



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



DEC 23 2013

Chad Hathaway
Hathaway, LLC
PO Box 31385
Bakersfield, CA 93380

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: S-6509
Project Number: S-1134631

Dear Mr. Hathaway:

Enclosed for your review and comment is the District's analysis of Hathaway, LLC's application for an Authority to Construct for installation of one (1) 1,000 bbl crude oil storage tank and a reduction in throughput limit of tank S-6509-11, at Section 28, T29S, R29E within Hathaway, LLC's heavy oil central stationary source.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. After addressing all comments made during the 30-day public notice comment period, the District intends to issue the Authority to Construct. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Richard Edgehill of Permit Services at (661) 392- 5617.

Sincerely,

David Warner
Director of Permit Services

DW:RUE/st

Enclosures

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

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San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Crude Oil Storage Tank

Facility Name: Hathaway, LLC
Mailing Address: PO Box 31385
Bakersfield, CA 93380
Contact Person: Chad Hathaway and Nick Diercks
Telephone: 661-393-2004 and 377-0073 (#13)
Application #(s): S-6509-11-3 and '34-0
Project #: 1134631
Deemed Complete: December 12, 2013

I. Proposal

Hathaway, LLC (Hathaway) requests Authorities to Construct (ATCs) for the installation of one (1) 1,000 bbl crude oil storage tank and a reduction in throughput limit of tank S-6509-11 from 800 bbl/day to 675 bbl/day.

The increase in emissions from the new tank is a Federal Major Modification. BACT and public notice are required. Offsets are not required.

Disposition of Outstanding ATCs

PTO S-6509-11-2 is included in **Attachment I**.

Hathaway is a major source for VOCs but does not have a Title V permit. District Rule 2530 (but not District Rule 2520) is applicable.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410	Prevention of Significant Deterioration (11/26/12)
Rule 2530	Federally Enforceable Potential to Emit (12/18/08)
Rule 4001	New Source Performance Standards - Subpart Kb (4/14/99) ~ Not applicable ~, tank < 420,000 gal and stores fluids prior to custody transfer
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4623	Storage of Organic Liquids (5/19/05)
Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)	
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines	

III. Project Location

S-6509-11

NW/4 section 15, T25S, R27E.

S-6509-34

Section 28, T29S, R29E

The above two locations are within Hathaway's heavy oil central stationary source.

The equipment is/will not be 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.

A location map is included in **Attachment II**.

IV. Process Description

Hathaway operates facilities for processing of crude oil.

In TEOR operations, steam generators are used to produce steam which is injected into the production zone to reduce the viscosity of the crude oil and pressurize the oil-bearing strata, thereby facilitating oil flow to producing wells. Produced fluids are then piped to surface facilities for processing and temporary storage.

Production from wells enters a wash tank for separation into oil, gas and water. Separated oil is stored in stock tanks prior to custody transfer.

Proposed Additions/Modifications

Installation of one (1) 1,000 bbl crude oil storage and a reduction in throughput limit of tank S-6509-11.

A process diagram is included in **Attachment III**.

V. Equipment Listing

Pre-Project Equipment Description:

ATC S-6509-11-2: 1,000 BBL BOLTED, FIXED ROOF SHIPPING/STOCK TANK WITH P/V VENT -- (QUINN LEASE)

Proposed Modification:

S-6509-11-3: MODIFICATION OF 1,000 BBL BOLTED, FIXED ROOF SHIPPING/STOCK TANK WITH P/V VENT -- (QUINN LEASE): LOWER THROUGHPUT FROM 800 BBLS/ DAY TO 675 BBLS/DAY

Post Project Equipment Description:

S-6509-11-3: 1,000 BBL BOLTED, FIXED ROOF SHIPPING/STOCK TANK WITH P/V VENT -
- (QUINN LEASE)

S-6509-34-0: 1000 BBL CRUDE OIL STOCK TANK (COHN LEASE)

VI. Emission Control Technology Evaluation

Existing tank S-6509-11 and new tank '-34 are equipped with pressure-vacuum (P/V) relief valves set to within 10% of the maximum allowable working pressure of the tank. The PV-valve reduces VOC wind-induced emissions from the tank vent.

VII. General Calculations

A. Assumptions

The maximum operating schedule is 24 hours per day, 8,760 hr/year

Tank S-6509-11:

- Pre- and post-project throughputs: 800 bbl/day and 675 bbl/day, respectively
- Maximum TVP: 0.5 psi (current PTO)
- API gravity: <26 degrees (applicant)
- Tank temperature: 140 deg F
- Additional parameters included in **Attachment IV**.

Tank S-6509-34 New Stock Tank:

- Fluid Throughput: 50 bbl/day (applicant)
- Maximum TVP: 0.5 psi (applicant)
- API gravity: <26 degrees (applicant)
- Tank temperature: 140 deg F
- Additional parameters included in **Attachment IV**.

B. Emission Factors

Both the daily and annual PE's for the tanks will be based on the results from the District's Microsoft Excel spreadsheets for Tank Emissions - Fixed Roof Crude Oil less than 26° API.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

PE1		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
S-6509-11	41.8	15,247

2. Post Project Potential to Emit (PE2)

PE2		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
S-6509-11	35.5	12,966
S-6509-34	4.3	1,559
Total		14,525

Greenhouse Gas (GHG) Emissions

The project results in a decrease in VOC emissions and therefore, even if VOCs are assumed to be 100% methane, there is no increase in CO₂e emissions.

The emissions profile is included in **Attachment V**.

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. The facility has no ERCs. SSPE1 is the SSPE2 from project 1132535 which is the latest project finalized in PAS.

SSPE1 (lb/year)					
Permit Unit/ERC	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	3,294	599	1,598	8,603	220,757

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.

SSPE2 (lb/year)					
Permit Unit/ERC	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	3,294	599	1,598	8,603	220,757
PTO S-6509-11-2	0	0	0	0	-15,247
ATC S-6509-11-3	0	0	0	0	+12,966
ATC S-6509-34-0	0	0	0	0	+1,559
SSPE2	3,294	599	1,598	8,603	220,035

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

Rule 2201 Major Source Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
Facility emissions pre-project	3,294	599	1,598	8,603	220,757
Facility emissions – post project	3,294	599	1,598	8,603	220,035
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	Yes

This source is an existing Major Source for VOC emissions and will remain a Major Source for VOC.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). Therefore the following PSD Major Source thresholds are applicable.

PSD Major Source Determination (tons/year)							
	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀	CO _{2e}
Estimated Facility PE before Project Increase	1.6	110.4	0.3	4.3	0.8	0.8	<100,000*
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
PSD Major Source ? (Y/N)	n	n	n	n	n	n	n

* < 25 MMBtu/hr combustion devices

As shown above, the facility is not an existing major source for PSD for at least one pollutant. Therefore the facility is not an existing major source for PSD.

6. Baseline Emissions (BE)

The BE calculation (in lbs/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.

S-6509-34:

Since this is a new emissions unit, BE = PE1 = 0 for all pollutants.

S-6509-11:

Tank S-6509-11 is equipped with a PV vent, which meets the requirements for achieved-in-practice BACT. Therefore, it's BE = 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	14,525	50,000	no

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

8. Federal Major Modification

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.

NO_x, SO_x, PM₁₀

Since this facility is not a Major Source for NO_x, SO_x, and PM₁₀, this project does not constitute a Federal Major Modification for these air contaminants. Additionally, since the facility is not a major source for PM₁₀ (140,000 lb/year), it is not a major source for PM_{2.5} (200,000 lb/year).

Step 1

VOCs

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project. Project emissions decreases are not included in the calculation.

The project's combined total emission increases 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?
VOC	1,559	0	Yes

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

Since there is an increase in VOC emissions, this project constitutes a Federal Major Modification, and no further analysis is required.

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

Rule 2410 applies to pollutants for which the District is in attainment or for unclassified, pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

- NO₂ (as a primary pollutant)
- SO₂ (as a primary pollutant)
- CO
- PM
- PM₁₀
- Greenhouse gases (GHG): CO₂, N₂O, CH₄, HFCs, PFCs, and SF₆

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not (See Section VII.C.5 of this document).

In the case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase.

In the case the facility is NOT an existing PSD Major Source but is an existing source, the second step of the PSD evaluation is to determine if the project, by itself, would be a PSD major source.

In the case the facility is new source, the second step of the PSD evaluation is to determine if this new facility will become a new PSD major Source as a result of the project and if so, to determine which pollutant will result in a PSD significant increase.

I. Significance of Project Emission Increase Determination

a. Potential to Emit of attainment/unclassified pollutant for New or Modified Emission Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the project potential to emit from all new and modified units is compared to the PSD major source threshold, and if total project potential to emit from all new and modified units is below this threshold, no further analysis will be needed.

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). Therefore the following PSD Major Source thresholds are applicable.

PSD Major Source Determination: Potential to Emit (tons/year)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	0	7.3	0	0	0	0	0
PSD Major Source threshold	250	250	250	250	250	250	100,000
New PSD Major Source?	n	N	n	n	n	n	N

As shown in the table above, the project potential to emit, by itself, does not exceed any of the PSD major source thresholds. Therefore Rule 2410 is not applicable and no further discussion is required.

10. Quarterly Net Emissions Change (QNEC)

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2s are calculated as follows:

S-6509-11

$$\begin{aligned} \text{QNEC} &= (12,966 - 15,247)/4 \\ &= -570 \text{ lb/qtr} \end{aligned}$$

S-6509-34

As this is a new emissions unit QNEC = PE2/4.

$$= 1559/4$$
$$= 390 \text{ lb/qtr}$$

VIII. Compliance

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 seen in Section VII.C.2 above, the applicant is proposing to install a new crude oil storage tank S-6509-34 with a PE greater than 2 lb/day for VOC and BACT is 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

$$AIPE = PE2 - (PE1 * (EF2 / EF1))$$

Tank S-6509-11:

$$EF2 = EF1$$

$$AIPE = PE2 - PE1$$

$$AIPE = 35.5 - 41.8 < 0 \text{ lb-VOC/day}$$

As demonstrated above, the AIPE is not greater than 2.0 lb/day for the tank.

Therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project constitutes 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

BACT Guideline 7.3.1, applies to the fixed roof organic liquid storage or processing tanks < 5,000 bbl in capacity. (See **Attachment VI**)

3. Top-Down BACT Analysis

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

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

S-6509-34

VOC: P/V relief valve set to within 10% of maximum allowable pressure of the tank

B. Offsets

1. Offset Applicability

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

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	3,294	599	1,598	8,603	220,035
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets calculations required?	No	No	No	No	Yes

2. Quantity of Offsets Required

The applicant has proposed to reduce the throughput of tank S-6509-11 to mitigate the VOC emissions increase

$$\text{Offsets Required (lb/year)} = \sum ([\text{PE2} - \text{BE}]) \times \text{DOR}$$

	<u>PE2</u>	<u>BE</u>
S-6509-34	1,559	0
S-6509-10	12,966	15,247
Total	14,525	15,247
$\sum (\text{PE2} - \text{BE}) = -722 \text{ lb/yr}$		

Offsets are not required.

C. Public Notification

1. Applicability

Public noticing is required for:

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

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 VII.C.7, 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. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

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

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	3,294	3,294	20,000 lb/year	No
SO _x	599	599	54,750 lb/year	No
PM ₁₀	1,598	1,598	29,200 lb/year	No
CO	8,603	8,603	200,000 lb/year	No
VOC	220,757	220,035	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	SSPE1 (lb/year)	SSPE2 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	3,294	3,294	0	20,000 lb/year	No
SO _x	599	599	0	20,000 lb/year	No
PM ₁₀	1,598	1,598	0	20,000 lb/year	No
CO	8,603	8,603	0	20,000 lb/year	No
VOC	220,757	220,035	-722	20,000 lb/year	No

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

2. Public Notice Action

As discussed above, public noticing is required for this project for VOC emissions triggering 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:

S-6509-11

Throughput shall not exceed 675 bbl/day. [District Rule 2201] N

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 Rules 2201 and 4623] N

S-6509-34

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 2201] N

Crude oil throughput shall not exceed 50 barrels per day based on a monthly average. [District Rules 2201 and 4623] N

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

S-6509-11

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] N

S-6509-34

Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start-up, 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 2201 and 4623] N

3. Record Keeping

Record keeping is required to demonstrate compliance with the daily emission limit requirements of Rule 2201. The following conditions will appear on the permits:

S-6509-11:

~~{2912} Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. 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 4623] Y*~~

*No longer required by Compliance

Permittee shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Y

{2490} 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 Rules 1070 and 4623] N

S-6509-34

Permittee shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] N

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 Rules 1070 and 4623] N

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The project emissions are VOCs which does not have a Federal or State Air Quality standard. AAQA is not required.

G. Compliance Certification

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

or are on a schedule for compliance with all applicable emission limitations and standards. As discussed above, the project is a Federal Major Modification, therefore this requirement is applicable. Included in **Attachment VIII** is Hathaway's Statewide Compliance Certification document.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to authorize a tank. Since the project is at the current facility location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2530 Federally Enforceable Potential to Emit

The purpose of this rule is to restrict the emissions of a stationary source so that the source may elect to be exempt from the requirements of Rule 2520. Pursuant to Rule 2530, since this facility has elected exemption from the requirements of Rule 2520 by ensuring actual emissions from the stationary source in every 12-month periods to not exceed the following: ½ the major source thresholds for NO_x, VOCs, CO, and PM₁₀; 50 tons per year SO₂; 5 tons per year of a single HAP; 12.5 tons per year of any combination of HAPs; 50 percent of any lesser threshold for a single HAP as the EPA may establish by rule; and 50 percent of the major source threshold for any other regulated air pollutant not listed in Rule 2530.

Rule 4101 Visible Emissions

S-6509-11, '-34

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

Compliance with District Rule 4101 is expected.

Rule 4102 Nuisance

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (**Attachment IX**), the total facility prioritization score including this project was less than or equal to one.

Therefore, no future analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.

Rule 4623, Storage of Organic Liquids

This rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored.

According to Section 4.3, except for complying with Sections 6.3.4 and 7.2, a small producer's tank with a throughput of 50 barrels of crude oil per day or less is exempt from the requirements of this rule.

The facility produces on average less than 6,000 barrels per day of crude oil, and has a throughput of less 50 barrels of crude oil per day, and does not engage in refining, transportation, or marketing of refined petroleum products. Therefore, under Section 3.29 of this rule and District Rule 1020, Section 3.45, this facility is a small producer and is exempt from the rule except for keeping tank throughput records. Therefore, the following conditions shall be placed on the permit:

Permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rule 4623] N

Crude oil throughput shall not exceed 50 barrels per day based on a monthly average. [District Rules 2201 and 4623] N

Permittee shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] N

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 Rules 1070 and 4623] N

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

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

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATC S-6509-11-3 and '-34-0 subject to the permit conditions on the attached draft ATC in **Attachment X**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-6509-11	3020-05S-C	42,000 gallons	\$63
S-6509-34	3020-05S-C	42,000 gallons	\$63

Attachments

- I: PTO S-6509-11-2
- II: Location Map
- III: Process Diagram
- IV: Tank Emissions Calculations
- V: Emissions Profile
- VI: BACT Guideline
- VII: BACT Analysis
- VIII: Statewide Compliance Form
- IX: Title V Compliance Certification Form
- X: HRA
- XI: Draft ATC

ATTACHMENT I
PTO S-6509-11-2

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-6509-11-2

EXPIRATION DATE: 01/31/2015

SECTION: NW15 **TOWNSHIP:** 25S **RANGE:** 27E

EQUIPMENT DESCRIPTION:

1,000 BBL BOLTED, FIXED ROOF SHIPPING/STOCK TANK WITH P/V VENT -- (QUINN LEASE)

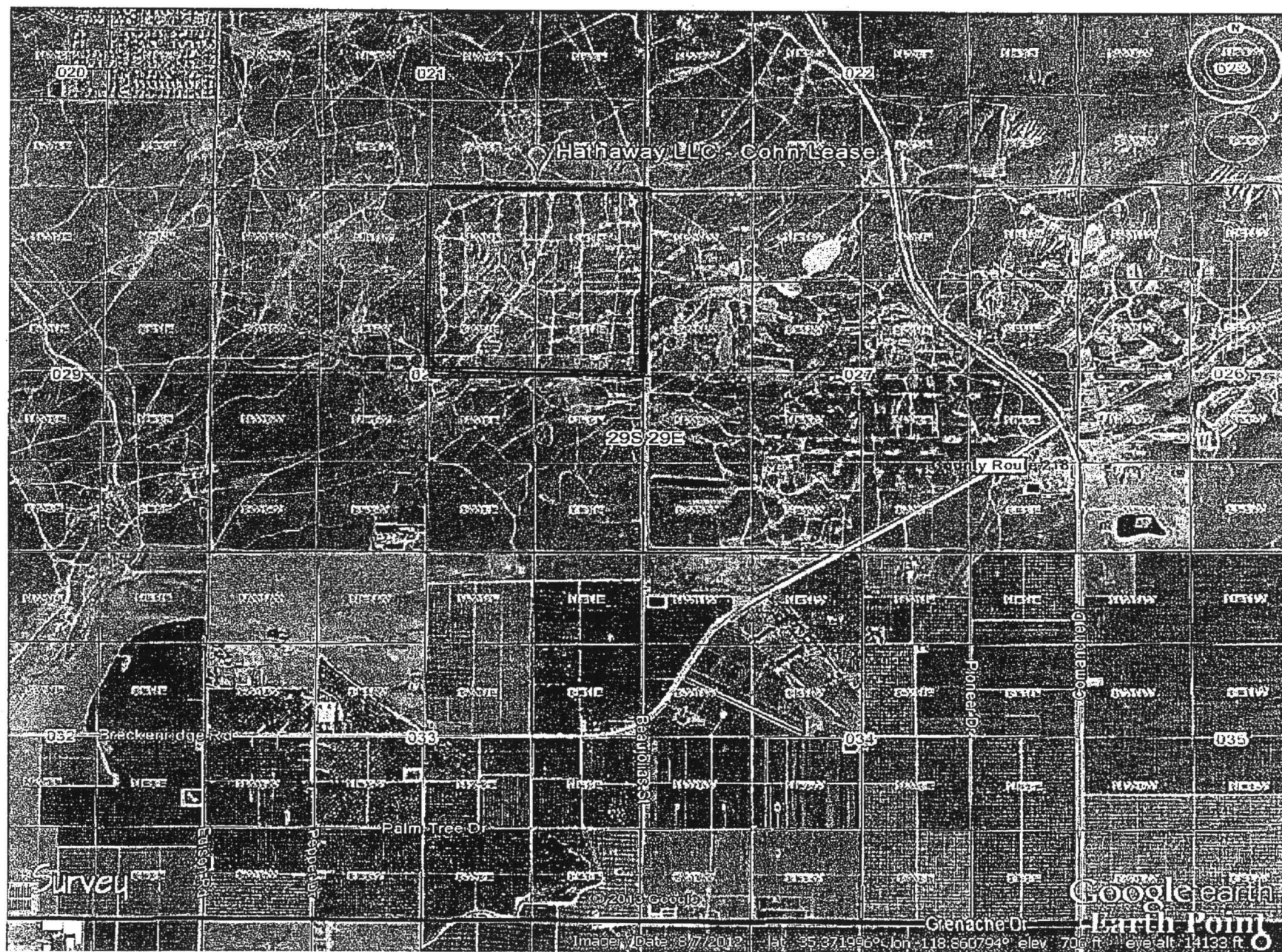
PERMIT UNIT REQUIREMENTS

1. To maintain status as a small producer, permittee's crude oil production shall average less than 6000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rules 3020 and 4623]
2. Throughput shall not exceed 800 bbl/day. [District Rule 2201]
3. 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 Rules 2201 and 4623]
4. 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]
5. 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]
6. 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]
7. 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 Rule 4623]
8. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. 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 4623]
10. Permittee shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623]
11. 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 Rules 1070 and 4623]

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

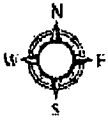
ATTACHMENT II

Location Map



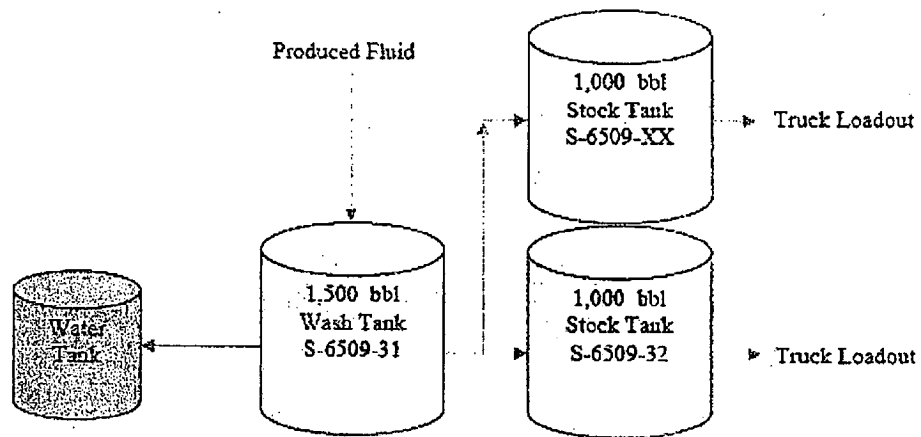
ATTACHMENT III Process Diagram

HATHAWAY, LLC.



FACILITY NAME: Cohn Tank Battery – Post-Project Process Flow Diagram
SCALE: NONE

Facility Diagram S-6509

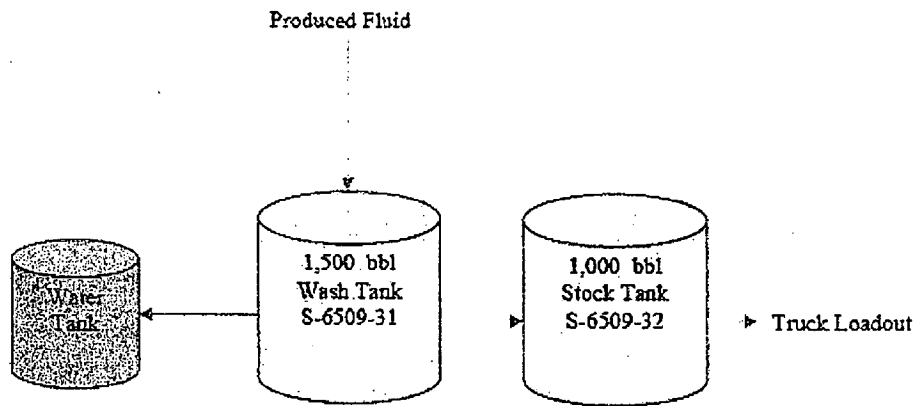


HATHAWAY, LLC.



FACILITY NAME: Cohn Tank Battery – Pre-Project Process Flow Diagram
SCALE: NONE

Facility Diagram S-6509



ATTACHMENT IV

Tank Emissions Calculations

S-6509-11-2 Pre-Project Emissions

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-6509-11-2
facility tank I.D.	Stock
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.5
liquid bulk storage temperature, T _b (°F)	140
is this a constant-level tank? (yes, no)	no
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)	21.2
capacity of tank (bbl)	1,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	16
average liquid height (feet)	10
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)	4
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	4
-----This row only used if shell is different color from roof-----	1

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		800
maximum annual fluid throughput (bbl)		292,000
-----This row only used if flashing losses occur in this tank-----		800
-----This row only used if flashing losses occur in this tank-----		292,000
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
(psia)	121.4	0.9259
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn}	110.6	0.6653
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	116.0	0.7903
roof outage, H _{ro} (feet)		0.2208
vapor space volume, V _v (cubic feet)		2195.89
paint factor, alpha		0.68
vapor density, W _v (lb/cubic foot)		0.0081
daily vapor temperature range, delta T _v (degrees Rankine)		49.04
vapor space expansion factor, K _e		0.0998

Results	lb/year	lb/day
Standing Storage Loss	647	1.77
Working Loss	14,600	40.00
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	15,247	41.8

Summary Table	
Permit Number	S-6509-11-2
Facility Tank I.D.	Stock
Tank capacity (bbl)	1,000
Tank diameter (ft)	21.2
Tank shell height (ft)	16
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	800
Maximum Annual Fluid Throughput (bbl/year)	292,000
Maximum Daily Oil Throughput (bbl/day)	800
Maximum Annual Oil Throughput (bbl/year)	---
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	41.8
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	15,247

S-6509-11-3 Post-Project Emissions

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-6509-11-2
facility tank I.D.	Stock
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.5
liquid bulk storage temperature, T_b (°F)	140
is this a constant-level tank? (yes, no)	no
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)	21.2
capacity of tank (bbl)	1,000
conical or dome roof? (c, d)	c
shell height of tank (feet)	16
average liquid height (feet)	10
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)	4
condition (1: Good, 2: Poor)	1
—This row only used if shell is different color from roof—	4
—This row only used if shell is different color from roof—	1

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		675
maximum annual fluid throughput (bbl)		246,375
—This row only used if flashing losses occur in this tank—		675
—This row only used if flashing losses occur in this tank—		246,375
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 insolation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P_a (psia)		14.47
(psia)	121.4	0.9259
water vapor pressure at daily minimum liquid surface temperature (T_{ln}), P_{vn}	110.6	0.6653
water vapor pressure at average liquid surface temperature (T_{la}), P_{va} (psia)	116.0	0.7903
roof outage, H_{ro} (feet)		0.2208
vapor space volume, V_v (cubic feet)		2185.89
paint factor, α		0.68
vapor density, W_v (lb/cubic foot)		0.0081
daily vapor temperature range, ΔT_v (degrees Rankine)		49.04
vapor space expansion factor, K_e		0.0998

Results	lb/year	lb/day
Standing Storage Loss	647	1.77
Working Loss	12,319	33.75
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	12,966	35.5

Summary Table	
Permit Number	S-6509-11-2
Facility Tank I.D.	Stock
Tank capacity (bbl)	1,000
Tank diameter (ft)	21.2
Tank shell height (ft)	16
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	675
Maximum Annual Fluid Throughput (bbl/year)	246,375
Maximum Daily Oil Throughput (bbl/day)	675
Maximum Annual Oil Throughput (bbl/year)	---
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	35.5
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	12,966

New Stock Tank Post-Project Emissions

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-6509-XX-X
facility tank I.D.	Stock
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.6
liquid bulk storage temperature, Tb (°F)	140
is this a constant-level tank? (yes, no)	no
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)	21.2
capacity of tank (bbl)	1,000
conical or dome roof? (c, d)	c
shell height of tank (feet)	16
average liquid height (feet)	10
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)	4
condition (1: Good, 2: Poor)	1
—This row only used if shell is different color from roof—	4
—This row only used if shell is different color from roof—	1

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		50
maximum annual fluid throughput (bbl)		18,250
—This row only used if flashing losses occur in this tank—		50
—This row only used if flashing losses occur in this tank—		18,250
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, Pa (psia)		14.47
(psia)	121.4	0.9259
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn}	110.6	0.6653
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	116.0	0.7903
roof outage, H _{ro} (feet)		0.2208
vapor space volume, V _v (cubic feet)		2195.89
paint factor, alpha		0.68
vapor density, V _v (lb/cubic foot)		0.0081
daily vapor temperature range, delta T _v (degrees Rankine)		49.04
vapor space expansion factor, K _e		0.0998

Results	lb/year	lb/day
Standing Storage Loss	647	1.77
Working Loss	913	2.50
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	1,559	4.3

Summary Table	
Permit Number	S-6509-XX-X
Facility Tank I.D.	Stock
Tank capacity (bbl)	1,000
Tank diameter (ft)	21.2
Tank shell height (ft)	16
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	50
Maximum Annual Fluid Throughput (bbl/year)	18,250
Maximum Daily Oil Throughput (bbl/day)	50
Maximum Annual Oil Throughput (bbl/year)	---
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	4.3
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	1,559

ATTACHMENT V Emissions Profile

Permit #: S-6509-11-3	Last Updated
Facility: HATHAWAY LLC	12/13/2013 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	12966.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	35.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	-570.0
Q2:	0.0	0.0	0.0	0.0	-570.0
Q3:	0.0	0.0	0.0	0.0	-570.0
Q4:	0.0	0.0	0.0	0.0	-571.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-6509-34-0	Last Updated
Facility: HATHAWAY LLC	12/13/2013 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	1559.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	4.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	389.0
Q2:	0.0	0.0	0.0	0.0	390.0
Q3:	0.0	0.0	0.0	0.0	390.0
Q4:	0.0	0.0	0.0	0.0	390.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

ATTACHMENT VI BACT Guideline

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.3.1*

Last Update 10/1/2002

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

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

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

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

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

ATTACHMENT VII BACT Analysis

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

Step 1 - Identify All Possible Control Technologies

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

Technologically feasible:

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

Achieved in Practice:

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

Step 2 - Eliminate Technologically Infeasible Options

All of the above identified control options are technologically feasible.

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

Applicant has provided a detailed installation and annual operating cost for a vapor control system achieving 99% vapor control efficiency, \$70,987/yr. The cost effectiveness is

$$\$70,987/\text{yr}/[0.99 \times 1559 \text{ lb/yr}/2000 \text{ lb/ton}] = \$54,781/\text{ton}.$$

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

Step 5 - Select BACT

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

Com-Pac Systems, Inc.

(432) 332-4515
Fax (432) 332-0121
2412 S. Market St.
Odessa, Texas 79766

Com-Pac Systems, Inc. Proposal 12-2221R0

13.0 Paint

Package to be painted per Com-Pac Systems standard two part paint system suitable for onshore service and includes the following:

- Surface Preparation - Steel surfaces blasted to SSPC-SP6
- Primer- PPG Low VOC Quick Dry MultiPrime applied to a dry film thickness of 2-4 mils
- Top Coat- PPG Type 35 High Gloss Enamel applied to a dry film thickness of 1.5-2 mils.
- Top Coat Color - At customers discretion

14.0 Miscellaneous Inclusions/Exclusions to Scope Of Supply

The following items are included in our Scope of Supply:

- Mechanical run test of completed package, on air, at Com-Pac Systems works
- Continuity and loop check of controls at Com-Pac Systems works
- Stainless steel tagging
- Preparation for domestic shipping only
- One (1) technician for one (1) week start-up and commissioning assistance
- Three (3) computer discs copies of Com-Pac Systems standard Installation, Operations and Maintenance Manual.

The following items are not included in our Scope of Supply

- Freight to site
- Unloading at site
- Interconnecting wiring
- Interconnecting piping
- Motor starters, switch gear, variable frequency drives and/or power junction boxes
- Heat tracing and/or insulation of any type, other than previously mentioned
- Off-skid and/or interconnecting piping
- Fire/gas detection or suppression equipment
- Unit enclosure HVAC system and/or lifting crane.
- Utility gas piping, filters or silencers, other than specifically mentioned
- Tools, other than previously described
- Alignment or leveling devices, other than specifically mentioned
- Design and supply of foundations, support structures, ladders, platforms, etc.
- Site performance test
- Personal costs of purchaser's/client's and/or third party inspectors.
- Installation costs
- Commissioning and operating spare parts
- Storage or preservation costs
- Spreader bars, shackles or lifting equipment of any kind
- Cable tray
- Tubing tray
- Acoustical study
- Skid dynamic study
- Finite element analysis
- Site specific preventative and/or predictive maintenance plans

Com-Pac Systems, Inc.

(432) 332-4515
Fax (432) 332-0121
2412 S. Market St.
Odessa, Texas 79766

Com-Pac Systems, Inc. Proposal 12-2221R0

11.0 Control Panel

One (1) compressor control panel is provided mounted and wired on the compressor skid. The control panel and equipment are rated for National Electrical Code area classification of Class I Division II, Groups C & D and is equipped as per the following:

- Allen Bradley ControlLogix programmable logic controller
- Allen Bradley 10000CP HMI
- Ethernet connection
- Door mounted ESD, re-set switch and power on light
- NEMA 4X stainless steel enclosure
- Package control instrumentation for at a minimum
 - Package suction pressure
 - Package suction temperature
 - Suction scrubber level control
 - Suction scrubber low/low level
 - Suction scrubber high/high level
 - Compressor "A" discharge temperature
 - Compressor "A" discharge pressure
 - Compressor "A" high vibration
 - Compressor "A" lube oil no flow
 - Compressor "A" lubricator low level
 - Compressor "A" jacket water high temperature
 - Compressor "A" jacket water no flow
 - Compressor "B" discharge temperature
 - Compressor "B" discharge pressure
 - Compressor "B" high vibration
 - Compressor "B" lube oil no flow
 - Compressor "B" lubricator low level
 - Compressor "B" jacket water high temperature
 - Compressor "B" jacket water no flow
 - Discharge scrubber level control
 - Discharge scrubber high/high level
 - Package discharge pressure
 - Cooler high vibration

12.0 Skid

One (1) structural steel skid, with major equipment mounted on main structural members as per the following:

- Com-Pac Systems standard single-piece skid design
- 3/8" ASME SA-36 smooth bottom plate, seal-welded around skid perimeter
- Two inch (2") environmental containment barrier around perimeter of skid
- Two (2) drain connections located on opposite corners
- Two (2) draw bars, one lactated at each end, suitable for use as lifting lugs.
- Anchor bolt holes drilled w/ jack bolt nuts welded to skid perimeter
- Com-Pac Systems standard skid welding procedures apply
- Skid is not subject to NDE

Com-Pac Systems, Inc.

(432) 332-4515
Fax (432) 332-0121
2412 S. Market St.
Odessa, Texas 79766

Com-Pac Systems, Inc. Proposal 12-2221R0

2.0 Process Valves

One (1) lot of process valves from edge suction block valve through the compressor package to skid edge final discharge block. All process valves are carbon steel bodies, SS trim and firesafe. The following valves are included:

- One (1) manual full port suction block valve located at skid edge
- One (1) conventional type thermal relief valve on suction scrubber complete with full port inlet/outlet block valves, bleed ring and bleed valve.
- Two (2) manual inlet double block and bleed valve sets. One each located between suction scrubber and each compressor inlet
- One (1) conventional type relief valve on each compressor discharge complete with full port inlet/outlet block valves, bleed ring and bleed valve.
- One (1) automatic recycle capacity control valve, sized for 100% of flow, including I/P, positioner and manual bypass loop to maintain suction pressure
- Two (2) discharge check valve double door spring assisted closure type. One located on the discharge of each compressor
- Two (2) manual outlet double block and bleed valve sets. One each located between compressor discharge check valve and discharge scrubber
- One (1) conventional type full flow relief valve on discharge scrubber complete with full port inlet/outlet block valves, bleed ring and bleed valve.
- One (1) common discharge check valve double door spring assisted closure type.
- One (1) manual full port discharge block valve located at skid edge

9.0 Utility Piping, Valves and Tubing

One (1) lot utility piping, valves and tubing as per the following:

- Threaded and/or socket weld stainless steel lube oil piping per SA-312 304, SA-182 304
- Threaded and/or socket weld carbon steel jacket water piping per SA106-B, SA-105
- Threaded and/or socket weld carbon steel instrument air piping per SA106-B, SA-105
- SA-249 304SS welded instrument tubing
- 304SS Parker, or equal, tubing fittings
- Galvanized u-bolts
- Valves are threaded, carbon steel body carbon steel trim

10.0 Instrumentation and Electrical

One (1) lot skid instrumentation and electrical as per the following:

- Instrumentation/end devices are designed for installation in a Class I Division 2 Group C&D hazardous area classification
- All wiring in ridged galvanized conduit with type "G" galvanized fittings
- Preliminary instrument manufactures as per the following:
 - Pressure Indicating Transmitter – Rosemount 3051S
 - Temperature Indicating Transmitter – Rosemount 644
 - Temperature RTD's – Rosemount 0068
 - Level Bridle Assembly – Com-Pac Systems standard
 - Level Transmitter Guided Wave – Rosemount 3300
 - Level Switch Ultrasonic – Rosemount 2120
 - Level Indicator – Penberthy
 - Vibration Transmitter – Metrix ST5491E

Com-Pac Systems, Inc.

(432) 332-4515
Fax (432) 332-0121
2412 S. Market St.
Odessa, Texas 79766

Com-Pac Systems, Inc. Proposal 12-2221R0

6.0 Scrubbers

One (1) 10-3/4" OD x 48" seam/seam API 11P Class "C" vertical suction scrubber, sized for both compressors running, as per the following:

- Carbon steel per SA106-B, SA-234 WPB, SA-105
- Designed, fabricated, tested, inspected and stamped to ASME Sec VIII Div II
- 1/16" corrosion allowance
- 100% x-ray per ASME Sec VIII Div II
- Post weld heat treated
- Internally plastic coated
- Stainless steel mesh pad type mist extractor
- One (1) bridle mounted level control assembly as per the following:
 - Level transmitter guided wave type (condensate pump on/off)
 - Level indicator
- One (1) bridle mounted level shutdown assembly as per the following:
 - Level switch high/high (shutdown)
 - Level switch low/low (alarm)
- One (1) rotary vane electric motor driven condensate pumps sized for 10 gpm @ 60 psig discharge

One (1) 8-5/8" OD x 48" seam/seam API 11P Class "C" vertical discharge scrubber, sized for both compressors running, as per the following:

- Carbon steel per SA106-B, SA-234 WPB, SA-105
- Designed, fabricated, tested, inspected and stamped to ASME Sec VIII Div II
- 1/16" corrosion allowance
- 100% x-ray per ASME Sec VIII Div II
- Post weld heat treated
- Internally plastic coated
- Stainless steel mesh pad type mist extractor
- One (1) bridle mounted level assembly as per the following:
 - Level transmitter guided wave type
 - Level indicator
- One (1) bridle mounted level shutdown assembly as per the following:
 - Level switch high/high (shutdown)
- One (1) Fisher D2 pneumatic dump valve

Note 1 - All pressure vessel sizes are subject to final engineering

7.0 Process Piping

One (1) lot of gas process piping, sized for both compressors running, from skid edge suction connection through the compressor package to final skid edge discharge connection, including relief valve header, as per the following:

- Carbon steel per ASTM A106-B, ASTM WPB-234 ANSI A-105
- Designed, fabricated, inspected and tested to ANSI B31.3 severe cyclic
- 1/16" corrosion allowance
- 20% x-ray examination per ANSI B31.3 severe cyclic
- Flanged process connections
- Flanged and/or threaded instrumentation connections
- Process piping pipe supports are pipe straps, no u-bolts, welded to main members

Com-Pac Systems, Inc.

(432) 332-4515
Fax (432) 332-0121
2412 S. Market St.
Odessa, Texas 79766

Com-Pac Systems, Inc. Proposal 12-2221R0

- Dedicated force feed cylinder lubrication system including:
 - Two (2) electric motor driven lubricator pumps, one for each compressor
 - Two (2) pressurized divider block distribution systems, one for each compressor
 - Two (2) lube oil no-flow switches, one for each compressor
- One (1) 30 gallon lube oil day tank, common to both compressors
- Torsionally resilient coupling /w built to suit coupling guard

3.1 Compressor Performance

See attached

4.0 Compressor Driver

Two (2) Baldor model ECP416T, or equal, premium efficiency, severe duty, induction electric motor as per the following:

- 20 HP
- 3600 RPM
- TEFC
- 460/3/60 VAC
- 1.15 service factor
- Lubricated bearings
- Rotatable, oversized conduit box w/ stainless steel hardware
- Rated for NEC Class 1 Division 2 Groups C&D hazardous area

4.1 Compressor Driver Performance

See attached

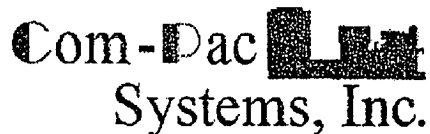
5.0 Gas Cooler

One (1) ACE model C32M-4 or equal, vertical finned tube air cooled heat exchanger as per the following:

- One (1) after gas cooling section, sized for both compressors running, as per the following
 - SA-516/70 carbon steel headers
 - 1/16" corrosion allowance
 - SA-249 304 stainless steel welded tubes
 - Manual louver
 - 5005 marine grade aluminum fins
 - ASME coded stamped w/ National Board registration
- One (1) compressor lube jacket water cooling section, sized for both compressors running as per the following
 - Carbon steel headers
 - SA-214 carbon steel welded tubes
 - 5005 marine grade aluminum fins
- Mounted electric motor driven direct drive fan drive assembly
- Cooler structure as per the following
 - Seal welded
 - White metal blasted
 - Metalized headers and structure

5.1 Cooler Performance

VRU COMPRESSOR QUOTE



(432) 332-4515
Fax (432) 332-0121
2412 S. Market St.
Odessa, Texas 79766

Com-Pac Systems, Inc. Proposal 12-2221R0

December 16, 2012

Vintage Production
9000 Ming Ave,
Suite 300
Bakersfield, CA. 93311
Attention: Mr. George Elledge

Reference: Mount Poso South Unit TVR Compressor Budgetary Proposal

Sir,

In response to inquiry regarding the above referenced project Com-Pac Systems, Inc. is pleased to offer this budgetary proposal for your consideration. This proposal is for budgetary purposes only and does not take into account any design conditions and/or specifications, other than those already supplied, and is subject to any exceptions and clarifications contained herein.

1.0 Scope of Supply

Provide engineering, labor and material to supply one (1) fully packaged TVR compressor packages.

The package is complete with two (2) x 100% self supporting compressors, electric motor drivers, suction and discharge scrubbers complete with condensate removal system, air cooled finned tubed heat exchanger complete with discharge gas and compressor jacket water cooling sections each sized for both compressor running, compressor jacket water cooling systems complete with jacket water circulation pumps and surge tank, compressor lube oil system complete with an electric motor driven lubricator pump and force feed divider block distribution system, process piping including recycle capacity control loop with manual by-pass, utility piping, instrumentation and PLC based compressor control panel all mounted on a single fit for purpose steel skid.

The package is designed to meet the following conditions and includes the following list of materials

2.0 Design Conditions

PARAMETER		DESIGN
Flow Rate @ Skid Edge	MSCFD	100
Compressor Delivered Capacity (Each Compressor)	MSCFD	105
Suction Temperature (@ Compressor Flange)	^o F	90
Suction Pressure @ Compressor Flange)	PSIG	0.0
Discharge Temperature (@ Cooler Discharge)	^o F	130
Discharge Pressure @ Compressor Flange)	PSIG	45

3.0 Gas Compressor

Two (2) Ro Flo model SCC, sliding vane, positive displacement compressors. The compressors are belt driven to 1850 rpm and are equipped as per the following:

- Double bellows seals complete with pressurized oil seal system for zero shaft seal emissions
- Jacket water cooling system including:
 - One (1) air cooled finned tubed jacket water cooler, sized for both compressor running
 - Two (2) electric motor driven coolant pumps, one for each compressor
 - Two (2) thermostatic type temperature control valves, one for each compressor
 - Two (2) jacket water no-flow switches, one for each compressor

FLARE QUOTE

GBA-Corona, Inc.

10333 Harwin, Suite 110

Houston, Texas 77036

Telephone: 713-773-9933 / Fax: 713-773-9940

FACSIMILE TRANSMITTAL SHEET

TO:	FROM:
George Ellledge	Travis Turner
COMPANY:	DATE:
OXY	December 10, 2012
FAX NUMBER:	TOTAL NO. OF PAGES INCLUDING COVER:
via e-mail	8
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:
	CF12.1909
RE:	YOUR REFERENCE NUMBER:
Flare Quotation	Mt. Poso TVR and Flare

Dear George,

The following is in response to your request for commercial and technical information pertaining to the above referenced flare system.

In this package, we have included flare tip sizing, equipment data sheets, a radiation plot, and a pressure vs. flow curve for system. Please note that this system has been designed by using a lot of assumptions and that the design can change if the process data changes.

Flare Tip Selection

For this application, we have selected a GBA-Corona CSF-RO-3 sonic flare for this relief system. The back pressure will not exceed 20 psig when flowing at the maximum flow rate of 0.2mm-scfd.

The GBA-Corona CSF flare uses the energy associated with pressurized gas to entrain and mix large quantities of air. The difference in this multi-arm sonic flare is in the nozzle. Unlike other multi-arm flares, the CSF flare does not lose efficiency as the size increases. The annulus design of the nozzle enhances the mixing rate of the entrained air into the primary mixing zone of flame. This highly aerated gas and air stream burns with a clean short flame and with F-Factors ranging from 0.06 to 0.10.

Most flares spend very little time at the peak design rate. Yet, many flares are unable to handle the condition that occurs most of the time -- low flow turnaround. Unlike flares which rely on large diameter curved surfaces, the GBA-Corona CSF flare ensures that the combustion takes place above the flare tip. This eliminates nearly the entire continuous flame lick on the flare. And by using properly designed wind deflectors, low flow rate flames are allowed to lift away from the flare further reducing the chance of flame lick. These two features greatly improve longevity and guard against flare tip failure.

Radiation

We have provided a radiation plot illustrating the radiation values at the maximum flow rate of 0.2 mm/scfd. Included will be an 18' self-support flare stack, including flare tip, to meet the requirements of limiting the radiation to less than 1500 btu/hr*sq ft at ground elevation.

The plot is scaled so stack heights and contours can be evaluated. If there are other radiation constraints or specifications that need to be evaluated, we will quickly incorporate them into our study. Please note that we have included 300 btu/hr*sq ft solar radiation into our contours.

Pilot Ignition

To ignite the flare, we have offered Corona's CHT electronic pilots. This pilot is fully automatic and self-monitoring. This system has auto re-light capabilities (standard) and is self-monitoring. The CHT system uses flame ionization for pilot monitoring which ensures long life and reliability of pilot indication. This system does not require utility air and eliminates the inherent problems associated with thermocouples and flame front generators. Our package includes 2 CHT pilots and 250' of standard ignition cable per pilot. Electronics will be housed in a NEMA 4X, general purpose, stainless steel enclosure.

Air Lock Seal

A continuous supply of purge gas is required to prevent air from migrating into the waste gas header. Many studies have proved that the air will typically migrate down along the inside wall of the flare, where the gas is moving the slowest. It has also been shown, that for the same purge gas velocities, it is much easier for air to enter a large diameter tip than a small diameter tip. Finally, it has also been shown that bends within the header further inhibit the ability of the air to penetrate in the stack.

We have offered an Air Lock purge reduction seal. This seal is an inverted cone (baffle) that forms a physical obstruction for the air that typically migrates in along the flare tip body wall. When the air encounters the seal, the air is diverted toward the center of the flare (where the purge gas is moving the fastest) and toward the exit of the flare.

Quotation and Scope of Supply

Flare Tip

- 1.0 One (1) CSF-RO-3 flare tip complete with two CHT pilot/ignitor assemblies, manifolds and wind deflectors.

Pilot Control Panel

- 2.0 One (1) CHT automatic, electronic pilot control panel. Panel to control two pilots. Electrical components to be housed in a NEMA 4X, general purpose enclosure. Also included is 250' of ignition cable per pilot.
- 3.0 One (1) 18' self-support flare stack. This will also include calculations and drawing that will specifically meet the required criteria for the project site and location.

Price EXW - Houston, TX

\$42,250.00.

ATTACHMENT VIII

Statewide Compliance Form

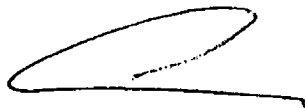
December 5, 2013

Mr. Leonard Scandura
Permit Services Manager
San Joaquin Valley Unified
Air Pollution Control District
34946 Flyover Ct.
Bakersfield, CA 93308

Subject: Federal Major Modification Compliance Certification – S-6509

Dear Mr. Scandura:

I hereby certify that all major Stationary Sources owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in California, which are subject to emission limitations, are in compliance or on a schedule for compliance with all applicable emission limitations and standards.



Signature

Member Manager
Title

ATTACHMENT IX HRA

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Richard Edgehill, AQE – Permit Services
From: Ester Davila, SAQS – Technical Services
Date: December 18, 2013
Facility Name: Hathaway, LLC
Location: Kern Front Oil Field
Application #(s): S-6509-11-3, -34-0
Project #: S-1134631

A. RMR SUMMARY

RMR Summary				
Categories	1000 bbl. tank (Unit 11-3)	1000 bbl. tank (Unit 34-0)	Project Totals	Facility Totals
Prioritization Score	0.00	0.012	0.012	0.72
Acute Hazard Index	NA	NA	NA	NA
Chronic Hazard Index	NA	NA	NA	NA
Maximum Individual Cancer Risk (10^{-6})	NA	NA	NA	NA
T-BACT Required?	No	No		
Special Permit Conditions?	No	No		

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Units # 11-3, -34-0

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on December 11, 2013, to perform a Risk Management Review for the proposed modification of unit S-6509-11 (1000 bbl. bolted, fixed roof, shipping/stock tank) and installation of a new 1000 bbl. crude oil stock tank. Unit 11-3 is being modified to reduce throughput to 675 bbl. per day therefore no analysis needs to be done on this unit.

II. Analysis

Toxic emissions for the proposed unit were calculated using District emission factors for fugitive emissions from oilfields. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905, March 2, 2001), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEARTs database. The prioritization score for the proposed unit was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was necessary.

The following parameters were used for the review:

Analysis Parameters Unit 11-3			
VOC Emissions (lb/yr)	0	Max Hours per Year	8760
Closest Receptor (m)	640		

Analysis Parameters Unit 34-0			
VOC Emissions (lb/yr)	1,559	Max Hours per Year	8760
Closest Receptor (m)	640		

III. Conclusion

The prioritization score is less than 1.0. In accordance with the District's *Risk Management Policy*, the project is approved without Toxic Best Available Control Technology (T-BACT).

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

Attachments:

- A. RMR request from the project engineer
- B. Prioritization score
- C. Facility Summary

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Richard Edgehill, AQE – Permit Services
From: Ester Davila, SAQS – Technical Services
Date: December 18, 2013
Facility Name: Hathaway, LLC
Location: Kern Front Oil Field
Application #(s): S-6509-11-3, -34-0
Project #: S-1134631

A. RMR SUMMARY

RMR Summary				
Categories	1000 bbl. tank (Unit 11-3)	1000 bbl. tank (Unit 34-0)	Project Totals	Facility Totals
Prioritization Score	0.00	0.012	0.012	0.72
Acute Hazard Index	NA	NA	NA	NA
Chronic Hazard Index	NA	NA	NA	NA
Maximum Individual Cancer Risk (10^{-6})	NA	NA	NA	NA
T-BACT Required?	No	No		
Special Permit Conditions?	No	No		

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Units # 11-3, -34-0

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on December 11, 2013, to perform a Risk Management Review for the proposed modification of unit S-6509-11 (1000 bbl. bolted, fixed roof, shipping/stock tank) and installation of a new 1000 bbl. crude oil stock tank. Unit 11-3 is being modified to reduce throughput to 675 bbl. per day therefore no analysis needs to be done on this unit.

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Analysis Parameters Unit 11-3			
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Closest Receptor (m)	640		

Analysis Parameters Unit 34-0			
VOC Emissions (lb/yr)	1,559	Max Hours per Year	8760
Closest Receptor (m)	640		

III. Conclusion

The prioritization score is less than 1.0. In accordance with the District's *Risk Management Policy*, the project is approved without Toxic Best Available Control Technology (T-BACT).

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

Attachments:

- A. RMR request from the project engineer
- B. Prioritization score
- C. Facility Summary

ATTACHMENT X
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-6509-11-3

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: HATHAWAY LLC
MAILING ADDRESS: PO BOX 81385
BAKERSFIELD, CA 93380-1385

LOCATION: HEAVY OIL CENTRAL

SECTION: NW15 TOWNSHIP: 25S RANGE: 27E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL BOLTED, FIXED ROOF SHIPPING/STOCK TANK WITH P/V VENT -- (QUINN LEASE):
REDUCE THROUGHPUT TO 675 BBL PER DAY

CONDITIONS

1. To maintain status as a small producer, permittee's crude oil production shall average less than 6000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rules 3020 and 4623]
2. Throughput shall not exceed 675 bbl/day. [District Rule 2201]
3. 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 Rules 2201 and 4623]
4. {2910} 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]
5. {2482} 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]
6. {2483} 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]

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

DAVID WARNER, Director of Permit Services
S-6509-11-3 : Dec 13 2013 10:53AM - EDGEHUR : Joint Inspection NOT Required

7. {2911} 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 Rule 4623]
8. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623]
9. Permittee shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623]
10. 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 Rules 1070 and 4623]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-6509-34-0

LEGAL OWNER OR OPERATOR: HATHAWAY LLC
MAILING ADDRESS: PO BOX 81385
BAKERSFIELD, CA 93380-1385

LOCATION: HEAVY OIL CENTRAL

SECTION: 28 TOWNSHIP: 29S RANGE: 29E

EQUIPMENT DESCRIPTION:
ONE 1000 BBL CRUDE OIL STOCK TANK

ISSUANCE DATE: DRAFT

DRAFT

CONDITIONS

1. To maintain status as a small producer, permittee's crude oil production shall average less than 6000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rules 3020 and 4623]
2. Throughput shall not exceed 50 bbl/day. [District Rules 2201 and 4623]
3. 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 2201]
4. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201]
5. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions. [District Rule 2201]
6. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start-up, 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 2201 and 4623]
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

DRAFT

DAVID WARNER, Director of Permit Services

S-6509-34-0 : Dec 16 2013 1:58PM - EDGEHOLM : Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

8. 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 2201 and 4623]
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 2201 and 4623]
10. Permittee shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623]
11. 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 Rules 1070 and 4623]
12. ATC S-6509-11-3 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

DRAFT