



SEP 22 2017

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

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1135
Project # 1172776

Dear Mr. Haley:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The permits will authorize tank modifications.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authorities to Construct with Certificates 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 Authorities 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,


Arnaud Marjollet
Director of Permit Services

Enclosures

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

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
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Bakersfield, CA 93308-9725
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San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Facility Name:	Aera Energy LLC	Date:	9/14/17
Mailing Address:	PO Box 11164 Bakersfield, CA 93389	Engineer:	David Torii
Contact Person:	John Haley	Lead Engineer:	Steve Leonard
Telephone:	(661) 665-5279		
Application #(s):	S-1135-149-24 and 29 others		
Project #:	1172776		
Deemed Complete:	8/11/17		

I. Proposal

Aera Energy LLC (Aera) is applying for Authorities to Construct (ATCs) to allow tanks and the tank vapor control system (VCS) at the Anderson/Goodwin and Neely Dehydration facilities to be idle. The Anderson/Goodwin and Neely Dehydration facilities are currently serving as a standby operation and will be used only in the event that the primary facility receiving oil production in the area is inoperable. The applicant has stated that maintenance of the tanks and vapor control system, when not processing oil, is unnecessary and costly.

When idle, and not connected to the VCS, there will be no oil throughput to the tanks and VOC emissions will consist of only standing losses from low vapor pressure oil (< 0.05 psia).

Aera received their Title V Permit on 8/31/02. This modification can be classified as a Title V significant modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Area 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) <i>This rule applies to attainment pollutants only. The subject equipment only emits VOC. VOC is not an attainment pollutant; therefore, this rule does not apply.</i>
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4623	Storage of Organic Liquids (05/19/05)
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 equipment is located in the Anderson/Goodwin and Neely Dehydration facilities in Aera's Heavy Oil Western stationary source. The equipment is not located 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

The tanks and vessels at the tank battery receive production prior to custody transfer. VOC emissions from the tanks are currently controlled by a shared vapor control system in accordance with current permit conditions. The vapor control system collects vapors from the tanks for disposal in DOGGR well(s) as stated in the following thermally enhanced oil recovery (TEOR) permits S-1135-127 and '128.

Proposed Modifications

The tanks and VCS will be allowed to be idle. When idle, the TVP of the oil stored will be limited to 0.05 psia, there will be no throughput, and VOC emissions will be low. No equipment changes are required to idle the tanks and VCS.

Fluids will be diverted into the tanks only in the event of a severe upset that would necessitate activating additional storage. The VCS must be restarted prior to introducing fluids into the tank.

The following conditions will be added to the ATC which are applicable under both proposed modes of operation 1), when the tanks are made idle and 2), when they are reactivated

3. *When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Y*
4. *Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Y*
5. *When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] Y*
6. *When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Y*
7. *When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed X.X lb/day. [District Rule 2201] Y*

8. *Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Y*

V. Equipment Listing

Pre-Project Equipment Description (See PTOs in Appendix A):

- S-1135-149-23: 3,000 BBL CRUDE OIL LACT TANK ID# AG-01, WITH VAPOR CONTROL SYSTEM SHARED WITH TANKS S-1135-150, '151, '270, '301, '323, '339, AND VESSELS S-1135-346 THROUGH '351 AND '353 THROUGH '356 (ANDERSON-GOODWIN)
- S-1135-150-15: 3,000 BBL CRUDE OIL LACT TANK ID# AG-02, WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1135-149 (ANDERSON/GOODWIN LEASE)
- S-1135-151-15: 5,000 BBL REJECT TANK ID# AG-03, WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1135-149 (ANDERSON/GOODWIN LEASE)
- S-1135-270-13: 5,000 BBL FIXED ROOF OIL TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1135-149 (ANDERSON/GOODWIN LEASE)
- S-1135-281-16: 3,000 BBL FIXED ROOF SUMP REPLACEMENT TANK WITH VAPOR CONTROL SYSTEM SHARED WITH S-1135-284, -285, -286, -287, -328, '329, '330, '331, '332, '333, '334, AND '335
- S-1135-284-15: 3,000 BBL FIXED ROOF RUN TANK #5, WITH VAPOR CONTROL SYSTEM LISTED ON S-1135-281
- S-1135-285-17: 3,000 BBL FIXED ROOF LACT TANK #6 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281
- S-1135-286-17: 3,000 BBL FIXED ROOF LACT TANK #7 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281
- S-1135-287-17: 3,000 BBL FIXED ROOF LACT TANK #8 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281
- S-1135-301-17: 6,700 BBL FIXED ROOF CRUDE OIL STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-149 (ANDERSON/GOODWIN LEASE)
- S-1135-323-5: 3,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-149 - ANDERSON GOODWIN LEASE
- S-1135-328-2: 1,200 BBL FLOW SPLITTER PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)

- S-1135-329-2: 1,200 BBL FWKO PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-330-2: 1,200 BBL "GAS BUSTER" PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-331-2: 1,200 BBL UNFIRED TREATER #1 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-332-2: 1,200 BBL UNFIRED TREATER #2 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-333-2: 1,200 BBL UNFIRED TREATER #4 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-334-2: 1,200 BBL UNFIRED TREATER #6 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-335-2: 1,200 BBL UNFIRED TREATER #7 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-339-2: 3,000 BBL REJECT TANK CONNECTED TO THE VAPOR CONTROL SYSTEM LISTED ON TANK S-1135-149 (ANDERSON/GOODWIN LEASE)
- S-1135-346-1: 1,200 BBL FREE WATER KNOCK OUT (FWKO) #1 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
- S-1135-347-1: 1,000 BBL FLOW SPLITTER VESSEL CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
- S-1135-348-1: 700 BBL FLOW GAS BUSTER VESSEL CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
- S-1135-349-1: 1,000 BBL TREATER VESSEL #1 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
- S-1135-350-1: 1,000 BBL TREATER VESSEL #2 CONNECTED TO VAPOR RECOVERY SYSTEM CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
- S-1135-351-1: 1,000 BBL TREATER VESSEL #3 CONNECTED TO VAPOR RECOVERY SYSTEM CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
- S-1135-353-1: 1,000 BBL TREATER VESSEL #5 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
- S-1135-354-1: 1,000 BBL TREATER VESSEL #6 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)

- S-1135-355-1: 1,000 BBL TREATER VESSEL #7 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
- S-1135-356-1: 1,000 BBL TREATER VESSEL #8 CONNECTED TO THE VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)

Proposed ATCs:

- S-1135-149-24: MODIFICATION OF 3,000 BBL CRUDE OIL LACT TANK ID# AG-01, WITH VAPOR CONTROL SYSTEM SHARED WITH TANKS S-1135-150, '151, '270, '301, '323, '339, AND VESSELS S-1135-346 THROUGH '351 AND '353 THROUGH '356 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS
- S-1135-150-16: MODIFICATION OF 3,000 BBL CRUDE OIL LACT TANK ID# AG-02, WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1135-149 (ANDERSON/GOODWIN LEASE): AUTHORIZE IDLING OF VCS
- S-1135-151-16: MODIFICATION OF 5,000 BBL REJECT TANK ID# AG-03, WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1135-149 (ANDERSON/GOODWIN LEASE): AUTHORIZE IDLING OF VCS
- S-1135-270-14: MODIFICATION OF 5,000 BBL FIXED ROOF OIL TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1135-149 (ANDERSON/GOODWIN LEASE): AUTHORIZE IDLING OF VCS
- S-1135-281-17: MODIFICATION OF 3,000 BBL FIXED ROOF SUMP REPLACEMENT TANK WITH VAPOR CONTROL SYSTEM SHARED WITH S-1135-284, -285, -286, -287, -328, '329, '330, '331, '332, '333, '334, AND '335: AUTHORIZE IDLING OF VCS
- S-1135-284-16: MODIFICATION OF 3,000 BBL FIXED ROOF RUN TANK #5, WITH VAPOR CONTROL SYSTEM LISTED ON S-1135-281: AUTHORIZE IDLING OF VCS
- S-1135-285-18: MODIFICATION OF 3,000 BBL FIXED ROOF LACT TANK #6 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281: AUTHORIZE IDLING OF VCS
- S-1135-286-18: MODIFICATION OF 3,000 BBL FIXED ROOF LACT TANK #7 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281: AUTHORIZE IDLING OF VCS
- S-1135-287-18: MODIFICATION OF 3,000 BBL FIXED ROOF LACT TANK #8 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281: AUTHORIZE IDLING OF VCS
- S-1135-301-15: MODIFICATION OF 6,700 BBL FIXED ROOF CRUDE OIL STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-149 (ANDERSON/GOODWIN LEASE): AUTHORIZE IDLING OF VCS

- S-1135-323-6: MODIFICATION OF 3,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-149 - ANDERSON GOODWIN LEASE: AUTHORIZE IDLING OF VCS
- S-1135-328-3: MODIFICATION OF 1,200 BBL FLOW SPLITTER PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS
- S-1135-329-3: MODIFICATION OF 1,200 BBL FWKO PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS
- S-1135-330-3: MODIFICATION OF 1,200 BBL "GAS BUSTER" PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS
- S-1135-331-3: MODIFICATION OF 1,200 BBL UNFIRED TREATER #1 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS
- S-1135-332-3: MODIFICATION OF 1,200 BBL UNFIRED TREATER #2 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS
- S-1135-333-3: MODIFICATION OF 1,200 BBL UNFIRED TREATER #4 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS
- S-1135-334-3: MODIFICATION OF 1,200 BBL UNFIRED TREATER #6 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS
- S-1135-335-3: MODIFICATION OF 1,200 BBL UNFIRED TREATER #7 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS
- S-1135-339-3: MODIFICATION OF 3,000 BBL REJECT TANK CONNECTED TO THE VAPOR CONTROL SYSTEM LISTED ON TANK S-1135-149 (ANDERSON/GOODWIN LEASE): AUTHORIZE IDLING OF VCS
- S-1135-346-2: MODIFICATION OF 1,200 BBL FREE WATER KNOCK OUT (FWKO) #1 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR S-1135-149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS
- S-1135-347-2: MODIFICATION OF 1,000 BBL FLOW SPLITTER VESSEL CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR S-1135-149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS

- S-1135-348-2: MODIFICATION OF 700 BBL FLOW GAS BUSTER VESSEL CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS
- S-1135-349-2: MODIFICATION OF 1,000 BBL TREATER VESSEL #1 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS
- S-1135-350-2: MODIFICATION OF 1,000 BBL TREATER VESSEL #2 CONNECTED TO VAPOR RECOVERY SYSTEM CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS
- S-1135-351-2: MODIFICATION OF 1,000 BBL TREATER VESSEL #3 CONNECTED TO VAPOR RECOVERY SYSTEM CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS
- S-1135-353-2: MODIFICATION OF 1,000 BBL TREATER VESSEL #5 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS
- S-1135-354-2: MODIFICATION OF 1,000 BBL TREATER VESSEL #6 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS
- S-1135-355-2: MODIFICATION OF 1,000 BBL TREATER VESSEL #7 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS
- S-1135-356-2: MODIFICATION OF 1,000 BBL TREATER VESSEL #8 CONNECTED TO THE VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS

Post Project Equipment Description:

- S-1135-149: 3,000 BBL CRUDE OIL LACT TANK ID# AG-01, WITH VAPOR CONTROL SYSTEM SHARED WITH TANKS S-1135-150, '151, '270, '301, '323, '339, AND VESSELS S-1135-346 THROUGH '351 AND '353 THROUGH '356 (ANDERSON-GOODWIN)
- S-1135-150: 3,000 BBL CRUDE OIL LACT TANK ID# AG-02, WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1135-149 (ANDERSON/GOODWIN LEASE)
- S-1135-151: 5,000 BBL REJECT TANK ID# AG-03, WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1135-149 (ANDERSON/GOODWIN LEASE)
- S-1135-270: 5,000 BBL FIXED ROOF OIL TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1135-149 (ANDERSON/GOODWIN LEASE)

- S-1135-281: 3,000 BBL FIXED ROOF SUMP REPLACEMENT TANK WITH VAPOR CONTROL SYSTEM SHARED WITH S-1135-284, -285, -286, -287, -328, -329, -330, -331, -332, -333, -334, AND -335
- S-1135-284: 3,000 BBL FIXED ROOF RUN TANK #5, WITH VAPOR CONTROL SYSTEM LISTED ON S-1135-281
- S-1135-285: 3,000 BBL FIXED ROOF LACT TANK #6 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281
- S-1135-286: 3,000 BBL FIXED ROOF LACT TANK #7 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281
- S-1135-287: 3,000 BBL FIXED ROOF LACT TANK #8 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281
- S-1135-301: 6,700 BBL FIXED ROOF CRUDE OIL STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-149 (ANDERSON/GOODWIN LEASE)
- S-1135-323: 3,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-149 - ANDERSON GOODWIN LEASE
- S-1135-328: 1,200 BBL FLOW SPLITTER PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-329: 1,200 BBL FWKO PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-330: 1,200 BBL "GAS BUSTER" PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-331: 1,200 BBL UNFIRED TREATER #1 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-332: 1,200 BBL UNFIRED TREATER #2 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-333: 1,200 BBL UNFIRED TREATER #4 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-334: 1,200 BBL UNFIRED TREATER #6 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-335: 1,200 BBL UNFIRED TREATER #7 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)
- S-1135-339: 3,000 BBL REJECT TANK CONNECTED TO THE VAPOR CONTROL SYSTEM LISTED ON TANK S-1135-149 (ANDERSON/GOODWIN LEASE)

S-1135-346:	1,200 BBL FREE WATER KNOCK OUT (FWKO) #1 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
S-1135-347:	1,000 BBL FLOW SPLITTER VESSEL CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
S-1135-348:	700 BBL FLOW GAS BUSTER VESSEL CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
S-1135-349:	1,000 BBL TREATER VESSEL #1 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
S-1135-350:	1,000 BBL TREATER VESSEL #2 CONNECTED TO VAPOR RECOVERY SYSTEM CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
S-1135-351:	1,000 BBL TREATER VESSEL #3 CONNECTED TO VAPOR RECOVERY SYSTEM CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
S-1135-353:	1,000 BBL TREATER VESSEL #5 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
S-1135-354:	1,000 BBL TREATER VESSEL #6 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
S-1135-355:	1,000 BBL TREATER VESSEL #7 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)
S-1135-356:	1,000 BBL TREATER VESSEL #8 CONNECTED TO THE VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)

VI. Emission Control Technology Evaluation

When idle, the tanks will utilize their pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank. The PV-valve will reduce wind induced VOC emissions from the tank vent.

VII. General Calculations

A. Assumptions

- Facility operates 24 hours per day, 7 days per week, and 52 weeks per year.
- The tanks emit only volatile organic compounds (VOCs),
- Post-project emissions are calculated assuming the tanks and VCS are active as this represents worst case or highest emissions.
- Emissions from the tanks when idle are calculated assuming 365 days/yr with a TVP not exceeding 0.05 psia (this will be verified via TVP testing)

- When the tanks and VCS are idle (no throughput), there are no working or flashing loss emissions of VOCs.
- Tank temperature, 78° F (unheated and proposed)

B. Emission Factors

Pre-Project

Emissions are based on the EPA's "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission Factors.

Post-Project

Both the daily and annual idled PE's for each permit unit are based on the results from the District's Microsoft Excel spreadsheets for Tank Emissions - Fixed Roof Crude Oil less than 26° API located in **Appendix B**.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Permit unit	VOC - Daily PE1 (lb/day)	VOC- Annual PE1 (lb/Year)	Source
S-1135-149	10	3000	PTO
S-1135-150	2.6	938	
S-1135-151	1.8	655	
S-1135-270	3.1	1144	
S-1135-281	3.1	464	
S-1135-284	0.1	37	
S-1135-285	0.2	73	
S-1135-286	0.1	37	
S-1135-287	0.1	37	
S-1135-301	4.2	1521	
S-1135-323	0.3	95	
S-1135-328	0.0	33	
S-1135-329	0.0	24	
S-1135-330	0.0	29	
S-1135-331	0.0	28	
S-1135-332	0.0	29	
S-1135-333	0.0	17	
S-1135-334	0.0	13	
S-1135-335	0.0	12	
S-1135-339	1.9	689	
S-1135-346	0.6	219	
S-1135-347	0.6	219	
S-1135-348	0.6	219	
S-1135-349	0.6	219	

Permit unit	VOC - Daily PE1 (lb/day)	VOC- Annual PE1 (lb/Year)	Source
S-1135-350	0.6	219	
S-1135-351	0.6	219	
S-1135-353	0.6	219	
S-1135-354	0.6	219	
S-1135-355	0.6	219	
S-1135-356	0.6	219	
Total	33.5	11,065	

2. Post Project Potential to Emit (PE2)

Operation with Vapor Control		
Permit unit	VOC - Daily PE2 (lb/day)*	VOC- Annual PE2 (lb/Year)
S-1135-149	10	3000
S-1135-150	2.6	938
S-1135-151	1.8	655
S-1135-270	3.1	1144
S-1135-281	3.1	464
S-1135-284	0.1	37
S-1135-285	0.2	73
S-1135-286	0.1	37
S-1135-287	0.1	37
S-1135-301	4.2	1521
S-1135-323	0.3	95
S-1135-328	0.0	33
S-1135-329	0.0	24
S-1135-330	0.0	29
S-1135-331	0.0	28
S-1135-332	0.0	29
S-1135-333	0.0	17
S-1135-334	0.0	13
S-1135-335	0.0	12
S-1135-339	1.9	689
S-1135-346	0.6	219
S-1135-347	0.6	219
S-1135-348	0.6	219
S-1135-349	0.6	219
S-1135-350	0.6	219
S-1135-351	0.6	219
S-1135-353	0.6	219
S-1135-354	0.6	219
S-1135-355	0.6	219
S-1135-356	0.6	219
Total	33.5	11,065

Idle Operation		
Permit unit	VOC - Daily PE2 (lb/day)*	VOC- Annual PE2 (lb/Year)
S-1135-149	1.0	376
S-1135-150	1.0	376
S-1135-151	1.7	639
S-1135-270	1.7	639
S-1135-281	0.9	337
S-1135-284	1.0	376
S-1135-285	1.0	376
S-1135-286	1.0	376
S-1135-287	1.0	376
S-1135-301	2.2	793
S-1135-323	1.0	376
S-1135-328	0.3	121
S-1135-329	0.3	121
S-1135-330	0.3	121
S-1135-331	0.3	121
S-1135-332	0.3	121
S-1135-333	0.3	121
S-1135-334	0.3	121
S-1135-335	0.3	121
S-1135-339	1.0	376
S-1135-346	0.5	173
S-1135-347	0.4	145
S-1135-348	0.3	94
S-1135-349	0.4	145
S-1135-350	0.4	145
S-1135-351	0.4	145
S-1135-353	0.4	145
S-1135-354	0.4	145
S-1135-355	0.4	145
S-1135-356	0.4	145
Total	20.9	7811

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 VOC emissions; therefore, SSPE1 calculations are not necessary.

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.

Since facility emissions are already above the Offset and Major Source Thresholds for VOC emissions, 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 VOC emissions and will remain a Major Source for VOC. No change in other pollutants are proposed or expected as a result of this project.

6. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed pollutant-by-pollutant for each unit within the project to calculate the QNEC, and if applicable, to determine the amount of offsets required.

Pursuant to District Rule 2201, BE = PE1 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 District Rule 2201.

The subject tanks currently have a vapor control system capable of reducing VOCs by at least 95% by weight; therefore, they are considered Clean Emissions Units.

Therefore, the BE is equal to the pre-project potential to emit (PE1).

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 VOC, 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?
VOC	11,065	50,000	n

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 determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. Emission decreases may not cancel out the increases for this determination.

For new non-fugitive emissions from the subject tanks, the increase in emissions is equal to the PE2 (idle emissions) for each tank included in this project.

The project's combined total emission increases 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	7,811*	0	Yes
PM ₁₀	0	30,000	No
SO _x	0	80,000	No

*New point source emissions

Since there are new VOC emissions associated with non-operation of the vapor control system, this project constitutes a Federal Major Modification and no further analysis is required.

Federal Offset Quantities:

The Federal offset quantity is 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 pollutants for which the project is a Federal Major Modification have Federal offset quantities. The calculated Federal offset quantity, listed in the table below, is entered into the Major Modification tracking spreadsheet under the heading "Federal Offset Quantity"

VOCs		Federal Offset Ratio	1.5
Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	Emissions Change (lb/yr)
ATCs S-1135-149-24 and 29 others	0	7,811	7,811
Net Emission Change (lb/year):			7,811
Federal Offset Quantity: (NEC * 1.5)			11,717

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*:

- Any new emissions unit with a potential to emit exceeding two pounds per day,
- The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- 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. Therefore BACT for new 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, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

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

$$\text{AIPE} = \text{PE2} - \text{HAPE}$$

Where,

AIPE = Adjusted Increase in Permitted Emissions, (lb/day)

PE2 = Post-Project Potential to Emit, (lb/day)

HAPE = Historically Adjusted Potential to Emit, (lb/day)

$$\text{HAPE} = \text{PE1} \times (\text{EF2}/\text{EF1})$$

Where,

PE1 = The emissions unit's PE prior to modification or relocation, (lb/day)

EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1

EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

$$\text{AIPE} = \text{PE2} - (\text{PE1} * (\text{EF2} / \text{EF1}))$$

$$\text{EF1} = 0.05 \text{ (95\% Control)}, \text{EF2} = 0.9 \text{ (10\% control w/PV vent)}$$

Since EF2 is greater than EF1, EF2/EF1 is set to 1

$$\text{Therefore, AIPE} = \text{PE2} - \text{PE1}$$

For all of the project emissions units PE2 - PE1 is less than 2.0 lb/day, therefore AIPE is < 2.0.

As demonstrated above, the AIPE is not greater than 2.0 lb/day for each unit. Therefore, BACT is not triggered for modification purposes.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does constitute a Federal Major Modification for VOC emissions. Therefore BACT is triggered for VOC for all emissions units in the project for which there is an emission increase.

2. BACT Guideline

There is not an existing BACT Guideline for temporary disconnection of tank and VCS when in standby mode. The BACT analysis will be based on the BACT Guidelines for fixed roof tanks which are BACT Guidelines 7.3.1 and 7.3.2 (see **Appendix C**).

3. Top-Down BACT Analysis

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

VOC:

When tanks and VCS are idle (non-operational), the tanks shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank and and TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, VCS must be reactivated and shall have a VOC control efficiency of at least 99%.

When tanks and VCS are idle, the monitoring and recordkeeping requirements specified in this permit do not apply except for the following: biennial true vapor pressure measurements and records shall continue and the permittee shall maintain daily records of tank throughput and records of whether tank served by vapor recovery system.

B. Offsets

1. Offset Applicability

The total project annual emission increase ($\Sigma [PE2 - PE1]$, for either vapor controlled of idled operation, for all units in the project) averages less than or equal to 0.5 lb/day which therefore rounds to zero for the purposes of triggering offsets. Therefore, offset calculations are not necessary and offsets will not be required for this project.

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,
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant, and/or
- 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 is a Federal Major Modification. Therefore, public noticing for 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. There are no new emissions units associated with this project. 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?
VOC	>20,000	>20,000	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	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
VOC	0	20,000 lb/year	No

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 constitutes 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 for triggering a Federal Major Modification. 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.

Proposed Rule 2201 (DEL) Conditions:

A new DEL condition added to the ATCs is as follows.

Example:

VOC emission rate from the tank when idle shall not exceed X.X lb/day. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

The ATCs will include the following new monitoring condition:

When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required.. [District Rules 2201 and 4623] Y

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following condition(s) are listed on the permit to operate:

The ATCs will include the following new recordkeeping condition:

Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Y

4. Reporting

The ATCs will include the following new reporting condition:

Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Y

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. Section 3.29 defines a significant permit modification as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

The project is Federal Major Modification and therefore is also a Title V Significant Modification. 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 Title V Compliance Certification form is included in **Appendix D**.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates the New Source Performance Standards from 40 CFR Part 60. 40 CFR Part 60, Subparts K, Ka, Kb and OOOO could potentially apply to the tanks located at this facility. However, Subparts K, Ka and Kb do not apply to storage vessels less than 10,000 barrels used for petroleum or condensate that is stored, processed and/or treated at a drilling and production facility prior to transfer. Subpart OOOO has no standards for tanks with annual VOC emissions less than 6 tons per year.

Therefore, the requirements of these subparts are not applicable to this project.

Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringlemann 1 or equivalent to 20% opacity.

As long as the equipment is properly maintained and operated, compliance with visible emissions limits is expected under normal operating conditions.

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.

As demonstrated above, there are no increases in emissions associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

Rule 4623, Storage of Organic Liquids

According to Section 4.4, tanks exclusively receiving and or storing organic liquids with a TVP less than 0.5 psia are exempt from this Rule except for complying with Sections 6.2, 6.3.6, 6.4 and 7.2. The tanks are currently operating in compliance with the rule. New conditions applicable when the tanks and VCS are idle will be added to the permits as follows:

When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] Y

When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Y

Compliance with the requirements of 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.

Greenhouse Gas (GHG) Significance Determination

Oil and gas operations in Kern County must comply with the *Kern County Zoning Ordinance – 2015 (C) Focused on Oil and Gas Local Permitting*. In 2015, Kern County revised the Kern County Zoning Ordinance Focused on Oil and Gas Activities (Kern Oil and Gas Zoning Ordinance) in regards to future oil and gas exploration, and drilling and production of hydrocarbon resource projects occurring within Kern County.

Kern County served as lead agency for the revision to their ordinance under the California Environmental Quality Act (CEQA), and prepared an Environmental Impact Report (EIR) that was certified on November 9, 2015. The EIR evaluated and disclosed to the public the environmental impacts associated with the growth of oil and gas exploration in Kern County, and determined that such growth will result in significant GHG impacts in the San Joaquin Valley. As such, the EIR included mitigation measures for GHG.

The District is a Responsible Agency for the project because of its discretionary approval power over the project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CEQA Guidelines §15381). As a Responsible Agency, the District is limited to mitigating or avoiding impacts for which it has statutory authority. The District does not have statutory authority for regulating GHGs. The District has determined that the applicant is responsible for implementing GHG mitigation measures imposed in the EIR by the Kern County for the Kern County Zoning Ordinance.

District CEQA Findings

The proposed project is located in Kern County and is thus subject to the Kern County Zoning Ordinance – 2015 (C) Focused on Oil and Gas Local Permitting. The Kern County Zoning Ordinance was developed by the Kern County Planning Agency as a comprehensive set of goals, objectives, policies, and standards to guide development, expansion, and operation of oil and gas exploration within Kern County.

In 2015, Kern County revised their *Kern County Zoning Ordinance* in regards to exploration, drilling and production of hydrocarbon resources projects. Kern County, as the lead agency, is the agency that will enforce the mitigation measures identified the EIR, including the mitigation requirements of the Oil and Gas ERA. As a responsible agency the District complies with CEQA by considering the EIR prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project involved (CCR §15096). The District has reviewed the EIR prepared by Kern County, the Lead Agency for the project, and finds it to be adequate. The District also prepared a full findings document. The full findings document, *California Environmental Quality Act*

(CEQA) *Statement of Findings for the Kern County Zoning Ordinance EIR* contains the details of the District's findings regarding the Project. The District's implementation of the Kern Zoning Ordinance and its EIR applies to ATC applications received for any new/modified equipment used in oil/gas production in Kern County, including new wells. The full findings applies to the Project and the Project's related activity equipment(s) is covered under the Kern Zoning Ordinance. To reduce project related impacts on air quality, the District evaluates emission controls for the project such as Best Available Control Technology (BACT) under District Rule 2201 (New and Modified Stationary Source Review). In addition, the District is requiring the applicant to surrender emission reduction credits (ERC) for stationary source emissions above the offset threshold.

Thus, the District concludes that through a combination of project design elements, permit conditions, and the Oil and Gas ERA, the project will be fully mitigated to result in no net increase in emissions. Pursuant to CCR §15096, prior to project approval and issuance of ATCs the District prepared findings.

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 revision to the *Kern County Zoning Ordinance* went through an extensive public process that included a Notice of Preparation, a preparation of an EIR, scoping meetings, and public hearings. The process led to the certification of the final EIR and approval of the revised *Kern County Zoning Ordinance* in November 2015 by the Kern County Board of Supervisors. As mentioned above, the proposed project will be fully mitigated and will result in no net increase in emissions. In addition, the proposed project is not located at a facility of concern; 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. Pending a successful public noticing period, issue the ATCs subject to the permit conditions on the attached draft ATCs in **Appendix E**.

X. Billing Information

This project's modification does not result in a fee change.

Appendixes

- A: Current PTOs
- B: Idled PE2 Emissions
- C: Title V Compliance Certification Form
- D: BACT Guidelines and BACT Analysis
- E: Draft ATCs

Appendix A Current PTOs

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-149-23

EXPIRATION DATE: 05/31/2021

SECTION: NW 21 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL CRUDE OIL LACT TANK ID# AG-01, WITH VAPOR CONTROL SYSTEM SHARED WITH TANKS S-1135-150, '151, '270, '301, '323, '339, AND VESSELS S-1135-346 THROUGH '351 AND '353 THROUGH '356 (ANDERSON-GOODWIN)

PERMIT UNIT REQUIREMENTS

1. Vapor control system shall contain vapor control system piping network and vapor compression system consisting of vapor compressor(s), air-cooled heat exchanger, inlet scrubber, pump, and discharge scrubber. Collected vapors shall be compressed to the Andersen-Goodwin Lease TEOR skid S-1135-129 for disposal. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Compressor suction and knockout drum liquids shall be piped only to vapor-controlled tanks. [District Rule 2520] Federally Enforceable Through Title V Permit
3. The fugitive VOC emissions from this tank and the vapor control system shall not exceed 10.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Maximum VOC content of hydrocarbons in tank vapor shall not exceed 20% by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Permittee shall measure VOC content of tank vapor annually using EPA Method 18, 25, 25a, 25b, or ASTM D-1945. [District Rule 4623] Federally Enforceable Through Title V Permit
6. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts for tank and associated vapor recovery system and resulting emissions calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017. [District Rule 2080] Federally Enforceable Through Title V Permit
8. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. AG DEHY VAPOR RECOVERY CONDITION: The tank shall be equipped with a vapor loss prevention system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99%. [District Rule 2201] Federally Enforceable Through Title V Permit
10. AG DEHY VAPOR RECOVERY CONDITION: Except during periods of tank cleaning, inspections, and maintenance allowed by this permit, tank shall be connected to a vapor control system that is functional and operating as designed. [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.

11. AG DEHY VAPOR RECOVERY CONDITION: All tank gauging, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and leak-free (as defined in Rule 4623) except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
12. AG DEHY VAPOR RECOVERY CONDITION: Tanks seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
13. AG DEHY INSPECTION CONDITION: A gas leak is a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
14. AG DEHY VAPOR RECOVERY CONDITION: Operator shall monitor vapor control system pressures on quarterly basis to ensure that system pressure does not exceed pressure relief valve setting. [District Rule 2520] Federally Enforceable Through Title V Permit
15. AG DEHY TESTING CONDITION: Permittee shall conduct true vapor pressure (TVP) and API gravity testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
16. AG DEHY TESTING CONDITION: For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
17. AG DEHY TESTING CONDITION: Permittee shall retain records of TVP and API gravity testing for District inspection upon request. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 2080] Federally Enforceable Through Title V Permit
18. AG DEHY TANK CLEANING CONDITION: This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit
19. AG DEHY TANK CLEANING CONDITION: There shall be no throughput during cleaning of this tank. [District Rule 2080] Federally Enforceable Through Title V Permit
20. AG DEHY TANK CLEANING CONDITION: Prior to opening the tank to allow tank cleaning the following procedure must be followed. Operate PV valve and vapor recovery system during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed. Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
21. AG DEHY TANK CLEANING CONDITION: Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor recovery system for at least 2 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3 V / Q$, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit
22. AG DEHY TANK CLEANING CONDITION: Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] 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.

23. AG DEHY VAPOR RECOVERY CONDITION: Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2201] Federally Enforceable Through Title V Permit
24. AG DEHY VAPOR RECOVERY CONDITION: The pressure transmitters shall be inspected and maintained in good operating conditions. The inspections shall be conducted on a quarterly basis. Replacing and repairing of each pressure transmitters shall not exceed one hour per day. [District Rule 2520] Federally Enforceable Through Title V Permit
25. AG DEHY INSPECTION CONDITION: All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520] Federally Enforceable Through Title V Permit
26. AG DEHY INSPECTION CONDITION: A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520] Federally Enforceable Through Title V Permit
27. AG DEHY INSPECTION CONDITION: An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520] Federally Enforceable Through Title V Permit
28. AG DEHY INSPECTION CONDITION: Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520] Federally Enforceable Through Title V Permit
29. AG DEHY INSPECTION CONDITION: Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520] Federally Enforceable Through Title V Permit
30. AG DEHY INSPECTION CONDITION: If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520] Federally Enforceable Through Title V Permit
31. AG DEHY INSPECTION CONDITION: Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520] Federally Enforceable Through Title V Permit
32. AG DEHY VAPOR RECOVERY CONDITION: Permittee shall maintain records of the date and duration of the vapor control system maintenance operation. [District Rule 1070] 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.

33. AG DEHY TESTING CONDITION: The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-150-15

EXPIRATION DATE: 05/31/2021

SECTION: 21 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL CRUDE OIL LACT TANK ID# AG-02, WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1135-149 (ANDERSON/GOODWIN LEASE)

PERMIT UNIT REQUIREMENTS

1. Tank shall be vented only to vapor control system listed on S-1135-149. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The fugitive VOC emissions from this tank and the vapor control system shall not exceed 2.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Maximum VOC content of hydrocarbons in tank vapor shall not exceed 20% by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
4. Permittee shall measure VOC content of tank vapor annually using EPA Method 18, 25, 25a, 25b, or ASTM D-1945. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Tank shall be equipped with stored liquid temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
8. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40 CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. This unit is subject to the AG Dehy Vapor Recovery, Inspection, Testing, and Tank Cleaning Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-151-15

EXPIRATION DATE: 05/31/2021

SECTION: 21 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL REJECT TANK ID# AG-03, WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1135-149
(ANDERSON/GOODWIN LEASE)

PERMIT UNIT REQUIREMENTS

1. Tank shall be vented only to vapor control system listed on S-1135-149. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The fugitive VOC emissions from this tank and the vapor control system shall not exceed 1.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Maximum VOC content of hydrocarbons in tank vapor shall not exceed 20% by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
4. Permittee shall measure VOC content of tank vapor annually using EPA Method 18, 25, 25a, 25b, or ASTM D-1945. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Tank shall be equipped with stored liquid temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
8. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. This unit is subject to the AG Dehy Vapor Recovery, Inspection, Testing, and Tank Cleaning Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-270-13

EXPIRATION DATE: 05/31/2021

SECTION: NW21 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF OIL TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1135-149
(ANDERSON/GOODWIN LEASE)

PERMIT UNIT REQUIREMENTS

1. Tank shall be vented only to vapor control system listed on S-1135-149. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The fugitive VOC emissions from this tank and the vapor control system shall not exceed 3.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Maximum VOC content of hydrocarbons in tank vapor shall not exceed 20% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall measure VOC content of tank vapor annually using EPA Method 18, 25, 25a, 25b, or ASTM D-1945. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Tank shall be equipped with stored liquid temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
6. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
7. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. This unit is subject to the AG Dehy Vapor Recovery, Inspection, Testing, and Tank Cleaning Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-281-16

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL FIXED ROOF SUMP REPLACEMENT TANK WITH VAPOR CONTROL SYSTEM SHARED WITH S-1135-284, -285, -286, -287, -328, '-329, '-330, '-331, '-332, '-333, '-334, AND '-335

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The tank shall be equipped with a vapor control system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99%. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Vapor control system shall discharge to unit S-1135-128. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All associated tanks shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All tank gauge hatches, thief hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight (as defined in Rule 4623) except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight (as defined in Rule 4623) condition. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Tank shall be equipped with stored liquid temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Compressor suction and knockout drum liquids shall be piped only to vapor-controlled tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The operator shall ensure that the vapor control system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Operator shall monitor vapor control system compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. Tank vapor control system efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor control system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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12. All non-condensable hydrocarbon vapors shall be directed to the vapor control system authorized by permit S-1135-128 either directly through bypass piping, or through tank battery vapor control skid. [District Rule 2201] Federally Enforceable Through Title V Permit
13. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.45 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
16. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 4623] Federally Enforceable Through Title V Permit
18. Permittee shall retain records of TVP and API gravity testing for District inspection upon request. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rules 4623] Federally Enforceable Through Title V Permit
19. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit
20. There shall be no throughput during cleaning of this tank. [District Rule 2080] Federally Enforceable Through Title V Permit
21. Prior to opening the tank to allow tank cleaning the following procedure must be followed. Operate PV valve and vapor control system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor control system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
22. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor control system for at least 2 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3 V / Q$, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit
23. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit
24. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
27. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
28. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. Permittee shall keep accurate records of throughput, storage temperature, and TVP of liquids stored in each tank and such records shall be made readily available for District inspection at any time for a time period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. Permittee shall maintain records of the date and duration of the vapor control system maintenance operation. Such records shall be made available for district inspection upon request for a period of at least five years. [District Rule 2201 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
35. The fugitive VOC emissions from this tank and tank vapor control system shall not exceed 3.1 lb/day [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.

36. Permittee shall maintain with the permit accurate fugitive component counts for tank and the tank vapor control system and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999) Oil and Gas Production Screening Value Range emission factors. [District Rule 2201] Federally Enforceable Through Title V Permit
37. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

Facility Name: AERA ENERGY LLC

Location: HEAVY OIL WESTERN STATIONARY SOURCE, MIDWAY-SUNSET, KERN COUNTY, CA

S-1135-281-16 : Aug 20 2017 11:43AM - TORID

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-284-15

EXPIRATION DATE: 05/31/2021

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL FIXED ROOF RUN TANK #5, WITH VAPOR CONTROL SYSTEM LISTED ON S-1135-281

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The tank shall be equipped with a vapor control system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99%. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit
4. All tank gauge hatches, thief hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight (as defined in Rule 4623) except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight (as defined in Rule 4623) condition. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Tank shall be equipped with stored liquid temperature indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.45 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)". Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 4623] 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.

12. Permittee shall retain records of TVP and API gravity testing for District inspection upon request. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rules 4623] Federally Enforceable Through Title V Permit
13. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit
14. There shall be no throughput during cleaning of this tank. [District Rule 2080] Federally Enforceable Through Title V Permit
15. Prior to opening the tank to allow tank cleaning the following procedure must be followed. Operate PV valve and vapor control system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor control system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor control system for at least 2 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3 V / Q$, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit
18. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit
19. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] 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.

23. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
24. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. Permittee shall keep accurate records of throughput, storage temperature, and TVP of liquids stored in each tank and such records shall be made readily available for District inspection at any time for a time period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
27. Permittee shall maintain records of the date and duration of the vapor control system maintenance operation. Such records shall be made available for district inspection upon request for a period of at least five years. [District Rule 2201 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
28. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
29. The fugitive VOC emissions from this tank shall not exceed 0.1 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit
30. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999) Oil and Gas Production Screening Value Range emission factors. [District NSR Rule] Federally Enforceable Through Title V Permit
31. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-285-17

EXPIRATION DATE: 05/31/2021

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL FIXED ROOF LACT TANK #6 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The tank shall be equipped with a vapor control system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99%. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit
4. All tank gauge hatches, thief hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight (as defined in Rule 4623) except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight (as defined in Rule 4623) condition. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Tank shall be equipped with stored liquid temperature indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.45 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 4623] 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.

12. Permittee shall retain records of TVP and API gravity testing for District inspection upon request. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rules 4623] Federally Enforceable Through Title V Permit
13. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit
14. There shall be no throughput during cleaning of this tank. [District Rule 2080] Federally Enforceable Through Title V Permit
15. Prior to opening the tank to allow tank cleaning the following procedure must be followed. Operate PV valve and vapor control system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor control system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor control system for at least 2 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3 V / Q$, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit
18. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit
19. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] 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.

23. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
24. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. Permittee shall keep accurate records of throughput, storage temperature, and TVP of liquids stored in each tank and such records shall be made readily available for District inspection at any time for a time period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
27. Permittee shall maintain records of the date and duration of the vapor control system maintenance operation. Such records shall be made available for district inspection upon request for a period of at least five years. [District Rule 2201 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
28. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
29. The fugitive VOC emissions from this tank shall not exceed 0.2 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit
30. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999) Oil and Gas Production Screening Value Range emission factors. [District NSR Rule] Federally Enforceable Through Title V Permit
31. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-286-17

EXPIRATION DATE: 05/31/2021

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL FIXED ROOF LACT TANK #7 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The tank shall be equipped with a vapor control system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99%. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit
4. All tank gauge hatches, thief hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight (as defined in Rule 4623) except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight (as defined in Rule 4623) condition. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Tank shall be equipped with stored liquid temperature indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.45 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)". Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 4623] 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.

12. Permittee shall retain records of TVP and API gravity testing for District inspection upon request. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rules 4623] Federally Enforceable Through Title V Permit
13. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit
14. There shall be no throughput during cleaning of this tank. [District Rule 2080] Federally Enforceable Through Title V Permit
15. Prior to opening the tank to allow tank cleaning the following procedure must be followed. Operate PV valve and vapor control system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor control system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor control system for at least 2 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3 V / Q$, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit
18. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit
19. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] 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.

23. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
24. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. Permittee shall keep accurate records of throughput, storage temperature, and TVP of liquids stored in each tank and such records shall be made readily available for District inspection at any time for a time period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
27. Permittee shall maintain records of the date and duration of the vapor control system maintenance operation. Such records shall be made available for district inspection upon request for a period of at least five years. [District Rule 2201 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
28. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
29. The fugitive VOC emissions from this tank shall not exceed 0.1 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit
30. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999) Oil and Gas Production Screening Value Range emission factors. [District NSR Rule] Federally Enforceable Through Title V Permit
31. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-287-17

EXPIRATION DATE: 05/31/2021

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL FIXED ROOF LACT TANK #8 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The tank shall be equipped with a vapor control system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99%. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit
4. All tank gauge hatches, thief hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight (as defined in Rule 4623) except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight (as defined in Rule 4623) condition. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Tank shall be equipped with stored liquid temperature indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.45 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)". Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 4623] 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.

Facility Name: AERA ENERGY LLC

Location: HEAVY OIL WESTERN STATIONARY SOURCE, MIDWAY-SUNSET, KERN COUNTY, CA

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12. Permittee shall retain records of TVP and API gravity testing for District inspection upon request. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rules 4623] Federally Enforceable Through Title V Permit
13. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit
14. There shall be no throughput during cleaning of this tank. [District Rule 2080] Federally Enforceable Through Title V Permit
15. Prior to opening the tank to allow tank cleaning the following procedure must be followed. Operate PV valve and vapor control system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor control system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor control system for at least 2 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3 V / Q$, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit
18. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit
19. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] 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.

23. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
24. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. Permittee shall keep accurate records of throughput, storage temperature, and TVP of liquids stored in each tank and such records shall be made readily available for District inspection at any time for a time period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
27. Permittee shall maintain records of the date and duration of the vapor control system maintenance operation. Such records shall be made available for district inspection upon request for a period of at least five years. [District Rule 2201 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
28. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
29. The fugitive VOC emissions from this tank shall not exceed 0.1 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit
30. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999) Oil and Gas Production Screening Value Range emission factors. [District NSR Rule] Federally Enforceable Through Title V Permit
31. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-301-14

EXPIRATION DATE: 05/31/2021

SECTION: NW21 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

6,700 BBL FIXED ROOF CRUDE OIL STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-149 (ANDERSON/GOODWIN LEASE)

PERMIT UNIT REQUIREMENTS

1. Tank shall be vented only to vapor control listed on S-1135-149. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The fugitive VOC emissions from this tank and the vapor control system shall not exceed 4.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Maximum VOC content of hydrocarbons in tank vapor shall not exceed 20% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall measure VOC content of tank vapor annually using EPA Method 18, 25, 25a, 25b, or ASTM D-1945. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Tank shall be equipped with stored liquid temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
8. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. This unit is subject to the AG Dehy Vapor Recovery, Inspection, Testing, and Tank Cleaning Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-323-5

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

3,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-149 - ANDERSON GOODWIN LEASE

PERMIT UNIT REQUIREMENTS

1. Tank shall vent only to the vapor control skid inlet in permit S-1135-129. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The fugitive VOC emissions from this tank and the vapor control system shall not exceed 0.26 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall measure VOC content of tank vapor annually using EPA Method 18, 25, 25a, 25b, or ASTM D-1945. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
6. This unit has a storage capacity less than 420,000 gallons (1,589.874 cubic meters) and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
7. This unit is subject to the AG Dehy Vapor Recovery, Inspection, Testing, and Tank Cleaning Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

Facility Name: AERA ENERGY LLC

Location: HEAVY OIL WESTERN STATIONARY SOURCE, MIDWAY-SUNSET, KERN COUNTY, CA

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-328-2

EXPIRATION DATE: 05/31/2021

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,200 BBL FLOW SPLITTER PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)

PERMIT UNIT REQUIREMENTS

1. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
2. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
5. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
7. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
8. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] 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.

9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
12. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-329-2

EXPIRATION DATE: 05/31/2021

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,200 BBL FWKO PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)

PERMIT UNIT REQUIREMENTS

1. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
2. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
5. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
7. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
8. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] 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.

9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
12. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-330-2

EXPIRATION DATE: 05/31/2021

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,200 BBL "GAS BUSTER" PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)

PERMIT UNIT REQUIREMENTS

1. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
2. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
5. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
7. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
8. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] 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.

9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
12. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-331-2

EXPIRATION DATE: 05/31/2021

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,200 BBL UNFIRED TREATER #1 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)

PERMIT UNIT REQUIREMENTS

1. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
2. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
5. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
7. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
8. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] 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.

9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
12. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-332-2

EXPIRATION DATE: 05/31/2021

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,200 BBL UNFIRED TREATER #2 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)

PERMIT UNIT REQUIREMENTS

1. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
2. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
5. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
7. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
8. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] 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.

9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
12. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-333-2

EXPIRATION DATE: 05/31/2021

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,200 BBL UNFIRED TREATER #4 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)

PERMIT UNIT REQUIREMENTS

1. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
2. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
5. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
7. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
8. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] 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.

9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
12. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-334-2

EXPIRATION DATE: 05/31/2021

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,200 BBL UNFIRED TREATER #6 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)

PERMIT UNIT REQUIREMENTS

1. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
2. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
5. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
7. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
8. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] 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.

9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
12. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-335-2

EXPIRATION DATE: 05/31/2021

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,200 BBL UNFIRED TREATER #7 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY)

PERMIT UNIT REQUIREMENTS

1. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
2. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
5. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
7. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
8. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] 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.

9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
12. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-339-2

EXPIRATION DATE: 05/31/2021

SECTION: 21 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL REJECT TANK CONNECTED TO THE VAPOR CONTROL SYSTEM LISTED ON TANK S-1135-149
(ANDERSON/GOODWIN LEASE)

PERMIT UNIT REQUIREMENTS

1. The fugitive VOC emissions from this tank and the vapor control system shall not exceed 1.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Maximum VOC content of hydrocarbons in tank vapor shall not exceed 20% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Permittee shall measure VOC content of tank vapor annually using EPA Method 18, 25, 25a, 25b, or ASTM D-1945. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
6. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40 CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
7. Tank shall be vented only to vapor control listed on S-1135-149. [District Rule 2201] Federally Enforceable Through Title V Permit
8. This unit is subject to the AG Dehy Vapor Recovery, Inspection, Testing, and Tank Cleaning Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-346-1

EXPIRATION DATE: 05/31/2021

SECTION: nw21 **TOWNSHIP:** 31s **RANGE:** 22e

EQUIPMENT DESCRIPTION:

1,200 BBL FREE WATER KNOCK OUT (FWKO) #1 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-347-1

EXPIRATION DATE: 05/31/2021

SECTION: nw21 **TOWNSHIP:** 31s **RANGE:** 22e

EQUIPMENT DESCRIPTION:

1,000 BBL FLOW SPLITTER VESSEL CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR S-1135-149 (ANDERSON-GOODWIN)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-348-1

EXPIRATION DATE: 05/31/2021

SECTION: nw21 **TOWNSHIP:** 31s **RANGE:** 22e

EQUIPMENT DESCRIPTION:

700 BBL FLOW GAS BUSTER VESSEL CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129
AND/OR '1-149 (ANDERSON-GOODWIN)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-349-1

EXPIRATION DATE: 05/31/2021

SECTION: nw21 **TOWNSHIP:** 31s **RANGE:** 22e

EQUIPMENT DESCRIPTION:

1,000 BBL TREATER VESSEL #1 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR S-1135-149 (ANDERSON-GOODWIN)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-350-1

EXPIRATION DATE: 05/31/2021

SECTION: ne21 **TOWNSHIP:** 31s **RANGE:** 22e

EQUIPMENT DESCRIPTION:

1,000 BBL TREATER VESSEL #2 CONNECTED TO VAPOR RECOVERY SYSTEM CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR S-1135-149 (ANDERSON-GOODWIN)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

Facility Name: AERA ENERGY LLC

Location: HEAVY OIL WESTERN STATIONARY SOURCE, MIDWAY-SUNSET, KERN COUNTY, CA

S-1135-350-1 Aug 20 2017 11:44AM - TORID

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-351-1

EXPIRATION DATE: 05/31/2021

SECTION: nw21 **TOWNSHIP:** 31s **RANGE:** 22e

EQUIPMENT DESCRIPTION:

1,000 BBL TREATER VESSEL #3 CONNECTED TO VAPOR RECOVERY SYSTEM CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

Facility Name: AERA ENERGY LLC

Location: HEAVY OIL WESTERN STATIONARY SOURCE, MIDWAY-SUNSET, KERN COUNTY, CA

S-1135-351-1 : Aug 20 2017 11:44AM - TORID

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-353-1

EXPIRATION DATE: 05/31/2021

SECTION: nw21 **TOWNSHIP:** 31s **RANGE:** 22e

EQUIPMENT DESCRIPTION:

1,000 BBL TREATER VESSEL #5 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR S-1135-149 (ANDERSON-GOODWIN)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-354-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

1,000 BBL TREATER VESSEL #6 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR S-1135-149 (ANDERSON-GOODWIN)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-355-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

1,000 BBL TREATER VESSEL #7 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR S-1135-149 (ANDERSON-GOODWIN)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1135-356-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

1,000 BBL TREATER VESSEL #8 CONNECTED TO THE VAPOR CONTROL SYSTEMS LISTED ON S-1135-129
AND/OR S-1135-149 (ANDERSON-GOODWIN)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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

Appendix B

Idled PE2 Emissions

Tank Input Data	
permit number (S-xxxx-xx-xx)	
facility tank I.D.	S-1135-149
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	--
tank ROC vapor pressure (psia)	1
liquid bulk storage temperature, T_b (°F)	0.05
is this a constant-level tank? {yes, no}	78
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	yes
breather vent pressure setting range (psi)	no
diameter of tank (feet)	0.06
capacity of tank (bbl)	30
conical or dome roof? {c, d}	3,000
shell height of tank (feet)	c
average liquid height (feet)	24
are the roof and shell the same color? {yes,no}	5
For roof:	yes
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	
condition {1: Good, 2: Poor}	3
	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		
maximum daily fluid throughput (bbl)	A	B
maximum annual fluid throughput (bbl)		
-----This row only used if flashing losses occur in this tank-----	0	0
-----This row only used if flashing losses occur in this tank-----		
molecular weight, Mw (lb/lb-mol)		
		100

Calculated Values		
daily maximum ambient temperature, T_{ax} (°F)	A	B
daily minimum ambient temperature, T_{an} (°F)		77.65
daily total solar insulation factor, I (Btu/ft ² -day)		53.15
atmospheric pressure, P_a (psia)		1648.9
water vapor pressure at daily maximum liquid surface temperature (T_{lx}), P_{vx} (psia)		14.47
water vapor pressure at daily minimum liquid surface temperature (T_{ln}), P_{vn} (psia)	84.9	0.6009
water vapor pressure at average liquid surface temperature (T_{la}), P_{va} (psia)	74.1	0.4223
roof outage, H_{ro} (feet)	79.5	0.5000
vapor space volume, V_v (cubic feet)		0.3125
paint factor, alpha		13651.20
vapor density, W_v (lb/cubic foot)		0.54
daily vapor temperature range, delta T_v (degrees Rankine)		0.0009
vapor space expansion factor, K_e		42.57
		0.0874

Results		
Standing Storage Loss	lb/year	lb/day
Working Loss	376	1.03
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	376	1.0

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-150
facility tank I.D.	--
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, T_b (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30
capacity of tank (bbl)	3,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	24
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	3
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		-
maximum annual fluid throughput (bbl)	0	0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T_{ax} (°F)		77.65
daily minimum ambient temperature, T_{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P_a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T_{lx}), P_{vx} (psia)	84.9	0.6009
water vapor pressure at daily minimum liquid surface temperature (T_{ln}), P_{vn} (psia)	74.1	0.4223
water vapor pressure at average liquid surface temperature (T_{la}), P_{va} (psia)	79.5	0.5000
roof outage, H_{ro} (feet)		0.3125
vapor space volume, V_v (cubic feet)		13651.20
paint factor, alpha		0.54
vapor density, W_v (lb/cubic foot)		0.0009
daily vapor temperature range, delta T_v (degrees Rankine)		42.57
vapor space expansion factor, K_e		0.0874

Results	lb/year	lb/day
Standing Storage Loss	376	1.03
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	376	1.0

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-151
facility tank I.D.	—
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, T _b (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	39
capacity of tank (bbl)	5,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	24
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	3
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		
	A	B
maximum daily fluid throughput (bbl)		—
maximum annual fluid throughput (bbl)	0	0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		
molecular weight, Mw (lb/lb-mol)		100

Calculated Values		
	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	84.9	0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	74.1	0.4223
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	79.5	0.5000
roof outage, H _{ro} (feet)		0.4063
vapor space volume, V _v (cubic feet)		23182.52
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0009
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.0874

Results		
	lb/year	lb/day
Standing Storage Loss	639	1.75
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	639	1.7

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-270
facility tank I.D.	-
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, Tb (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	39
capacity of tank (bbl)	5,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	24
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	3
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			-
maximum annual fluid throughput (bbl)		0	0
-----This row only used if flashing losses occur in this tank-----			
-----This row only used if flashing losses occur in this tank-----			
molecular weight, Mw (lb/lb-mol)			100

Calculated Values		A	B
daily maximum ambient temperature, T _{ax} (°F)			77.65
daily minimum ambient temperature, T _{an} (°F)			53.15
daily total solar insulation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P _a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	84.9		0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	74.1		0.4223
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	79.5		0.5000
roof outage, H _{ro} (feet)			0.4063
vapor space volume, V _v (cubic feet)			23182.52
paint factor, alpha			0.54
vapor density, W _v (lb/cubic foot)			0.0009
daily vapor temperature range, delta T _v (degrees Rankine)			42.57
vapor space expansion factor, K _e			0.0874

Results		lb/year	lb/day
Standing Storage Loss		639	1.75
Working Loss		N/A	N/A
Flashing Loss		N/A	N/A
Total Uncontrolled Tank VOC Emissions		639	1.7

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-281
facility tank I.D.	--
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, Tb (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	37
capacity of tank (bbl)	3,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	16
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof: color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	3
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		-
maximum annual fluid throughput (bbl)	0	0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	84.9	0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	74.1	0.4223
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	79.5	0.5000
roof outage, H _{ro} (feet)		0.3854
vapor space volume, V _v (cubic feet)		12241.71
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0009
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.0874

Results	lb/year	lb/day
Standing Storage Loss	337	0.92
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	337	0.9

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-284
facility tank I.D.	-
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, Tb (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30
capacity of tank (bbl)	3,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	24
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	3
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			-
maximum annual fluid throughput (bbl)		0	0
-----This row only used if flashing losses occur in this tank-----			
-----This row only used if flashing losses occur in this tank-----			
molecular weight, Mw (lb/lb-mol)			100

Calculated Values		A	B
daily maximum ambient temperature, T _{ax} (°F)			77.65
daily minimum ambient temperature, T _{an} (°F)			53.15
daily total solar insulation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P _a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	84.9		0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	74.1		0.4223
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	79.5		0.5000
roof outage, H _{ro} (feet)			0.3125
vapor space volume, V _v (cubic feet)			13651.20
paint factor, alpha			0.54
vapor density, W _v (lb/cubic foot)			0.0009
daily vapor temperature range, delta T _v (degrees Rankine)			42.57
vapor space expansion factor, K _e			0.0874

Results		lb/year	lb/day
Standing Storage Loss		376	1.03
Working Loss		N/A	N/A
Flashing Loss		N/A	N/A
Total Uncontrolled Tank VOC Emissions		376	1.0

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-285
facility tank I.D.	--
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, Tb (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30
capacity of tank (bbl)	3,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	24
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	3
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			-
maximum annual fluid throughput (bbl)		0	0
-----This row only used if flashing losses occur in this tank-----			
-----This row only used if flashing losses occur in this tank-----			
molecular weight, Mw (lb/lb-mol)			100

Calculated Values		A	B
daily maximum ambient temperature, T _{ax} (°F)			77.65
daily minimum ambient temperature, T _{an} (°F)			53.15
daily total solar insulation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P _a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T _{ix}), P _{vx} (psia)	84.9		0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{in}), P _{vn} (psia)	74.1		0.4223
water vapor pressure at average liquid surface temperature (T _{ia}), P _{va} (psia)	79.5		0.5000
roof outage, H _{ro} (feet)			0.3125
vapor space volume, V _v (cubic feet)			13651.20
paint factor, alpha			0.54
vapor density, W _v (lb/cubic foot)			0.0009
daily vapor temperature range, delta T _v (degrees Rankine)			42.57
vapor space expansion factor, K _e			0.0874

Results		lb/year	lb/day
Standing Storage Loss		376	1.03
Working Loss		N/A	N/A
Flashing Loss		N/A	N/A
Total Uncontrolled Tank VOC Emissions		376	1.0

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-286
facility tank I.D.	--
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, Tb (°F)	78
is this a constant-level tank? (yes, no)	yes
will flashing losses occur in this tank (only if first-line tank)? (yes, no)	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30
capacity of tank (bbl)	3,000
conical or dome roof? (c, d)	c
shell height of tank (feet)	24
average liquid height (feet)	5
are the roof and shell the same color? (yes, no)	yes
For roof:	
color (1: Spec Al, 2: Diff Al, 3: Light, 4: Med, 5: Red, 6: White)	3
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		-
maximum annual fluid throughput (bbl)	0	0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	84.9	0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	74.1	0.4223
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	79.5	0.5000
roof outage, H _{ro} (feet)		0.3125
vapor space volume, V _v (cubic feet)		13651.20
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0009
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.0874

Results	lb/year	lb/day
Standing Storage Loss	376	1.03
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	376	1.0

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-287
facility tank I.D.	
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	--
tank ROC vapor pressure (psia)	1
liquid bulk storage temperature, Tb (°F)	0.05
is this a constant-level tank? {yes, no}	78
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	yes
breather vent pressure setting range (psi)	no
diameter of tank (feet)	0.06
capacity of tank (bbl)	30
conical or dome roof? {c, d}	3,000
shell height of tank (feet)	c
average liquid height (feet)	24
are the roof and shell the same color? {yes,no}	5
For roof:	yes
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	
condition {1: Good, 2: Poor}	3
	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		
	A	B
maximum daily fluid throughput (bbl)		
maximum annual fluid throughput (bbl)	0	0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		
molecular weight, Mw (lb/lb-mol)		100

Calculated Values		
	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{ix}), P _{vx} (psia)	84.9	0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{in}), P _{vn} (psia)	74.1	0.4223
water vapor pressure at average liquid surface temperature (T _{ia}), P _{va} (psia)	79.5	0.5000
roof outage, H _{ro} (feet)		0.3125
vapor space volume, V _v (cubic feet)		13651.20
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0009
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.0874

Results		
	lb/year	lb/day
Standing Storage Loss	376	1.03
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	376	1.0

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-301
facility tank I.D.	--
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, T_b (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	38
capacity of tank (bbl)	6,700
conical or dome roof? {c, d}	c
shell height of tank (feet)	30
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	3
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			-
maximum annual fluid throughput (bbl)		0	0
-----This row only used if flashing losses occur in this tank-----			
-----This row only used if flashing losses occur in this tank-----			
molecular weight, M_w (lb/lb-mol)			100

Calculated Values		A	B
daily maximum ambient temperature, T_{ax} (°F)			77.65
daily minimum ambient temperature, T_{an} (°F)			53.15
daily total solar insulation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P_a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T_{lx}), P_{vx} (psia)	84.9		0.6009
water vapor pressure at daily minimum liquid surface temperature (T_{ln}), P_{vn} (psia)	74.1		0.4223
water vapor pressure at average liquid surface temperature (T_{la}), P_{va} (psia)	79.5		0.5000
roof outage, H_{ro} (feet)			0.3958
vapor space volume, V_v (cubic feet)			28801.79
paint factor, α			0.54
vapor density, W_v (lb/cubic foot)			0.0009
daily vapor temperature range, ΔT_v (degrees Rankine)			42.57
vapor space expansion factor, K_e			0.0874

Results		
	lb/year	lb/day
Standing Storage Loss	793	2.17
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	793	2.2

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-323
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, Tb (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30
capacity of tank (bbl)	3,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	24
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	3
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		-
maximum annual fluid throughput (bbl)	0	0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/l ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{ix}), P _{vx} (psia)	84.9	0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{in}), P _{vn} (psia)	74.1	0.4223
water vapor pressure at average liquid surface temperature (T _{ia}), P _{va} (psia)	79.5	0.5000
roof outage, H _{ro} (feet)		0.3125
vapor space volume, V _v (cubic feet)		13651.20
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0009
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.0874

Results	lb/year	lb/day
Standing Storage Loss	376	1.03
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	376	1.0

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-328
facility tank I.D.	-
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, T_b (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30
capacity of tank (bbl)	1,200
conical or dome roof? {c, d}	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	1
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		-
maximum annual fluid throughput (bbl)	0	0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		-
molecular weight, M_w (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T_{ax} (°F)		77.65
daily minimum ambient temperature, T_{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P_a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T_{lx}), P_{vx} (psia)	82.9	0.5634
water vapor pressure at daily minimum liquid surface temperature (T_{ln}), P_{vn} (psia)	72.1	0.3941
water vapor pressure at average liquid surface temperature (T_{la}), P_{va} (psia)	77.5	0.4719
roof outage, H_{ro} (feet)		0.3125
vapor space volume, V_v (cubic feet)		5168.90
paint factor, α		0.39
vapor density, W_v (lb/cubic foot)		0.0009
daily vapor temperature range, ΔT_v (degrees Rankine)		35.65
vapor space expansion factor, K_e		0.0741

Results	lb/year	lb/day
Standing Storage Loss	121	0.33
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	121	0.3

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-329
facility tank I.D.	-
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, Tb (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30
capacity of tank (bbl)	1,200
conical or dome roof? {c, d}	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	1
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			-
maximum annual fluid throughput (bbl)		0	0
-----This row only used if flashing losses occur in this tank-----			
-----This row only used if flashing losses occur in this tank-----			
molecular weight, Mw (lb/lb-mol)			100

Calculated Values		A	B
daily maximum ambient temperature, T _{ax} (°F)			77.65
daily minimum ambient temperature, T _{an} (°F)			53.15
daily total solar insulation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P _a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	82.9		0.5634
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	72.1		0.3941
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	77.5		0.4719
roof outage, H _{ro} (feet)			0.3125
vapor space volume, V _v (cubic feet)			5168.90
paint factor, alpha			0.39
vapor density, W _v (lb/cubic foot)			0.0009
daily vapor temperature range, delta T _v (degrees Rankine)			35.65
vapor space expansion factor, K _e			0.0741

Results		lb/year	lb/day
Standing Storage Loss		121	0.33
Working Loss		N/A	N/A
Flashing Loss		N/A	N/A
Total Uncontrolled Tank VOC Emissions		121	0.3

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-330
facility tank I.D.	--
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, T_b (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30
capacity of tank (bbl)	1,200
conical or dome roof? {c, d}	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? {yes, no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	1
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		-
maximum annual fluid throughput (bbl)	0	0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T_{ax} (°F)		77.65
daily minimum ambient temperature, T_{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P_a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T_{ix}), P_{vx} (psia)	82.9	0.5634
water vapor pressure at daily minimum liquid surface temperature (T_{in}), P_{vn} (psia)	72.1	0.3941
water vapor pressure at average liquid surface temperature (T_{ia}), P_{va} (psia)	77.5	0.4719
roof outage, H_{ro} (feet)		0.3125
vapor space volume, V_v (cubic feet)		5168.90
paint factor, alpha		0.39
vapor density, W_v (lb/cubic foot)		0.0009
daily vapor temperature range, delta T_v (degrees Rankine)		35.65
vapor space expansion factor, K_e		0.0741

Results	lb/year	lb/day
Standing Storage Loss	121	0.33
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	121	0.3

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-331
facility tank I.D.	--
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, Tb (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30
capacity of tank (bbl)	1,200
conical or dome roof? {c, d}	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	1
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		-
maximum annual fluid throughput (bbl)	0	0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{ix}), P _{vx} (psia)	82.9	0.5634
water vapor pressure at daily minimum liquid surface temperature (T _{in}), P _{vn} (psia)	72.1	0.3941
water vapor pressure at average liquid surface temperature (T _{ia}), P _{va} (psia)	77.5	0.4719
roof outage, H _{ro} (feet)		0.3125
vapor space volume, V _v (cubic feet)		5168.90
paint factor, alpha		0.39
vapor density, W _v (lb/cubic foot)		0.0009
daily vapor temperature range, delta T _v (degrees Rankine)		35.65
vapor space expansion factor, K _e		0.0741

Results	lb/year	lb/day
Standing Storage Loss	121	0.33
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	121	0.3

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-332
facility tank I.D.	—
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, T_b (°F)	78
is this a constant-level tank? (yes, no)	yes
will flashing losses occur in this tank (only if first-line tank)? (yes, no)	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30
capacity of tank (bbl)	1,200
conical or dome roof? (c, d)	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? (yes, no)	yes
For roof:	
color (1: Spec Al, 2: Diff Al, 3: Light, 4: Med, 5: Red, 6: White)	1
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			—
maximum annual fluid throughput (bbl)		0	0
-----This row only used if flashing losses occur in this tank-----			
-----This row only used if flashing losses occur in this tank-----			
molecular weight, M_w (lb/lb-mol)			100

Calculated Values		A	B
daily maximum ambient temperature, T_{ax} (°F)			77.65
daily minimum ambient temperature, T_{an} (°F)			53.15
daily total solar insulation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P_a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T_{lx}), P_{vx} (psia)	82.9		0.5634
water vapor pressure at daily minimum liquid surface temperature (T_{ln}), P_{vn} (psia)	72.1		0.3941
water vapor pressure at average liquid surface temperature (T_{la}), P_{va} (psia)	77.5		0.4719
roof outage, H_{ro} (feet)			0.3125
vapor space volume, V_v (cubic feet)			5168.90
paint factor, α			0.39
vapor density, W_v (lb/cubic foot)			0.0009
daily vapor temperature range, ΔT_v (degrees Rankine)			35.65
vapor space expansion factor, K_e			0.0741

Results		
	lb/year	lb/day
Standing Storage Loss	121	0.33
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	121	0.3

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-333
facility tank I.D.	—
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, T_b (°F)	78
is this a constant-level tank? (yes, no)	yes
will flashing losses occur in this tank (only if first-line tank)? (yes, no)	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30
capacity of tank (bbl)	1,200
conical or dome roof? (c, d)	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? (yes, no)	yes
For roof:	
color (1: Spec Al, 2: Diff Al, 3: Light, 4: Med, 5: Red, 6: White)	1
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		—
maximum annual fluid throughput (bbl)	0	0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		
molecular weight, M_w (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T_{ax} (°F)		77.65
daily minimum ambient temperature, T_{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P_a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T_{lx}), P_{vx} (psia)	82.9	0.5634
water vapor pressure at daily minimum liquid surface temperature (T_{ln}), P_{vn} (psia)	72.1	0.3941
water vapor pressure at average liquid surface temperature (T_{la}), P_{va} (psia)	77.5	0.4719
roof outage, H_{ro} (feet)		0.3125
vapor space volume, V_v (cubic feet)		5168.90
paint factor, α		0.39
vapor density, W_v (lb/cubic foot)		0.0009
daily vapor temperature range, ΔT_v (degrees Rankine)		35.65
vapor space expansion factor, K_e		0.0741

Results	lb/year	lb/day
Standing Storage Loss	121	0.33
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	121	0.3

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-334
facility tank I.D.	
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, T _b (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30
capacity of tank (bbl)	1,200
conical or dome roof? {c, d}	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? {yes, no}	yes
For roof:	
color {1: Spec Al, 2: Diff Al, 3: Light, 4: Med, 5: Red, 6: White}	1
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			
maximum annual fluid throughput (bbl)		0	0
-----This row only used if flashing losses occur in this tank-----			
-----This row only used if flashing losses occur in this tank-----			
molecular weight, Mw (lb/lb-mol)			100

Calculated Values		A	B
daily maximum ambient temperature, T _{ax} (°F)			77.65
daily minimum ambient temperature, T _{an} (°F)			53.15
daily total solar insulation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P _a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	82.9		0.5634
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	72.1		0.3941
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	77.5		0.4719
roof outage, H _{ro} (feet)			0.3125
vapor space volume, V _v (cubic feet)			5168.90
paint factor, alpha			0.39
vapor density, W _v (lb/cubic foot)			0.0009
daily vapor temperature range, delta T _v (degrees Rankine)			35.65
vapor space expansion factor, K _e			0.0741

Results		
	lb/year	lb/day
Standing Storage Loss	121	0.33
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	121	0.3

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-335
facility tank I.D.	
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, T_b (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30
capacity of tank (bbl)	1,200
conical or dome roof? {c, d}	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? {yes, no}	yes
For roof:	
color (1: Spec Al, 2: Diff Al, 3: Light, 4: Med, 5: Red, 6: White)	1
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			
maximum annual fluid throughput (bbl)		0	0
-----This row only used if flashing losses occur in this tank-----			
-----This row only used if flashing losses occur in this tank-----			
molecular weight, M_w (lb/lb-mol)			100

Calculated Values		A	B
daily maximum ambient temperature, T_{ax} (°F)			77.65
daily minimum ambient temperature, T_{an} (°F)			53.15
daily total solar insulation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P_a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T_{lx}), P_{vx} (psia)	82.9		0.5634
water vapor pressure at daily minimum liquid surface temperature (T_{ln}), P_{vn} (psia)	72.1		0.3941
water vapor pressure at average liquid surface temperature (T_{la}), P_{va} (psia)	77.5		0.4719
roof outage, H_{ro} (feet)			0.3125
vapor space volume, V_v (cubic feet)			5168.90
paint factor, α			0.39
vapor density, W_v (lb/cubic foot)			0.0009
daily vapor temperature range, ΔT_v (degrees Rankine)			35.65
vapor space expansion factor, K_e			0.0741

Results		
	lb/year	lb/day
Standing Storage Loss	121	0.33
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	121	0.3

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-339
facility tank I.D.	
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	--
tank ROC vapor pressure (psia)	1
liquid bulk storage temperature, Tb (°F)	0.05
is this a constant-level tank? {yes, no}	78
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	yes
breather vent pressure setting range (psi)	no
diameter of tank (feet)	0.06
capacity of tank (bbl)	30
conical or dome roof? {c, d}	3,000
shell height of tank (feet)	c
average liquid height (feet)	24
	5
are the roof and shell the same color? {yes,no}	
For roof:	yes
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	
condition (1: Good, 2: Poor)	3
	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		
	A	B
maximum daily fluid throughput (bbl)		-
maximum annual fluid throughput (bbl)	0	0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		
molecular weight, Mw (lb/lb-mol)		-
		100

Calculated Values		
	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	84.9	0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	74.1	0.4223
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	79.5	0.5000
roof outage, H _{ro} (feet)		0.3125
vapor space volume, V _v (cubic feet)		13651.20
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0009
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.0874

Results		
	lb/year	lb/day
Standing Storage Loss	376	1.03
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	376	1.0

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-346
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, Tb (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	33
capacity of tank (bbl)	1,200
conical or dome roof? {c, d}	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	3
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			-
maximum annual fluid throughput (bbl)		0	0
-----This row only used if flashing losses occur in this tank-----			
-----This row only used if flashing losses occur in this tank-----			
molecular weight, Mw (lb/lb-mol)			100

Calculated Values		A	B
daily maximum ambient temperature, T _{ax} (°F)			77.65
daily minimum ambient temperature, T _{an} (°F)			53.15
daily total solar insulation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P _a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	84.9		0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	74.1		0.4223
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	79.5		0.5000
roof outage, H _{ro} (feet)			0.3438
vapor space volume, V _v (cubic feet)			6281.10
paint factor, alpha			0.54
vapor density, W _v (lb/cubic foot)			0.0009
daily vapor temperature range, delta T _v (degrees Rankine)			42.57
vapor space expansion factor, K _e			0.0874

Results		
	lb/year	lb/day
Standing Storage Loss	173	0.47
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	173	0.5

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-347
facility tank I.D.	
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	
tank ROC vapor pressure (psia)	1
liquid bulk storage temperature, Tb (°F)	0.05
is this a constant-level tank? (yes, no)	78
will flashing losses occur in this tank (only if first-line tank)? (yes, no)	yes
breather vent pressure setting range (psi)	no
diameter of tank (feet)	0.06
capacity of tank (bbl)	30.3
conical or dome roof? (c, d)	1,000
shell height of tank (feet)	c
average liquid height (feet)	12
	5
are the roof and shell the same color? (yes,no)	yes
For roof:	
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	
condition (1: Good, 2: Poor)	3
	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			
maximum annual fluid throughput (bbl)			
-----This row only used if flashing losses occur in this tank-----		0	0
-----This row only used if flashing losses occur in this tank-----			
molecular weight, Mw (lb/lb-mol)			
			100

Calculated Values		A	B
daily maximum ambient temperature, T _{ax} (°F)			77.65
daily minimum ambient temperature, T _{an} (°F)			53.15
daily total solar insulation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P _a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	84.9		0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	74.1		0.4223
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	79.5		0.5000
roof outage, H _{ro} (feet)			0.3156
vapor space volume, V _v (cubic feet)			5275.05
paint factor, alpha			0.54
vapor density, W _v (lb/cubic foot)			0.0009
daily vapor temperature range, delta T _v (degrees Rankine)			42.57
vapor space expansion factor, K _e			0.0874

Results		
	lb/year	lb/day
Standing Storage Loss		
Working Loss	145	0.40
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	145	0.4

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-348
facility tank I.D.	—
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, T_b (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	24.5
capacity of tank (bbl)	700
conical or dome roof? {c, d}	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	3
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		—
maximum annual fluid throughput (bbl)	0	0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		—
molecular weight, M_w (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T_{ax} (°F)		77.65
daily minimum ambient temperature, T_{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P_a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T_{lx}), P_{vx} (psia)	84.9	0.6009
water vapor pressure at daily minimum liquid surface temperature (T_{ln}), P_{vn} (psia)	74.1	0.4223
water vapor pressure at average liquid surface temperature (T_{la}), P_{va} (psia)	79.5	0.5000
roof outage, H_{ro} (feet)		0.2552
vapor space volume, V_v (cubic feet)		3420.36
paint factor, α		0.54
vapor density, W_v (lb/cubic foot)		0.0009
daily vapor temperature range, ΔT_v (degrees Rankine)		42.57
vapor space expansion factor, K_e		0.0874

Results	lb/year	lb/day
Standing Storage Loss	94	0.26
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	94	0.3

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-349
facility tank I.D.	--
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, T _b (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30.3
capacity of tank (bbt)	1,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	3
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		
	A	B
maximum daily fluid throughput (bbt)		-
maximum annual fluid throughput (bbt)	0	0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		
molecular weight, Mw (lb/lb-mol)		100

Calculated Values		
	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	84.9	0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	74.1	0.4223
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	79.5	0.5000
roof outage, H _{ro} (feet)		0.3156
vapor space volume, V _v (cubic feet)		5275.05
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0009
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.0874

Results		
	lb/year	lb/day
Standing Storage Loss	145	0.40
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	145	0.4

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-350
facility tank I.D.	-
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, Tb (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30.3
capacity of tank (bbl)	1,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	3
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		-
maximum annual fluid throughput (bbl)	0	0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		-
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	84.9	0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	74.1	0.4223
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	79.5	0.5000
roof outage, H _{ro} (feet)		0.3156
vapor space volume, V _v (cubic feet)		5275.05
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0009
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.0874

Results	lb/year	lb/day
Standing Storage Loss	145	0.40
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	145	0.4

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-351
facility tank I.D.	
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, Tb (°F)	78
Is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30.3
capacity of tank (bbl)	1,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	3
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			-
maximum annual fluid throughput (bbl)		0	0
-----This row only used if flashing losses occur in this tank-----			
-----This row only used if flashing losses occur in this tank-----			
molecular weight, Mw (lb/lb-mol)			100

Calculated Values		A	B
daily maximum ambient temperature, T _{ax} (°F)			77.65
daily minimum ambient temperature, T _{an} (°F)			53.15
daily total solar insulation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P _a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	84.9		0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	74.1		0.4223
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	79.5		0.5000
roof outage, H _{ro} (feet)			0.3156
vapor space volume, V _v (cubic feet)			5275.05
paint factor, alpha			0.54
vapor density, W _v (lb/cubic foot)			0.0009
daily vapor temperature range, delta T _v (degrees Rankine)			42.57
vapor space expansion factor, K _e			0.0874

Results		
	lb/year	lb/day
Standing Storage Loss	145	0.40
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	145	0.4

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-353
facility tank I.D.	-
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, T _b (°F)	78
is this a constant-level tank? (yes, no)	yes
will flashing losses occur in this tank (only if first-line tank)? (yes, no)	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30.3
capacity of tank (bbl)	1,000
conical or dome roof? (c, d)	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? (yes,no)	yes
For roof:	
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	3
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			-
maximum annual fluid throughput (bbl)		0	0
-----This row only used if flashing losses occur in this tank-----			
-----This row only used if flashing losses occur in this tank-----			
molecular weight, Mw (lb/lb-mol)			100

Calculated Values		A	B
daily maximum ambient temperature, T _{ax} (°F)			77.65
daily minimum ambient temperature, T _{an} (°F)			53.15
daily total solar insulation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P _a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	84.9		0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	74.1		0.4223
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	79.5		0.5000
roof outage, H _{ro} (feet)			0.3156
vapor space volume, V _v (cubic feet)			5275.05
paint factor, alpha			0.54
vapor density, W _v (lb/cubic foot)			0.0009
daily vapor temperature range, delta T _v (degrees Rankine)			42.57
vapor space expansion factor, K _e			0.0874

Results		lb/year	lb/day
Standing Storage Loss		145	0.40
Working Loss		N/A	N/A
Flashing Loss		N/A	N/A
Total Uncontrolled Tank VOC Emissions		145	0.4

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-354
facility tank I.D.	--
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	--
tank ROC vapor pressure (psia)	1
liquid bulk storage temperature, Tb (°F)	0.05
is this a constant-level tank? (yes, no)	78
will flashing losses occur in this tank (only if first-line tank)? (yes, no)	yes
breather vent pressure setting range (psi)	no
diameter of tank (feet)	0.06
capacity of tank (bbl)	30.3
conical or dome roof? (c, d)	1,000
shell height of tank (feet)	c
average liquid height (feet)	12
are the roof and shell the same color? (yes,no)	5
For roof:	yes
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	
condition (1: Good, 2: Poor)	3
	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			
maximum annual fluid throughput (bbl)		0	0
-----This row only used if flashing losses occur in this tank-----			
-----This row only used if flashing losses occur in this tank-----			
molecular weight, Mw (lb/lb-mol)			100

Calculated Values		A	B
daily maximum ambient temperature, T _{ax} (°F)			77.65
daily minimum ambient temperature, T _{an} (°F)			53.15
daily total solar insulation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P _a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	84.9		0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	74.1		0.4223
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	79.5		0.5000
roof outage, H _{ro} (feet)			0.3156
vapor space volume, V _v (cubic feet)			5275.05
paint factor, alpha			0.54
vapor density, W _v (lb/cubic foot)			0.0009
daily vapor temperature range, delta T _v (degrees Rankine)			42.57
vapor space expansion factor, K _e			0.0874

Results		
	lb/year	lb/day
Standing Storage Loss	145	0.40
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	145	0.4

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-355
facility tank I.D.	—
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, Tb (°F)	78
is this a constant-level tank? (yes, no)	yes
will flashing losses occur in this tank (only if first-line tank)? (yes, no)	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30.3
capacity of tank (bbl)	1,000
conical or dome roof? (c, d)	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? (yes, no)	yes
For roof:	
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	3
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		
	A	B
maximum daily fluid throughput (bbl)		—
maximum annual fluid throughput (bbl)		—
-----This row only used if flashing losses occur in this tank-----	0	0
-----This row only used if flashing losses occur in this tank-----		—
molecular weight, Mw (lb/lb-mol)		100

Calculated Values		
	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	84.9	0.6009
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	74.1	0.4223
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	79.5	0.5000
roof outage, H _{ro} (feet)		0.3156
vapor space volume, V _v (cubic feet)		5275.05
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0009
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.0874

Results		
	lb/year	lb/day
Standing Storage Loss	145	0.40
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	145	0.4

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1135-356
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.05
liquid bulk storage temperature, T_b (°F)	78
is this a constant-level tank? {yes, no}	yes
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30.3
capacity of tank (bbl)	1,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	12
average liquid height (feet)	5
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	3
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			-
maximum annual fluid throughput (bbl)		0	0
-----This row only used if flashing losses occur in this tank-----			
-----This row only used if flashing losses occur in this tank-----			
molecular weight, M_w (lb/lb-mol)			100

Calculated Values		A	B
daily maximum ambient temperature, T_{ax} (°F)			77.65
daily minimum ambient temperature, T_{an} (°F)			53.15
daily total solar insulation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P_a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T_{lx}), P_{vx} (psia)	84.9		0.6009
water vapor pressure at daily minimum liquid surface temperature (T_{ln}), P_{vn} (psia)	74.1		0.4223
water vapor pressure at average liquid surface temperature (T_{la}), P_{va} (psia)	79.5		0.5000
roof outage, H_{ro} (feet)			0.3156
vapor space volume, V_v (cubic feet)			5275.05
paint factor, α			0.54
vapor density, W_v (lb/cubic foot)			0.0009
daily vapor temperature range, ΔT_v (degrees Rankine)			42.57
vapor space expansion factor, K_e			0.0874

Results		lb/year	lb/day
Standing Storage Loss		145	0.40
Working Loss		N/A	N/A
Flashing Loss		N/A	N/A
Total Uncontrolled Tank VOC Emissions		145	0.4

Appendix C

BACT Guidelines and BACT Analysis

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 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).**

Best Available Control Technology (BACT) Guideline 7.3.2
Last Update: 10/1/2002

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

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	50% control, (Waste gas incinerated at scrubbed steam generator, heater treater or incinerator or compressed and injected in injection wells and inspection and maintenance program, or equal)	99% control (Transfer of noncondensable vapors to gas pipeline; reinjection to formation (if appropriate wells are available); or equal).	
SOx		95% control (Vapor collection system and either a) sulfur removal by scrubber with inspection and maintenance program or b) vapors no greater than 0.2 gr S/100 dscf; transfer of non-condensable vapors to gas pipeline; reinjection to formation (if appropriate wells are available), or equal)	
VOC	99% Control (Waste gas incinerated in steam generator, heater treater or other fired equipment and inspection and maintenance program, or equal)	99% control (Transfer of noncondensable vapors to gas pipeline; reinjection to formation (if appropriate wells are available); thermal or catalytic oxidizer; carbon adsorption; or equal).	

**** Converted from Determinations 7.1.4 and 7.1.12 (10/01/02).**

Top Down BACT Analysis

Step 1 - Identify All Possible Control Technologies

BACT Guidelines 7.3.1 and 7.3.2 list the controls that are considered potentially applicable to fixed-roof organic liquid storage or processing tank. The VOC control measures are summarized below.

Technologically Feasible (BACT Guideline 7.3.1)

Achieved in Practice (BACT Guideline 7.3.2)

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 (BACT Guideline 7.3.1)

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

Step 2 - Eliminate Technologically Infeasible Options

None of the above listed technologies are technologically infeasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. 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)
2. PV relief valve set to within 10% of maximum allowable pressure

Step 4 - Cost Effectiveness Analysis

The tanks are currently equipped with vapor control; therefore, the cost effectiveness analysis addresses only the cost of maintenance of the current VCS. In project S1170828 for a similar project involving only nine tanks the applicant estimated those maintenance costs be \$109,750/yr. This cost will conservatively be used in this cost effectiveness analysis.

Tank Vapor Recovery Operating Costs

Daily Operating Costs:

- Electricity – 75 KW/hr @ \$0.1/KW = \$65,700/yr
- Daily Surveillance – Operator @ \$55/hr * 1 hour = \$55/ day or \$20,075/yr
- Lubricant - \$2,400/yr

Maintenance:

- Quarterly mechanical – Mechanic @ \$75/hr * 9 hours = \$675/qtr or \$2,700/yr
- Annual electrical – Instrument Tech @ \$75/hr * 9 hours = \$675/yr
- Miscellaneous parts (can vary depending on parts needed) = \$15,000/yr
- Annual P/V valve inspection (performed by contractor inc. safety equipment) = \$700/yr
- Annual leak inspection (performed by contractor inc. safety equipment) = \$2,500/yr

Total Annual Costs:

Total annual costs = \$109,750

Reducing post-project emissions (3,258 lb/yr, 1.6 ton/yr) by 99% with vapor control results in a cost effectiveness of

$$\begin{aligned}\text{Cost effectiveness} &= \$109,750/[7,811 \text{ lb}/(2000\text{lb/ton}) \times 0.99] \\ &= \$28,385/\text{ton} > \$17,500/\text{ton}.\end{aligned}$$

This value exceeds the cost effectiveness threshold for VOCs of \$17,500/ton. Therefore, the vapor control system is not cost effective.

Step 5 - Select BACT

When tanks and VCS are idle, a PV relief valve shall be set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank and and TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, VCS must be functional with a VOC control efficiency of at least 99%.

When tanks and VCS are idle, the monitoring and recordkeeping requirements specified in this permit do not apply except for the following: biennial true vapor pressure measurements and records shall continue and the permittee shall maintain daily records of tank throughput and records of whether tank served by vapor recovery system.

Appendix C
Title V Compliance Certification Form

Appendix D

Draft ATCs

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: April 6, 2017

Title: Vice President

Time: 3:07 pm

Appendix C

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1135-149-24

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: NW 21 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 3,000 BBL CRUDE OIL LACT TANK ID# AG-01, WITH VAPOR CONTROL SYSTEM SHARED WITH TANKS S-1135-150, '151, '270, '301, '323, '339, AND VESSELS S-1135-346 THROUGH '351 AND '353 THROUGH '356 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-149-24 - Aug 20 2017 11:44AM - TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. Vapor control system shall contain vapor control system piping network and vapor compression system consisting of vapor compressor(s), air-cooled heat exchanger, inlet scrubber, pump, and discharge scrubber. Collected vapors shall be compressed to the Andersen-Goodwin Lease TEOR skid S-1135-129 for disposal. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Compressor suction and knockout drum liquids shall be piped only to vapor-controlled tanks. [District Rule 2520] Federally Enforceable Through Title V Permit
11. The fugitive VOC emissions from this tank and the vapor control system shall not exceed 10.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Maximum VOC content of hydrocarbons in tank vapor shall not exceed 20% by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Permittee shall measure VOC content of tank vapor annually using EPA Method 18, 25, 25a, 25b, or ASTM D-1945. [District Rule 4623] Federally Enforceable Through Title V Permit
14. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Permittee shall maintain with the permit accurate fugitive component counts for tank and associated vapor recovery system and resulting emissions calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017. [District Rule 2080] Federally Enforceable Through Title V Permit
16. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
17. AG DEHY VAPOR RECOVERY CONDITION: The tank shall be equipped with a vapor loss prevention system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99%. [District Rule 2201] Federally Enforceable Through Title V Permit
18. AG DEHY VAPOR RECOVERY CONDITION: Except during periods of tank cleaning, inspections, and maintenance allowed by this permit, tank shall be connected to a vapor control system that is functional and operating as designed. [District Rule 2201] Federally Enforceable Through Title V Permit
19. AG DEHY VAPOR RECOVERY CONDITION: All tank gauging, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and leak-free (as defined in Rule 4623) except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
20. AG DEHY VAPOR RECOVERY CONDITION: Tanks seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
21. AG DEHY INSPECTION CONDITION: A gas leak is a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

22. AG DEHY VAPOR RECOVERY CONDITION: Operator shall monitor vapor control system pressures on quarterly basis to ensure that system pressure does not exceed pressure relief valve setting. [District Rule 2520] Federally Enforceable Through Title V Permit
23. AG DEHY TESTING CONDITION: Permittee shall conduct true vapor pressure (TVP) and API gravity testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
24. AG DEHY TESTING CONDITION: For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
25. AG DEHY TESTING CONDITION: Permittee shall retain records of TVP and API gravity testing for District inspection upon request. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 2080] Federally Enforceable Through Title V Permit
26. AG DEHY TANK CLEANING CONDITION: This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit
27. AG DEHY TANK CLEANING CONDITION: There shall be no throughput during cleaning of this tank. [District Rule 2080] Federally Enforceable Through Title V Permit
28. AG DEHY TANK CLEANING CONDITION: Prior to opening the tank to allow tank cleaning the following procedure must be followed. Operate PV valve and vapor recovery system during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed. Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
29. AG DEHY TANK CLEANING CONDITION: Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor recovery system for at least 2 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3 V / Q$, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit
30. AG DEHY TANK CLEANING CONDITION: Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit
31. AG DEHY VAPOR RECOVERY CONDITION: Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2201] Federally Enforceable Through Title V Permit
32. AG DEHY VAPOR RECOVERY CONDITION: The pressure transmitters shall be inspected and maintained in good operating conditions. The inspections shall be conducted on a quarterly basis. Replacing and repairing of each pressure transmitters shall not exceed one hour per day. [District Rule 2520] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

33. AG DEHY INSPECTION CONDITION: All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520] Federally Enforceable Through Title V Permit
34. AG DEHY INSPECTION CONDITION: A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520] Federally Enforceable Through Title V Permit
35. AG DEHY INSPECTION CONDITION: An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520] Federally Enforceable Through Title V Permit
36. AG DEHY INSPECTION CONDITION: Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520] Federally Enforceable Through Title V Permit
37. AG DEHY INSPECTION CONDITION: Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520] Federally Enforceable Through Title V Permit
38. AG DEHY INSPECTION CONDITION: If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520] Federally Enforceable Through Title V Permit
39. AG DEHY INSPECTION CONDITION: Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520] Federally Enforceable Through Title V Permit
40. AG DEHY VAPOR RECOVERY CONDITION: Permittee shall maintain records of the date and duration of the vapor control system maintenance operation. [District Rule 1070] Federally Enforceable Through Title V Permit
41. AG DEHY TESTING CONDITION: The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1135-150-16

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: 21 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 3,000 BBL CRUDE OIL LACT TANK ID# AG-02, WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1135-149 (ANDERSON/GOODWIN LEASE): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjolle, Director of Permit Services

S-1135-150-16 - Aug 20 2017 11:45AM - TORID - Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. Tank shall be vented only to vapor control system listed on S-1135-149. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The fugitive VOC emissions from this tank and the vapor control system shall not exceed 2.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Maximum VOC content of hydrocarbons in tank vapor shall not exceed 20% by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Permittee shall measure VOC content of tank vapor annually using EPA Method 18, 25, 25a, 25b, or ASTM D-1945. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017. [District Rule 2080] Federally Enforceable Through Title V Permit
14. Tank shall be equipped with stored liquid temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
16. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40 CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
17. This unit is subject to the AG Dehy Vapor Recovery, Inspection, Testing, and Tank Cleaning Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-151-16

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: 21 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 5,000 BBL REJECT TANK ID# AG-03, WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1135-149 (ANDERSON/GOODWIN LEASE): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-151-16 Aug 20 2017 11:45AM - TORID - Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 1.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. Tank shall be vented only to vapor control system listed on S-1135-149. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The fugitive VOC emissions from this tank and the vapor control system shall not exceed 1.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Maximum VOC content of hydrocarbons in tank vapor shall not exceed 20% by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Permittee shall measure VOC content of tank vapor annually using EPA Method 18, 25, 25a, 25b, or ASTM D-1945. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017. [District Rule 2080] Federally Enforceable Through Title V Permit
14. Tank shall be equipped with stored liquid temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
16. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
17. This unit is subject to the AG Dehy Vapor Recovery, Inspection, Testing, and Tank Cleaning Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-270-14

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: NW21 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 5,000 BBL FIXED ROOF OIL TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1135-149 (ANDERSON/GOODWIN LEASE): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-270-14 / Aug 29 2017 11:45AM - TORID Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 1.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. Tank shall be vented only to vapor control system listed on S-1135-149. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The fugitive VOC emissions from this tank and the vapor control system shall not exceed 3.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Maximum VOC content of hydrocarbons in tank vapor shall not exceed 20% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee shall measure VOC content of tank vapor annually using EPA Method 18, 25, 25a, 25b, or ASTM D-1945. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Tank shall be equipped with stored liquid temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
14. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
15. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
16. This unit is subject to the AG Dehy Vapor Recovery, Inspection, Testing, and Tank Cleaning Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-281-17

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 3,000 BBL FIXED ROOF SUMP REPLACEMENT TANK WITH VAPOR CONTROL SYSTEM SHARED WITH S-1135-284, -285, -286, -287, -328, -329, -330, -331, -332, -333, -334, AND -335: AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-281-17 Aug 20 2017 11:45AM - TORID Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The tank shall be equipped with a vapor control system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99%. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Vapor control system shall discharge to unit S-1135-128. [District Rule 2201] Federally Enforceable Through Title V Permit
12. All associated tanks shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
13. All tank gauge hatches, thief hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight (as defined in Rule 4623) except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight (as defined in Rule 4623) condition. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Tank shall be equipped with stored liquid temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Compressor suction and knockout drum liquids shall be piped only to vapor-controlled tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The operator shall ensure that the vapor control system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
18. Operator shall monitor vapor control system compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
19. Tank vapor control system efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor control system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623] Federally Enforceable Through Title V Permit
20. All non-condensable hydrocarbon vapors shall be directed to the vapor control system authorized by permit S-1135-128 either directly through bypass piping, or through tank battery vapor control skid. [District Rule 2201] Federally Enforceable Through Title V Permit
21. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.45 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
22. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 4623] Federally Enforceable Through Title V Permit
26. Permittee shall retain records of TVP and API gravity testing for District inspection upon request. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rules 4623] Federally Enforceable Through Title V Permit
27. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit
28. There shall be no throughput during cleaning of this tank. [District Rule 2080] Federally Enforceable Through Title V Permit
29. Prior to opening the tank to allow tank cleaning the following procedure must be followed. Operate PV valve and vapor control system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor control system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
30. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor control system for at least 2 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3 V / Q$, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit
31. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit
32. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit
33. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

34. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. Permittee shall keep accurate records of throughput, storage temperature, and TVP of liquids stored in each tank and such records shall be made readily available for District inspection at any time for a time period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. Permittee shall maintain records of the date and duration of the vapor control system maintenance operation. Such records shall be made available for district inspection upon request for a period of at least five years. [District Rule 2201 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. The fugitive VOC emissions from this tank and tank vapor control system shall not exceed 3.1 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit
44. Permittee shall maintain with the permit accurate fugitive component counts for tank and the tank vapor control system and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999) Oil and Gas Production Screening Value Range emission factors. [District Rule 2201] Federally Enforceable Through Title V Permit
45. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-284-16

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 3,000 BBL FIXED ROOF RUN TANK #5, WITH VAPOR CONTROL SYSTEM LISTED ON S-1135-281: AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-284-16 Aug 20 2017 11:45AM - TORID - Joint Inspection NOT Required

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6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. The tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit
10. The tank shall be equipped with a vapor control system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99%. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit
12. All tank gauge hatches, thief hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight (as defined in Rule 4623) except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight (as defined in Rule 4623) condition. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Tank shall be equipped with stored liquid temperature indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
15. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.45 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
18. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 4623] Federally Enforceable Through Title V Permit
20. Permittee shall retain records of TVP and API gravity testing for District inspection upon request. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rules 4623] Federally Enforceable Through Title V Permit
21. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit
22. There shall be no throughput during cleaning of this tank. [District Rule 2080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. Prior to opening the tank to allow tank cleaning the following procedure must be followed. Operate PV valve and vapor control system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor control system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
24. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor control system for at least 2 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3 V / Q$, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit
25. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit
26. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit
27. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
28. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

33. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. Permittee shall keep accurate records of throughput, storage temperature, and TVP of liquids stored in each tank and such records shall be made readily available for District inspection at any time for a time period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. Permittee shall maintain records of the date and duration of the vapor control system maintenance operation. Such records shall be made available for district inspection upon request for a period of at least five years. [District Rule 2201 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
37. The fugitive VOC emissions from this tank shall not exceed 0.1 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit
38. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999) Oil and Gas Production Screening Value Range emission factors. [District NSR Rule] Federally Enforceable Through Title V Permit
39. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1135-285-18

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 3,000 BBL FIXED ROOF LACT TANK #6 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281: AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-285-18 : Aug 29 2017 11:45AM - TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. The tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit
10. The tank shall be equipped with a vapor control system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99%. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit
12. All tank gauge hatches, thief hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight (as defined in Rule 4623) except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight (as defined in Rule 4623) condition. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Tank shall be equipped with stored liquid temperature indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
15. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.45 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
18. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 4623] Federally Enforceable Through Title V Permit
20. Permittee shall retain records of TVP and API gravity testing for District inspection upon request. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rules 4623] Federally Enforceable Through Title V Permit
21. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit
22. There shall be no throughput during cleaning of this tank. [District Rule 2080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. Prior to opening the tank to allow tank cleaning the following procedure must be followed. Operate PV valve and vapor control system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor control system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
24. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor control system for at least 2 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3 V / Q$, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit
25. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit
26. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit
27. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
28. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

33. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. Permittee shall keep accurate records of throughput, storage temperature, and TVP of liquids stored in each tank and such records shall be made readily available for District inspection at any time for a time period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. Permittee shall maintain records of the date and duration of the vapor control system maintenance operation. Such records shall be made available for district inspection upon request for a period of at least five years. [District Rule 2201 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
37. The fugitive VOC emissions from this tank shall not exceed 0.2 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit
38. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999) Oil and Gas Production Screening Value Range emission factors. [District NSR Rule] Federally Enforceable Through Title V Permit
39. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1135-286-18

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 3,000 BBL FIXED ROOF LACT TANK #7 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281: AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-286-18 Aug 29 2017 11:45AM - TORID - Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. The tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit
10. The tank shall be equipped with a vapor control system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99%. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit
12. All tank gauge hatches, thief hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight (as defined in Rule 4623) except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight (as defined in Rule 4623) condition. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Tank shall be equipped with stored liquid temperature indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
15. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.45 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
18. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 4623] Federally Enforceable Through Title V Permit
20. Permittee shall retain records of TVP and API gravity testing for District inspection upon request. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rules 4623] Federally Enforceable Through Title V Permit
21. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit
22. There shall be no throughput during cleaning of this tank. [District Rule 2080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. Prior to opening the tank to allow tank cleaning the following procedure must be followed. Operate PV valve and vapor control system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor control system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
24. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor control system for at least 2 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3 V / Q$, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit
25. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit
26. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit
27. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
28. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

33. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. Permittee shall keep accurate records of throughput, storage temperature, and TVP of liquids stored in each tank and such records shall be made readily available for District inspection at any time for a time period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. Permittee shall maintain records of the date and duration of the vapor control system maintenance operation. Such records shall be made available for district inspection upon request for a period of at least five years. [District Rule 2201 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
37. The fugitive VOC emissions from this tank shall not exceed 0.1 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit
38. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999) Oil and Gas Production Screening Value Range emission factors. [District NSR Rule] Federally Enforceable Through Title V Permit
39. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-287-18

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 3,000 BBL FIXED ROOF LACT TANK #8 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-281: AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-287-18 Aug 29 2017 11:45AM -- TORID Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. The tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit
10. The tank shall be equipped with a vapor control system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99%. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit
12. All tank gauge hatches, thief hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight (as defined in Rule 4623) except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight (as defined in Rule 4623) condition. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Tank shall be equipped with stored liquid temperature indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
15. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.45 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)". Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
18. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 4623] Federally Enforceable Through Title V Permit
20. Permittee shall retain records of TVP and API gravity testing for District inspection upon request. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rules 4623] Federally Enforceable Through Title V Permit
21. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit
22. There shall be no throughput during cleaning of this tank. [District Rule 2080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. Prior to opening the tank to allow tank cleaning the following procedure must be followed. Operate PV valve and vapor control system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor control system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
24. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor control system for at least 2 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3 V / Q$, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit
25. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit
26. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit
27. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
28. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

33. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. Permittee shall keep accurate records of throughput, storage temperature, and TVP of liquids stored in each tank and such records shall be made readily available for District inspection at any time for a time period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. Permittee shall maintain records of the date and duration of the vapor control system maintenance operation. Such records shall be made available for district inspection upon request for a period of at least five years. [District Rule 2201 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
37. The fugitive VOC emissions from this tank shall not exceed 0.1 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit
38. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999) Oil and Gas Production Screening Value Range emission factors. [District NSR Rule] Federally Enforceable Through Title V Permit
39. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1135-301-15

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: NW21 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 6,700 BBL FIXED ROOF CRUDE OIL STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1135-149 (ANDERSON/GOODWIN LEASE): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-301-15 - Aug 29 2017 11:45AM - TORID - Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 2.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. Tank shall be vented only to vapor control listed on S-1135-149. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The fugitive VOC emissions from this tank and the vapor control system shall not exceed 4.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Maximum VOC content of hydrocarbons in tank vapor shall not exceed 20% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee shall measure VOC content of tank vapor annually using EPA Method 18, 25, 25a, 25b, or ASTM D-1945. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Tank shall be equipped with stored liquid temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
16. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
17. This unit is subject to the AG Dehy Vapor Recovery, Inspection, Testing, and Tank Cleaning Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-323-6

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 3,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM
LISTED ON S-1135-149 - ANDERSON GOODWIN LEASE: AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-323-6 : Aug 20 2017 11:46AM - TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. Tank shall vent only to the vapor control skid inlet in permit S-1135-129. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The fugitive VOC emissions from this tank and the vapor control system shall not exceed 0.26 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee shall measure VOC content of tank vapor annually using EPA Method 18, 25, 25a, 25b, or ASTM D-1945. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
14. This unit has a storage capacity less than 420,000 gallons (1,589.874 cubic meters) and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
15. This unit is subject to the AG Dehy Vapor Recovery, Inspection, Testing, and Tank Cleaning Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1135-328-3

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,200 BBL FLOW SPLITTER PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-328-3 Aug 20 2017 11:45AM - TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
10. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
12. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
13. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
14. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
15. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
18. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
20. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-329-3

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,200 BBL FWKO PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjolle, Director of Permit Services
S-1135-329-3 : Aug 20 2017 11:45AM - TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
10. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
12. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
13. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
14. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
15. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
18. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
20. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-330-3

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,200 BBL "GAS BUSTER" PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-330-3: Aug 20 2017 11:45AM - TORID - Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
10. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
12. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
13. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
14. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
15. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
18. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
20. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-331-3

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,200 BBL UNFIRED TREATER #1 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

S-1135-331-3 Aug 20 2017 11:45AM - TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
10. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
12. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
13. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
14. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
15. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
18. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
20. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1135-332-3

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: SW16 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,200 BBL UNFIRED TREATER #2 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

S-1135-332-3 Aug 20 2017 11:45AM - TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
10. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
12. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
13. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
14. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
15. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
18. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
20. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-333-3

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,200 BBL UNFIRED TREATER #4 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjolle, Director of Permit Services
S-1135-333-3 : Aug 20 2017 11:45AM - TORID - Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
10. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
12. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
13. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
14. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
15. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
18. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
20. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1135-334-3

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,200 BBL UNFIRED TREATER #6 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-334-3 Aug 29 2017 11:45AM - TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
10. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
12. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
13. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
14. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
15. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
18. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
20. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-335-3

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: SW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,200 BBL UNFIRED TREATER #7 PRESSURE VESSEL VENTED TO THE VAPOR CONTROL SYSTEM LISTED ON S-1135-281 (NEELY): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-335-3 Aug 20 2017 11:45AM - TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. The pressure vessel shall only vent to the vapor control system listed on permit S-1135-281. [District Rule 2080] Federally Enforceable Through Title V Permit
10. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit
12. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2080] Federally Enforceable Through Title V Permit
13. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit
14. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit
15. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit
18. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit
20. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1135-339-3

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: 21 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 3,000 BBL REJECT TANK CONNECTED TO THE VAPOR CONTROL SYSTEM LISTED ON TANK S-1135-149 (ANDERSON/GOODWIN LEASE): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-339-3, Aug 20 2017 11:45AM - TORIO - Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. The fugitive VOC emissions from this tank and the vapor control system shall not exceed 1.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Maximum VOC content of hydrocarbons in tank vapor shall not exceed 20% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Permittee shall measure VOC content of tank vapor annually using EPA Method 18, 25, 25a, 25b, or ASTM D-1945. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee shall maintain with the permit accurate fugitive component counts for tank and resulting emissions calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
13. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
14. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40 CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
15. Tank shall be vented only to vapor control listed on S-1135-149. [District Rule 2201] Federally Enforceable Through Title V Permit
16. This unit is subject to the AG Dehy Vapor Recovery, Inspection, Testing, and Tank Cleaning Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-346-2

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: nw21 **TOWNSHIP:** 31s **RANGE:** 22e

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,200 BBL FREE WATER KNOCK OUT (FWKO) #1 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-346-2 Aug 20 2017 11:45AM - TORID Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
10. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-347-2

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: nw21 **TOWNSHIP:** 31s **RANGE:** 22e

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL FLOW SPLITTER VESSEL CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjolle, Director of Permit Services

S-1135-347-2 Aug 20 2017 11:45AM -- TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
10. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1135-348-2

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: nw21 **TOWNSHIP:** 31s **RANGE:** 22e

EQUIPMENT DESCRIPTION:

MODIFICATION OF 700 BBL FLOW GAS BUSTER VESSEL CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-348-2 - Aug 20 2017 11:45AM - TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
10. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-349-2

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: nw21 **TOWNSHIP:** 31s **RANGE:** 22e

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL TREATER VESSEL #1 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-349-2 Aug 20 2017 11:45AM - TORID Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
10. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-350-2

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: ne21 **TOWNSHIP:** 31s **RANGE:** 22e

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL TREATER VESSEL #2 CONNECTED TO VAPOR RECOVERY SYSTEM CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '-149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-350-2 : Aug 20 2017 11:45AM - TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
10. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1135-351-2

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: nw21 **TOWNSHIP:** 31s **RANGE:** 22e

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL TREATER VESSEL #3 CONNECTED TO VAPOR RECOVERY SYSTEM CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN); AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-351-2 : Aug 20 2017 11:45AM - TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
10. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1135-353-2

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: nw21 **TOWNSHIP:** 31s **RANGE:** 22e

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL TREATER VESSEL #5 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-353-2 Aug 20 2017 11:45AM - TORID Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
10. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1135-354-2

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL TREATER VESSEL #6 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR S-1149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-354-2 : Aug 20 2017 11:45AM - TORID Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
10. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-355-2

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL TREATER VESSEL #7 CONNECTED TO VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR S-149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjolle, Director of Permit Services

S-1135-355-2, Aug 20 2017 11:45AM - TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
10. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1135-356-2

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL TREATER VESSEL #8 CONNECTED TO THE VAPOR CONTROL SYSTEMS LISTED ON S-1135-129 AND/OR '149 (ANDERSON-GOODWIN): AUTHORIZE IDLING OF VCS

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. When tank and vapor control system are idle (non-operational) oil inlet valve to tank shall remain closed. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
4. Permittee shall submit written notification to the District upon designating the tank as idle or operational. [District Rules 2080 and 2201] Federally Enforceable Through Title V Permit
5. When tank and VCS are idle, the tank shall vent through a PV relief valve set to within 10% of maximum allowable pressure of the tank, no oil shall be introduced into tank, and the TVP of residual (standing) oil shall not exceed 0.05 psia. Prior to introducing crude oil or produced water, the VCS must be reactivated and shall have a VOC control efficiency of at least 99%. [District Rules 2201 and 4623] 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

Arnaud Marjollet, Director of Permit Services

S-1135-356-2, Aug 20 2017 11:46AM - TORID : Joint Inspection NOT Required

6. When tank and vapor control system are idle, only biennial true vapor pressure measurements shall be taken. No additional monitoring and recordkeeping is required. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. When tank and vapor control system are idle, VOC emission rate from the tank shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Records of tank throughput when idle, all dates and times that this unit is idle and operational, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
9. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
10. This unit is subject to the AG Dehy Inspection and Testing Conditions on Permit S-1135-149. Deviations from a standard condition shall be reported under the applicable condition in S-1135-149. [District Rule 2520] Federally Enforceable Through Title V Permit

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