



JUN 27 2011

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

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)**  
**District Facility # S-1372**  
**Project # S-1110679**

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. Plains Exploration & Production Company proposes to install a 5,000 bbl crude oil storage tank at Morris Lease, Cymric Field.

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:WJ/dg

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  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585



**JUN 27 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-1110679**

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, which has been issued a Title V permit. This facility is located at the Cymric Field, within the NE/4 of Section 8, Township 30S, Range 22E. 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. Plains Exploration & Production Company proposes to install a 5,000 bbl crude oil storage tank at Morris Lease, Cymric Field.

Enclosed is the engineering evaluation of this application and proposed Authority to Construct # S-1372-407-0 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.

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

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Mr. Gerardo C. Rios  
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Thank you for your cooperation in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "David Warner", with a long horizontal flourish extending to the right.

David Warner  
Director of Permit Services

DW:WJ/dg

Enclosures



JUN 27 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-1110679**

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. Plains Exploration & Production Company proposes to install a 5,000 bbl crude oil storage tank at Morris Lease, Cymric Field.

Enclosed is the engineering evaluation of this application and proposed Authority to Construct # S-1372-407-0 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:WJ/dg

Enclosures

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

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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 modification of Plains Exploration & Production Company for its Morris Lease oil and gas facility located at the Cymric Field, within the NE/4 of Section 8, Township 30S, Range 22E, California. Plains Exploration & Production Company proposes to install a 5,000 bbl crude oil storage tank at Morris Lease, Cymric Field.

The District's analysis of the legal and factual basis for this proposed action, project #S-1110679, is available for public inspection at [http://www.valleyair.org/notices/public\\_notices\\_idx.htm](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 P.E. 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 93308-9725.

# San Joaquin Valley Air Pollution Control District Authority to Construct Application Review

Facility Name: Plains Exploration & Production Company Date: 5/18/11  
Mailing Address: 1200 Discovery Drive Suite #500, Bakersfield, CA 93309 Engineer: William Jones  
Lead Engineer: Richard Karrs  
Contact Person: Kenneth R. Bork  
Telephone: 661-395-5458  
Fax: 661-395-5298  
E-Mail: kbork@pxp.com  
Application #(s): S-1372-407-0  
Project #: S-1110679  
Deemed Complete: 4/08/11

*RWK*

*6-16-11*

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## I. Proposal

Plains Exploration & Production Company (PXP) has requested an Authority to Construct (ATC) permit for the installation of a 5,000 bbl crude oil storage tank at Morris Lease, Cymric Field.

PXP received their Title V Permit on June 30, 1992. This modification can be classified as a Title V significant modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. PXP must apply to administratively amend their Title V permit.

The oil stored is less than 26° API gravity and the TVP is less than 0.5 psi by the HOST method analysis (Attachment B).

## II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (6/10/10)  
Rule 2520 Federally Mandated Operating Permits (6/21/01)  
Rule 4001 New Source Performance Standards (4/14/99)  
Rule 4102 Nuisance (12/17/92)  
Rule 4623 Storage of Organic Liquids (12/20/01)  
CH&SC 41700 Health Risk Assessment  
CH&SC 42301.6 School Notice  
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)  
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

### III. Project Location

The equipment will be located on the Morris Lease oil and gas facility in the Cymric Field, within the NE/4 of Section 8, 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

PXP's Morris Lease facility consist of oil and gas production devices in addition to ancillary equipment used to treat and separate crude oil, produced water and gas from the crude oil influent produced from the Morris Production wells located onsite. The separated crude oil is piped from PXP's Morris Lease facility, 0.75 miles to PXP's McKittrick Lease facility where the crude oil is further processed before it is piped to the Conono Phillips pipeline. This ATC for a new 5,000 bbl fixed roof crude oil storage tank will allow the facility to accommodate an increase in oil production.

### V. Equipment Listing

S-1372-407-0: 5,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (MORRIS LEASE).

### VI. Emission Control Technology Evaluation

Emissions from crude oil storage tanks include VOC. 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. All emissions produced by this unit are vented to atmosphere.

### VII. General Calculations

#### A. Assumptions

- Facility operates 24 hr/day, 365 days/yr.
- 100% of emissions are vented to atmosphere
- The tanks emit only volatile organic compounds (VOCs), sulfur content is negligible
- The tank paint condition is good and the color is light.
- Maximum tank volume: 5,000 bbls
- TVP of oil = 0.2 psia (Applicant)
- API gravity of Organic fluid : 11.0 API gravity (Applicant)
- Organic liquid storage temperature: 210 F (Applicant)
- Tank is operated at a constant level
- Tank height: 24 ft. (Applicant)
- Tank Diameter: 38.7ft (Applicant)
- Average liquid Height: 8ft. (Applicant)
- Maximum daily throughput of oil: 1,400 bbls/day. (Applicant)
- Maximum annual throughput of oil: 511,000 bbls/yr. (Applicant)
- Maximum daily throughput of fluid: 21,670 bbls/day. (Applicant)
- Maximum annual throughput of fluid: 7,909,505 bbls/yr. (Applicant)

- VOCs molecular weight, 100 lb/lb mol

## B. Emission Factors

Both the daily and annual PE's for each permit unit will be based on the results from the District's Microsoft Excel spreadsheets for Tank Emissions - Fixed Roof Crude Oil less than 26° API located in Attachment C. The spreadsheet for tanks was developed using the equations for fixed-roof tanks from EPA AP-42, Chapter 7.1. See Calculations Attachment C.

## C. Calculations

### 1. Pre-Project Potential to Emit (PE1)

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

### 2. Post Project Potential to Emit (PE2)

The potential to emit for the boiler is calculated as follows, and summarized in the table below:

Post Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO <sub>x</sub>	0	0
SO <sub>x</sub>	0	0
PM <sub>10</sub>	0	0
CO	0	0
VOC	19.5	7,123

### 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."

A Major Source is a facility where the SSPE2 for any pollutant exceeds the following Major Source threshold value:

Major Source				
Pollutant	SSPE (lb/yr)	SSPE2 (lb/yr)	Major Source Threshold (lb/year)	Major Source?
VOC	> 20,000	> 20,000	20,000	Yes

Since the threshold value in the above table is exceeded, this facility is a Major Source for VOC.

#### 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.

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

### 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."

As discussed in Section VII.C.5 above, the facility is an existing Major Source for NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, CO, and VOC; however, the project by itself would need to be a significant increase in order to trigger a Major Modification. The emissions unit(s) within this project do not have a total potential to emit which is greater than Major Modification thresholds (see table below). Therefore, the project cannot be a significant increase and the project does not constitute a SB 288 Major Modification.

<b>SB 288 Major Modification Thresholds (Existing Major Source)</b>			
Pollutant	Project PE (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO <sub>x</sub>	0	50,000	No
SO <sub>x</sub>	0	80,000	No
PM <sub>10</sub>	0	30,000	No
VOC	7,123	50,000	No

### 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. SB 288 Major Modifications are not Federal Major Modifications if they meet the criteria of the "Less-Than-Significant Emissions Increase" exclusion.

A Less-Than-Significant Emissions Increase exclusion is for an emissions increase for the project, or a Net Emissions Increase for the project (as defined in 40 CFR 51.165 (a)(2)(ii)(B) through (D), and (F)), that is not significant for a given regulated NSR pollutant, and therefore is not a Federal Major Modification for that pollutant.

- To determine the post-project projected actual emissions from existing units, the provisions of 40 CFR 51.165 (a)(1)(xxviii) shall be used.
- To determine the pre-project baseline actual emissions, the provisions of 40 CFR 51.165 (a)(1)(xxv)(A) through (D) shall be used.
- If the project is determined not to be a Federal Major Modification pursuant to the provisions of 40 CFR 51.165 (a)(2)(ii)(B), but there is a reasonable possibility that the project may result in a significant emissions increase, the owner or operator shall comply with all of the provisions of 40 CFR 51.165 (a)(6) and (a)(7).
- Emissions increases calculated pursuant to this section are significant if they exceed the significance thresholds specified in the table below.

Pollutant	Threshold (lb/year)
VOC	0
NOx	0
PM10	30,000
SOx	80,000

The Net Emissions Increases (NEIs) for purposes of determination of a "Less-Than-Significant Emissions Increase" exclusion will be calculated below to determine if this project qualifies for such an exclusion.

Net Emission Increase for New Unit (NEI)

Per 40 CFR 51.165 (a)(2)(ii)(D) for new emissions unit in this project,

$$NEI = PE2 - BAE$$

BAE = 0 for the new emissions unit; therefore,

$$NEI = PE2$$

Unit S-1372-407-0 is a new units, and baseline actual emissions are equal to zero, and therefore, pursuant to 40 CFR 51.165 (a)(2)(ii)(D), the Net Emissions Increases are equal to the post-project potential to emit, and the project is a Federal major Modification for VOC.

**9. Quarterly Net Emissions Change (QNEC)**

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in **Appendix G**.

**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 seen in Section VII.C.2 of this evaluation, the applicant is proposing to install a new 5,000 bbl Crude Oil Storage Tank with a PE greater than 2 lb/day for VOC. BACT is triggered for VOC since the PEs are greater than 2 lbs/day.

**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**

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

**d. SB 288/Federal Major Modification**

As discussed in 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 the Petroleum and Petrochemical Production – Fixed Roof Organic Liquid Storage or Processing Tank, < 5,000 bbl Tank capacity (See Appendix D)

The Tank is nominally rated at 5,000 bbl but the actual capacity of the proposed tank is 4,916 bbl.

**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 applicant concedes they are over the offset threshold for all five criteria air contaminants. Therefore offsets are triggered for the emissions increases associated with this project approval.

### 2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for all five criteria air contaminants; 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 is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

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

BE = 0 for these new emissions units.

The facility is proposing to install a new emissions unit; therefore Baseline Emissions are equal to zero. Also, there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

**Offsets Required** (lb/year) = PE2 x DOR

**DOR = 1.5** The distance offset ratio (DOR) for federal major Modifications is 1.5.

Therefore the offsets required for this project 1.5 time the PE2 for the project.

<b>Offsets required</b>	
	Annual Emissions (lb/year)
NO <sub>x</sub>	0
SO <sub>x</sub>	0
PM <sub>10</sub>	0
CO	0
VOC	10,684

<b>ERC Certificates to be used as offsets</b>					
Pollutant	Certificate #	Q1	Q2	Q3	Q4
VOC	Offsets req'd	2,671	2,671	2,671	2,671
	ERC C-1029-1	5,138	5,110	5,081	5,082

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

**Proposed Rule 2201 (offset) Conditions:**

- *Prior to operating under this Authority to Construct, permittee shall surrender VOC emission reduction credits to offset emission increases of 1781 lb VOC/qtr at the offset ratio specified in section 4.8 of Rule 2201. Using ERC C-1029-1, the offset ratio will be 1.5:1.0 and the total amount of offsets required will be 2671lb/VOCqtr. [District Rule 2201]*
- *ERC Certificate Numbers C-1029-1 (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**

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 Potential to Emit 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 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?
VOC	>20,000	>20,000	20,000 lb/year	No

As detailed above, offset thresholds were surpassed for NO<sub>x</sub> with this project; therefore public noticing is 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:

<b>Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice</b>			
<b>Pollutant</b>	<b>SSIPE (lb/year)</b>	<b>SSIPE Public Notice Threshold</b>	<b>Public Notice Required?</b>
NO <sub>x</sub>	0	20,000 lb/year	No
SO <sub>x</sub>	0	20,000 lb/year	No
PM <sub>10</sub>	0	20,000 lb/year	No
CO	0	20,000 lb/year	No
VOC	7,123	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, this project is a Federal Major Modification; therefore, public noticing for SB 288 or Federal Major Modification purposes is required. 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.

DELs for the emission units in this project will be included on the ATCs in the form of tanks' throughput and the tank contents' maximum true vapor pressure (TVP). The permittee will be required to maintain accurate records of tank content TVP and tanks monthly average daily throughput to validate the DEL.

## 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 monitoring is required to demonstrate compliance with Rule 2201.

### 3. Recordkeeping

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

- {2497} 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]
- {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 Rule 4623]

### 4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

### 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 Sections VIII-Rule 2201-C.1.a and VIII-Rule 2201-C.1.b, this facility is a new major source and this project does constitute a Title I modification, therefore this requirement is applicable. Included in **Appendix J** is Plains Exploration & Production Company's compliance certification.

### H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install a 5,000 bbl fixed roof crude oil storage tank.

Since the project will provide 5,000 bbl fixed roof crude oil storage tank 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.

### District Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification may be considered a significant modification to the Title V Permit. As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment/minor modification, prior to operating with the proposed modifications. PXP's Title V compliance certification form is included in Appendix H. Continued compliance with this rule is expected.

### **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. 40 CFR Part 60, Subpart Kb applies to Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.

Per 40 CFR Part 60, Subpart Kb, section d(4), this subpart does not apply to vessels with a design capacity less than or equal to 1,589.874 m<sup>3</sup> (422,377 gallons) used for petroleum or condensate stored, processed, or treated prior to custody transfer.

Since, the storage capacity of this tank is 210,000 gallons the provisions of 40 CFR Part 60, Subpart Kb do not apply to this unit.

### **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 E of this report, the emissions increases for this project was determined to be less than significant.

### **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.

Per Section 4.4, tanks storing organic liquids with a TVP less than 0.5 psia are exempt from all requirements of this rule with the exception of the following.

- 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.

This tank stores crude oil with a TVP less than 0.5 psia. The permittee will be required to perform periodic TVP and API testing to show exemption from this rule. The following conditions will be placed on the permit,

- *{modified 2480} 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 NSR Rule and District Rule 4623]*
- *TVP testing shall be conducted 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 each tank. [District Rule 4623]*
- *{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]*
- *{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]*
- *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]*
- *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 NSR Rule and District Rule 4623]*

- *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 NSR Rule and District Rule 4623]*

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)**

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.

Project specific impacts on global climate change were evaluated consistent with the adopted District policy – *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The District's engineering evaluation (this document) demonstrates that the project includes Best Performance Standards (BPS) for each class and category of greenhouse gas emissions unit. 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. Issue Authority to Construct S-1372-407-0 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-1372-407-0	3020-05-C	5,000 bbl	\$135.00

**Appendices**

- A: Draft ATC
- B: TVP HOST method analysis data
- C: PE2 Calculations
- D: BACT Guideline
- E: BACT Analysis
- F: HRA Summary
- G: Quarterly Net Emissions Change
- H: Title V compliance certification form
- I: Emission Profile
- J: Compliance certification

# APPENDIX A: Draft ATC

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: S-1372-407-0

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: NE8 TOWNSHIP: 30S RANGE: 22E

EQUIPMENT DESCRIPTION:  
5,000 BBL FIXED ROOF, CRUDE OIL STORAGE TANK

**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. {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. 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, and shall remain in gas-tight condition except when the operating pressure exceeds the valve's set pressure. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Tank crude oil throughput shall not exceed 1,400 bbl/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. True vapor pressure (TVP) of liquids received, held or stored in this tank shall not exceed 0.2 psia. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

**DRAFT**

DAVID WARNER, Director of Permit Services

S-1372-407-0 : Jun 7 2011 11:00AM - JONESW : Joint Inspection NOT Required

6. Tank shall be operated at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
7. VOC emission rate shall not exceed 19.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. TVP testing shall be conducted 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 each tank. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
11. 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 2201 and District Rule 4623] Federally Enforceable Through Title V Permit
12. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201 and District Rule 4623] Federally Enforceable Through Title V Permit
13. Prior to operating under this Authority to Construct, permittee shall surrender VOC emission reduction credits to offset emission increases of 1781 lb VOC/qtr at the offset ratio specified in Table 4-2 of Rule 2201. Using ERC C-1029-1, the offset ratio will be 1.5:1.0 and the total amount of offsets required will be 2671 lb VOC/qtr. [District Rule 2201] Federally Enforceable Through Title V Permit
14. ERC Certificate Numbers C-1029-1 (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

DRAFT





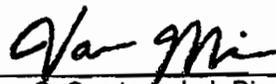
O I L F I E L D   E N V I R O N M E N T A L   A N D   C O M P L I A N C E

Client: Plains Exploration & Production Company 1200 Discovery Drive, Suite 500 Bakersfield, CA 93309 Attn: Kenneth Bork Project: RVP TVP/Host VP API Site: McKittrick / Cymrick	SAMPLE ID: 1101415-1 Date Sampled: 03/24/11 @ 0910 Date Analyzed: 03/31/11 @ 1126 Date Received: 03/24/11 @ 1220  Lab Contact: J. Carstens
---	---

**Report Of Analytical Results**  
HOST Method

OEC ID	Client ID	Constituent	Results	Units	Method	PQL
1101415-1	S- 1372-320	API Gravity	10.6	API	ASTM D-4052	0.1
		Vapor Pressure @ 140°F	0.008	psi	HOST <sup>1</sup>	0.005

<sup>1</sup>Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatography, Revised Draft, calculation from page 6. David Littlejohn and Donald Lucas, Lawrence Berkeley National Laboratory, March 1, 2000. Results listed as ND would have been reported if present at or above the listed PQL (Practical Quantitation Limit).  
N/A= Not available, due to sample matrix.

  
Julius G. Carstens, Lab Director



# Oilfield Environmental and Compliance

307 Roemer Way Suite 300, Santa Maria CA 93454

phone: (805) 922-4772 fax: (805) 925-3376

## CHAIN OF CUSTODY

<b>Company:</b> Plains Exploration & Production Company	<b>Project Name:</b> RVP TVP/Host VP API
<b>Street Address:</b> 1200 Discovery Drive, Suite 500	<b>Site:</b> McKittrick / Cymrick
<b>City:</b> Bakersfield <b>State:</b> CA <b>Zip Code:</b> 93309	<b>Comments:</b> Results by Wednesday 03/30/11
<b>Telephone:</b> 661-395-5458 <b>Fax:</b> 661-395-5298	email kbork @ plainsxp.com
<b>Report To:</b> Kenneth Bork <b>Sampler:</b> Roger Dickinson	

<b>Turnaround Time</b> <input type="checkbox"/> 10 Work Days <input type="checkbox"/> 3 Work Days <input type="checkbox"/> 24 hr <input checked="" type="checkbox"/> 5 Work Days <input type="checkbox"/> 2 Work Days <input type="checkbox"/> 2-8 hrs					<b>Analyses Requested</b>						
Lab Sample ID	Date/Time Sampled	Matrix	# of Cont.	Client Sample ID	Host VP	API Gravity					Remarks
1101415-1A	03/24/11 @ 0910	OIL	3	S-1372-320	X	X					Sample Temp 140°F

Relinquished By: <i>[Signature]</i> Date: 03/24/11 Time: 1220	Received By: <i>[Signature]</i> Date: 03/24/11 Time: 1220
Relinquished By: _____ Date: _____ Time: _____	Received By: _____ Date: _____ Time: _____
Relinquished By: _____ Date: _____ Time: _____	Received By: _____ Date: _____ Time: _____
Sample integrity upon receipt: Good    Method of shipment: OEC Samples received cold: y/n    Samples received intact: y/n Custody seals: y/n	<b>Comments:</b> *API Gravity will determine Vapor Pressure Method < 26.0 API Gravity HOST VP method will apply. > 26.1 API Gravity RVP/TVP (CARB) method will apply.



## **APPENDIX C: PE2 Calculations**

<b>Tank Input Data</b>	
permit number (S-xxxx-xx-xx)	S-1372-407-0
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.2
liquid bulk storage temperature, Tb (°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}	yes
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	38.7
capacity of tank (bbl)	5,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	24
average liquid height (feet)	8
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	1
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

<b>Liquid Input Data</b>	<b>A</b>	<b>E</b>
maximum daily fluid throughput (bbl)		21,670
maximum annual fluid throughput (bbl)	7,909,505	7,909,505
maximum daily oil throughput (bbl)(used to calculate flashing loss)		1,400
maximum annual oil throughput (bbl)(used to calculate flashing loss)		511,000
molecular weight, Mw (lb/lb-mol)		100

<b>Calculated Values</b>	<b>A</b>	<b>B</b>
daily maximum ambient temperature, T <sub>ax</sub> (°F)		77.65
daily minimum ambient temperature, T <sub>an</sub> (°F)		53.15
daily total solar insolation factor, I (Btu/ft <sup>2</sup> -day)		1648.9
atmospheric pressure, P <sub>a</sub> (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T <sub>lx</sub> ), P <sub>vx</sub> (psia)	156.8	4.4224
water vapor pressure at daily minimum liquid surface temperature (T <sub>ln</sub> ), P <sub>vn</sub> (psia)	146.1	3.3955
water vapor pressure at average liquid surface temperature (T <sub>la</sub> ), P <sub>va</sub> (psia)	151.5	3.8710
roof outage, H <sub>ro</sub> (feet)		0.4031
vapor space volume, V <sub>v</sub> (cubic feet)		19294.72
paint factor, alpha		0.39
vapor density, W <sub>v</sub> (lb/cubic foot)		0.0030
daily vapor temperature range, delta T <sub>v</sub> (degrees Rankine)		35.65
vapor space expansion factor, K <sub>e</sub>		0.1495

<b>Results</b>	<b>lb/year</b>	<b>lb/day</b>
Standing Storage Loss	3,210	8.79
Working Loss	N/A	N/A
Flashing Loss	3,913	10.72
<b>Total Uncontrolled Tank VOC Emissions</b>	<b>7,123</b>	<b>19.5</b>

<b>Summary Table</b>	
<b>Permit Number</b>	<b>S-1372-407-0</b>
<b>Facility Tank I.D.</b>	<b>--</b>
<b>Tank capacity (bbl)</b>	<b>5,000</b>
<b>Tank diameter (ft)</b>	<b>38.7</b>
<b>Tank shell height (ft)</b>	<b>24</b>
<b>Conical or Dome Roof</b>	<b>Conical</b>
<b>Maximum Daily Fluid Throughput (bbl/day)</b>	<b>21,670</b>
<b>Maximum Annual Fluid Throughput (bbl/year)</b>	<b>7,909,505</b>
<b>Maximum Daily Oil Throughput (bbl/day)</b>	<b>1,400</b>
<b>Maximum Annual Oil Throughput (bbl/year)</b>	<b>511,000</b>
<b>Total Uncontrolled Daily Tank VOC Emissions (lb/day)</b>	<b>19.5</b>
<b>Total Uncontrolled Annual Tank VOC Emissions (lb/year)</b>	<b>7,123</b>

**APPENDIX D:  
BACT Guideline**

**Best Available Control Technology (BACT ) Guideline 7.3.1  
Last Update: 10/1/2002**

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

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	PV-vent set to within 10% of maximum allowable pressure	99% control ( Waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of non-condensable 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 - Permit Specific BACT Determinations on Details Page.**

**2.9 BOLTING**

Tank bolting 1/2 inch in diameter to and including 1 1/2 inch in length shall conform to the requirements given in Appendix A. All other bolting shall conform to the latest revision of ASTM A-307, Grade A or B. Unless otherwise specified on the purchase order, black-finish bolts and nuts shall be furnished. When specified to be galvanized, bolts and nuts shall be zinc-coated in accordance with Appendix A or the applicable ASTM Specification. Alternative materials and/or finish conforming to recognized standards for bolting may be furnished by agreement between the purchaser and the manufacturer.

**3 Design**

**3.1 GENERAL**

Tanks covered by this specification have been designed using established engineering calculations to determine minimum metal thickness and bolting specifications for each size tank filled with water (62.37 lb/cu. ft. @ 60 F) and at the internal pressure specified in column 2 Table 1. In order to assure structural stability and integrity, additional metal thickness has been added to that determined by calculation. The minimum metal thickness specified in this specification shall in no case be decreased.

**JOINT DESIGN**

**3.2 DEFINITIONS**

The following definitions shall apply to tank-joint designs.

- a. **Double-Welded Butt Joint.** A joint between two abutting parts lying in approximately the same plane and welded from both sides. A joint with filler metal added from one side only is considered equivalent to a double-welded butt joint when means are provided for accomplishing complete penetration and reinforcement on both sides of joint.
- b. **Single-Welded Butt Joint with Backing.** A joint between two abutting parts lying in approximately the same plane and welded from one side only, with a backing strip, bar, or other suitable material.
- c. **Double-Welded Lap Joint.** A joint between two overlapping members in which the overlapped edges of both members are welded with fillet welds.
- d. **Single-Welded Lap Joint.** A joint between two overlapping members, in which the overlapped edge of one member is welded with a fillet weld.
- e. **Butt Weld.** A weld placed in a groove between abutting members. Grooves may be square, V (single or double), or U (single or double).
- f. **Fillet Weld.** A weld of approximately triangular cross-section joining two surfaces approximately at right angles to each other, as in a lap joint, tee joint, or corner joint.
- g. **Full-Fillet Weld.** A fillet weld whose size is equal to the thickness of the thinner member joined.
- h. **Tack Weld.** A weld made to hold parts of a weldment in proper alignment until the final welds are made.

**3.3 SIZE OF WELD**

The size of a weld shall be based on the following dimensions:

Table 1—Tank Dimensions (See Fig. 1)

(1) Nominal Capacity, bbl.	(2) Design Pressure, oz. per sq. in. <sup>1</sup>		(3) Approximate Working Capacity, bbl. (See Note)	(4) Nominal Outside Diameter, ft. in. A	(5) Nominal Height, ft. in. B	(6) Height of Overflow-Line Connection, <sup>2</sup> ft. in. C	(7) Height of Walkway Lugs, ft. in. D	(8) Location of Fill-Line Connection, <sup>2</sup> in. E	(9) Size of Connections, in.
	Press.	Vac.							
H-500	8	1/2	479	15 - 6	16 - 0	15 - 6	13 - 7	14	4
750	8	1/2	746	15 - 6	24 - 0	23 - 6	21 - 7	14	4
L-500	6	1/2	407	21 - 6	8 - 0	7 - 6	5 - 7	14	4
H-1000	6	1/2	923	21 - 6	16 - 0	15 - 6	13 - 7	14	4
1500	6	1/2	1438	21 - 6	24 - 0	23 - 6	21 - 7	14	4
L-1000	4	1/2	784	29 - 9	8 - 0	7 - 6	5 - 7	14	4
2000	4	1/2	1774	29 - 9	16 - 0	15 - 6	13 - 7	14	4
3000	4	1/2	2764	29 - 9	24 - 0	23 - 6	21 - 7	14	4
5000	3	1/2	4916	38 - 8	24 - 0	23 - 6	21 - 7	14	4
10,000	3	1/2	9938	55 - 0	24 - 0	23 - 6	21 - 7	14	4
Tolerance						± 1/8 in.	± 1/8 in.	± 1/8 in.	—

*Morris tank (flat bottom)*

Note: The approximate working capacities shown in Col. 3 apply to flat-bottom tanks. Type A (unskirted) cone-bottom tanks have 6 in. greater working height than the corresponding flat-bottom tanks. The approximate increase in capacity is 17 bbl. for the 15-ft. 6-in. diam. tanks, 32 bbl. for the 21-ft. 6-in. diam. tanks, 62 bbl. for the 29-ft. 9-in. diameter tanks, 104 bbl. for the 38-ft. 8-in. diameter tanks, and 208 bbl. for the 55-ft. diameter tanks.

<sup>1</sup>See Par. 3.17 for frangible deck limitations.  
<sup>2</sup>Viscous Oil Option. When so specified on the purchase order, tanks shall be furnished for viscous oil service. On such tanks, dimension C of the overflow-line connections shall be 6 in. less than shown in Col. 6, Table 1, and dimension E of the fill-line connection shall be 6 in., ± 1/8 in.

## APPENDIX E: BACT Analysis

**I. BACT Analysis for tank in permit S-1372-407-0:**

For the crude oil stock tank in permits S-1372-407-0, BACT is required for VOC.

**a. Step 1 - Identify All Possible Control Technologies**

BACT guideline 7.3.1 identifies the following control technologies:

Pollutant	Achieved in Practice or contained in 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	

**b. Step 2 - Eliminate Technologically Infeasible Options**

There are no technologically infeasible options for VOC.

**c. Step 3 - Rank Remaining Control Technologies by Control Effectiveness**

VOC

Rank	Control Technology	Achieved in Practice
1	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	N
2	PV-vent set to within 10% of maximum allowable pressure	Y

There are no remaining control technologies for VOC.

#### d. Step 4 - Cost Effectiveness Analysis

##### VOC

Capital costs:

Compressor skid costs:	\$330,000
Piping Costs:	\$125,000
Heat exchanger cost:	\$100,000
Foundation and Installation:	\$125,000
Total:	\$680,000

Operating costs annually (electricity, maintenance, labor): \$32,128

- I. Equivalent Annual Control Equipment Cost per APCD Policy APR 1305-9 X(A){1}. Assume  $i = 10\%$  and  $n = 10$  years.

$$\text{Total annualized cost} = \$680,000 \left[ \frac{0.1(1.1)^{10}}{(1.1)^{10} - 1} \right] = \$110,636 / \text{yr}$$

- II. Total Annual Costs calculation

Total Annual Costs = Equivalent Annual Control Equipment Cost + Annual Operating Cost

$$\text{Total Annual Costs} = \$110,636 + \$32,128 = \$142,764$$

- III. Annual Emissions Reduction

Uncontrolled emissions (see attached calculation) = 14,280 lbs/yr or 7.14 tons/yr

Control System with 99% efficiency = 7.14 tons/yr \* 0.99 = 7.06 tons/yr reduction

- IV. Control Cost per Section X(A){4}

$$\text{Control Cost} = (\$142,764/\text{yr}) / (7.06 \text{ tons VOC/yr}) = \$20,222 / \text{ton VOC}$$

- V. VOC Cost Effectiveness Threshold per Section III(C)

VOC threshold = \$17,500/ ton; therefore not cost effective.

#### e. Step 5 - Select BACT

VOC: PV-vent set to within 10% of maximum allowable pressure is selected as BACT.

**APPENDIX F:  
HRA Summary  
San Joaquin Valley Air Pollution Control District**

## Risk Management Review

**To:** William Jones – Permit Services  
**From:** Yu Vu – Technical Services  
**Date:** May 13, 2011  
**Facility Name:** Plains Exploration & Production Company  
**Location:** NE Section 8, Township 30S, Range 22E  
**Application #(s):** S-1372-407-0  
**Project #:** S-1110679

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### A. RMR SUMMARY

<b>RMR Summary</b>			
<b>Categories</b>	<b>5,000 BBL Crude Oil Tank (Unit 407-0)</b>	<b>Project Totals</b>	<b>Facility Totals</b>
<b>Prioritization Score</b>	0.01	0.01	>1.0
<b>Acute Hazard Index</b>	0.00	0.00	0.006
<b>Chronic Hazard Index</b>	0.00	0.00	0.002
<b>Maximum Individual Cancer Risk (<math>10^{-6}</math>)</b>	0.074	0.04	0.074
<b>T-BACT Required?</b>	No		
<b>Special Permit Conditions?</b>	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 # 407-0

No special conditions are required.

### B. RMR REPORT

#### I. Project Description

Technical Services received a request on May 9, 2011, to perform a Risk Management Review for a proposed installation of a 5,000 bbl crude oil storage tank.

#### II. Analysis

Technical Services performed a health risk assessment using the "Toxic Fugitive Emissions from Heavy 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 2004-2008 from Fellows to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid.

<b>Analysis Parameters</b>			
<b>Source Type</b>	Area	<b>Location Type</b>	Rural
<b>X-Length (m)</b>	10.455	<b>Closest Receptor (m)</b>	1,996
<b>Y-Length (m)</b>	10.455	<b>Type of Receptor</b>	Business
<b>Release Height (m)</b>	7.32	<b>Pollutant Type</b>	VOC
		<b>Emission Rate (g/m-s<sup>2</sup>)</b>	0.00915

### **III. Conclusion**

The acute and chronic indices are below 1.0 and the cancer risk factor associated with the crude oil storage tank 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.

#### **Attachments:**

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

**APPENDIX G:  
Quarterly Net Emissions Change (QNEC)**

## Quarterly Net Emissions Change (QNEC)

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

QNEC = PE2 - PE1, where:

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

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

PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$$\begin{aligned} \text{PE2}_{\text{quarterly}} &= \text{PE2}_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 7,123 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 1,780.83 \text{ lb VOC/qtr} \\ &= 1,781 \text{ lb VOC/qtr} \end{aligned}$$

$$\begin{aligned} \text{PE1}_{\text{quarterly}} &= \text{PE1}_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 0 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 0 \text{ lb VOC/qtr} \end{aligned}$$

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO <sub>x</sub>	0	0	0
SO <sub>x</sub>	0	0	0
PM <sub>10</sub>	0	0	0
CO	0	0	0
VOC	1,781	0	1,781



# San Joaquin Valley Unified Air Pollution Control District

## TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

**I. TYPE OF PERMIT ACTION (Check appropriate box)**

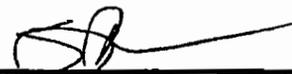
- SIGNIFICANT PERMIT MODIFICATION                       ADMINISTRATIVE AMENDMENT  
 MINOR PERMIT MODIFICATION

COMPANY NAME: Plains Exploration & Production Company	FACILITY ID: S - 1372
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Plains Exploration & Production Company	
3. Agent to the Owner: Steven P. Rusch	

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

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

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



Signature of Responsible Official

3.8.11

Date

Steven P. Rusch

Name of Responsible Official (please print)

Vice President-EH&S & Governmental Affairs

Title of Responsible Official (please print)

# APPENDIX I: Emission Profile

Permit #: S-1372-407-0	Last Updated
Facility: PLAINS EXPLORATION &	05/17/2011 JONESW

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	7123.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	19.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	1781.0
Q2:	0.0	0.0	0.0	0.0	1781.0
Q3:	0.0	0.0	0.0	0.0	1781.0
Q4:	0.0	0.0	0.0	0.0	1781.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

**APPENDIX J:  
Compliance Certification**

# PXP

## Plains Exploration & Production Company

May 19, 2011

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

**RULE 2201 COMPLIANCE STATEMENT  
ATC S-1372-324 FEDERAL MAJOR MODIFICATION  
PROJECT 1105279**

Mr. Edgehill:

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 1105279).

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