



JUL 15 2016

Mr. John Haley
Aera Energy LLC
PO Box 11164
Bakersfield, CA 93389

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1547
Project # 1162422**

Dear Mr. Haley:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project authorizes operation of sulfur removal system.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authority to Construct with a Certificate of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

for 
Arnaud Marjollet
Director of Permit Services

Enclosures

cc: Tung Le, CARB (w/enclosure) via email
cc: Gerardo C. Rios, EPA (w/enclosure) via email

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San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
New Authorized Location for H₂S Scavenger Systems

Facility Name: Aera Energy LLC Date: July 11, 2016
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Application #(s): S-1547-1347-0
Project #: 1162422
Deemed Complete: June 17, 2016

I. Proposal

Aera Energy LLC (Aera) has requested an Authority to Construct (ATC) permit for operation of H₂S scavenger chemical injection systems, currently permitted as S-1548-451 for use in Aera's Light Oil Western Stationary Source, at various unspecified locations (VULs) in Aera's Heavy Oil Western Stationary Source (facility S-1547).

BACT and public notice are required. Offsets are not required.

Please note that the equipment description of PTO S-1548-451-3 will be revised to include the words "also permitted as S-1547-1347-0" under Administrative Amendment project S-1548, 1162454.

Current PTO S-1548-451-3 is included in **Attachment I**.

Aera operates under a Title V Permit. This project is a Federal Major Modification and is classified as a Title V Significant Modification pursuant to Rule 2520, Section 3.20 and can be processed with a Certificate of Conformity (COC). The facility has specifically requested that this project be processed in that manner; therefore, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Aera must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (2/18/16)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4623	Storage of Organic Liquids (05/19/05)

Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA
Guidelines

III. Project Location

The H₂S scavenger chemical injection systems will be permitted to operate at VULs within S-1547. The equipment will not be authorized by permit condition to operate within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Proposed Modification (Operation at S-1547)

Elevated concentrations of H₂S have been noticed in casing vent gas at Aera's holdings in the Midway Sunset Field within facility S-1547. There is concern that steam generators combusting the gas may not be able to comply with sulfur emissions limits. Therefore, Aera has requested the ATC authorize operation at VULs within S-1547 to avoid compliance issues. Background information on the H₂S scavenger system, as provided in project S-1548 project 1043826, is presented below.

Up to five (5) H₂S scavenger systems are currently used to reduce the H₂S concentration of produced natural gas handled by Aera's existing gas gathering system in the Lost Hills Oilfield on an as needed basis. The systems have been used on transfer piping at the Lost Hills One Compressor Site with the treated gas combusted in steam generators owned by Aera and to sale gas line(s).

The H₂S scavenger chemical is a proprietary formulation designed to remove hydrogen sulfide from produced gas, which combines with the H₂S to form stable, water-soluble reaction products that may be easily removed from the system. The chemical is injected directly into gas piping at one or more injection points at the Lost Hills One site and other unspecified sites, thereby contacting and absorbing the H₂S. The typical equipment for each (of the 5) chemical scavenger systems include:

- One chemical storage tank, up to 500 gallons, with catch basin.
- Up to two chemical transfer pumps.
- One or more flexible piping lines from the chemical pump(s) to the gas pipeline with stinger-type injection fitting(s).
- Injection valve(s) on gas piping.

V. Equipment Listing

Pre-Project Equipment Description:

S-1548-453-3: HYDROGEN SULFIDE (H₂S) SCAVENGER CHEMICAL STORAGE AND INJECTION OPERATION APPROVED TO OPERATE AT VARIOUS UNSPECIFIED LOCATIONS IN THE LIGHT OIL WESTERN STATIONARY SOURCE UTILIZING UP TO 5 CHEMICAL STORAGE TANKS (CAPACITY OF 500 GALLONS OR LESS) EACH EQUIPPED WITH A CATCH BASIN AND ASSOCIATED COMPONENTS INCLUDING LIQUID TRANSFER PUMP(S), VALVES, FLANGES, THREADED CONNECTIONS, FLEXIBLE PIPING, AND STINGER-TYPE INJECTION FITTINGS ON PRODUCED GAS PIPELINES

Proposed Modification:

Authorize operation within S-1547

Post Project Equipment Description:

S-1547-1347-0: HYDROGEN SULFIDE (H₂S) SCAVENGER CHEMICAL STORAGE AND INJECTION OPERATION APPROVED TO OPERATE AT VARIOUS UNSPECIFIED LOCATIONS IN THE HEAVY OIL WESTERN STATIONARY SOURCE UTILIZING UP TO 5 CHEMICAL STORAGE TANKS (CAPACITY OF 500 GALLONS OR LESS) EACH EQUIPPED WITH A CATCH BASIN AND ASSOCIATED COMPONENTS INCLUDING LIQUID TRANSFER PUMP(S), VALVES, FLANGES, THREADED CONNECTIONS, FLEXIBLE PIPING, AND STINGER-TYPE INJECTION FITTINGS ON PRODUCED GAS PIPELINES

VI. Emission Control Technology Evaluation

The H₂S scavenging chemical injection tanks and associated equipment is utilized to reduce the H₂S content of produced gas. The scavenging chemical absorbs the H₂S in the gas upon contact. By removing the H₂S in the fuel gas, the SO_x emissions from the combustion equipment is reduced. VOC (scavenger chemical) emissions are uncontrolled.

VII. General Calculations

A. Assumptions

- Each H₂S scavenger chemical storage tank and associated equipment comprises one emissions unit since each can and will be operated independently of each other at different locations on an as-needed basis.
- There will be a total of five (5) H₂S scavenger systems. From each H₂S scavenger system there are two potential emission sources: the chemical storage tank and the components on the piping from the chemical tank to the injection points.

- Worst-case emissions will be quantified for each chemical storage tank using the District's tank emissions calculation spreadsheet developed from EPA's Tanks Program. Each tank is uncontrolled and will be assumed to have a maximum storage capacity of 500 gallons.
- The emissions due to fugitive leaks from the piping components will not change which were estimated to be 0.20 lb/day in project 1020759 for each (of the 5) system.

B. Emission Factors

- Potential emissions for each H₂S scavenger chemical storage tank were quantified in project S-1548, 1020759 using the District's tank emissions calculation spreadsheet developed from EPA's Tanks Program based on the following tank and liquid properties:

Tank Diameter	=	4.0 feet
Tank Shell	=	5.3 feet
Control Efficiency	=	0%
Tank Condition	=	Good
Tank Color	=	Gray
Vapor Molecular Wt.	=	219 lb/lb-mole (conservative since this is actually the liquid molecular weight identified by the manufacturer)
Liquid Type	=	Naphtha (selected for spreadsheet calculation due to similar vapor pressure characteristics)

- The following input parameters are proposed to change as a result of this project:

Max Throughput	=	200 gallons/day
Vapor Pressure	=	3.0 psia

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since this is a new emissions unit to S-1547, PE1 = 0 for all pollutants.

2. Post Project Potential to Emit (PE2)

Project S-1548, 1043826

As stated above, the Potential to Emit for the each H₂S scavenger system includes the emissions from the chemical storage tank and the components comprising the piping from the tank to the injection points.

Tank Losses = 1.2 lb/day/system
Fugitive Losses = 0.2 lb/day/system (see Project #S-1020759)
 Daily PE (VOC) = 1.4 lb/day/system

For 5 H₂S scavenger systems

PE1 = 5 x 1.4 = 7.0 lb/day (2,555 lb/yr)

Post-Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	7.0	2,555

The emissions profiles are included in **Attachment II**.

Greenhouse Gas (GHG) Emissions

The chemical scavenger is not a GHG. No increase in GHG emissions is expected.

3 Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for all criteria pollutants*; therefore, SSPE1 calculations are not necessary.

***SSPE Calculator (6-17-16, PTOs only)**

	lb/yr	Tons/yr
NOx	2,440,602	1,220
SOx	2,639,675	1,320
PM10	1,767,984	884
CO	4,949,273	2,475
VOC	3,672,852	1,836

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

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for all criteria pollutants; therefore, SSPE2 calculations are not necessary.

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

This source is an existing Major Source for all criteria pollutants and will remain a Major Source for criteria pollutants. No change in other pollutants are proposed or expected as a result of this project.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Estimated Facility PE before Project Increase	≥1,220*	Not needed				
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source ? (Y/N)	Y					

*SSPE Calculator

As shown above, the facility is an existing PSD major source for at least one pollutant.

6. Baseline Emissions (BE)

a. Annual BE

The annual BE is performed pollutant by pollutant to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold. For this project the annual BE will be performed to calculate quarterly Baseline Emissions (QBE)

BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.23

Since the permit unit is new in S-1547 and the equipment has not previously operated there, the BE = 0.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this facility is a major source for all criteria pollutants, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	2,555	50,000	No

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a “Major Modification” as defined in 40 CFR 51.165 and part D of Title I of the CAA.

The H2S scavenger systems are new emissions units in source S-1547. For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

The project’s combined total emission increases as calculated above are compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NO _x *	0	0	No
VOC*	2,555	0	Yes
PM ₁₀	0	30,000	No
PM _{2.5}	0	20,000	No
SO _x	0	80,000	No

*If there is any emission increases in NO_x or VOC, this project is a Federal Major Modification and no further analysis is required.

Since there is an increase in VOC emissions, this project constitutes a Federal Major Modification. Federal Offset quantities are calculated below.

Federal Offset Quantities:

The Federal offset quantity is only calculated only for the pollutants for which the project is a Federal Major Modification. The Federal offset quantity is the sum of the annual emission changes for all new and modified emission units in a project calculated as the potential to emit after the modification (PE2) minus the actual emissions (AE) during the baseline period for each emission unit times the applicable

federal offset ratio. There are no special calculations performed for units covered by an SLC.

Only list pollutants for which the project is a Federal Major Modification and delete other pollutants. The calculated Federal offset quantity is entered into the Major Modification tracking spreadsheet under the heading "Federal Offset Quantity"

VOC		Federal Offset Ratio	1.5
Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	Emissions Change (lb/yr)
S-1547-1347	0	2,555	2,555
Net Emission Change (lb/year):			2,555
Federal Offset Quantity: (NEC * 1.5)			3,833

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are emitted in this project are: (See 52.21 (b) (23) definition of significant)

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10
- Sulfuric acid mist
- Hydrogen sulfide (H2S)
- Total reduced sulfur (including H2S)
- Reduced sulfur compounds

I. Project Location Relative to Class 1 Area

As demonstrated in the "PSD Major Source Determination" Section above, the facility was determined to be a existing PSD Major Source. Because the project is not located within 10 km (6.2 miles) of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Project Emission Increase – Significance Determination

a. Evaluation of Calculated Post-project Potential to Emit for New or Modified Emissions Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the post-project potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if the total potentials

to emit from all new and modified units are below the applicable thresholds, no further PSD analysis is needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)					
	NO2	SO2	CO	PM	PM10
Total PE from New and Modified Units	0	0	0	0	0
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	N	N	N	N	N

As demonstrated above, because the post-project total potentials to emit from all new and modified emission units are below the PSD significant emission increase thresholds, this project is not subject to the requirements of Rule 2410 and no further discussion is required.

10. Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - BE, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.

PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.

BE = Baseline Emissions (per Rule 2201) for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly BE is calculated in the following tables:

QNEC S-1547-1347 (lb/qtr)			
Pollutant	PE2	BE	QNEC
VOC	2,555	0	638.75

VIII. Compliance Determination

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

As discussed in Section I above, there are no new emissions units associated with this project. The H2S scavenger is existing and currently operates in facility S-1548. Therefore BACT for new emissions units with PE > 2 lb/day purposes is not triggered.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, the H2S scavenger system consisting of 5 tanks and associated fugitive emissions being relocated from VULs in one stationary source (S-1547) to VULs in another stationary source (S-1548) and as seen in Section VII.C.2 above. The emissions units (5 tanks) each have a PE less than 2 lb/day for VOC. Therefore, BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

As discussed in Section I above, there are no modified emissions units associated with this project. Therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project is a Federal Major Modification for VOC emissions. Therefore BACT is triggered for VOCs pollutant.

2. BACT Guidance

Per District Policy APR 1305, Section IX, "A top-down BACT analysis shall be performed as a part of the Application Review for each application subject to the BACT requirements pursuant to the District's NSR Rule for source categories or classes covered in the BACT Clearinghouse, relevant information under each of the following steps may be simply cited from the Clearinghouse without further analysis."

BACT Guideline 7.3.1, applies to Petroleum and Petrochemical Production – Fixed Roof Organic Liquid Storage or Processing Tank, < 5,000 bbl tank capacity (see **Attachment III**)

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see **Attachment IV**), BACT has been satisfied with the following:

The applicant is proposing to use PV relief valve on the tank vent set to within 10% of maximum allowable pressure. The technologically feasible option of 99% vapor control and Inspection and Maintenance program is not Technologically Feasible as the equipment is authorized to be moved to various unspecified locations.

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

Note that because offsets for the H2S scavenger system have been provided previously (see project S-1548, 1143826 (ATC S-1547-451-1), additional offsets are not required pursuant to Section 4.6.7.2 Rule 2201.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

e. Any project which results in a Title V significant permit modification

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

As demonstrated in Sections VII.C.7 and VII.C.8, this project constitutes a Federal Major Modification; therefore, public noticing for SB 288 or Federal Major Modification purposes is required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. The H2S scavenger system is a new emissions unit(s) to S-1547 with a PE less than 100 lb/day. Therefore public noticing is not required for this project for PE > 100 lb/day.

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	>20,000 lb/year	>20,000 lb/year	20,000 lb/year	No
SO _x	>54,750 lb/year	>54,750 lb/year	54,750 lb/year	No
PM ₁₀	>29,200 lb/year	>29,200 lb/year	29,200 lb/year	No
CO	>200,000 lb/year	>200,000 lb/year	200,000 lb/year	No
VOC	>20,000 lb/year	>20,000 lb/year	20,000 lb/year	No

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	>20,000 lb/year	>20,000 lb/year	0	20,000 lb/year	No
SO _x	>54,750 lb/year	>54,750 lb/year	0	20,000 lb/year	No
PM ₁₀	>29,200 lb/year	>29,200 lb/year	0	20,000 lb/year	No
CO	>200,000 lb/year	>200,000 lb/year	0	20,000 lb/year	No
VOC	>20,000 lb/year	>20,000 lb/year	2,555	20,000 lb/year	No

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project does constitute a Title V Significant Modification. Therefore, public noticing for Title V Significant Modifications is required for this project.

2. Public Notice Action

As discussed above, public noticing is required for this project. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

The ATCs include the following conditions:

Proposed Rule 2201 (DEL) Conditions:

Each chemical storage tank shall have a maximum rated capacity of 500 gallons or less and up to eight injection fittings. [District Rule 2201] Y

The maximum throughput of each chemical storage tank shall not exceed 200 gallons per day. [District Rule 2201] Y

True vapor pressure of materials stored in each chemical tank shall not exceed 3.0 psia. [District Rule 2201] Y

Total VOC emissions from all H2S scavenger injection equipment shall not exceed 7.0 lb/day. [District Rule 2201] Y

E. Compliance Assurance

1. Source Testing

The equipment does not fall under any of the categories (Section II Source Test Frequency) requiring source testing pursuant to District Policy APR 1705. Therefore, source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

Record-keeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following condition(s) will appear on the permit to operate:

Permittee shall maintain accurate fugitive component counts and resultant emissions calculated using Table 2-4 of U.S. EPA Publication 453/R-95-017. [District Rule 2201] Y

Accurate records of the dates and amounts of chemical deliveries for each chemical injection site and fugitive component counts shall be retained and made available for District inspection upon request for a period of 5 years. [District Rule 2201] Y

Operator shall keep records of the true vapor pressure of the chemical stored in the tank. These records shall include a laboratory analysis for TVP according to the methods described in District Rule 4623, Section 6.4 (Amended 5/19/05), MSDS which lists the true vapor pressure, or environmental data sheet which lists the true vapor pressure. Such records shall be made readily available for District inspection upon request for a period of 5 years. [District Rule 4623] Y

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Federal Major Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in

compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Section VIII above, the source S-1547 is undergoing a Federal Major Modification, therefore this requirement is applicable. Aera's compliance certification is included in **Attachment V**.

G. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install 3 vapor destruction devices.

Since the project will provide new equipment to be used at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. A significant permit modification is defined as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility shall not implement the changes requested until the final permit is issued. The Title V Compliance Certification form is included in **Attachment V**.

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – *Risk Management Policy for Permitting New and Modified Sources* specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (**Attachment VI**), the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-1547-1347-0	XX* per million	No

*Not calculated as there are no RELs for Toxic Air Contaminants being evaluated.

TBACT is not required.

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District's thresholds for triggering T-BACT requirements; therefore, compliance with the District's Risk Management Policy is expected.

Rule 4801 Sulfur Compounds

Rule 4801 limits sulfur compound emissions to 0.2% (2,000 ppm) dry volume. The H₂S scavenger chemical storage and injection operations described in this project are not expected to be a source of sulfur compound emissions; therefore, compliance with this rule is expected.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

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 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 the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- 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.

District is a Lead Agency and Project not Covered Under Cap-and-Trade

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project. The District's engineering evaluation (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular project's potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

The criteria pollutant emissions and toxic air contaminant emissions associated with the proposed project are not significant, and there is minimal potential for public concern for this particular type of facility/operation. Therefore, an Indemnification Agreement and/or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue ATC S-1547-1347-0 with the permit conditions on the attached draft ATC in **Attachment VII**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1547-1347-0	3020-05-A	2500 gallons	\$79.00

Attachments

- I: Current PTO S-1548-451-3
- II: Emissions Profiles
- III: BACT Guideline
- IV: BACT Analysis
- V: Statewide Compliance Statement and Title V Compliance Certification form
- VI: HRA
- VII: Draft ATCs

ATTACHMENT I
Current PTO S-1548-451-3

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1547-359-30

EXPIRATION DATE: 05/31/2016

SECTION: 33 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:

VAPOR COLLECTION AND CONTROL SYSTEM SERVING 1657 THERMALLY ENHANCED WELLS IN SECTIONS 1, 2, 3, 4, 10, 11, 12 OF T29S, R21E, SECTIONS 33, 34, 35 OF T28S, R21E

PERMIT UNIT REQUIREMENTS

1. Vapor collection and control system can receive vapors from tank vapor control system S-1547-888, TEOR system S-1547-1079, free water knockout vessel S-1547-1104, and degassing operation S-1547-1141. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Vapor collection system shall include 2 sulfur scrubbing systems using District approved scrubbing agents. Scrubber(s) may be by-passed only when incinerating vapors in scrubbed steam generator S-1547-47 or when routing gas directly to Sec. 32 Belridge gas plant (S-1543-4). [District Rule 2201] Federally Enforceable Through Title V Permit
3. Scrubbed gases shall be incinerated in steam generators S-1547-726, '-733, '-735 through '-738, '-742 through '-749, '-760, '-761, '-762, '-803, '-834, '-835, and '-837 or shall be routed to the Sec. 32 Belridge gas plant (S-1543-4). Alternatively, the wells can be operated with the casing vents closed. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Scrubbed or unscrubbed vapor may be routed to the Sec. 32 Belridge gas plant (S-1543-4) via the Del Sur gas gathering system (compressors S-1578-433, '-434, '-435 and emergency flare S-1548-134). [District Rule 2201] Federally Enforceable Through Title V Permit
5. Vapor collection system shall be equipped with heat exchangers, gas/liquid separators with vane-type mist eliminators, gas compressors, compressor discharge knock-outs, and liquid pumps. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All produced fluids from any well served by vapor collection system which has had the casing vent closed shall be handled only in closed production equipment served by a 99% effective vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Water/VOCs condensate from all liquid knockout drums shall be pumped to production manifold, recycled to production wells for disposal, or pumped to vapor controlled storage tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The regeneration vessel air vent at each sulfur scrubbing system may be vented to atmosphere provided daily emissions from each vent shall not exceed 2.0 lbs VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Permittee shall determine VOC content of the exhaust at each regeneration vessel air vent semi-annually. If a semi-annual VOC content analysis fails to show compliance, the regeneration vessel air vents shall be tested once per week. If compliance with the VOC content limit has been demonstrated for eight consecutive weeks, then the VOC content testing frequency shall revert to semi-annually. Gas analysis shall be performed using ASTM D-3588. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Total mass flowrate of sulfur compounds in gas leaving sulfur removal systems shall not exceed 336.92 lb/day as sulfur. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions of Volatile Organic Compounds (VOC) shall not exceed 1,888.1 lb/day (including regeneration vessel air vents). [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee shall maintain accurate records of sulfur content and daily vapor flow rate of all uncondensed vapors sent to approved incineration devices(S-1547-726, '-733, '-735 through '-738, '-742 through '-749, '-760, '-761, '-762, '-803, '-834, '-835, and '-837) for disposal. Such records shall be maintained readily available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Permittee shall maintain with the permit a listing (updated each calendar year) of all steam-enhanced wells connected to the casing vent control system and such listing shall be made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
15. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
16. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
17. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
18. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
19. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
20. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
21. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
22. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit
23. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit
25. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
26. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit
27. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit
28. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
29. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
30. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
31. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
32. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
33. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
34. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

35. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
36. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
37. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
38. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit
39. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
40. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
41. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
42. Operator shall keep a list of all gauge tanks, as defined in Section 3.0 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
43. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit
44. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
45. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
46. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit
47. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.0 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

48. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
49. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
50. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
51. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
52. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
53. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

ATTACHMENT II Emissions Profiles

Permit #: S-1547-1347-0	Last Updated
Facility: AERA ENERGY LLC	06/24/2016 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	2555.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	7.0
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	638.0
Q2:	0.0	0.0	0.0	0.0	639.0
Q3:	0.0	0.0	0.0	0.0	639.0
Q4:	0.0	0.0	0.0	0.0	639.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

ATTACHMENT III BACT Guideline

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.3.1*

Last Update 10/1/2002

**Petroleum and Petrochemical Production - Fixed Roof Organic
Liquid Storage or Processing Tank, < 5,000 bbl Tank capacity ****

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	PV-vent set to within 10% of maximum allowable pressure	99% control (Waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of noncondensable vapors to gas pipeline; reinjection to formation (if appropriate wells are available); or equal).	

**** Converted from Determinations 7.1.11 (10/01/02).**

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

ATTACHMENT IV BACT Analysis

Top Down BACT Analysis

VOC emissions may occur when the produced fluids from the crude oil production wells enter the oil storage tanks.

Step 1 - Identify All Possible Control Technologies

BACT Guideline 7.3.1 lists the controls that are considered potentially applicable to fixed-roof organic liquid storage or processing tank <5,000 bbl tank capacity. The VOC control measures are summarized below.

Technologically feasible:

99% control (waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of uncondensed vapors to gas pipeline or reinjection to formation (if appropriate wells are available).

Achieved in Practice:

PV relief valve set to within 10% of maximum allowable pressure.

Step 2 - Eliminate Technologically Infeasible Options

99% control with vapor control is not feasible as the equipment will be moved to unspecified locations within S-1547 on an as needed basis.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

PV relief valve set to within 10% of maximum allowable pressure.

Step 4 - Cost Effectiveness Analysis

Applicant has proposed the only technology not eliminated by Step 2. A Cost Analysis is not required.

ATTACHMENT V
Statewide Compliance Statement
Title V Compliance Certification form



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



TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

COMPANY NAME: Aera Energy LLC	FACILITY ID: S - 1547
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Aera Energy LLC	
3. Agent to the Owner: N/A	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

E.E. Patterson
 Signature of Responsible Official

7-11-2016
 Date

E.E. Patterson
 Name of Responsible Official (please print)

Process Supervisor
 Title of Responsible Official (please print)

Revise PTO S-1548-451-3 to state "also permitted as S-1547-1347-0" in the equipment description.

Title I Compliance Certification - SJVUAPCD

CERTIFICATION

Aera Energy LLC hereby certifies as follows:

1. Aera Energy LLC owns or operates certain major stationary sources in the State of California. Such sources are comprised of a large number of emission points. As used in this certification, the term "major stationary source" shall, with respect to Aera Energy LLC stationary sources in the SJVUAPCD, have the meaning ascribed thereto in SJVUAPCD Rule 2201.3.15, and shall, with respect to all of Aera Energy LLC's other stationary sources in the State of California, have the meaning ascribed thereto in section 302(J) of the Clean Air Act (42 U.S.C. Section 7602 (J)).

2. Subject to paragraphs 3 and 4 below, all major stationary sources owned or operated by Aera Energy LLC in the State of California are either in compliance, or on a schedule of compliance, with all applicable emission limitations and standards under the Clean Air Act and all of the State Implementation Plan approved by the Environmental Protection Agency.

3. This certification is made on information and belief and is based upon a review of Aera Energy LLC's major stationary sources in the State of California by those employees of Aera Energy LLC who have operational responsibility for compliance. In conducting such reviews, Aera Energy LLC and its employees have acted in good faith and have exercised reasonable best efforts to identify any exceedances of the emission limitations and standards referred to in paragraph 2 thereof.

4. This certification shall speak as of the time and date of its execution.

CERTIFICATION

By: 

Date: June 21, 2016

Title: Vice President

Time: 12:45 pm

ATTACHMENT VI
HRA

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Richard Edgehill – Permit Services
 From: Cheryl Lawler – Technical Services
 Date: June 21, 2016
 Facility Name: Aera Energy LLC
 Location: Various Unspecified Locations within S-1547 & S-1548
 Application #(s): S-1547-1347-0
 Project #: S-1162422

A. RMR SUMMARY

RMR Summary			
Categories	5 H2S Scavenger Tanks (Unit 1347-0)	Project Totals	Facility Totals
Prioritization Score	0.00	0.00	>1.0
Acute Hazard Index	0.01	0.01	0.37
Chronic Hazard Index	0.00	0.00	0.14
Maximum Individual Cancer Risk	N/A ¹	N/A ¹	10.19E-06
T-BACT Required?	No		
Special Permit Requirements?	No		

¹The Maximum Individual Cancer Risk was not calculated since there are no RELs for any of the Toxic Air Contaminants being evaluated.

B. RMR REPORT

I. Project Description

Technical Services received a request on June 16, 2016, to perform a Risk Management Review for five H2S scavenger tanks currently permitted under S-1548-451-3 to also operate at various unspecified locations within S-1547.

II. Analysis

Toxic emissions for this project were evaluated based upon a MSDS sheet that was submitted by the applicant and the VOC emissions calculated by the processing engineer. Emissions were then input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, May 28, 2015), risks from the project were prioritized using the procedures in the 1990 CAPCOA Facility Prioritization Guidelines. The prioritization score for the facility is greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required. The AERMOD model was used, with the parameters outlined below and meteorological data for 2004-2008 from Missouri Triangle to determine the dispersion factors (i.e., the predicted concentration or X

divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the SHARP Program, which then used the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 1347-0			
Source Type	Area	Location Type	Rural
X-Length (m)	15.24	Closest Receptor (m)	Worst Case
Y-Length (m)	1.83	VOC Emission Rates (lbs)	0.29 hr 2555 yr
Release Height (m)	1.6		

III. Conclusion

The Acute and Chronic Indices are below 1.0, and there is no Cancer Risk associated with any of the Toxic Air Contaminants for this project. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

IV. Attachments

- A. RMR Request Form & Attachments
- B. Prioritization
- C. Facility Summary

ATTACHMENT VII
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1547-1347-0

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:

HYDROGEN SULFIDE (H₂S) SCAVENGER CHEMICAL STORAGE AND INJECTION OPERATION APPROVED TO OPERATE AT VARIOUS UNSPECIFIED LOCATIONS IN THE LIGHT OIL WESTERN STATIONARY SOURCE UTILIZING UP TO 5 CHEMICAL STORAGE TANKS (CAPACITY OF 500 GALLONS OR LESS) EACH EQUIPPED WITH A CATCH BASIN AND ASSOCIATED COMPONENTS INCLUDING LIQUID TRANSFER PUMP(S), VALVES, FLANGES, THREADED CONNECTIONS, FLEXIBLE PIPING, AND STINGER-TYPE INJECTION FITTINGS ON PRODUCED GAS PIPELINES (ALSO PERMITTED AS S-1548-451)

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Permittee shall notify the SJVUAPCD of each location at which an H₂S scavenger chemical storage and injection operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Chemical storage and injection operations shall not be located within 1000 feet of a school. [District Rule 4102]
6. Each chemical storage tank shall have a maximum rated capacity of 500 gallons or less and up to eight injection fittings. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

DRAFT

Arnaud Marjolle, Director of Permit Services
S-1547-1347-0 : Jul 14 2018 3:44PM - EDGEHLR : Joint Inspection NOT Required

7. Permit exempt tanks with a capacity of 250 gallons or less where the actual storage temperature does not exceed 150 deg F may be used to store H₂S scavenger chemical. [District Rule 2020] Federally Enforceable Through Title V Permit
8. The maximum throughput of each chemical storage tank shall not exceed 200 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. True vapor pressure of materials stored in each chemical tank shall not exceed 3.0 psia. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Total VOC emissions from all H₂S scavenger injection equipment shall not exceed 7.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. On a monthly basis, to determine compliance with daily throughput limits, permittee shall maintain accurate records of average daily throughput for each tank based on purchase records. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. Permittee shall maintain accurate fugitive component counts and resultant emissions calculated using Table 2-4 of U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Accurate records of the dates and amounts of chemical deliveries for each chemical injection site and fugitive component counts shall be retained and made available for District inspection upon request for a period of 5 years. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Operator shall keep records of the true vapor pressure of the chemical stored in the tank. These records shall include a laboratory analysis for TVP according to the methods described in District Rule 4623, Section 6.4 (Amended 5/19/05), MSDS which lists the true vapor pressure, or environmental data sheet which lists the true vapor pressure. Such records shall be made readily available for District inspection upon request for a period of 5 years. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Injection of scavenging chemicals shall not result in an increase in air contaminant or odorous emissions at downstream production handling facilities or wastewater separators, containers, loadouts, or disposal sites. [District Rule 2010] Federally Enforceable Through Title V Permit

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