describe how the project demonstrated the cost-effectiveness of the proposed technology in achieving greenhouse gas emissions reduction.
- Provide additional data that may be requested by the Energy Commission during the term of this Agreement, as is reasonably available.

Products:

- None. Data from this task will be included in the Final Report.

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: GRANT AWARD # ARV-10-053 TO
PIXLEY BIOGAS, LLC PON-09-003

WHEREAS, on June 29, 2011 by Resolution 11-06-29-18 the State Energy Resources Conservation and Development Commission (Energy Commission) approved this grant to proceed with preliminary portions of the project that would guide the CEQA analysis and not have a significant impact on the environment, which previous Resolution is incorporated herein by reference;

WHEREAS, the Lead Agency's CEQA analysis is now complete;

WHEREAS, Energy Commission staff have considered the Lead Agency's final Environmental Impact Report (EIR) and independently made findings under that analysis, which findings are included in the backup materials for this Resolution, and which findings are specifically incorporated herein by reference;

WHEREAS, Energy Commission as a Responsible Agency hereby adopts staff's findings and independent conclusions in said findings that the project with the indicated mitigation measures will have a less than significant impact on the environment;

WHEREAS, Energy Commission finds pursuant to CEQA Guideline 15091 that changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effects as described in the Lead Agency's final EIR, and that such changes or alterations are within the responsibility and jurisdiction of another public agency and not the Energy Commission, and that said changes have been adopted by such other agency or can and should be adopted by such other agency;

RESOLVED, that the Energy Commission hereby approves **Grant Award # ARV-10-053** with Pixley Biogas, LLC (Recipient), to proceed with the remainder of the project, including the full scope of the agreement to construct an anaerobic digestion

facility that will produce biogas from dairy manure to power the adjacent Calgren Renewable Fuels Biorefinery, an ethanol facility, to lower Calgren's carbon intensity.

FURTHER BE IT RESOLVED, that this document authorizes the Executive Director to execute the same on behalf of the Energy Commission.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on March 12, 2014.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

Harriet Kallemeyn,
Secretariat