



**San Joaquin Valley Unified
Air Pollution Control District**

**Linn Operating, Inc.
Cogeneration Project**

Project Numbers S-1151996 and S-1151997

Kern County

**Initial Study and Draft
Mitigated Negative Declaration**

October 7, 2015

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GOVERNING BOARD 2015**

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INITIAL STUDY AND DRAFT MITIGATED NEGATIVE DECLARATION

Linn Operating, Inc. Cogeneration Project

Project Numbers: S-1151996 and S-1151997

October 2015

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A. INTRODUCTION

Linn Operating, Inc. (Linn) is a Title V oil production company with facilities located in Kern County, California. The San Joaquin Valley Unified Air Pollution Control District (District) has received Authority to Construct (ATC) application packages from Linn proposing to install two (2) 5.67 megawatt (ISO rated) combined heat and power cogeneration systems (Project). Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 (T-60) turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery Steam Generator. The Project will be located within the existing oilfield boundaries of the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), consistent with current oil and gas operations in Kern County, California.

B. PURPOSE AND AUTHORITY

The District has discretionary approval power over the Project, pursuant to District Rule 2010 (Permits Required) and District Rule 2201 (New and Modified Stationary Source Review Rule). The District determined that no other agency has broader discretionary approval power over the Project. As such, the District is the public agency having principal responsibility for approving the project and serves as Lead Agency (CCR §15367).

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The ERG was prepared to comply with this requirement and is an internal document used to comply with CEQA.

The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.



Under CEQA the Lead Agency is required to:

- Conduct preliminary reviews to determine if applications are subject to CEQA [CCR §15060].
- Conduct review to determine if projects are exempt from CEQA [CCR §15061].
- Prepare Initial Studies for projects that may have adverse environmental impacts [CCR §15063].
- Determine the significance of the environmental effects caused by the project [CCR §15064].
- Prepare Negative Declarations or Mitigated Negative Declarations for projects with no significant environmental impacts [CCR §15070].
- Prepare, or contract to prepare, EIRs for projects with significant environmental impacts [CCR §15081].
- Adopt reporting or monitoring programs for the changes made to projects or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment [PRC §21081.6 & CCR §15097].
- Comply with CEQA noticing and filing requirements.

C. PROJECT BACKGROUND INFORMATION

Project Description

The District has received two (2) ATC application packages from Linn to install two (2) 5.67 megawatt (ISO rated) combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 (T-60) turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction (SCR) and CO catalyst and Heat Recovery Steam Generator (Project). The Project will be located within the existing oilfield boundaries of the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), consistent with current operations in Kern County, California.

Linn is a major source as defined in Section 3.23 of District Rule 2201 (New and Modified Stationary Source Review Rule). The installation and operation of stationary source equipment for this Project is subject to District permit requirements. One major requirement is that new and modified equipment that has air contaminant emissions must satisfy the requirements of New Source Review (NSR). The main requirements of NSR are to require the installation of Best Available Control Technology (BACT) to minimize emission increases from such equipment and to mitigate emission increases over certain thresholds by providing emission reductions either by limiting the use of existing equipment or by providing emission offsets.



Process Description

The proposed equipment will be used to generate electricity and steam which will be used for facility operations. The combined cycle generator set is equipped with a waste heat recovery steam generator.

Project Location

The Project is located in the vicinity of the communities of McKittrick and Taft in Kern County, California, which is in the San Joaquin Valley Air Basin (see Figure 1-4). Table 1 below identifies the specified locations in which the Project will be located. These locations are within the Linn's existing McKittrick and North Midway Sunset oilfield boundaries.

Table 1: Project Location

Site	Section	Township	Range	Assessor's Parcel Number
21Z Lease	30S	22E	21	157-110-25
Pan Fee Lease	31S	22E	2	183-010-07

Figure 1: The San Joaquin Valley Air Basin

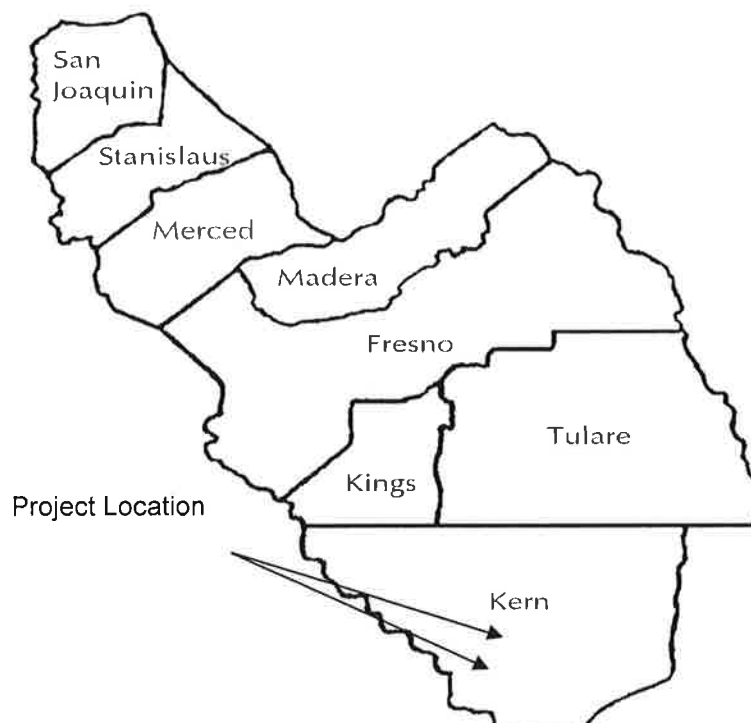




Figure 2: 21Z Lease Location and Project Site

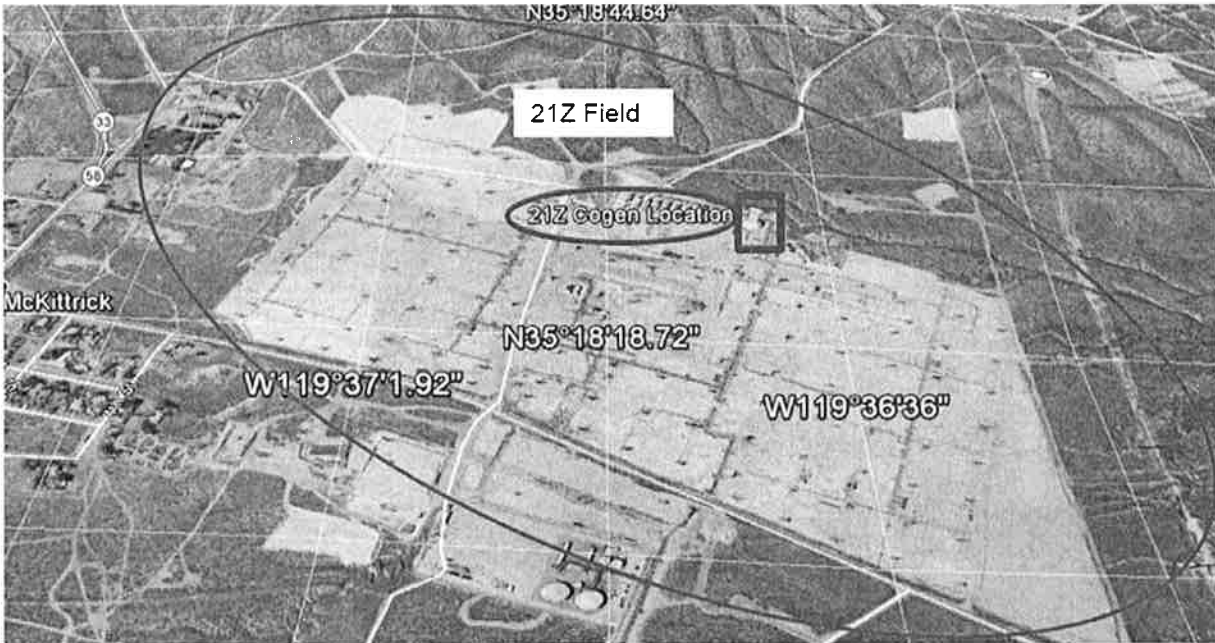


Figure 3: Pan Fee Lease Location and Project Site

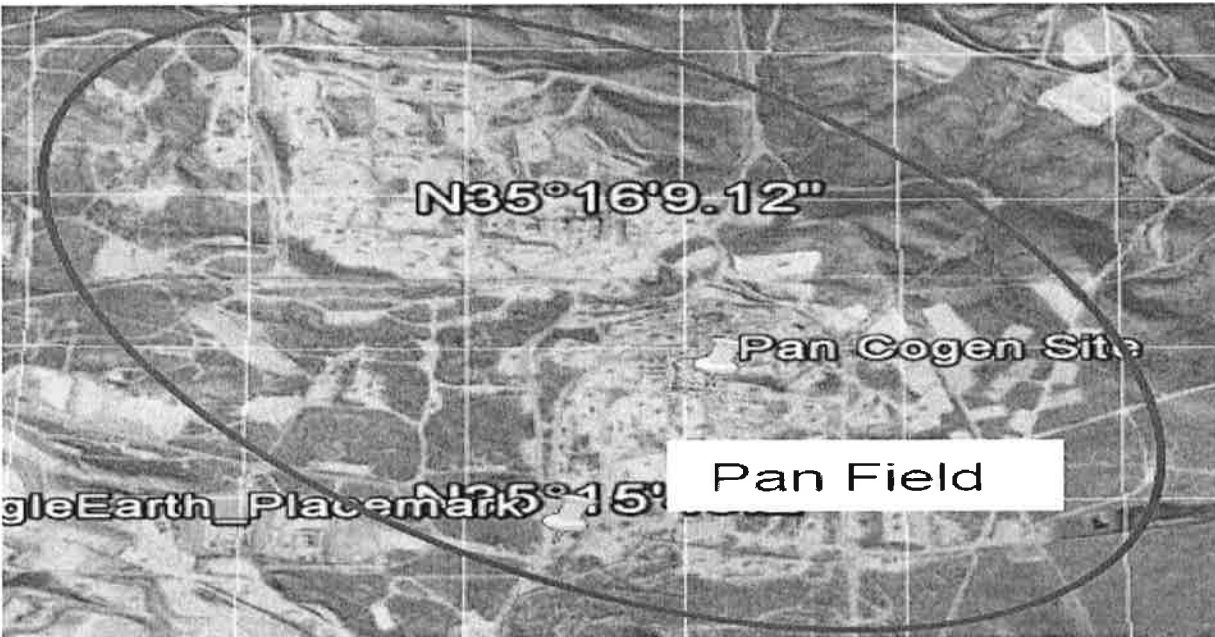
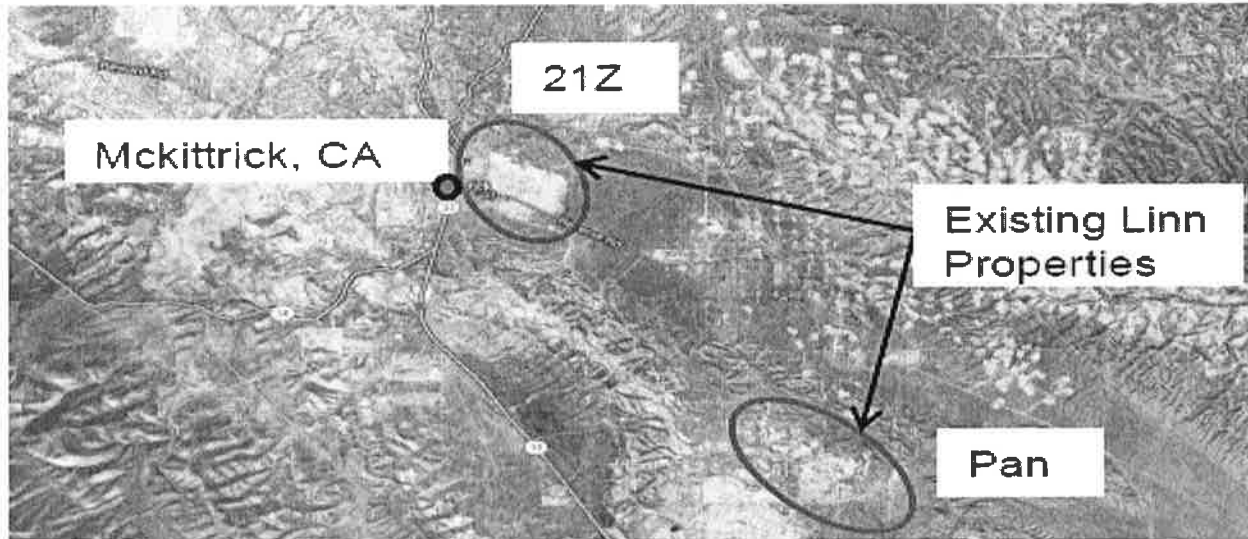




Figure 4: Existing Linn Oilfields (21Z Lease and Pan Fee Lease)



General Plan Designation and Zoning

The locations of the Project described above (Table 1) are zoned as Exclusive Agriculture (Zone A). The 21Z Lease location is within the McKittrick oilfield and is designated under the Kern County General Plan as Mineral and Petroleum (Code 8.4) and Resource Management (Code 8.5). The Pan Fee Lease location is within the North Midway Sunset oilfield and is designated under the Kern County General Plan as Mineral and Petroleum (8.4). Pursuant to Section 19.12.020(E) of the Kern County Zoning Ordinance, cogeneration facilities or steam generators primarily intended for steam production used for production of oil or gas (excluding coal fired) are a permitted use by right in Zone A.

Surrounding Land Uses and Setting

The Project is within Linn's existing McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield boundaries. The area immediately surrounding the 21Z Lease site is designated as agriculture, mineral and petroleum, and state and federal land. The area immediately surrounding the Pan Fee Lease is designated as agriculture, and mineral and petroleum.

Other Public Agencies Whose Approval Is Required

The District has identified the following agencies as having approval authority for the Project.



US Environmental Protection Agency (US EPA)

The Project is classified as a Title V minor modification to be processed with a Certificate of Conformity (COC), and its ATC application will be submitted to the US EPA for a 45-day comment period. Linn must apply administratively to amend the Title V operating permit to include the requirements of the ATCs issued with the Project.

US Fish and Wildlife Service (USFWS)

The USFWS has regulatory authority over projects that could result in the “take” of any species identified as threatened or endangered. If the Project would result in the incidental take of any federally identified species, an Incidental Take Permit and/or a Habitat Conservation Plan would be required.

California Department of Fish and Wildlife (CDFW)

The CDFW has regulatory authority over projects that could result in the “take” of any species identified by the State of California as threatened or endangered. If the Project would result in the “take” of any identified species, an Incidental Take Permit would be required.

D. DECISION TO PREPARE A MITIGATED NEGATIVE DECLARATION

Consistent with CEQA requirements the District prepared an Initial Study that evaluated potential environmental effects of the Project. The District has determined that with mitigation of the Project would have a less than significant impact on the environment. The District concludes that a Mitigated Negative Declaration would be appropriate for the Project. Project design elements and mitigation measures that reduce the Project’s impact on the environment would be enforced through mitigation and District permits.



E. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

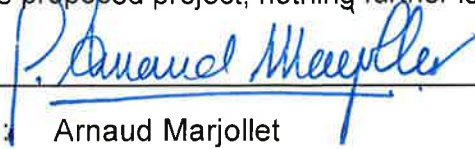
The environmental factors checked below would be potentially affected by the proposed Project, involving at least one impact that is a "Potentially Significant Impact" or "Potentially Significant Unless Mitigated", as indicated by the checklist on the following pages.

- | | | |
|---|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality |
| <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation / Traffic | <input type="checkbox"/> Utilities / Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

F. DETERMINATION

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

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION has been prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature: 
 Printed Name: Arnaud Marjollet

Date: OCT 07 2015

Title: Director of Permit Services



G. ENVIRONMENTAL IMPACT CHECKLIST

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

I. AESTHETICS

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

a) *Have a substantial adverse effect on a scenic vista?*

No Impact

The Project sites and its surroundings are currently developed for oil and gas production. There are no designated scenic vistas within the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield boundaries or adjacent properties. As such, the absence of a scenic vista on or nearby the Project sites precludes the possibility of potential adverse impacts. Therefore, the Project will have no impact on scenic vista.



-
- b) *Substantially damage scenic resources, including, but not limited to trees, rock, outcroppings, and historic buildings within a state scenic highway?*

No Impact

There are no scenic resources such as trees, rock outcroppings, or historic buildings within the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield boundaries or adjacent properties. The absence of these features on or nearby the Project site precludes the possibility of potential adverse impacts. Therefore, the Project will have no impact on scenic resources.

- c) *Substantially degrade the existing visual character or quality of the site and its surroundings?*

No Impact

The Project will be located within the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield boundaries. The 21Z Lease site is currently designated under the Kern County General Plan as Mineral and Petroleum (Code 8.4) and Resource Management (Code 8.5) and is zoned Exclusive Agriculture (Zone A). The Pan Fee Lease site is currently designated under the Kern County General Plan as Mineral and Petroleum (Code 8.4) and is zoned Exclusive Agriculture (Zone A). Pursuant to Section 19.12.020(E) of the Kern County Zoning Ordinance, cogeneration facilities or steam generators primarily intended for steam production used for production of oil and gas (excluding coal fired) are a permitted use by right in Zone A. The Project sites and its surroundings are currently developed for oil and gas production activities. As such, the Project will have no impact on visual character.

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

No Impact

Minor ground preparation activities such as site preparation will be conducted prior to the installation of the cogeneration systems. Construction activities will be short term, occurring over a six (6) month period during daylight hours only. As such, no lightening impacts associated with construction are anticipated. There are existing safety and security lightings that currently exist throughout the Project sites, and are consistent with the existing operations. Once construction has commenced and the cogeneration system equipment has been installed, no new lighting would be needed. Therefore, the Project will have no impact on light or glare.



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

II. AGRICULTURAL RESOURCES

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat



Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

- a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

No Impact

The California Department of Conservation prepared the Farmland Mapping and Monitoring Program (FMMP) designating important farmland in California. Based on the FMMP, the Project sites are not designated as Prime Farmland, Unique Farmland, or of Statewide importance. Therefore, the Project will have no impact on farmland.

- b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

No Impact

The Project will be located within the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield boundaries which are zoned Exclusive Agriculture (Zone A). Pursuant to the Kern County Zoning Ordinance Section 19.12.020(E), cogeneration facilities or steam generators primarily intended for steam production used for production of oil and gas (excluding coal fired) are a permitted use in Exclusive Agriculture zoning designation. The Project is consistent with current and surrounding land uses. Furthermore, the Project sites are not designated as active Williamson Act contract. As such, the Project will not conflict with existing zoning or a Williamson Act contract. Therefore, the Project will have no impact.

- c) *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220 (g)), timberland (as defined by Public Resource Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104 (g))?*

No Impact

The Project will be located within the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield boundaries which historically has been allowed for the exploration and production of oil. No forest lands exist on the Project sites or within the oilfield boundaries. Therefore, the Project will have no impact on forest lands.



d) *Result in the loss of forest lands or conversion of forest land to non-forest use?*

No Impact

The Project will be located within the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield boundaries which historically has been allowed for the exploration and production of oil. The Project sites do not contain forest lands. As such, implementation of the Project will not result in the loss of forest lands or conversion of forest land to non-forest use. Therefore, the Project will have no impact on the loss of forest lands.

e) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

No Impact

As discussed above, the Project is consistent with current and surrounding land uses for oil production activities and will not convert farmland or forest lands to non-farmland or non-forest use. Therefore, the Project will have no impact.



III. Air Quality	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
Would the Project: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:				
a)		✓		
b)			✓	
c)			✓	
d)			✓	
e)			✓	

III. AIR QUALITY

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

a) *Conflict with or obstruct implementation of the applicable air quality plan?*

Less Than Significant Impact With Mitigation

The District is tasked with implementing programs and regulations by the Federal Clean Air Act and the California Clean Air Act and has prepared plans to attain federal and state Ambient Air Quality Standards (AAQS). The District has established thresholds of significance for criteria pollutant emissions, which are based on federal and District New Source Review (NSR) offset requirements for stationary sources. Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation.



The significance of the impacts of the emissions from construction, operational non-permitted equipment and activities, and operational permitted equipment and activities are evaluated separately. The thresholds of significance are based on an annual year basis. For construction emissions, the annual emissions are evaluated on a consecutive 12-month period. A project would be determined to have a significant impact on air quality if the emission sum for any criteria pollutant exceeds its respective threshold of significance. The District's thresholds of significance for criteria pollutant emissions are presented below in Table 2.

Table 2: District Thresholds of Significance for Criteria Pollutants

Pollutant	Construction Emissions Threshold (*tpy)	Permitted Operational Emissions Threshold (*tpy)	Non-Permitted Operational Emissions Threshold (*tpy)
NOx	10	10	10
SOx	27	27	27
PM ₁₀	15	15	15
**PM _{2.5}	15	15	15
CO	100	100	100
ROG (VOC)	10	10	10
*tpy = tons per year **PM _{2.5} emissions are a subset of PM ₁₀ , and therefore are included in PM ₁₀ emissions. Note: For construction emissions, the annual emissions are evaluated on a consecutive 12 month period.			

Project Details

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system will consist of one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which



historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

Construction Emissions

Construction of the Project is expected to begin in the third quarter of 2015 upon issuance of District air permits and be completed by the first quarter of 2016. Construction will be short-term and minimal in nature, consisting of: site preparation, hauling, minor demolition, worker trips, and installation of the cogeneration system equipment. The Project will utilize existing roads. As such, no new roads will be necessary and constructed.

Table 3: Project Construction Emissions

12-month Construction Period	Annual Emissions (tons)			
	ROG (VOC)	NOx	CO	PM10
Year 2015/2016 (21Z Lease Site)	0.5	4.6	2.3	0.2
Year 2015/2016 (Pan Fee Lease Site)	0.5	4.6	2.3	0.3
District Threshold of Significance	10	10	100	15
Exceed District Thresholds of Significance?	No	No	No	No

The construction emissions shown in Table 3 are on a consecutive 12-month period assuming construction begins mid to late third quarter in 2015. As shown in Table 3, construction emissions will not exceed the District’s thresholds of significance for criteria pollutants. Therefore, the District concludes that Project construction emissions will have a less than significant impact on air quality and mitigation measures are not required.

Operational Emissions

Operational Non-Permitted Activities – Mobile Source Emissions: The Project will be maintained and manned by existing Linn personnel and contractors. Therefore, the Project will not result in any new mobile source emissions.



Operational Permitted Equipment – Stationary Source Emissions: The Project consists of installing two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The District has conducted an engineering evaluation for the Project and determined that Best Available Control Technology (BACT) is triggered for NO_x, SO_x, PM₁₀, CO and VOC. Linn is an existing Major Source and is in compliance with New Source Review requirements. Also, offsets through surrendering Emission Reduction Credits (ERCs) are required for the Project and the District has imposed permit conditions consistent with New Source Review requirements.

Table 4 below presents the operational permitted stationary source emissions at full build-out for the Project. Table 5 below presents the Emission Reduction Credits (ERCs) required for the Project. As presented in Table 4 and Table 5 below, compliance with District Rule 2201 (New Source Review Rule) will ensure Project related criteria pollutant emissions be offset through the surrendering of ERCs. The requirement for offsets will be enforced through permit conditions. Therefore, the District concludes that through a combination of project design features and permit conditions, Project related stationary source emissions will have a less than significant impact on air quality.



Table 4: Project Operational Stationary Source Emissions

	Annual Emissions (tons/year)				
	NOx	SOx	PM ₁₀	CO	VOC
Total Project Operational Stationary Source Emissions	9.93	2.34	18.60	15.12	2.76
Emissions Required to be Offset per Rule 2201	9.93	2.34	18.60	0	2.76
Final Project Stationary Source Emissions after Offsets	0	0	0	15.12	0
District Thresholds of Significance	10	27	15	100	10
After surrendering ERCs will the Project Stationary Source Emissions exceed District Thresholds of Significance?	No	No	No	No	No



Table 5: Project Stationary Source Offset Requirements

	Offsets Required *				
	NOx	SOx	PM ₁₀	CO ‡	VOC
Total Emission Reduction Credits (ERCs) to be Surrendered per Rule 2201 (tpy) for the Project	14.90	3.51	27.90	0	4.14
Emission Reduction Credits (ERCs) to be Surrendered per Rule 2201 (lbs/quarter**) for the Project	7,448	1,756	13,948	0	2,070
Emission Reduction Credits (ERCs) to be Surrendered per Rule 2201 (lbs/year) for the Project	29,796	7,024	55,792	0	8,280
<p>*Offset requirements were calculated at the ratios identified in District Rule 2201 (New and Modified Stationary Source Review)</p> <p>**Due to rounding, the lbs/quarter emissions in this table may not match exactly the lbs/quarter in MM AIR-1.</p> <p>‡Pursuant to District Rule 2201, § 4.6.1 CO offsets are not required in attainment areas provided that federal AAQS are not violated in the areas to be affected. The District performed an AAQA which demonstrates that the Project will not violate the federal AAQS for CO. Therefore, the Project CO emissions impact is less than significant, and no mitigation is required for CO.</p>					

Air Quality Plans

As summarized in Table 3 Project related construction emissions are below the District's thresholds of significance. Furthermore, as summarized in Tables 4 and 5, operational stationary source emissions will be mitigated to below the District's thresholds through the surrendering of Emission Reduction Credits (ERCs). The ERCs must be surrendered to the District prior to commencement of operation of the equipment proposed under the ATC. As such, the Project does not conflict with the implementation strategy of the District's air quality plans (2008 PM 2.5 Plan; 2007 8-Hour Ozone Plan and Request for Redesignation; 2007 PM₁₀ Maintenance Plan; 2012 PM_{2.5} Plan, 2013 Plan for the Revoked 1-hour Ozone Standard, 2015 Plan for the 1997 PM_{2.5} Standard). Therefore, the Project will have a less than significant impact with mitigation measures.



Mitigation: To ensure compliance with District New Source Review (NSR) requirements for offsetting operational emissions, Linn shall surrender ERCs sufficient to completely offset operational emissions as required by District NSR requirements. The following measures will be made conditions of Project approval and will be included in the Project ATCs:

AIR-1: The following measures will be made conditions of Project approval (S-1151996) and will be included in the Project ATCs:

- Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter – 3,724 lb., 2nd quarter – 3,724 lb., 3rd quarter – 3,725 lb., and 4th quarter – 3,725 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
- Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter – 1,035 lb., 2nd quarter – 1,035 lb., 3rd quarter – 1,035 lb., and 4th quarter – 1,035 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
- Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of emissions: 1st quarter - 878 lb., 2nd quarter – 878 lb., 3rd quarter – 878 lb., and 4th quarter – 878 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
- Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits for the following quantity of emissions: 1st quarter – 6,974 lb., 2nd quarter – 6,974 lb., 3rd quarter – 6,974 lb., and 4th quarter – 6,974 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

AIR-2: The following measures will be made conditions of Project approval (1151997) and will be included in the Project ATCs:

- Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter – 3,724 lb., 2nd quarter – 3,724 lb., 3rd quarter – 3,725 lb., and 4th quarter – 3,725 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]



-
- Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter – 1,035 lb., 2nd quarter – 1,035 lb., 3rd quarter – 1,035 lb., and 4th quarter – 1,035 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
 - Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of emissions: 1st quarter – 878 lb., 2nd quarter – 878 lb., 3rd quarter – 878 lb., and 4th quarter – 878 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
 - Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits for the following quantity of emissions: 1st quarter – 6,974 lb., 2nd quarter – 6,974 lb., 3rd quarter – 6,974 lb., and 4th quarter – 6,974 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
- b) *Violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Less Than Significant Impact

Determination of whether project emissions would violate any ambient air quality standard is largely a function of air quality dispersion modeling. If project emissions would not exceed State and Federal ambient air quality standards at the project's property boundaries, the project would be considered to not violate any air quality standard or contribute substantially to an existing or projected air quality violation. The District performed an AAQA for both the national and state AAQS to determine whether Project related criteria pollutant emissions have the potential to contribute to the possible violation of existing air quality standards. The AAQA indicates that Project related criteria pollutant emissions will not cause or contribute to an exceedance of either national or state AAQS. Therefore, the Project is not expected to result in a violation of an air quality standard and the impact will be less than significant.



-
- c) *Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

Less Than Significant Impact

By its very nature, air pollution has a cumulative impact. The District's nonattainment status is a result of past and present development within the San Joaquin Valley Air Basin (SJVAB). Furthermore, attainment of ambient air quality standards can be jeopardized by increasing emissions-generating activities in the region. No single project would be sufficient in size, by itself, to result in nonattainment of the regional air quality standards. Instead, a project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development within the San Joaquin Valley Air Basin.

The District's thresholds of significance for criteria pollutants are based on District Rule 2201 (New Source Review) offset requirements. Furthermore, New Source Review (NSR) is a major component of the District's attainment strategy. NSR provides mechanisms, including emission trade-offs, by which Authorities to Construct such sources may be granted, without interfering with the attainment or maintenance of ambient air quality standards. District implementation of NSR ensures that there is no net increase in emissions above specified thresholds from new and modified Stationary Sources for all nonattainment pollutants and their precursors. In fact, permitted emissions above offset thresholds equivalent to the District's thresholds of significance for criteria pollutants are mitigated to below the thresholds, and the District's attainment plans show that this level of emissions increase will not interfere with attainment or maintenance of ambient air quality standards.

The District's attainment plans demonstrate that project-specific net emissions increase below New Source Review (NSR) offset requirements will not prevent the District from achieving attainment. Consequently, emission impacts from sources permitted consistent with NSR requirements are not individually significant and are not cumulatively significant.

As discussed above, the Project construction is short term and will not exceed any significance threshold. The Project operation will comply with all District rules and regulations including the surrendering of ERCs. Therefore, Project related emissions will have a cumulatively less than significant impact on air quality.



d) *Expose sensitive receptors to substantial pollutant concentrations?*

Less Than Significant Impact

Under the Clean Air Act, toxic air contaminants (TACs) are airborne pollutants that may be expected to result in an increase in mortality or serious illness or which may pose a present or potential hazard to human health. Potential health impacts from TACs include long-term health effects such as cancer, birth defects, neurological damage, or genetic damage; or short-term effects such as eye watering, respiratory irritation, throat pain and headaches. TACs may also be referred to as hazardous air pollutants (HAPs). There are currently more than seven hundred (700) substances classified by the US EPA and California Air Resources Board (CARB) as TACs. Air Quality problems occur when sources of TACs and sensitive receptors are located in proximity to one another.

TACs can be separated into carcinogens and non-carcinogens based on the nature of the physiological degradation associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts would not occur. Cancer risk is expressed as excess cancer cases per one million exposed individuals.

Non-carcinogens differ in that there is generally assumed to be a safe level of exposure below which no negative health impact would occur. These levels are determined on a pollutant-by-pollutant basis. Acute and chronic exposure to non-carcinogens is expressed by using a Hazard Index, which is the ratio of expected exposure levels to acceptable health-acceptable exposure levels.

The District's thresholds of significance for determining whether project emissions would expose sensitive receptors to substantial pollutant concentrations are:

- Carcinogens: Probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds twenty (20) in one-million.
- Non-Carcinogens: Ground Level concentrations of non-carcinogenic TACs would result in a Hazard Index greater than one (1) for the MEI.

The Risk Assessment demonstrates that for each unit, the acute and chronic hazard indices are both below one (1) and the maximum individual cancer exposure risk associated with each unit is less than the 1 in a million threshold. Specific conditions will be placed into the permit to ensure that human health risks will not exceed the District allowable levels. Therefore, the District concludes that there is no substantial evidence of record to support a conclusion that the Project would expose sensitive receptors to significant health risks. Therefore the Project will have a less than significant impact on sensitive receptors.



e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact

While offensive odors rarely cause any physical harm, they can be very unpleasant leading to considerable distress among the public and often generating citizen complaints to local governments and the District. Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there is no quantitative or formulaic methodologies to determine if potential odors would have a significant impact. Rather, projects must be assessed on a case-by-case basis.

The District's *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI) defines a significant odor impact as either:

- More than one (1) confirmed complaint per year averaged over a three (3) year period, or
- Three (3) unconfirmed complaints per year averaged over a three (3) year period.

A review of the District's complaint database did not reveal any unconfirmed complaint over the last three year period alleging potential odor impacts. Therefore, the Project will have a less than significant impact.

IV. Biological Resources	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
Would the Project: a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			✓	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				✓



IV. Biological Resources Continued	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			✓	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			✓	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

IV. BIOLOGICAL RESOURCES

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

- a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Less Than Significant Impact

McCormick Biological Inc. was retained to conduct a Biological Survey and Habitat Impact Review (BSHIR) for the McKittrick (21Z Lease) and North Midway Sunset (Pan



Fee Lease) oilfield Project sites. McCormick Biological, Inc. surveyed both Project sites including a buffer distance outside the Project boundaries.

McKittrick (21Z Lease) Project Site

The topography of this site consists of flat terrain, rolling hills and potential streambed. The Project site is also located within a highly developed oil and gas field with an approximate elevation of 995 feet adjacent to potential habitat. Potential streambed exists in the buffer area to the north, however the BSHIR identifies it will not be impacted by the Project.

The BSHIR observed the following vegetation at the Project site: non-native grassland, and saltbush scrub. The dominant shrub layer identified was the *atriplex polycarpa*, and the dominant herb layer identified was the *bromus madritensis*. Furthermore, the BSHIR identifies no sensitive plants were identified on the Project site. As such, the BSHIR concludes that since the Project will occur within an existing disturbed oil and gas activities area, no impacts to sensitive plants are anticipated.

The BSHIR observed no wildlife on the Project site; however, the blunt-nosed leopard lizard has the potential to be present adjacent to the north of the Project site. Since the Project will occur within an existing disturbed oil and gas area, the BSHIR concludes that the Project should not result in direct impacts to threatened or endangered species.

North Midway Sunset (Pan Fee Lease) Project Site

The topography of this site consists of rolling hill and is located in a highly developed oil and gas field with elevation of approximately 1,200 feet. The BSHIR observed the following vegetation at the Project site: saltbush scrub. The dominant shrub layer identified was the *atriplex polycarpa*, and the dominant herb layer identified was the *schismus arabicus* and *bromus madritensis*. Furthermore, the BSHIR identifies Kern Mallow as a sensitive plant identified during the survey. However, the BSHIR concludes that the Kern Mallow was observed approximately 710 feet from the Project site. Given the distance from the Project site, no impacts to the Kern Mallow are expected as a result of the Project.

The BSHIR observed the San Joaquin Kit Fox as the only potential wildlife species near the Project site. Specifically, four San Joaquin Kit Fox dens were observed during the survey. However none of the dens observed are within 100 feet of the Project site, and therefore den monitoring is not necessary.

The BSHIR identifies the below precautionary measures to be taken by Linn in relation to potential impacts to candidate, sensitive or special status species:



-
- Personnel should be aware that the San Joaquin Antelope Squirrel and San Joaquin Kit Fox are likely to be in the area and should exercise caution along roads.
 - A biological monitor is required for all ground disturbing activities.

The disturbed nature of the Project sites makes it highly unlikely that there would be any significant impacts on sensitive biological resources during Project implementation. Therefore, the District concludes that the Project will have a less than significant impact on candidate, sensitive, or special status species.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact

Both Project sites consist of already disturbed areas for oil and gas activities. Based on the BSHIR, the Project site does not contain any riparian habitat or sensitive natural community habitat. Therefore, the District concludes the Project will have no impact.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less Than Significant Impact

Section 404 of the Clean Water Act defines wetlands as “areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

In more common language, wetlands are areas where the frequent and prolonged presence of water at or near the soil surface drives the natural system meaning the kind of soils that form, the plants that grow, and the fish and/or wildlife communities that use the habitat. Swamps, marshes, and bogs are well-recognized types of wetlands. However, many important specific wetland types have drier or more variable water systems than those familiar to the general public. Some examples of these are vernal pools (pools that form in the spring rains but are dry at other times of the year), playas (areas at the bottom of undrained desert basins that are sometimes covered with water), and prairie potholes.



The U.S. Department of Fish and Wildlife Services National Wetlands Inventory identified no wetlands to exist on the Project sites. As such, the Project is not expected to have an adverse impact on wetlands. Therefore, the Project will have a less than significant impact.

- d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Less Than Significant Impact

The traditional pattern for development in oil and gas production results in patches of disturbance. The Project includes minimal construction activities that include: site preparation and installation of the cogeneration systems that will result in ground disturbance. Some vegetation between existing vegetation between existing stationary source equipment and facilities will be left undisturbed and additional vegetation is allowed to recover in areas not continuously disturbed. When vegetation is allowed to recover, many of the native wildlife species recolonize in areas between stationary sources from patches of habitat that were not part of the initial ground disturbance. Construction and operation of the Project leaves little opportunity for burrowing animals to persist or recolonize. The Project would result in no migratory fish since there are no lakes or streambeds and furthermore, would result in no native resident or species that would impede or adversely affect the use of any native wildlife nursery sites. Based on the above, the District concludes that construction and operational impacts regarding the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors associated with the Project will be less than significant.

- e) *Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?*

No Impact

The Kern County General Plan Land Use, Open Space, and Conservation Element outlined policies for tree conservation. The policy requires protection of oak woodlands and large oak trees. There are no trees present on the Project sites or surrounding areas, as both Project sites consist of already disturbed land for oil and gas production activities. Therefore, the Project will have no impact.



- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?

No Impact

California (Recovery Plan) which outlined conservation and recovery objectives for certain species listed under the Federal Endangered Species Act (FESA). There is a relatively high level of existing disturbance from oil and gas development in production areas of the oilfield. Similarly, the Project sites do not contain any significant blocks of natural lands that would provide contiguous high-quality habitat for any of the species addressed in the Recovery Plan. The Project will be consistent with the Recovery Plan goals and ecosystem-level strategy. In December 2006, Kern County issued a Draft Valley Floor Habitat Conservation Plan (VFHCP). The VFHCP is a long-term comprehensive strategy that provides means of addressing compliance with the California and Federal Endangered Species Acts for Kern County's oil and gas production industry, urban development, water district development and maintenance, and public infrastructure activities. Overall, the Project is consistent with the objectives in the Recovery Plan and VFHCP which encourages protection of sensitive species. Therefore, the Project will have no impact on conservation plans.

V. Cultural Resources Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?			✓	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?		✓		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓		
d) Disturb any human remains, including those interred outside of formal cemeteries?		✓		

V. CULTURAL RESOURCES

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which



historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

- a) *Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?*

Less Than Significant Impact

McKittrick (21Z Lease) Project Site

One cogeneration system with supporting equipment will be located within the McKittrick (21Z Lease) oilfield, which is consistent with current and surrounding land uses for exploration and production of oil. An assessment of historical resources indicated a state landmark is located within the Project site. The state landmark is defined as *California Oil Well 1*. This landmark was registered on November 7, 1941 and was one of the early wells in the year of 1899 that started the oilfield and pumped approximately 150 barrels of oil per day for the first six months. Last production of the well was in April of 1929. The *California Oil Well 1* is the only state landmark that has been identified and no further historical resources has been identified within the Project site.

North Midway Sunset (Pan Fee Lease) Project Site

One cogeneration system with supporting equipment will be located within the North Midway Sunset (Pan Fee Lease) oilfield, which will be consistent with current and surrounding land uses for the exploration and production of oil. Based on an assessment of historical resources on the Project site, a historic oil well (PL-TW-01) was identified as an early oil production site. However, the historical oil well identified was evaluated as lacking the integrity necessary to qualify for listing in the California Register since it was deteriorated and didn't contain important information.

Although historical resources have been identified on the Project sites, the Project will not be located directly on or near the historical sites identified. The Project will occur within the existing and already disturbed McKittrick and North Midway Sunset Oilfields. Therefore, the District concludes the Project will have a less than significant impact on historical resources.

- b) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?*

Less Than Significant Impact With Mitigation

Construction activities during ground disturbing work such as site preparation on the Project sites may have the potential to impact archaeological resources. Currently, no archaeological resources have been unearthed from the existing and already disturbed



oilfield Project sites. However, to minimize impacts to archaeological resources, mitigation measure CUL-1 has been incorporated into the project to address the possibility that archaeological resources might be unearthed during any ground disturbance activities for the Project. Therefore the Project will have a less than significant impact with mitigation.

Mitigation: The following measure will be made a condition of Project approval and will be included in the Project ATCs:

CUL1: In the event that archaeological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measure in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

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

Less Than Significant Impact With Mitigation

Construction activities during ground disturbing work such as site preparation on the Project sites may have the potential to impact paleontological resources being uncovered. But, no known fossils or paleontological resources are known to exist on the Project sites. The McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) sites consist of already disturbed land for oil and gas production activities. As such, the Project sites do not contain any unique geological features that may be altered or destroyed. In the event paleontological resources are unearthed during construction or equipment installation activities, all work within 100 feet shall be ceased until the extent and significance of the find can be recovered by a qualified paleontologist for study. As such, mitigation measures have been incorporated into the Project to minimize impacts on paleontological resources. The District concludes that there is no substantial evidence of record to support a conclusion that the Project would have a significant impact on paleontological resources. Therefore, the impact will be less than significant with mitigation.

Mitigation: The following measure will be made a condition of the Project approval and will be included in the Project ATCs:

CUL 2: In the event that paleontological resources are discovered during ground disturbing activities, all work within 100 feet of the find shall cease and the Permittee



shall notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. A qualified paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

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

Less Than Significant Impact With Mitigation

The McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) sites consist of already disturbed land for oil and gas production activities. Human remains are not known to exist in the Project Sites. Also, no cemeteries are located within the Project sites. However in the event human remains are discovered during ground disturbing or equipment installation activities all work within 100 feet shall cease until the significance and extent of the find can be recovered for study. Mitigation measures have been incorporated into the Project to minimize impacts on human remains. As such, the District concludes that there is no substantial evidence of record to support a conclusion that the Project would have a significant impact on human remains. Therefore, the impact will be less than significant with mitigation.

Mitigation: The following measure will be made a condition of Project approval and will be included in the Project ATCs:

CUL3: In the event that human remains are discovered during ground disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [*Public Resources Code 21000-21177: California Environmental Quality Act*]



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

VI. GEOLOGY/SOILS

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech



duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving;*

- i. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*

Less Than Significant Impact

The Project will be located within the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield boundaries which historically has been allowed for the exploration and production of oil. The Project is not located within an Alquist-Priolo Earthquake Fault Zone, as published by the California Department of Conservation. The San Andreas Fault is the nearest active earthquake fault to the Project near the North Midway Sunset oilfield (Pan Fee Lease) and is located over 11 miles from the site. Therefore, the Project will have a less than significant impact.

- ii. *Strong seismic ground shaking?*

Less Than Significant Impact

According to the Safety Element of the Kern County General Plan, Kern County is susceptible to moderate-to-extreme ground shaking from a number of seismic sources. This hazard exists because elastic strains that accumulate deep within the earth become so great, that the rock can no longer be contained. When this happens, movement along a fracture zone occurs, releasing enormous amounts of energy. At any given location, the amount of the resulting shaking motion caused by the sudden movement depends on a large extent of the local ground condition. The Kern County Safety Element has policies and implementation measures in place to minimize concerns from ground shaking. The Project is not located within an Alquist-Priolo Earthquake Fault Zone, as published by the California Department of Conservation. There is no active earthquake fault near the McKittrick (21Z Lease) oilfield. Furthermore, the San Andreas Fault is located over 11 miles from the North Midway Sunset (Pan Fee Lease) oilfield. Therefore, the Project will have a less than significant impact.



iii. *Seismic-related ground failure, including liquefaction?*

Less Than Significant Impact

According to the Kern County General Plan (Safety Element), land subsidence is a type of ground failure that can be aggravated by ground shaking. It is most often caused by the withdrawal of large volumes of fluids from underground reservoirs, but it can also occur by the addition of surface water to certain types of soil. There are four types of subsidence occurring in Kern County:

- Tectonic subsidence: a long-term, very slow sinking of the valley, which is significant only over a geologic time period.
- Subsidence caused by the extraction of oil and gas: this type of subsidence is still too small to be of serious concern. The State Division of Oil, Gas, and Geothermal Resources monitors subsidence in oil and gas fields and regulates oil and gas withdrawal and repressurizing of the fields.
- Subsidence caused by withdrawal of groundwater: in quantities much larger than replacement can occur, causing a decline of water level. This type of subsidence is of major concern and should be regulated and reduced, especially in urbanizing areas. This practice has lowered the ground level over a large area south of Bakersfield and in other areas of the County.
- Subsidence caused by hydrocompaction of moisture – deficient alluvial deposits: this is a one-time densification from collapse of the soil structure in near surface strata where the rainfall of other moisture has not penetrated during a long period of time.

As noted in the Kern County Safety Element, subsidence caused by the extraction of oil and gas is too small to be of serious concerns. The Project consists of installing stationary source equipment which will include very minimal and short-term construction activities consisting of site preparation and demolition. The proposed equipment for the Project will be used to generate electricity and steam which will be used for facility operations. As such, ground failure is not expected to occur at the Project sites.

Liquefaction can occur in certain types of soil that are associated with shallow water table. It has been observed in many areas of the world that ground shaking produced by earthquakes tends to cause liquefaction to the extent that buildings have fallen over on their sides due to the lack of ground support. Some buildings designed to withstand earthquake shock waves, have been deemed inhabitable due to earthquake-triggered liquefaction. The California Department of Conservation has mapped liquefaction hazard areas. No liquefaction hazard areas were determined to be located within the Project sites.



The Project sites are consistent with current land use and will be designated in accordance with all building requirements including those pertaining to site preparation, excavations and grading. Adherence to the California Building Standards Code (CBSC) requirements and compliance with California seismic design requirements would ensure that the Project would not expose persons or property to substantial risk of loss, injury, or death resulting from seismic activity. Therefore, the Project will have a less than significant impact.

iv. Landslides?

No Impact

According to the Safety Element in the Kern County General Plan, Kern County is susceptible to small landslides in mountainous areas of the county as loose material moves naturally down slope or fires have caused loss of soil-stabilizing vegetative cover. The Project sites consist of flat terrain away from any mountains. As such, the Project is not expected to experience any landslides. Therefore, the Project will have no impact.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact

The Project will be constructed within existing oilfields, consistent with ongoing oil and gas production activities. The cogeneration systems will be manufactured and assembled off-site and be delivered to the Project sites for installation. Construction activities resulting in soil erosion will be minimal in nature consisting of: site preparation, hauling, demolition, and worker trips. Therefore, the Project will have a less than significant impact.

c) Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

No Impact

The Project will be located within the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield boundaries which historically has been allowed for the exploration and production of oil. Both Project sites are designated under the Kern County General Plan as Mineral and Petroleum. The Project will be located on a reasonably flat terrain within an area already in use for exploration and production of oil and therefore would not result in substantial subsidence. In addition the Project will be constructed consistent with existing oil and gas production activities. The Project is not located near mountainous areas where there is a potential for landslides and is not located in a liquefaction area. Therefore, the Project will have no impact.



- d) *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risk to life or property?*

No Impact

Expansive soils are soil that swell and contract depending on the amount of water that is present. Expansive soils contain minerals such as smectite clays that are capable of absorbing water. When they absorb water they increase in volume. The more water they absorb the more their volume increases. Expansions of ten percent or more are not uncommon. This change in volume can exert enough force on a building or other structure to cause damage.

According to the United States Geological Survey, *Swelling Clays Map of the Conterminous United States* identified geologic units that contain swelling clays, and within broad limits, categorized the units according to their swelling potential (see Figures 5 and 6).

Figure 5: Swelling Clays Map of the Conterminous United States



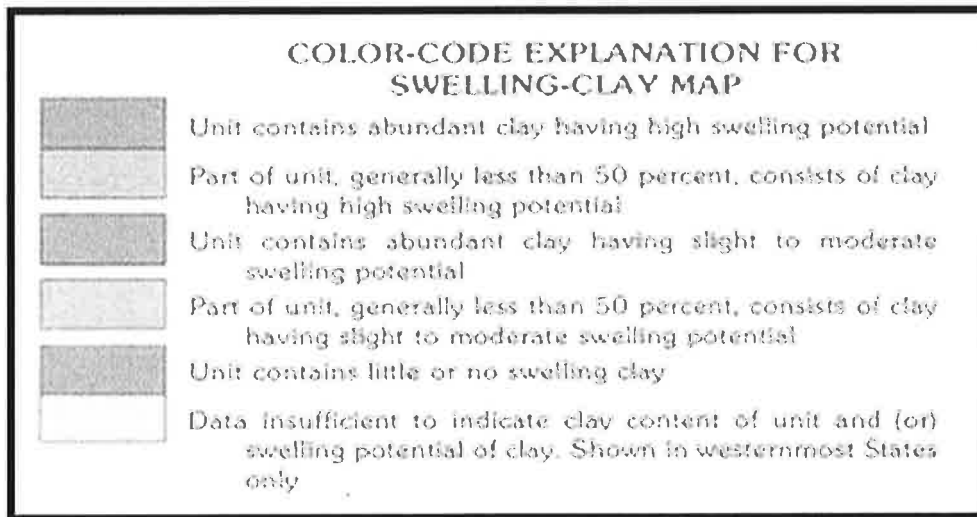


Figure 6: Swelling Clays Map of the Conterminous United States (Project Area)



The color coded explanation for the swelling-clay map is shown in Figure 7 below:

Figure 7: Color-Coded Explanation for Swelling Clay Map



Based on the *Swelling Clays Map of the Conterminous United States* prepared by the United States Geological Survey, the soil in Kern County contains little or no swelling potential. Therefore, there will be no impact on expansive soil.



e) *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal system where sewers are not available for the disposal of wastewater?*

No Impact

The Project includes the installation of cogeneration systems to support ongoing oil and gas operations within the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfields. The Project does not include or require new septic tanks or additional wastewater disposal systems. As such, the Project will not impact the soil or its capacity to support potential wastewater disposal. Therefore, the Project will have no impact.

VII. Greenhouse Gas Emissions Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

VII. GREENHOUSE GAS EMISSIONS

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

GHGs are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth's atmosphere. There are no "attainment" concentration standards established by the Federal or State government for GHGs. In fact, GHGs are not generally thought of as traditional air pollutants because GHGs, and their impacts, are global in nature, while traditional "criteria" air pollutants affect the health of people and other living things at ground level, in the general region of their release to the atmosphere. Some GHGs occur naturally and are emitted into the atmosphere through natural processes. Other GHGs are created and emitted solely through human activities. The principal GHGs that enter the atmosphere because of human activities are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated carbons.



Additional information on GHG and global climate change can be found in the District staff report titled: *Addressing Greenhouse Gas Emissions Impacts Under the California Environmental Quality Act*.

Assembly Bill 32 (AB 32)

Assembly Bill 32 (California Global Warming Solutions Act of 2006) is a key piece of California's effort to reduce its GHG emissions. AB 32 was adopted establishing a cap on statewide greenhouse gas emissions and sets forth the regulatory framework to achieve the corresponding reduction in statewide emissions levels. AB 32 requires the CARB to establish regulations designed to reduce California's GHG emissions to 1990 levels by 2020. In executing its legislative mandate under AB 32, the CARB developed a Scoping Plan that contains the main strategies California will use to reduce GHG from Business-as-Usual (BAU) emissions projected from 2020 levels back down to 1990 levels. BAU is the projected emissions caused by growth, without any GHG reduction measures. CARB determined that a 29% reduction from BAU is necessary to achieve the 1990 GHG emissions level. On December 11, 2008, ARB adopted its AB 32 Scoping Plan, setting forth a framework for future regulatory action on how California will achieve the goal of reducing GHG emissions to 1990 levels.

Cap & Trade

The AB 32 Scoping Plan identifies a Cap and Trade program as one of the strategies California will employ to reduce the GHG emissions that cause climate change. The Cap and Trade program is implemented by the California Air Resources Board (CARB) and caps GHG emissions from the industrial, utility, and transportation fuels sectors – which account for roughly 85% of the state's GHG emissions.

The program works by establishing a hard cap on about 85% of total statewide GHG emissions. The cap starts at expected BAU emissions levels in 2012, and declines 2-3% per year through 2020. Fewer and fewer GHG emissions allowances are available each year, requiring covered sources to reduce their emissions or pay increasingly higher prices for those allowances. The cap level is set in 2020 to ensure California complies with AB 32's emission reduction target of returning to 1990 GHG emission levels.

The scope of GHG emission sources subject to Cap and Trade in the first compliance period (2013-2014), includes:

- All electricity generated and imported into California. The first deliverer of electricity into the state is the capped entity (the one that will have to purchase and surrender allowances).
- Large industrial facilities emitting more than 25,000 metric tons of GHG pollution/year. Examples include oil refineries and cement manufacturers.



The scope of GHG emission sources subject to Cap and Trade during the second compliance period (2015-2017), expands to include distributors of transportation fuels (including gasoline and diesel), natural gas, and other fuels. The regulated entity will be the fuel provider that distributes the fuel upstream (not the gas station). In total, the Cap and Trade program is expected to include roughly 350 large businesses, representing about 600 facilities. Individuals and small businesses will not be regulated. Under the program, companies do not have individual or facility-specific reduction requirements. Rather, all companies covered by the regulation are required to turn in allowances in an amount equal to their total greenhouse gas emissions during each phase of the program. The program gives companies the flexibility to either trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more will have to turn in more allowances. Companies that can cut their emissions will have to turn in fewer allowances. Furthermore, as the cap declines, total emissions are reduced.

On October 20, 2011, CARB's Board adopted the final Cap and Trade regulation and Resolution 11-32. As part of finalizing the regulation, the Board considered the related environmental analysis and, consistent with CEQA requirements, approved CARB's functionally equivalent document (FED).

CEQA Requirements

In December, 2009, the California Natural Resources Agency (NRA) amended the CEQA Guidelines to include Global Climate Change, which is now generally accepted by the scientific community to be occurring and caused by GHG emissions. The amendments address analysis and mitigation of the potential effects of GHG emissions in CEQA documents. In their *Final Statement of Reasons for Regulatory Action*, NRA recognizes that the analysis of GHG emissions in a CEQA document presents unique challenges to lead agencies. NRA amended section 15064(h)(3) of the CEQA guidelines to add compliance with plans or regulations for the reduction of GHG emissions to the list of plans and programs that may be considered in a cumulative impacts analysis. In their *Final Statement of Reasons for Regulatory Action*, NRA discusses that AB 32 requires CARB to adopt regulations that achieve the maximum technologically feasible and cost effective GHG reductions to reach the adopted state-wide emissions limit. NRA goes on to state that a lead agency may consider whether CARB's GHG reduction regulations satisfy the criteria in existing subdivision (h)(3).

District CEQA Policy

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. On December 17, 2009, the District adopted the policy "*District Policy (APR 2005) – Addressing GHG Emissions Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*" and



approved the District's guidance document for use by other agencies when addressing GHG impacts as lead agencies under CEQA. The policy applies to all District permitting projects that have an increase in GHG emissions, regardless of the magnitude of the increase. Under this policy, the District's determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with AB 32 emission reduction targets are considered to have a less than significant impact on global climate change.

As illustrated in Figure 8, the District's board-adopted policy for determining significance of project-specific GHG emissions employs a tiered approach. Of specific relevance to Cap and Trade is the provision that: "Projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement best performance standards BPS." Projects that do not comply with such a plan or program must incorporate BPS or undergo a project-specific analysis demonstrating that GHG emissions would be reduced by at least 29%, as compared to BAU.

Determination of Significance of GHG Emissions for Projects Subject to an Approved GHG Emissions Reduction Plan

The NRA amended the CEQA Guidelines to include Global Climate Change and added compliance with plans or regulations to reduce GHG emissions to the list of plans and programs that should be considered in a cumulative impacts analysis. In their *Final Statement of Reasons for Regulatory Action*, NRA discusses that AB 32 requires the CARB to adopt regulations that achieve the maximum technologically feasible and cost effective GHG reductions to reach the adopted state-wide emissions limit. NRA goes on to state that a lead agency may consider whether CARB's GHG reduction regulations satisfy the criteria in section 15064(h)(3).

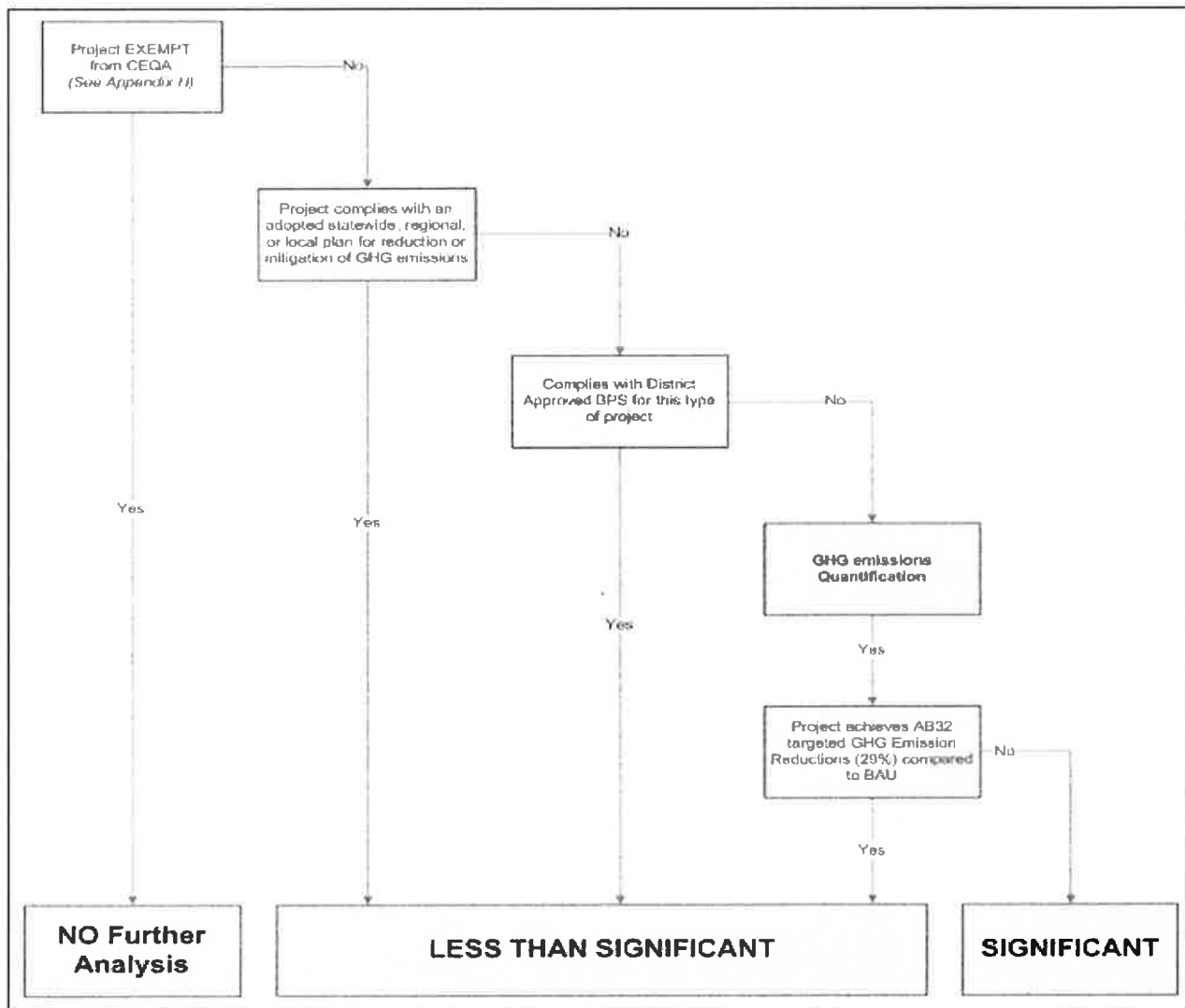
The District's board-adopted policy determines that: "Projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency."

AB 32, and the AB 32 scoping plan adopted by CARB, is a GHG reduction plan for CEQA purposes. It is directly and wholly responsible for meeting the GHG reduction



targets of the State of California and is supported by an environmental review process that has been successfully defended in court as equivalent to, and compliant with, CEQA requirements. However, there are some sources of GHG emissions that are discussed in the AB 32 scoping plan that are not required to mitigate emissions via implementation of the plan, and some of the plan is devoted to implementing regulations that address existing emissions, and will have only minimal impact on increases in emissions. Since it is these increases that must be addressed under CEQA, the District conducts its own analysis to determine whether compliance with AB 32 and its scoping plan are adequate to conclude that a particular GHG emissions increase is less than significant.

Figure 8: Determination of Significance for Stationary Source Projects





Determination of Significance of GHG Emissions for Projects Subject to CARB's GHG Cap and Trade Regulation

One regulation proposed in the AB 32 scoping plan that does address increases in GHG emissions is the Cap and Trade regulation discussed above. Facilities subject to the Cap and Trade regulation are subject to an industry-wide cap on overall GHG emissions, and any growth in emissions must be accounted for under that cap, so that a corresponding and equivalent reduction in emissions must occur to allow any increase. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions. It is therefore reasonable to conclude that facilities subject to and in compliance with CARB's Cap and Trade requirements will not, and in fact, cannot, contribute significantly towards any global GHG emissions growth. While this inherent mitigation process is not a necessary component of a finding that compliance with a plan for the reduction of greenhouse gas emissions may be considered in a cumulative impacts analysis [(CCR §15064(h)(3))], the fact that all growth in emissions at covered sources is mitigated provides a certainty that compliance with the Cap and Trade program eliminates any potential for significant impacts from those GHG emissions.

Determination of Significance of GHG Emissions for Projects Implementing BPS

BPS for stationary source projects is – for a specific class and category source of GHG emissions – the most effective, District approved, achieved-in-practice means of reducing or limiting GHG emissions from that source, which is also economically feasible per the definition of achieved-in-practice. BPS includes equipment type, equipment design, and operational and maintenance practices for the identified service, operation, or emissions unit class and category, and is developed by the District in a public process that considers and addresses input from all interested parties. Consistent with the District's adopted policy for assessing significance of project-specific GHG emission increases when serving as Lead Agency, projects implementing BPS will be determined to have a less than significant impact on global climate change.

- a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Less Than Significant Impact

Compliance with an Approved GHG Emission Reduction Plan

Linn is an oil production company that operates oil and gas production facilities throughout Kern County, California. As such, its facilities are subject to CARB's Cap and Trade regulation. As discussed above, CARB's Cap and Trade regulation is an adopted statewide plan for reducing or mitigating GHG emissions from targeted industries and is supported by an environmental review process that has been successfully defended in court as equivalent to, and compliant with, CEQA requirements.



Consistent with CCR §15064(h)(3), the District finds that compliance with CARB's Cap and Trade regulation would avoid or substantially lessen the impact of project-specific GHG emissions on global climate change. The District therefore concludes that the Project would have a less than significant individual and cumulative impact on global climate change.

Mitigation of GHG Increases under the Cap and Trade Regulation

As outlined above, facilities subject to the Cap and Trade regulation are subject to an industry-wide cap on overall GHG emissions. As such, any growth in emissions must be accounted for under that cap, such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Therefore, it is reasonable to conclude that implementation of the Cap and Trade program would fully mitigate project-specific GHG emissions.

Regardless of, and independent to, the above determination that the project is subject to a state-wide GHG emissions reduction plan, the District finds that, through compliance with the Cap and Trade regulation, Project-specific GHG emissions would be fully mitigated. Thus, the District concludes that the Project will have a less than significant individual and cumulative impact on global climate change.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact

As discussed above, the Project is subject to CARB's Cap and Trade regulation and is required to reduce or mitigate GHG emissions. As such, the Project will not conflict with an applicable plan, policy, or regulation for the purpose of reducing greenhouse gas emissions. Therefore, the Project will have a less than significant impact.



VIII. Hazards and Hazardous Materials Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			✓	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			✓	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?				✓
f) For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?				✓
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			✓	

VIII. HAZARDS & HAZARDOUS MATERIALS

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield



boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

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

Less Than Significant Impact

The only potential hazards associated with the Project will be minor welding associated only with installing the cogeneration systems. Potential hazards and disposal of materials are not expected to be significant at the Project site, as installation of cogeneration systems are essentially routine and standard hazards safety procedures are in place. However, in the event that hazardous materials are required or generated from the cogeneration systems, the materials will be transported in placard vehicles in packing or containers. The closest sensitive receptor to the McKittrick (21Z Lease) oilfield site is located approximately 2,736 feet from the Project. The closest sensitive receptor to the North Midway Sunset (Pan Fee Lease) oilfield site is located approximately 6,850 feet from the Project. The District has performed a Risk Management Review which indicates the operation of the cogeneration systems would not pose a significant risk to the nearest receptor. As such, the Project will not expose the public to hazardous materials from the transport, use, or disposal of hazardous materials. Therefore, the Project will have a less than significant impact.

- b) *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Less Than Significant

Linn has been operating the already disturbed McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfields for many years for oil and gas production activities. The only potential hazards associated with the Project will be minor welding associated only with the installation of the cogeneration systems. Should any potential hazards arise from construction or operation of the Project, they will be handled and disposed of in accordance with Federal, State, and local regulations (such as the Solid Waste Management Act, the Hazardous Materials Transportation Act, and the Hazardous Waste Control Act). Also the California Department of Industrial Relations Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA obligates many businesses prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated



with materials they handle, if need be. Therefore, the impacts will be less than significant.

- c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

Less Than Significant Impact

As discussed, potentially hazardous materials are not expected to be significant as a result of the Project. The nearest existing or proposed school to the McKittrick (21Z Lease) oilfield site is located approximately 2,736 feet from the Project. The nearest existing or proposed school to the North Midway Sunset (Pan Fee Lease) oilfield site is located approximately 6,850 feet from the Project. Therefore, the Project will have a less than significant impact.

- d) *Be located on a site which is included on a list of hazardous materials site compiled pursuant to Government Code Section 65962.5 and, as result, would it create a significant hazard to the public or the environment?*

No Impact

The McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) Project sites are not located on a site that meets the definition of the Government Code Section 65962.5, which requires specific hazardous waste facilities to submit required information to the Department of Toxic Substances Control (DTSC). Therefore, the Project will have no impact.

- e) *For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?*

No Impact

The Project sites are not located within two (2) miles of a public airport. The nearest public airport to the McKittrick (21Z Lease) oilfield site is the Elk-Hills/Buttonwillow Airport which is located approximately 7 miles from the Project. The nearest public airport to the North Midway Sunset (Pan Fee Lease) oilfield site is the Elk-Hills/Buttonwillow Airport which is located approximately 8 miles from the Project. Therefore, the Project will have no impact on people residing or working in the Project area.



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- f) *For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?*

No Impact

The Project sites are not located within the vicinity of a private airport. The nearest private airport to the McKittrick (21Z Lease) oilfield site is the 7R Ranch Airport located approximately 24 miles from the Project. The nearest private airport to the North Midway Sunset (Pan Fee Lease) oilfield site is the 7R Ranch Airport located approximately 27 miles from the Project. Therefore, the Project will have no impact on people residing or working in the Project area.

- g) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

No Impact

The Safety Element within the Kern County General Plan outlines the requirement for an emergency plan. In accordance with the General Plan, the circulation systems surrounding the proposed Project are adequate for emergency access and evacuation. No County or State designated emergency evacuation routes were identified near the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield sites.

Construction of the Project will be minimal and temporary in nature and is not expected to impact public roads. For operations, since existing Linn personnel will only intermittently be present at the Project sites for routine maintenance and emergency repair, the Project will not impair or physically interfere with the implementation of adopted emergency response and evacuation plans. The Project will not demolish any existing public roadways and would not interfere with existing emergency response or evacuation plans. Therefore, the Project will have no impact.

- h) *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

Less Than Significant Impact

The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses. No wildlands are within close proximity of the Project.



According to the California Department of Forestry and Fire Protection (CAL Fire), the Project sites are located in a Local Responsibility Area (LRA) are zoned as “moderate” for fire hazard severity. Potential fire risks associated with the Project for construction will be very low because Project construction will consist of site preparation, hauling, minor demolition, worker trips and delivery and installation of the cogeneration systems. A fire hazard may be associated with operations if existing vegetation or other obstructions come into contact with electrical equipment. However, the land is bared from vegetation and Linn maintains safety protocols to minimize fire hazards. For operations, the Project will not include hazardous materials that would expose people or structures to a risk of loss, injury or death involving a wildfire.

The nearest Kern County Fire station to the McKittrick (21Z Lease) oilfield site is the Kern County Fire Department – Station #24 located approximately 0.5 miles west of the Project site. The nearest Kern County Fire station to the North Midway Sunset (Pan Fee Lease) oilfield site is also the Kern County Fire Department – Station #24 located approximately 4 miles northwest of the Project site. The Fire Department would be adequate to cover both Project sites in case of any fire. As such, the Project would not expose people or structures to significant risk or loss due to potential wildfire fire. Therefore, the Project will have a less than significant impact on exposing people or structures to a significant risk of loss, injury or death involving wildland fires.

IX. Hydrology / Water Quality Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?			✓	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			✓	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?			✓	



IX. Hydrology / Water Quality Continued	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				✓
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			✓	
f) Otherwise substantially degrade water quality?			✓	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				✓
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				✓
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				✓
j) Inundation by seiche, tsunami, or mudflow				✓

IX. HYDROLOGY / WATER QUALITY

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.



a) *Violate any water quality standards or waste discharge requirements?*

Less Than Significant Impact

Operations of the Project will require the use of water for the production of steam. As part of Project operations, water is provided from an existing closed piping system and is converted to steam for facility operations. Excess water that is trapped within the combustion of the equipment will be drained to an existing wastewater collection system. Construction and operation of the Project is not subject to waste discharge requirements from the Regional Water Quality Control Board. As such, the Project is not expected to violate any water quality standards. Therefore, the Project will have a less than significant impact.

b) *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

Less Than Significant Impact

Project operations will require the use of water for the production of steam. Water is provided from an existing closed piping system at the project site and is converted to steam for facility operations. The Kern Water District provides water to McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) Project sites. It is expected that the existing water supply from the closed piping system would be adequate to meet the demand of these two additional sites. As such, there will be sufficient water supplies and groundwater supplies will not be depleted. Therefore, the Project will have a less than significant impact.

c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?*

Less than Significant Impact

As discussed above, the Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which is currently developed for oil and gas production activities. Both Project sites are equipped with existing drainage swales and drainage flows that allows for the flow of stormwater. Furthermore, both Project sites are drained by natural flow and percolation and do not rely on constructed stormwater drainage systems, aside from drainage swales and depressions. The existing drainage pattern will not be altered and no stream or river



exists on the Project sites. Therefore, the Project will have a less than significant impact.

- d) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*

No Impact

As discussed above, the Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which is currently developed for oil and gas production activities. The Project sites will not be altered enough to have a negative effect on surface runoff or increased flooding potential. Water activities occurring during construction activities or precipitation at the Project sites is rarely sufficient to cause flooding. The Project would not introduce a new flood hazard and would not necessitate any new flood control projects. Therefore, there will be no impact.

- e) *Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?*

Less Than Significant Impact

As discussed above, the Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which is currently developed for oil and gas production activities. The Project sites will not be altered enough to create or contribute to surface runoff. Water activities occurring during construction activities or precipitation at the Project site is rarely sufficient to cause runoff. Therefore, the impact will be less than significant.

- f) *Otherwise substantially degrade water quality?*

Less Than Significant Impact

The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which is currently developed for oil and gas production activities.

Project activities that would utilize water would occur during operations. The water supply would be provided by an existing closed piping system, which is converted to steam for facility operations. Excess water that is trapped within the combustion of the equipment is drained to an existing wastewater collection system. The water is provided from the Kern Water District, and is utilized consistent with existing oil and gas production activities. Therefore, the impact will be less than significant.



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- g) *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

No Impact

The Project does not include the construction of any housing units and is not located within a 100-year flood zone as mapped on the Flood Insurance Rate Maps (FIRMs); nor is the Project located in a Flood Hazard Safety Zone (FHSZ) as designated by Kern County. Therefore, the Project will have no impact.

- h) *Place within a 100-year flood hazard area structures which would impede or redirect flood flows?*

No Impact

The Project includes the installation of two (2) 5.67 MW combined heat and power cogeneration systems. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which is not located within a 100-year flood zone as mapped on the Flood Insurance Rate Maps (FIRMs); nor is the Project located in a Flood Hazard Safety Zone (FHSZ) as designated by Kern County. Therefore, the Project will have no impact.

- i) *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*

No Impact

The Project does not propose to place people or structures within any area that is subject to flooding through any cause, including as a result of failure of a levee or dam, nor will there be habitable structures proposed for construction of the Project. Therefore, the Project will have no impact.

- j) *Inundation by seiche, tsunami, or mudflow?*

No Impact

The Project sites are not within a county that is identified in the Tsunami Inundation Maps prepared by the California Geological Survey. Therefore, the Project will have no impact.



X. Land Use / Planning Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				✓
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				✓
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				✓

X. LAND USE/PLANNING

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

a) *Physically divide an established community?*

No Impact

There is no established community that will be physically divided. Therefore the District concludes that there is no substantial evidence of record to support a conclusion that the Project will physically divide an established community. Therefore, the Project will have no impact.

b) *Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the Project (including, but not limited to the general, plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigation an environmental effect?*

No Impact

The Project will be located within the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield boundaries which are zoned Exclusive Agriculture (Zone A).



Pursuant to the Kern County Zoning Ordinance Section 19.12.020(E), cogeneration facilities or steam generators primarily intended for steam production used for production of oil and gas (excluding coal fired) are a permitted use in Exclusive Agriculture zoning designation. Therefore, the Project is consistent with current and surrounding land uses and will not conflict with an applicable land use plan. Therefore the Project will have no impact.

c) Conflict with an applicable habitat conservation plan or natural community conservation plan?

No Impact

In December of 2006, Kern County issued a Draft County Valley Floor Habitat Conservation Plan (VFHCP). The VFHCP divides Kern County program area into three (3) separate habitat zone categories based on the habitat value as follows: Red Zone (the highest valued conservation habitat), Green Zone (area with some disturbance but important for movement of covered habitat species), and White Zone (limited importance due to intensive land uses). In addition to the three habitat quality zone areas, the VFHCP identifies an Oil Zone as part of the oil strategy. An oil strategy is identified in the VFHCP for oil and gas operations and referred to as Oil Zones in the Plan. It assures that the zones identified are covered within the plan for habitat conservation. According to Figure 3.1 (Habitat Zones) and Figure 5-1 (Existing Land Uses) of the VFHCP, the McKittrick (21Z Lease site) oilfield site is located within the "White Zone" and "Oil Field Intensity Zone." Also, the North Midway Sunset (Pan Fee Lease) oilfield site is located within the "White Zone" and "Oilfield Intensity Zone." As such, the Project is consistent with the VFHCP. The District concludes that there is no substantial evidence of record to support a conclusion that the Project would conflict with an applicable habitat conservation plan, and therefore, the Project will have no impact on a habitat conservation plan.



XI. Mineral Resources Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				✓

XI. MINERAL RESOURCES

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact

The Surface Mining and Reclamation Act of 1975 (SMARA) mandated the initiation by the State Geologist of mineral land classification in order to help identify and protect mineral resources in areas within the State subject to urban expansion or other irreversible land uses which would preclude mineral extraction. SMARA also allowed the State Mining and Geology Board (SMGB) to designate lands containing mineral deposits of regional or statewide significance. Construction aggregate was selected by the SMBG to be in the initial commodity target for classification because of its importance to society, its unique economic characteristics, and the imminent threat that continuing urbanization poses to that resources.

According to the California Geological Survey's Aggregate Sustainability Map, the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) are not located in or within the vicinity of a site being used for aggregate production. As such, the Project has no potential to result in the loss of availability of a known resource. Therefore, the Project will have no impact.



b) *Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

No Impact

As discussed above, the Project site is not located in an area that contains aggregate production. As such, the Project will not result in the loss of important mineral resource recovery site delineated on a plan. Therefore, the Project will have no impact.

XII. Noise Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			✓	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			✓	
c) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?			✓	
d) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?			✓	
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?				✓
f) For a Project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?				✓

XII. NOISE

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which



historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

- a) *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Less Than Significant Impact

The Kern County General Plan Noise Element identifies the following land uses as noise sensitive:

- Residential areas
- Schools
- Convalescent and acute care hospitals
- Parks and recreational areas
- Churches

The Project may result in a permanent increase in ambient noise levels. However, noise types and volumes from the Project will be consistent with current land use and existing oil and gas production activities. The nearest sensitive receptor to the McKittrick (21Z Lease) Project site is a residence, which is located approximately 2,736 feet. The nearest sensitive receptor to the North Midway Sunset (Pan Fee Lease) Project site is a residence, which is located approximately 6,850 feet from the Project site. As such, the Project would not expose persons to noise levels in excess of Kern County standards. Therefore, the Project will have a less than significant impact.

- b) *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

Less Than Significant Impact

The Project will be located within the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfields consistent with existing oil and gas production activities. The Project may result in a slight increase in groundborne vibration or groundborne noise levels during construction. However construction will be short-term in nature consisting of: site preparation, hauling, minor demolition, worker trips, and installation of the cogeneration system equipment. Operations of the cogeneration units will generate electricity and steam for facility operations. The Project is expected to have minimal groundborne vibration impacts and will not exceed the 90 decibel level for exposing persons or workers consistent with the Kern County Noise element. Therefore, the Project will have a less than significant impact.



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- c) *A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?*

Less Than Significant Impact

The Project may result in a permanent increase in ambient noise levels. However, noise types and volumes from the Project will be consistent with current land use and existing oil production operations within the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfields. State and federal standards set by the U.S. Department of Labor Occupational Safety and Health Administration (OSHA) regulate the amount of time workers may be exposed to sound levels above 90 decibels (dB). If the Project results in noise levels exceeding 85 dB, Linn will comply with all OSHA regulations for the protection against the effects of noise exposure (CCR §5095-5100). Therefore, the Project will have a less than significant impact.

- d) *A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?*

Less Than Significant Impact

During construction activities, noise levels are expected to be elevated. However, the increase in noise is temporary and will subside once construction of the Project is complete. Therefore, the Project will have a less than significant impact.

- e) *For a Project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?*

No Impact

The Project sites are not located within two (2) miles of a public airport. The nearest public airport to the McKittrick (21Z Lease) oilfield site is the Elk-Hills/Buttongwillow Airport which is located approximately 7 miles from the Project. The nearest public airport to the North Midway Sunset (Pan Fee Lease) oilfield site is the Elk-Hills/Buttongwillow Airport which is located approximately 8 miles from the Project. Therefore the District concludes that the Project will have no noise impacts on people residing or working in the Project area.



f) For a Project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?

No Impact

The Project sites are not located within the vicinity of a private airport. The nearest private airport to the McKittrick (21Z Lease) oilfield site is the 7R Ranch Airport located approximately 24 miles from the Project. The nearest private airport to the North Midway Sunset (Pan Fee Lease) oilfield site is the 7R Ranch Airport located approximately 27 miles from the Project. Therefore, the Project will have no noise impacts on people residing or working in the Project area.

XIII. Population / Housing Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				✓

XIII. POPULATION AND HOUSING

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.



a) *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extensions of roads or other infrastructure)?*

No Impact

The Project does not induce/include the development of homes or businesses, nor does it include the extension of roads or infrastructure. As such, the Project will not induce substantial population growth in the area. Therefore, the Project will have no impact.

b) *Displace a substantial number of existing housing, necessitating the construction of replacement housing elsewhere?*

No Impact

There is no housing on the Project sites. As such, the Project will not displace a substantial number of existing housing, necessitating the construction of replacement housing elsewhere. Therefore, the Project will have no impact.

c) *Displace substantial number of people necessitating the construction of replacement housing elsewhere?*

No Impact

There are no workers living on-site. As such, the Project will not displace a substantial number of people, necessitating the construction of replacement housing elsewhere. Therefore, the Project will have no impact.

XIV. Public Services Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?				✓
ii) Police protection?				✓
iii) Schools?				✓
iv) Parks?				✓



XIV. Public Services Continued	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
v) Other public facilities?				✓

XIV. PUBLIC SERVICES

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

a) *Result in substantial adverse physical impacts associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*

i. *Fire protection?*

No Impact

According to CAL Fire, the Project sites are located in a Local Responsibility Area (LRA) for fire protection. The Project will be designed to conform to current California Fire Code and Federal Safety Standards. As such, the installation and operation of the Project in accordance with these standards will minimize the potential for a fire.

Fire protection for the Project sites are currently under the jurisdiction of the Kern County Fire Department. The nearest Kern County Fire station to the McKittrick (21Z Lease) oilfield site is the Kern County Fire Department – Station #24 located approximately 0.5 miles west of the Project site. The nearest Kern County Fire station to the North Midway Sunset (Pan Fee Lease) oilfield site is the Kern County Fire Department – Station #24 located approximately 4 miles northwest of the Project site. This fire station covers approximately 218 square miles and would be adequate to cover the Project. No new or altered fire protection facility would be necessary. No additional increase in fire protection demand is anticipated. Therefore, the Project will have no impact on fire protection.



ii. Police protection?

No Impact

The Kern County Sherriff's Department currently serves as police protection for the McKittrick and North Midway Sunset oilfields. As such, the Project sites will be under the jurisdiction of the Kern County Sherriff's Department and is adequate to cover the Project. No new or altered police protection facility would be necessary and no additional increase in police protection demand is anticipated. Therefore, the Project will have no impact on police protection.

iii. Schools?

No Impact

The Project will not increase population in the surrounding areas of the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield sites necessitating the need for new schools. Therefore, the Project will have no impact on schools.

iv. Parks?

No Impact

The Project will not increase population in the surrounding areas of the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield sites necessitating the need for new parks. Therefore, the Project will have no impact on parks.

v. Other public facilities?

No Impact

The Project will not increase population in the surrounding areas of the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield sites necessitating the need for other public facilities. Therefore, the Project will have no impact.



XV. Recreation Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✓

XV. RECREATION

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact

The McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfields do not currently contain any recreational facilities, nor will it necessitate the use of existing parks and recreational facilities due the nature of the project. As such, no increase in the use or deterioration of existing recreational facilities would occur. Therefore, the Project will have no impact.



b) *Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

No Impact

The McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfields do not currently contain any recreational facilities due the nature of it being an oil field operation. Construction and operation of the Project will not increase population of the surrounding area. As such, the Project will not require the construction or expansion of recreational facilities. Therefore, the Project will have no impact.

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



XVI. Transportation / Traffic Continued	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				✓

XVI. TRANSPORTATION / TRAFFIC

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

a) *Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation systems, including but not limited to intersections streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?*

Less Than Significant Impact

The Kern County General Plan Circulation Element considers Level of Service (LOS) D as acceptable within the general plan area for County maintained roads. California State Highway 33 is located west of the McKittrick (21Z Lease) oilfield site and serves as a main access road. California State Highway 33 is located west and California State Highway 58 is located northwest of the North Midway Sunset (Pan Fee Lease) oilfield site and serves as a main access road. Reserved Road serves as the main access roadway, providing access to both Project sites. The local roadways are both paved and unpaved and provide access for oil and gas production employees. The Project will be maintained and manned by existing Linn personnel and contractors. As such, the Project will not substantially increase delays at intersections. There are no pedestrian, bicycles, or mass transit circulation located within the oilfield Project sites, furthermore, no new public roadways will be altered during Project activities. The Project will have restricted access; accordingly, bicyclists and pedestrians will not have access to the existing oil and gas site. Therefore, the Project will have a less than significant impact.



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- b) *Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*

Less Than Significant Impact

The Kern Council of Government's (COG's) 2014 Preliminary Regional Transportation Plan (RTP) established Level of Service (LOS) E as the minimum system-wide LOS traffic standard in the Kern County Congestion Management Program (CMP). LOS is a qualitative measure that represents the collective factors of speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs provided by a highway facility under a particular volume condition. LOS is ranked from "A to F", with "A" being the best and "F" being the worst. Kern COG's RTP that there are no designated CMP corridors near California State Highway Routes 33 and 58, which would exceed the CMP standard of LOS E.

California State Highway 33 is located west of the McKittrick (21Z Lease) oilfield site. California State Highway 33 is located west and California State Highway 58 is located northwest of the North Midway Sunset (Pan Fee Lease) oilfield site. Both highways serve as the main access roadways to the Project site. As such, the Project will not conflict with the Kern County Cogeneration Management Program. Therefore, the Project will have a less than significant impact.

- c) *Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

No Impact

The Project sites are not located within two (2) miles of a private or public airport. The nearest public airport to the McKittrick (21Z Lease) oilfield site is the Elk-Hills/Buttongwillow Airport which is located approximately 7 miles from the Project. The nearest private airport to the McKittrick (21Z Lease) oilfield site is the 7R Ranch Airport which is located approximately 24 miles from the Project. The nearest public airport to the North Midway Sunset (Pan Fee Lease) oilfield site is the Elk-Hills/Buttongwillow Airport which is located approximately 8 miles from the Project. The nearest private airport to the North Midway Sunset (Pan Fee Lease) oilfield site is the 7R Ranch Airport located approximately 27 miles from the Project. Project construction and operation will not result in a change in air traffic pattern and thus would not result in safety risk. Therefore, the Project will have no impact on air traffic patterns.



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

No Impact

The Project will not include the construction of new public roads or alterations to existing public roads or intersections. Temporary equipment staging areas may become part of the Project sites and may be set aside for employee and visitor vehicle parking. As such, the Project will not result in hazards due to sharp curves, dangerous intersections, or incompatible uses. Therefore, the Project will have no impact.

- e) *Result in an inadequate emergency access?*

No Impact

The Project sites and surrounding roadway networks do not have any conditions that would restrict or delay emergency vehicle access to the McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) oilfield sites. California State Highway 33 is located west of the McKittrick (21Z Lease) oilfield site. California State Highway 33 is located west and California State Highway 58 is located northwest of the North Midway Sunset (Pan Fee Lease) oilfield site. California State Highway 33 and 58 serves as the main access roads to the Project. Reserve Road bisects both Project sites and is the main local access road to the McKittrick and North Midway Sunset oilfields. The Kern County Safety Element requires new development of properties to have sufficient access for emergency vehicles. Therefore, the Project will have no impact on emergency access.

- f) *Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?*

No Impact

There is no pedestrian or bicycle circulation located within the oilfield Project sites, furthermore, no new public roadways will be constructed for the proposed Project and no existing roadways will be altered during Project activities. The Project will have restricted access; accordingly bicyclists and pedestrians will not have access to the existing oil and gas site. Therefore, the Project will have no impact.



XVII. Utilities / Service Systems Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			✓	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				✓
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			✓	
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?			✓	
e) Result in a determination by the wastewater treatment provider that serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?				✓
f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?				✓
g) Comply with federal, state, and local statutes and regulations related to solid waste?				✓

XVII. UTILITIES / SERVICE SYSTEMS

Wastewater Treatment and Facilities (a, b, e)

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield



boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.

- a) *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

Less Than Significant Impact

Operations of the Project will require the use of water for the production of steam. As part of Project operations, water is provided from an existing closed piping system and is converted to steam for facility operations. Excess water that is trapped within the combustion of the equipment will be drained to an existing wastewater collection system. Water for Project operations is obtained from the Kern Water District. Construction and operation of the Project will not require waste discharge permits from the Regional Water Quality Control Board. As such, the Project is not expected to exceed wastewater treatment requirements. Therefore, the Project will have a less than significant impact.

- b) *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

No Impact

For Project operations, any excess water that is trapped within the combustion of the equipment will be drained to an existing wastewater collection system which will be adequate to serve these two additional sites. As such, the Project will not require the construction of new water or wastewater treatment facilities or expansion of existing facilities. Therefore, the Project will have no impact.

- c) *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Less Than Significant Impact

The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which is currently developed for oil and gas production activities. The Project will not require the construction of new storm water drainage facilities, and it is not required to acquire a waste discharge permit from the Regional Water Quality Control Board. Storm water at the Project sites will drain by natural flow and percolation. Therefore, the Project will have no impact.



-
- d) *Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?*

Less Than Significant Impact

Operations of the Project will require the use of water for the production of steam. As part of the Project operations, water is provided from the Kern Water District through an existing close piping system and is converted to steam for facility operations. Excess water that is trapped within the combustion of the equipment will be drained to an existing wastewater collection system. The existing water supplies from the Kern Water District to support ongoing oil and gas production activities would be sufficient to serve these two additional sites. Therefore, there will be sufficient water supplies to serve the Project, and as such, the Project will have a less than significant impact.

- e) *Result in a determination by the wastewater treatment provider that serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?*

No Impact

The Project is for the construction and installation of cogeneration systems and does not involve wastewater treatment facilities. Therefore, the Project will have no impact.

- f) *Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?*

No Impact

The McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease) Project sites are currently served by the Taft Sanitary Landfill. Only minimal and short-term impacts to these landfills are anticipated during construction. No long term impacts are expected during the operational phase. As such, the Taft Sanitary Landfill is sufficient to accommodate the solid waste disposal needs of the Project. Therefore, the Project will have no impact.

- g) *Comply with federal, state, and local statues and regulations related to solid wastes?*

No Impact

Solid wastes generated during construction and operation will be stored and handled in accordance with federal or state regulation for solid wastes. Therefore, the Project will have no impact.



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

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

Linn is proposing to install two (2) 5.67 MW combined heat and power cogeneration systems. Each cogeneration system consists of: one (1) 67.9 MMBtu/hr natural gas-fired Solar Model Taurus 60 turbine and one (1) 57 MMBtu/hr natural gas-fired Rentech duct burner with Rentech selective catalytic reduction and CO catalyst and Heat Recovery steam generator. The Project will be located within the existing oilfield boundaries of McKittrick (21Z Lease) and North Midway Sunset (Pan Fee Lease), which historically has been allowed for the exploration and production of oil and is consistent with current and surrounding land uses.



-
- a) *Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

Less Than Significant Impact With Mitigation

With the incorporation of required permit conditions, the surrendering of ERCs, and the incorporation of mitigation measures as outlined in the Initial Study, the Project will have a less than significant impact with mitigation on the environment.

Mitigation: See Mitigation Measures AIR-1 and AIR -2, and CUL-1 through CUL-3.

- b) *Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects)?*

Less Than Significant Impact With Mitigation

CEQA Guidelines state that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable (CCR §15065). The assessment of the significant of the cumulative effects of the project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. Due to the nature and locations of the Project and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. In addition, the Project is not a part of any larger planned developments. Therefore, the Project would not contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e – an increase in population that could lead to an increase need to housing, increase in traffic, air pollutants, etc.). The Project will have a less than significant impact with mitigation.

Mitigation: See Mitigation Measures AIR-1 and AIR -2, and CUL-1 through CUL-3.

- c) *Does the Project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?*

Less Than Significant Impact With Mitigation

The analyses of environmental issues contained in this Initial Study indicate that the Project is not expected to have a substantial impact on human beings, either directly or



indirectly. Project design elements and mitigation measures have been incorporated into the Project to reduce all potentially significant impacts to less than significant.

Mitigation: See Mitigation Measures AIR-1 and AIR -2, and CUL-1 through CUL-3.

H. REFERENCES

California Air Resources Board. *AB2588 Air Toxics "Hot Spots" Program*. Website: <http://www.arb.ca.gov/ab2588/ab2588.htm>

California Air Resources Board. *Cap-and-Trade Program*. Website: <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>

California Code of Regulations. *Title 14, Chapter 3 §15064.5*. Website: <http://www.parks.ca.gov/pages/1054/files/california%20code%20of%20regulations.pdf>

California Department of Conservation. *Fault Parameters-Alquist Priolo Earthquake Fault Zones, Tsunami Maps, SMARA Maps*. Website: <http://www.conservation.ca.gov/cgs/rghm/ap/Pages/Index.aspx> and <http://www.quake.ca.gov/qmaps/VH/regulatorymaps.htm>

California Department of Conservation. *Seismic Shaking Hazards in California*. Website: <http://www.conservation.ca.gov/cgs/rghm/psha>

California Department of Conservation. *Fault-Rupture Hazard Zones in California*. Website: <ftp://ftp.consrv.ca.gov/pub/dmg/pubs/sp/Sp42.pdf>

California Department of Conservation. *SMARA Statutes and Associated Regulations*. Website: <http://www.conservation.ca.gov/omr/lawsandregulations>

California Department of Conservation. *Farmland Mapping & Monitoring Program*. Website: <http://www.conservation.ca.gov/DLRP/fmmp/Pages/Index.aspx>

California Department of Conservation. *Mineral Resources*. Website: http://www.conservation.ca.gov/cgs/geologic_resources/mineral_resource_mapping/Pages/Index.aspx

California Department of Fish and Wildlife. *California Endangered Species Act*. Website: <https://www.wildlife.ca.gov/Conservation/CESA>

California Department of Fish and Wildlife. *Natural Community Conservation Planning*. Website: <https://www.wildlife.ca.gov/Conservation/Planning/NCCP>



California Department of Toxic Substances Control. *DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List)*. Website:
http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm

California Department of Transportation. *Kern County Scenic Highways*. Website:
http://www.dot.ca.gov/hq/LandArch/scenic_highways/

California Geological Survey. *Aggregate Sustainability in California*. Website:
http://www.conservation.ca.gov/cgs/information/publications/ms/Documents/MS_52_2012.pdf

CAL Fire. *Hazard Severity Zone Map for Kern County*. Website:
http://www.fire.ca.gov/fire_prevention/fhsz_maps_kern.php

California Geological Survey. Website:
<http://www.conservation.ca.gov/cgs/minerals/mlc/Pages/Index.aspx>

County of Kern. *Building Codes*. Website: <http://esps.kerndsa.com/images/building-inspection/pdfs/2010CodeOfBuildingRegs.pdf>

County of Kern. *Engineering, Surveying and Permit Services – Online GIS Mapping*. Website: <http://esps.kerndsa.com/gis/>

County of Kern. *General Plan & Elements*. Website:
<http://pcd.kerndsa.com/planning/planning-documents/general-plans>

County of Kern. *Zoning Ordinance*. Website: <http://pcd.kerndsa.com/planning/planning-documents/zoning-ordinance>

County of Kern. Planning Programs. *First Draft Valley Floor Habitat Conservation Plan*. Website: <http://pcd.kerndsa.com/planning/planning-programs>

Federal Emergency Management Agency. *Flood Map Service Center*. Website:
<http://msc.fema.gov/portal>

Google Maps. August 2015.

Kern County Fire Department. *Fire Stations*. Website: <http://www.kerncountyfire.org/>

Kern County Sherriff's Office. Website:
<http://www.kernsheriff.com/FieldOps/Substations/Pages/default.aspx>

Linn Operating Inc. *Biological Survey and Habitat Impact Review Form*.



Reza, Shamim. Senior Environmental Health and Safety Representative, Linn Operating Inc. Electronic and Telephone Communication.

San Joaquin Valley Unified Air Pollution Control District. September 2015. *Draft Authority to Construct (S-1246, S-1151996)*. Available at San Joaquin Valley Air Pollution Control District, 1990 E. Gettysburg Avenue, Fresno, CA 93726-0244.

San Joaquin Valley Unified Air Pollution Control District. September 2015. *Draft Authority to Construct (S-1246, S-1151997)*. Available at San Joaquin Valley Air Pollution Control District, 1990 E. Gettysburg Avenue, Fresno, CA 93726-0244.

San Joaquin Valley Air Pollution Control District. March 2015. *Guidance for Assessing and Mitigating Air Quality Impacts*. Website:
http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf

San Joaquin Valley Air Pollution Control District. September 2015. *Risk Management Review. Linn Operating Inc. Project # S-1151996*. Available at San Joaquin Valley Air Pollution Control District. 1990 East Gettysburg Avenue, Fresno, CA 93726.

San Joaquin Valley Air Pollution Control District. September 2015. *Risk Management Review. Linn Operating Inc. Project # S-1151997*. Available at San Joaquin Valley Air Pollution Control District. 1990 East Gettysburg Avenue, Fresno, CA 93726.

San Joaquin Valley Air Pollution Control District. *Climate Change Action Plan: Addressing GHG Emissions Impacts Under CEQA*. Website:
<http://www.valleyair.org/Programs/CCAP/12-17-09/1%20CCAP%20-%20FINAL%20CEQA%20GHG%20Staff%20Report%20-%20Dec%2017%202009.pdf>

San Joaquin Valley Unified Air Pollution Control District. December 2009. *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency* (APR 2005). December 17, 2009. Website:
<http://www.valleyair.org/Programs/CCAP/12-17-09/2%20CCAP%20-%20FINAL%20District%20Policy%20CEQA%20GHG%20-%20Dec%2017%202009.pdf>

San Joaquin Valley Air Pollution Control District. *Best Performance Standards (BPS) for Stationary Sources*. September 2015. Website:
http://www.valleyair.org/Programs/CCAP/bps/BPS_idx.htm

United States Fish and Wildlife Service. *Habitat Conservation Plans*. Website:
<http://www.fws.gov/endangered/what-we-do/hcp-overview.html>

United States Fish and Wildlife Services. *National Wetlands Inventory*. Website:
<http://www.fws.gov/wetlands/data/mapper.HTML>



U.S Geological Survey. *National Geologic Map Database*. Website:
http://ngmdb.usgs.gov/Prodesc/proddesc_10014.htm



I. APPENDICES

- Appendix A. Acronyms and Abbreviations
- Appendix B. Mitigation Monitoring and Reporting Program
- Appendix C. Construction Emissions
- Appendix D. Engineering Evaluation
- Appendix E. Risk Management Review
- Appendix F. Biological Survey and Habitat Impact Review



Appendix A. Acronyms and Abbreviations

AAQA	Ambient Air Quality Analysis
AAQS	Ambient Air Quality Standards
AB 2588	Assembly Bill 2588 – Air Toxics “Hot Spots” Information and Assessment Act
AB 32	Assembly Bill 32 – California Global Warming Solutions Act of 2006
ATC	Authority to Construct
BACT	Best Available Control Technology
BAU	Business as Usual
BPS	Best Performance Standards
BSHIR	Biological Survey and Habitat Impact Review
Cal/OSHA	California Department of Industrial Relations - Division of Occupational Safety and Health Administration
CARB	California Air Resources Board
CBSC	California Building Standards Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CH ₄	Methane
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
COC	Certificate of Conformity
COG	Council of Government
dB	Decibel
DISTRICT	San Joaquin Valley Unified Air Pollution Control District
DTSC	California Department of Toxic Substances Control
ERC	Emission Reduction Credit
ERG	Environmental Review Guidelines
FESA	Federal Endangered Species Act
FIRM	Flood Insurance Rate Map
FHSZ	Flood Hazard Safety Zone
FMMP	Farmland Mapping and Monitoring Program
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
GHG	Greenhouse Gas
HAP	Hazardous Air Pollutant
HCP	Habitat Conservation Plan
HRA	Health Risk Assessment
LB	Pound
LOS	Level of Service



LRA	Local Responsible Agency
MEI	Maximally Exposed Individual
MMBtu/hr	Million British Thermal Units Per Hour
MW	Megawatt
N ₂ O	Nitrous Oxide
NAHC	Native American Heritage Commission
NO _x	Oxides of Nitrogen
NRA	California Natural Resources Agency
NSR	New Source Review
OEHHA	Office of Environmental Health and Hazard Assessment
PM ₁₀	Particulate Matter 10 microns in diameter
PM _{2.5}	Particulate Matter 2.5 microns in diameter
RMR	Risk Management Review
ROG	Reactive Organic Gases
SCR	Selective Catalytic Reduction
SMARA	Surface Mining and Reclamation Act of 1975
SMGB	State Mining and Geology Board
SJVAB	San Joaquin Valley Air Basin
SO _x	Sulfur Oxides
TAC	Toxic Air Contaminant
TPY	Tons Per Year
US EPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
VFHCP	Valley Floor Habitat Conservation Plan
VOC	Volatile Organic Compound



Appendix B. Mitigation Monitoring and Reporting Program

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
Project operational stationary source emissions may exceed the District's thresholds of significance.	Potentially Significant	AIR-1	<p>The following measures will be made conditions of Project approval (S-1151996) and will be included in the Project ATCs:</p> <ul style="list-style-type: none"> Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter – 3,724 lb., 2nd quarter – 3,724 lb., 3rd quarter – 3,725 lb., and 4th quarter – 3,725 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter – 1,035 lb., 2nd quarter – 1,035 lb., 3rd quarter – 1,035 lb., and 4th quarter – 1,035 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of emissions: 1st quarter – 878 lb., 2nd quarter – 878 lb., 3rd quarter – 878 lb., and 4th quarter – 878 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] 	San Joaquin Valley Air Pollution Control District	Less than Significant



Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
		AIR-2	<ul style="list-style-type: none">Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits for the following quantity of emissions: 1st quarter – 6,974 lb., 2nd quarter – 6,974 lb., 3rd quarter – 6,974 lb., and 4th quarter – 6,974 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] <p>The following measures will be made conditions of Project approval (S-1151997) and will be included in the Project ATCs:</p> <ul style="list-style-type: none">Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter – 3,724 lb., 2nd quarter – 3,724 lb., 3rd quarter – 3,725 lb., and 4th quarter – 3,725 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter – 1,035 lb., 2nd quarter – 1,035 lb., 3rd quarter – 1,035 lb., and 4th quarter – 1,035 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]		



Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
<p>The project could have an impact on archaeological resources, paleontological resources, or human remains.</p>	<p>Potentially Significant</p>	<p>CUL-1</p>	<ul style="list-style-type: none"> • Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantify of emissions: 1st quarter – 878 lb., 2nd quarter – 878 lb., 3rd quarter – 878 lb., and 4th quarter – 878 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] • Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits for the following quantify of emissions: 1st quarter – 6,974 lb., 2nd quarter – 6,974 lb., 3rd quarter – 6,974 lb., and 4th quarter – 6,974 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] 	<p>San Joaquin Valley Air Pollution Control District</p>	<p>Less than Significant</p>



San Joaquin Valley Unified Air Pollution Control District
Initial Study and Draft Mitigated Negative Declaration
Linn Operating, Inc. Cogeneration Project

October 7, 2015

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
		CUL-2	<p>In the event that paleontological resources are discovered during ground disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. A qualified paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [<i>Public Resources Code 21000-21177: California Environmental Quality Act</i>]</p>		
		CUL-3	<p>In the event that human remains are discovered during ground disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [<i>Public Resources Code 21000-21177: California Environmental Quality Act</i>]</p>		



Appendix C. Construction Emissions

Available Upon Request at District Office:

San Joaquin Valley Air Pollution Control District
Central Region
1990 E. Gettysburg Ave.
Fresno, CA 93726
(559) 230-6000



Appendix D. Draft Engineering Evaluations

Available Upon Request at District Office:

San Joaquin Valley Air Pollution Control District
Central Region
1990 E. Gettysburg Ave.
Fresno, CA 93726
(559) 230-6000



Appendix E. Risk Management Review

Available Upon Request at District Office:

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Central Region
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Appendix F. Biological Survey and Habitat Impact Review

Available Upon Request at District Office:

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