



DEC 05 2011

Mr. Kenneth Bork
Plains Exploration & Production Company
1200 Discovery Dr., Suite 500
Bakersfield, CA 93309

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1372
Project # S-1113786**

Dear Mr. Bork:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. The applicant is requesting that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This modification will result in an increase in throughput and the TVP limit of a crude oil storage tank.

After addressing any EPA comments made during the 45-day comment period, the Authority to Construct will be issued to the facility with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

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

Thank you for your cooperation in this matter.

Sincerely,



David Warner
Director of Permit Services

DW: KR/cm

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
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Southern Region
34946 Flyover Court
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San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



DEC 05 2011

Gerardo C. Rios, Chief
Permits Office
Air Division
U.S. EPA - Region IX
75 Hawthorne St.
San Francisco, CA 94105

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1372
Project # S-1113786**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for Plains Exploration & Production Company within the Heavy Oil Western Stationary Source of Kern County, which has been issued a Title V permit. Plains Exploration & Production Company is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. This modification will result in an increase in throughput and the TVP limit of a crude oil storage tank.

Enclosed is the engineering evaluation of this application with a copy of the current operating permit and proposed Authority to Construct # S-1372-324-2 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. 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,

David Warner
Director of Permit Services

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San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



DEC 05 2011

Mike Tollstrup, Chief
Project Assessment Branch
Air Resources Board
P O Box 2815
Sacramento, CA 95812-2815

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1372
Project # S-1113786**

Dear Mr. Tollstrup:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. The applicant is requesting that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This modification will result in an increase in throughput and the TVP limit of a crude oil storage tank.

Enclosed is the engineering evaluation of this application with a copy of the current operating permit and proposed Authority to Construct # S-1372-324-2 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 30-day comment period that begins on the date you receive this letter. 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,

David Warner
Director of Permit Services

DW: KR/cm

Enclosures

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**NOTICE OF PRELIMINARY DECISION
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT AND
THE PROPOSED SIGNIFICANT MODIFICATION OF FEDERALLY
MANDATED OPERATING PERMIT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed significant modification of Plains Exploration & Production Company for its heavy oil production within the Heavy Oil Western Stationary Source of Kern County, California. This modification will result in an increase in throughput and the TVP limit of a crude oil storage tank.

The District's analysis of the legal and factual basis for this proposed action, project #S-1113786, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested by the public, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact Mr. Leonard Scandura, Permit Services Manager, at (661)392-5500. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.

III. Project Location

The equipment will be located at the McKittrick Front Lease located within PXP's Heavy Oil Western Stationary Source, within the NW/4 of Section 6, Township 30S, Range 22E. 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

Produced crude oil and water enter wash tank(s) to undergo separation. Crude oil drawn from the wash tanks is directed to shipping tanks. The proposed tank in this project is part of PXP's McKittrick Front Lease Automatic Custody Transfer (LACT) system. The tank is equipped with a level controller and will operate at a constant level of 7 ft.; however, it will not serve as a wash tank.

V. Equipment Listing

Pre-Project Equipment Description:

ATC

S-1372-324-1: 2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH PV VALVE
(MCKITTRICK FRONT LEASE)

Proposed Modification:

S-1372-324-2: MODIFICATION OF 2,000 BBL FIXED ROOF CONSTANT LEVEL CRUDE OIL
STORAGE TANK WITH PV VALVE (MCKITTRICK FRONT LEASE):
INCREASE TVP TO 0.5 PSIA AND INCREASE THROUGHPUT TO 3,000
BBL/DAY

Post Project Equipment Description:

S-1372-324-2: 2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH PV VALVE
(MCKITTRICK FRONT LEASE)

VI. Emission Control Technology Evaluation

The tank will be equipped with a pressure-vacuum (PV) relief vent valve set to within 10% of the maximum allowable working pressure of the tank. The PV-valve will reduce VOC wind induced emissions from the tank vent.

VII. General Calculations

A. Assumptions

- Facility will operate 24 hours per day, 7 days per week, and 52 weeks per year
- TVP increasing from 0.375 to 0.5 psia (permit condition and applicant request)
- Throughput increasing from 2,000 to 3,000 bbl/day (equipment description and applicant request)
- The tank is equipped with level controller and will operate at a constant level (per applicant)
- VOC molecular weight is 100 lb/lbmol (District practice for a heavy oil source)
- 1 lb·CH₄ = 23 lb·CO₂e (California Climate Change Action Registry , Version 3.1, January, 2009, Appendix C)

B. Emission Factors

Daily and annual PE's for each permit unit are calculated using the District's Microsoft Excel spreadsheet for Tank Emissions - Fixed Roof Crude Oil less than 26° API. The spreadsheet for tanks was developed using the equations for fixed-roof tanks from EPA AP-42, Chapter 7.1.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

The potential to emit for unit S-1372-324-1 is summarized in the following table (see Appendix C for detailed tank emissions calculation):

Pre-Project Potential to Emit (PE1)		
Permit Unit	Daily VOC Emissions (lb/day)	Annual VOC Emissions (lb/year)
S-1372-324-1	6.2	2,272

2. Post Project Potential to Emit (PE2)

The potential to emit for unit S-1372-324-2 is summarized in the following table (see Appendix C for detailed tank emissions calculation):

Post Project Potential to Emit (PE2)		
Permit Unit	Daily VOC Emissions (lb/day)	Annual VOC Emissions (lb/year)
S-324-2	8.3	3,030

Greenhouse Gas (GHG) Emissions

Assuming that all VOC emitted is CH₄ (conservative assumption) the following GHG increase is calculated:

$$\left(\frac{3,030 \text{ lb} \cdot \text{CH}_4}{\text{year}} - \frac{2,272 \text{ lb} \cdot \text{CH}_4}{\text{year}} \right) \frac{23 \text{ lb} \cdot \text{CO}_2\text{e}}{\text{lb} \cdot \text{CH}_4} \left(\frac{1 \text{ ton}}{2,000 \text{ lbs}} \right) \frac{0.9072 \text{ metric tons}}{\text{short ton}} = 7.9 \frac{\text{metric tons} \cdot \text{CO}_2\text{e}}{\text{year}}$$

Per District Policy, project specific greenhouse gas emissions less than or equal to 230 metric tons-CO₂e/year are considered to be zero for District permitting purposes and are exempt from further environmental review.

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

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (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 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 Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) 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 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, SSPE2 calculations are not necessary.

5. Major Source Determination

Pursuant to Section 3.23 of District Rule 2201, a Major Source is a stationary source with post-project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.23.2 states, "for the purposes of determining major source status, the SSPE2 shall not include the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site."

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 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 Section 3.7 of District Rule 2201, BE = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.22 of District Rule 2201.

Clean Emissions Unit, Located at a Major Source

Pursuant to Rule 2201, Section 3.12, a Clean Emissions Unit is defined as an emissions unit that is "equipped with an emissions control technology with a minimum control efficiency of at least 95% or is equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

The tank is equipped with a PV valve, which is achieved in practice BACT (see BACT guidance in Appendix D); therefore; BE = Pre-project Potential to Emit.

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?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	3,030	50,000	No

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute a SB288 Major Modification.

8. Federal Major Modification

District Rule 2201, Section 3.17 states that Federal Major Modifications are the same as "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.

Since this project will result in an increase in VOC and the threshold for a Federal Major Modification is zero for this pollutant, this project will result in a Federal Major Modification.

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 exempted pursuant to Section 4.2, BACT shall be required for the following actions*:

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 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 Potential to Emit 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

Emission factors are not changing as a result of this project; therefore, AIPE can be calculated as:

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

$$\begin{aligned} \text{AIPE} &= 8.3 - 6.2 \\ &= 2.1 \text{ lb/day} \end{aligned}$$

As demonstrated above, the AIPE is greater than 2.0 lb/day for VOC emissions; therefore BACT is triggered for VOC emissions.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 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

BACT Guideline 7.3.1, applies to Petroleum and Petrochemical Production - Fixed Roof Organic Liquid Storage or Processing Tanks, < 5,000 bbl Tank capacity (See Appendix D).

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 Appendix E), BACT has been satisfied with the following:

VOC: PV-vent set to within 10% of maximum allowable pressure

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the Post Project Stationary Source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The following table compares the post-project facility-wide annual emissions in order to determine if offsets will be required for this project.

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
Post Project SSPE (SSPE2)	NA	NA	NA	NA	>20,000
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	No	No	No	No	Yes

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for VOC; therefore offset calculations will be required for this project.

Per Sections 4.7.1 and 4.7.3, the quantity of offsets in pounds per year for VOC is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

$$\text{Offsets Required (lb/year)} = (\sum[\text{PE2} - \text{BE}] + \text{ICCE}) \times \text{DOR}, \text{ for all new or modified emissions units in the project,}$$

Where,

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

BE = Baseline Emissions, (lb/year)

ICCE = Increase in Cargo Carrier Emissions, (lb/year)

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE)

As calculated previously, Baseline Emissions are equal to the Pre-project Potential to Emit. This project results in a Federal Major Modification; therefore, according to Rule 2201 Section 4.8.1, the Distance Offset Ratio will be equal to 1.5. Also, there are no increases in cargo carrier emissions. Offsets can be determined as follows:

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

$$\begin{aligned} \text{PE2 (VOC)} &= 3,030 \text{ lb/year} \\ \text{BE (VOC)} &= 2,272 \text{ lb/year} \end{aligned}$$

$$\begin{aligned} \text{Offsets Required (lb/year)} &= (3,030 - 2,272) \times 1.5 \\ &= 758 \times 1.5 \\ &= 1,137 \text{ lb VOC/year} \end{aligned}$$

Calculating the appropriate quarterly emissions to be offset is as follows:

<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
284	284	284	284

The applicant has stated that the facility plans to use ERC certificate C-616-1 and the third quarter of ERC certificate C-1089-1 (to supplement offset requirements that ERC C-616-1 does not fulfill) to offset the increases in VOC emissions associated with this project. The above certificates have available quarterly VOC credits as follows:

	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
ERC #C-616-1	192	207	253	270
ERC #C-1089-1	892	0	1,950	2,684

As seen above, the facility has sufficient credits to fully offset the quarterly VOC emissions increases associated with this project.

Proposed Rule 2201 (offset) Conditions:

- {GC# 4447 - edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 284 lb, 2nd quarter - 284 lb, 3rd quarter - 284 lb, and fourth quarter - 284 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
- ERC Certificate Numbers C-616-1 and C-1089-1 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications

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 Potential to Emit 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 Potential to Emit Purposes.

c. Offset Threshold

The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

Offset Threshold				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	NA	NA	20,000 lb/year	No
SO _x	NA	NA	54,750 lb/year	No
PM ₁₀	NA	NA	29,200 lb/year	No
CO	NA	NA	200,000 lb/year	No
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 Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. $SSIPE = SSPE2 - SSPE1$. The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	NA	NA	NA	20,000 lb/year	No
SO _x	NA	NA	NA	20,000 lb/year	No
PM ₁₀	NA	NA	NA	20,000 lb/year	No
CO	NA	NA	NA	20,000 lb/year	No
VOC	NA	NA	758	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 it being 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)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, 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 Modified Rule 2201 (DEL) Conditions:

- Crude oil throughput shall not exceed ~~2,000~~3,000 barrels per day based on a monthly average. [District Rules 2201 & 4623]
- This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than ~~0.375~~0.5 psia under all storage conditions. [District Rules 2201 & 4623]

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

No modification in monitoring requirements is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

No modification in recordkeeping requirements is required to demonstrate compliance with Rule 2201.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis

Section 4.14.1 of this Rule requires that an ambient air quality analysis (AAQA) 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 Technical Services Division of the SJVAPCD conducted the required analysis.

There is no Ambient Air Quality Standard in the District for emissions of VOC; therefore, an analysis 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 Title I Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Section VII.C.8, this project does constitute a Title I modification, therefore this requirement is applicable. Included in Appendix G is PXP's compliance certification.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to modify an existing crude oil storage tank.

Since the project will provide an increase in the storage of organic liquids to be used at the same location, the existing site will result in the least possible impact from the project.

Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. 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 source is proposing a Federal Major Modification which is also a Title I Modification. Section 3.20.5 describes Title I Modifications as modifications that do not qualify as a Minor Modification. Therefore, this project results in a significant modification.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.

Pursuant to 60.110b (b), Subpart Kb does not apply to a vessel with a design capacity less than or equal to 1,589.874 cubic meters (10,000 barrels) used for petroleum storage at a production facility prior to custody transfer. Since this vessel has a capacity less than or equal to 10,000 barrels and is used at a production facility prior to custody transfer, Subpart Kb does not apply.

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity).

As this equipment results in the emissions of fugitive VOC emissions only, compliance with visible emissions limits is expected.

Rule 4102 Nuisance

Section 4.0 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 (Appendix F), 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.

Discussion of T-BACT

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

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 10 in a million). As outlined by the HRA Summary in Appendix F of this report, the emissions increases for this project was determined to be less than significant.

Rule 4623 Storage of Organic Liquids

The purpose of this rule is to limit volatile organic compound (VOC) emissions from the storage of organic liquids. This rule applies to any tank with a design capacity of 1,100 gallons or greater used to store organic liquid.

Section 4.4 allows tanks exclusively receiving and/or storing an organic liquid with a TVP less than 0.5 psia to comply only with the following requirements of this rule:

- TVP and API Gravity Testing provisions pursuant to Section 6.2;
- Recordkeeping provisions pursuant to Section 6.3.6,
- Test Methods provisions pursuant to Section 6.4, and
- Compliance schedules pursuant to Section 7.2.

The following conditions will be listed on the permits to maintain this exemption:

- 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 & 4623]
- Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank within 60 days of startup and 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 Rules 2201 and 4623]

Section 6.2 applies to uncontrolled fixed roof tanks. Since this tank is equipped with a PV vent (considered to exhibit 10% control of VOCs), the requirements of Section 6.2 are not applicable.

Section 6.3.6 requires an operator to submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. An operator who uses the information in Appendix A to demonstrate the TVP and/or API gravity of the stored organic liquid shall submit information to the APCO within 45 days after the date that the type of organic liquid stored in the tank has been determined.

The following condition will ensure compliance with this section:

- Permittee shall submit the records of TVP and API gravity testing to the APCO within 30 days of startup tvp testing and within 45 days after the date of each 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 Rules 2201 and 4623]

Section 6.4 lists the following test methods to be used unless otherwise approved by the APCO and the United States Environmental Protection Agency (US EPA).

6.4.1 Analysis of halogenated exempt compounds shall be conducted using California Air Resources Board (ARB) Method 432.

6.4.2 The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287-92 (2000) 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 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products".

6.4.3 Except for crude oil subject to Section 6.4.4, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in Appendix B. Appendix B is an excerpt from the oil and gas section of "ARB Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588", dated August 1989. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26° up to 30° may be determined by using other equivalent test methods approved by APCO, ARB and US EPA.

6.4.4 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 US EPA, shall be used to determine the TVP of crude oil with an API gravity of 26° or less, or for any API gravity that is specified in this test method.

6.4.5 An operator may use the information in Appendix A to determine the TVP of the stored organic liquid in a tank provided the storage temperature listed in Appendix A is not exceeded at any time.

6.4.6 The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported.

The following conditions will appear on the ATC to ensure compliance with these testing conditions:

- 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 Rules 2201 and 4623]
- 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 Rules 2201 and 4623]

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)

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (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 Authority to Construct S-1372-324-2 subject to the permit conditions on the attached draft Authority to Construct in Appendix A.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1372-324-2	3020-05-D	84,000 gallons	\$185.00

Appendices

- A: Draft ATC
- B: Base Permit
- C: Pre/Post Project Emissions Calculation
- D: BACT Guideline
- E: BACT Analysis
- F: HRA Summary
- G: Compliance Certification

Appendix A

Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1372-324-2

LEGAL OWNER OR OPERATOR: PLAINS EXPLORATION & PRODUCTION COMPANY

MAILING ADDRESS: ATTN: KENNETH BORK
1200 DISCOVERY DRIVE, SUITE 500
BAKERSFIELD, CA 93309

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NW06 TOWNSHIP: 30S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 2,000 BBL FIXED ROOF CONSTANT LEVEL CRUDE OIL STORAGE TANK WITH P/V VALVE (MCKITTRICK FRONT LEASE): INCREASE TVP TO 0.5 PSIA AND INCREASE THROUGHPUT TO 3,000 BBL/DAY

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. Authority to Construct (ATC) S-1372-324-1 shall be implemented concurrently with or prior to this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 284 lb, 2nd quarter - 284 lb, 3rd quarter - 284 lb, and fourth quarter - 284 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] 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.

Sayed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

S-1372-324-2 : Oct 26 2011 1:22PM - RICKARDK : Joint Inspection NOT Required

5. ERC Certificate Numbers C-616-1 and C-1089-1 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Tank shall operate at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Crude oil throughput shall not exceed 3,000 barrels per day based on a monthly average. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank within 60 days of startup and 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 Rules 2201 and 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 API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. Permittee shall submit the records of TVP and API gravity testing to the APCO within 30 days of startup tvp testing and within 45 days after the date of each 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. The permittee 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] Federally Enforceable Through Title V Permit
16. 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] Federally Enforceable Through Title V Permit
17. 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 1070] Federally Enforceable Through Title V Permit

DRAFT

Appendix B

Base Permit

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1372-324-1

ISSUANCE DATE: 07/06/2011

LEGAL OWNER OR OPERATOR: PLAINS EXPLORATION & PRODUCTION COMPANY

MAILING ADDRESS: ATTN: KENNETH BORK
1200 DISCOVERY DRIVE, SUITE 500
BAKERSFIELD, CA 93309

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NW 6 TOWNSHIP: 30S RANGE: 22E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH P/V VALVE (MCKITTRICK FRONT LEASE)

CONDITIONS

1. 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. 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. Tank shall operate at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Crude oil throughput shall not exceed 2000 barrels per day based on a monthly average. [District Rules 2201 & 4623] Federally Enforceable Through Title V Permit
5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.375 psia under all storage conditions. [District Rules 2201 & 4623] Federally Enforceable Through Title V Permit
6. 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] 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

DAVID WARNER, Director of Permit Services

S-1372-324-1; Oct 26 2011 1:23PM - RICKARDK : Joint Inspection NOT Required

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

7. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank within 60 days of startup and 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Permittee shall submit the records of TVP and API gravity testing to the APCO within 30 days of startup tvp testing and within 45 days after the date of each 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 Rules 2201 & 4623] Federally Enforceable Through Title V Permit
12. The permittee 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] Federally Enforceable Through Title V Permit
13. 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 & 4623] Federally Enforceable Through Title V Permit
14. 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 1070] Federally Enforceable Through Title V Permit
15. PTOs S-1372-94-4, '-239-1, '-240-1, and '-287-1 shall be canceled upon implementation of ATC. [District Rule 2201] Federally Enforceable Through Title V Permit
16. ATC S-1372-324-0 is hereby canceled. [District Rule 2201] Federally Enforceable Through Title V Permit

Appendix C

Pre/Post Project Emissions Calculation

Tank Input Data	
permit number (S-xxxx-xx-xx)	324-1
facility tank I.D.	--
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.375
liquid bulk storage temperature, T _b (°F)	210
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)	2,000
conical or dome roof? (c, d)	c
shell height of tank (feet)	16
average liquid height (feet)	7
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-----	3
-----This row only used if shell is different color from roof-----	1

Tank Input Data	A	B
maximum daily fluid throughput (bbl)		2,000
maximum annual fluid throughput (bbl)	30,400	30,400
-----This row only used if flashing losses occur in this tank-----		100
-----This row only used if flashing losses occur in this tank-----		36,500
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)		1648.8
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	158.8	4.8223
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	148.0	3.5577
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	153.4	4.0709
roof outage, H _{ro} (feet)		0.3125
vapor space volume, V _v (cubic feet)		6582.62
paint factor, alpha		0.64
vapor density, W _v (lb/cubic foot)		0.0057
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.1660

Results	lb/year	lb/day
Standing Storage Loss	2,272	6.23
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	2,272	6.2

Summary Table	
Permit Number	324-1
Facility Tank I.D.	--
Tank capacity (bbl)	2,000
Tank diameter (ft)	30
Tank shell height (ft)	16
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	2,000
Maximum Annual Fluid Throughput (bbl/year)	30,400
Maximum Daily Oil Throughput (bbl/day)	N/A
Maximum Annual Oil Throughput (bbl/year)	N/A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	6.2
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	2,272

Tank Input Data	
permit number (S-xxxx-xx-xx)	324-2
facility tank I.D.	--
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.5
liquid bulk storage temperature, T _b (°F)	210
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)	2,000
conical or dome roof? (c, d)	c
shell height of tank (feet)	16
average liquid height (feet)	7
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-----	3
-----This row only used if shell is different color from roof-----	1

Liquid Input Data		A	B
maximum daily fluid throughput (bbl)			3,000
maximum annual fluid throughput (bbl)	30,400		30,400
-----This row only used if flashing losses occur in this tank-----			100
-----This row only used if flashing losses occur in this tank-----			36,500
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
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	158.8		4.6223
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	148.0		3.5577
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	153.4		4.0709
roof outage, H _{ro} (feet)			0.3125
vapor space volume, V _v (cubic feet)			6582.62
paint factor, alpha			0.54
vapor density, W _v (lb/cubic foot)			0.0076
daily vapor temperature range, delta T _v (degrees Rankine)			42.57
vapor space expansion factor, K _e			0.1660

Results	lb/year	lb/day
Standing Storage Loss	3,030	8.30
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	3,030	8.3

Summary Table	
Permit Number	324-2
Facility Tank I.D.	--
Tank capacity (bbl)	2,000
Tank diameter (ft)	30
Tank shell height (ft)	16
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	3,000
Maximum Annual Fluid Throughput (bbl/year)	30,400
Maximum Daily Oil Throughput (bbl/day)	N/A
Maximum Annual Oil Throughput (bbl/year)	N/A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	8.3
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	3,030

Appendix D

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**

Appendix E

BACT Analysis

Top Down BACT Analysis

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

Step 1 - Identify All Possible Control Technologies

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

Technologically feasible:

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

Achieved in Practice:

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

Step 2 - Eliminate Technologically Infeasible Options

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

PXP has provided the following costs for installation, as part of the approval for ATC S-1372-324-1, of equipment (compressor and heat exchanger) to pipe the tank vapors to an existing waste gas gathering system served by vapor control. PXP has stated that these costs are less than those that would be associated with reinjection of the vapors into onsite wells and therefore are conservative.

Compressor skid and piping cost	\$285,687
Heat Exchanger Cost	\$55,000
Foundation and Installation Cost	<u>\$120,000</u>
Total Capital Cost	\$460,687

The annualized capital cost is

$AP = (P) \left\{ \frac{i(1+i)^n}{(1+i)^n - 1} \right\}$, where

AP = Equivalent Annual Capital Cost of Control Equip.

P = Present value of the control equipment, including installation cost. \$51,000

i = interest rate (use 10% per policy)

n = equipment life (assume 10 years per policy)

$AP = (P) \left\{ \frac{(0.1)(1+0.1)^{10}}{(1+0.1)^{10} - 1} \right\}$

$AP = (P) \times (0.16274) = (\$460,687) (0.1627) = \$74,954/\text{year}$

For calculation of the amount of VOCs removed from each tank (emissions unit) with the vapor control system, 100% control is assumed. The VOCs removed annually are

$\text{Tons/yr} = 3,030 \text{ lb/yr} / 2000 \text{ lb/ton} = 1.51 \text{ tons/yr}$

$\text{Annualized cost} = \$74,954/\text{yr} / 1.51 \text{ tons/yr}$
 $= \$49,638/\text{ton}$

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

Step 5 - Select BACT

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

Appendix F

HRA Summary

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Kris Rickards, AQE – Permit Services
 From: Joe Aguayo, AQS – Technical Services
 Date: October 31, 2011
 Facility Name: Plains Exploration and Production Co.
 Location: NW/4 of S6/T30S/R22E
 Application #(s): S-1372-324-2
 Project #: S-1113786

A. RMR SUMMARY

RMR Summary			
Categories	Crude Oil Storage Tank (Unit 324-2)	Project Totals	Facility Totals
Prioritization Score	0.0	0.0	>1.0
Acute Hazard Index	0.00	0.00	0.08
Chronic Hazard Index	0.00	0.00	0.03
Maximum Individual Cancer Risk (10 ⁻⁶)	0.0	0.0	0.9
T-BACT Required?	No		
Special Permit Conditions?	No		

Proposed Permit Conditions

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

Unit # 324-2

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on June 17, 2004, to perform an Ambient Air Quality Analysis and Risk Management Review for a proposed modification to a crude oil storage tank. The modification consisted of the installation of increasing the throughput and TVP of stored liquids.

II. Analysis

Technical Services performed a health risk assessment using the Toxic Fugitive Emissions from Oilfield Equipment spreadsheet. The cumulative prioritization scores were greater than 1.0, thus modeling was conducted using the AERMOD model, with the parameters outlined below and meteorological data for 2005-2009 from Bakersfield to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid.

Analysis Parameters Unit 324-2			
Source Type	Area	Location Type	Rural
X-Length (m)	9.75	Closest Receptor (m)	5632
Y-Length (m)	9.75	Type of Receptor	Residential
Release Height (m)	4.88	Pollutant Type	VOC
		Emission Rate	0.35 lb/hr

III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk factor associated with the project is less than 1.0 in a million. **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.

Since all emissions from the proposed equipment are VOCs and a National Ambient Air Quality Standard for VOC emissions has not been developed, emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Toxic emissions summary
- D. Prioritization score
- E. Facility Summary

Appendix G

Compliance Certification

PXP

Plains Exploration & Production Company

October 31, 2011

San Joaquin Valley
Pollution Control District
34946 Flyover Court
Bakersfield, CA. 93308
Attention: Mr. Kristopher Rickards

**RULE 2201 COMPLIANCE STATEMENT
ATC S-1372-324 FEDERAL MAJOR MODIFICATION
PROJECT 1113786**

Mr. Rickards:

In accordance with Rule 2201, Section 4.15 "Additional Requirements for new Major Sources and Federal Major Modifications", PXP is providing this compliance statement regarding its proposed ATC for McKittrick Front Tank #S-1372-324 (APCD Project 1113786).

All major stationary sources in California owned and operated by PXP, or by any entity controlling, controlled by, or under common control with PXP, and which are subject to emission limitations are in compliance or on a schedule for compliance with all applicable emission limitations and standards. These sources include one or more of the following oil and gas production facilities:

1. Arroyo Grande Field
2. Inglewood Field
3. Lompoc Point Pedernales Title V Stationary Source

Based on information and belief formed after reasonable inquiry, the statements and information in this letter are true, accurate, and complete. Should you have any questions concerning this matter, please contact Kenneth Bork at (661) 395-5458.

Sincerely,



Steve Rusch
Vice President of EHS and Government Affairs