



**MAY 31 2011**

Mr. Ken 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 # 1105279**

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. The project reauthorizes a 2000 bbl fixed-roof 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:RE/dg

Enclosures

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

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



**MAY 31 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 # 1105279**

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 McKittrick Front Lease located at NW Section 6, T30S, R22E, 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. The project reauthorizes a 2000 bbl fixed-roof crude oil storage tank.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authority to Construct # S-1372-324-1 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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**MAY 31 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 # 1105279**

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. The project reauthorizes a 2000 bbl fixed-roof crude oil storage tank.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authority to Construct # S-1372-324-1 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:RE/dg

Enclosures

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Executive Director/Air Pollution Control Officer

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Bakersfield Californian

**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 western heavy oil production stationary source located at McKittrick Front Lease located at NW Section 6, T30S, R22E, California. The project reauthorizes a 2000 bbl fixed-roof crude oil storage tank

The District's analysis of the legal and factual basis for this proposed action, project #1105279, 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. Jim Swaney, Permit Services Manager, at (559) 230-5900. 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, 1990 E. GETTYSBURG AVE, FRESNO, CA 93726-0244.



Rule 4001 New Source Performance Standards (4/14/99) - Subpart Kb – **exempt** – tank is less than 10,000 bbl in capacity and oil is stored prior to custody transfer

Rule 4102 Nuisance (12/17/92)

Rule 4623 Storage of Organic Liquids (05/19/05)

Rule 4801 Sulfur Compounds (12/17/92)

CH&SC 41700 Health Risk Assessment

CH&SC 42301.6 School Notice

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)  
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

### III. Project Location

Tank ' -324 is located at the McKittrick Front Lease, NW Section 6, T30S, R22E within PXP's heavy production stationary source in the western Kern County fields.

The proposed location is not within 1,000 feet of a school.

### 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 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:

S-1372-94-4: 8,820 GALLON 10' DIA. X 15' HIGH FIXED ROOF TEST TANK #D-2 KEENE-WILLIAMS LEASE)

S-1372-239-1: 12,600 GALLON FIXED ROOF PETROLEUM STORAGE TANK

S-1372-240-1: 21,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK

S-1372-287-1: 42,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK (#2732)

#### Post Project Equipment Description:

~~S-1372-94-4: 8,820 GALLON 10' DIA. X 15' HIGH FIXED ROOF TEST TANK #D-2 KEENE-WILLIAMS LEASE)~~

~~S-1372-239-1: 12,600 GALLON FIXED ROOF PETROLEUM STORAGE TANK~~

~~S-1372-240-1: 21,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK~~

~~S-1372-287-1: 42,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK (#2732)~~

S-1372-324-0: 2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH P/V 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
- API gravity is 13.1°, tvp = 0.357 (laboratory analysis **Attachment II**)
- tvp limit, 0.375 psia (proposed)
- The tank is equipped with level controller and will operate at a constant level of 7 ft (2-28-11 email) however it will not serve as a wash tank (phone call 4-14-11)
- VOC molecular weight 100 lb/lbmol (heavy oil source and proposed)
- Input parameters for the tank emissions calculations are included in the table below and in **Attachment III**. Please note that '-324 parameters (°F, tvp, throughput) are proposed
- DEL for tank S-1372-94, 4.1 lb/day (condition # 6 PTO '-94-4)

	Capacity (bbl)	Diameter (ft)	Height (ft)	Average Liquid height (ft)	T (°F)	Tvp (psia)	Throughput (bbl/day)
'-239	300	13.4	12	6	140**	1.5*	300***
'-240	500	17	12	6	140**	1.5*	500***
'-287	1000	21	16	8	185**	1.5*	1000***
'-324	2000	30	16	8	210	0.375	2000

\* permit condition

\*\*applicant response to email

\*\*\* 1 turnover per day

### B. Emission Factors

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. The spreadsheet for tanks was developed using the equations for fixed-roof tanks from EPA AP-42, Chapter 7.1.

The tank emissions calculations are included in **Attachment III**.

**C. Calculations**

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

Permit Unit	VOC - Daily PE1 (lb/day)	VOC - Annual PE1 (lb/Year)
S-1372-94	4.1*	1497
S-1372-239	64.7	23,608
S-1372-240	79.0	28,823
S-1372-287	159.8	58,334
total		112,262

\*DEL(condition # 6 PTO '94-4)

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

Permit Unit	VOC - Daily PE1 (lb/day)	VOC - Annual PE1 (lb/Year)
S-1372-324	5.0	1,833

Greenhouse Gas (GHG) Emissions

The project results in a decrease in GHG emissions conservatively assuming that VOC and GHG emissions are equal.

The emissions profiles are provided in **Attachment IV**.

**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 3.24 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 3.24.2 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.

### S-1131'-94, '-239, '-240, and '-287

Tanks S-1372-'-94, '-239, '-240, and '-287 are equipped with a P/V valve satisfying the Achieved-in-Practice requirement of current BACT Guideline 7.3.1 (**Attachment V**).

Therefore S-1372-94, '-239, '-240, and '-287 are clean emissions units and BE = PE1.

### S-1372-324

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 VOCs; 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	1833	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)(xxxv)(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 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-1372-324 is a new unit, 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.

$$NEI = PE2 = 1833 \text{ lb/yr} > 0 \text{ lb/yr}$$

Therefore the project is a Federal Major Modification.

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

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

$$\begin{aligned}
 &\underline{S-1372-94} \\
 PE2_{\text{quarterly}} &= PE2_{\text{annual}} \div 4 \text{ quarters/year} \\
 &= 1833 \text{ lb/year} \div 4 \text{ qtr/year} \\
 &= 458 \text{ lb VOC/qtr}
 \end{aligned}$$

**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 for the following\*:

- 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 a Major Modification.

\*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 tank with PE > 2.0 lb VOCs/day. BACT is triggered for VOC purposes.

**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 is a Federal Major Modification; therefore BACT is triggered for Federal Major Modification purposes.

**2. BACT Guideline**

BACT Guideline 7.3.1, Petroleum and Petrochemical Production - Fixed Roof Organic Liquid Storage or Processing Tank, < 5,000 bbl Tank capacity, applies to the reauthorized fixed-roof storage tank. (See **Attachment V**)

**3. Top-Down BACT Analysis**

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

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

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

**B. Offsets**

**2. Quantity of Offsets Required**

As seen above, the SSPE2 is greater than the offset thresholds for VOCs; therefore offset calculations are necessary and are provided in the table below:

	VOC
ATC S-1372-324-1	1833
<b>Σ PE2</b>	<b>1833</b>
S-1372-94	1497
S-1372-239	23,608
S-1372-240	28,823
S-1372-287	58,334
<b>Σ BE</b>	<b>112,262</b>
<b>Σ PE2 - Σ BE</b>	<b>-110,429</b>

Offsets are not required for this project.

**C. Public Notification**

**1. Applicability**

Public noticing is required for:

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

**a. New Major Source**

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.

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

As demonstrated in VII.C.7, this project constitutes a Federal Major Modification; therefore, public noticing for Federal Major Modification purposes is required.

**c. 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.

**d. 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 lb/year	>20,000 lb/year	20,000 lb/year	No

As detailed above, the VOC threshold was not surpassed with this project; therefore public noticing is not required for offset purposes.

**e. 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?
VOC	>20,000 lb/year	>20,000 lb/year	-110,429	20,000 lb/year	No

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

**2. Public Notice Action**

As discussed above, this project will result in emissions which will subject the project to the noticing requirements listed above. Therefore, public notice will be required for this project.

**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 Rule 2201 (DEL) Conditions:**

**S-1372-324**

Crude oil throughput shall not exceed 2000 barrels per day based on a monthly average. [District Rules 2201 & 4623] Y

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] Y

Tank shall operate at constant level. [District Rule 2201]

**E. Compliance Assurance**

**1. Source Testing**

The permittee will be required to perform periodic TVP testing for all tanks in this project using the latest EPA and CARB approved version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph" to validate non-applicability of Rule 4623. The testing shall be conducted once every 24 month period or every time when the source of liquid stored is changed. The following conditions are included on all of the proposed ATCs:

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] Y

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] Y

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] Y

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] Y

**2. Monitoring**

Monitoring is not required for compliance with Rule 2201.

**3. Record Keeping**

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

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] Y

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] Y

#### **4. Reporting**

The following reporting requirement is required to demonstrate compliance with Rule 2201:

Permittee shall submit the records of TVP and API gravity testing to the APCO within 30 days of startup. 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] Y

#### **F. Compliance Certification**

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Major Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed above, the project is a Federal Major Modification, therefore this requirement is applicable. Included in **Attachment VII** is PXP's Statewide Compliance Certification document.

#### **G. Alternate Siting Analysis**

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

#### **District Rule 2520 Federally Mandated Operating Permits**

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

The project is Federal Major Modification and therefore is also a Title V Significant Modification. As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Included in **Attachment VII** is PXP's Title V Compliance Certification form. Continued compliance with this rule is expected.



**Rule 4102 Nuisance**

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance. The project is located in a remote oilfield setting in northern Kern County so nuisance complaints are not expected. The following condition will be listed on the ATC to ensure compliance.

- No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

**California Health & Safety Code 41700 (Health Risk Assessment)**

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

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-1372-324	0.033 per million	No

The project is approvable without TBACT

**Rule 4623 Storage of Organic Liquids**

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

According to Section 4.4, tanks exclusively receiving and or storing organic liquids with a TVP less than 0.5 psia are exempt from this Rule except for complying with Sections 6.2, 6.3.6, 6.4 and 7.2 (TVP testing and recordkeeping). Therefore, the following condition shall be placed on the ATC:

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] Y

The following TVP and API testing and recordkeeping requirements are included on the ATC:

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] Y

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] Y

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] Y

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] Y

Permittee shall submit the records of TVP and API gravity testing to the APCO within 30 days of startup. 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] Y

Compliance 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.
- 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 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-1372-324-1 subject to the permit conditions on the attached draft Authority to Construct in **Attachment IX**.

**X. Billing Information**

<b>Annual Permit Fees</b>			
<b>Permit Number</b>	<b>Fee Schedule</b>	<b>Fee Description</b>	<b>Annual Fee</b>
S-1372-324-1	3020-05D	126,000 gallons	\$185.00

**Attachments**

- I: ATC S-1372-324-0 and PTOs S-1372-94-4, '-239-1, '-240-1, and '-287-1
- II: Laboratory Analysis
- III: Tank Emissions Calculations
- IV: Emissions Profiles
- V: BACT Guidelines
- VI: BACT Analysis
- VII: Statewide and Title V Compliance Certification
- VIII: HRA Summary
- IX: Draft ATC

**ATTACHMENT I**  
**ATC S-1372-324-0 and PTOs S-1372-94-4, '-239-1, '-240-1, and '-**  
**287-1**



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT



## AUTHORITY TO CONSTRUCT

PERMIT NO: S-1372-324-0

ISSUANCE DATE: 09/21/1998

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 - MCKITTRICK FRONT LEASE

## CONDITIONS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The true vapor pressure (TVP) of liquids stored in the tank shall not exceed 1.5 psi. [District Rule 4623]
3. Upon implementation of this Authority to Construct, permit units S-1372-286-0 and S-1372-287-0 shall be removed or rendered permanently inoperable. [District Rule 2201]

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-1372-324-0 : Apr 4 2011 7:58AM - EDGEHILR : Joint Inspection Required with RODRIGUR

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-94-4

EXPIRATION DATE: 05/31/2007

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

**EQUIPMENT DESCRIPTION:**

8,820 GALLON 10' DIA. X 15' HIGH FIXED ROOF TEST TANK #D-2 KEENE-WILLIAMS LEASE)

## PERMIT UNIT REQUIREMENTS

1. True vapor pressure of liquid introduced into tank shall not exceed 1.3 psia. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Temperature of liquid in tank shall not exceed 250 degrees F. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Tank throughput shall not exceed 250 bbl/day. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Liquid stored shall be discharged to production pipeline only. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Tank shall be equipped with temperature indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
6. VOC emission rate shall not exceed 4.1 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in Section 6.2 of District Rule 4623 (Amended 12/17/92). Determinations shall be made annually during summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. Operator shall keep accurate records of liquids stored in each container, storage temperature, daily throughput, and true vapor pressure of such liquids. [District Rules 4623, 6.1 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from a common source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. The requirements of SJVUAPCD Rule 4623 (Amended 12/17/92) do not apply to this source. Also, this unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of Rule 4801 (Amended 12/17/92) and 40 CFR Part 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-239-1

EXPIRATION DATE: 05/31/2007

SECTION: 7 TOWNSHIP: 11N RANGE: 23W

**EQUIPMENT DESCRIPTION:**

12,600 GALLON FIXED ROOF PETROLEUM STORAGE TANK

## PERMIT UNIT REQUIREMENTS

---

1. The true vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
  2. Operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in Section 6.2 of District Rule 4623 (Amended 12/17/92). Determinations shall be made annually during summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
  3. Operator shall keep accurate records of types of liquids stored in each container, storage temperature, and true vapor pressure of liquids stored to verify continued exemption from District Rule 4623 (as amended December 17, 1992). [District Rule 2520, 9.1] Federally Enforceable Through Title V Permit
- As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from a common source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. The requirements of SJVUAPCD Rule 4623 (Amended 12/17/92) do not apply to this source. Also, this unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of Rule 4801 (Amended 12/17/92) and 40 CFR Part 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

Facility Name: PLAINS EXPLORATION & PRODUCTION COMPANY  
Location: HEAVY OIL WESTERN STATIONARY SOURCE, CA

San Joaquin Valley  
Air Pollution Control District

PERMIT UNIT: S-1372-240-1

EXPIRATION DATE: 05/31/2007

SECTION: 7 TOWNSHIP: 11N RANGE: 23W

**EQUIPMENT DESCRIPTION:**

21,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK

**PERMIT UNIT REQUIREMENTS**

1. The true vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
  2. Operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in Section 6.2 of District Rule 4623 (Amended 12/17/92). Determinations shall be made annually during summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
  3. Operator shall keep accurate records of types of liquids stored in each container, storage temperature, and true vapor pressure of liquids stored to verify continued exemption from District Rule 4623 (as amended December 17, 1992). [District Rule 2520, 9.1] Federally Enforceable Through Title V Permit
- As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from a common source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. The requirements of SJVUAPCD Rule 4623 (Amended 12/17/92) do not apply to this source. Also, this unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of Rule 4801 (Amended 12/17/92) and 40 CFR Part 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

Facility Name: PLAINS EXPLORATION & PRODUCTION COMPANY  
Location: HEAVY OIL WESTERN STATIONARY SOURCE, CA



# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-287-1

EXPIRATION DATE: 05/31/2007

SECTION: 24 TOWNSHIP: 31S RANGE: 22E

**EQUIPMENT DESCRIPTION:**

42,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK (#2732)

## PERMIT UNIT REQUIREMENTS

---

1. The true vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
2. Operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in Section 6.2 of District Rule 4623 (Amended 12/17/92). Determinations shall be made annually during summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
3. Operator shall keep accurate records of types of liquids stored in each container, storage temperature, and true vapor pressure of liquids stored to verify continued exemption from District Rule 4623 (as amended December 17, 1992). [District Rule 2520, 9.1] Federally Enforceable Through Title V Permit
4. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from a common source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. The requirements of SJVUAPCD Rule 4623 (Amended 12/17/92) do not apply to this source. Also, this unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of Rule 4801 (Amended 12/17/92) and 40 CFR Part 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

## **ATTACHMENT II**

### **Laboratory Analysis**



OILFIELD ENVIRONMENTAL AND COMPLIANCE, INC.

<b>Client:</b> Plains Exploration & Production Company 1200 Discovery Drive, Suite #500 Bakersfield, CA 93309 <b>Attn:</b> Charlotte Campbell <b>Project:</b> 2009 SJV TVP T <b>Site:</b> Cymric/Midway Sunset	<b>SAMPLE ID:</b> 09-1938-8Rev.1 <b>Date Sampled:</b> 07/07/09 @ 0940 <b>Date Analyzed:</b> 07/29/09 @ 1243 <b>Date Received:</b> 07/07/09 @ 1500  <b>Lab Contact:</b> J. Carstens
---	---

Report Of Analytical Results HOST Method						
OEC ID	Client ID	Constituent	Results	Units	Method	PQL
09-1938-8Rev.1	S-1372-323	API Gravity	13.1	API	ASTM D-287	0.1
	McKittrick Diatomite Front	Vapor Pressure @ 212°F	0.357	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

**ATTACHMENT III**  
**Tank Emissions Calculations**

Tank Data	
permit number (S-xxxx-xx-xx)	S-1372-239
facility tank I.D.	--
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	1.5
liquid bulk storage temperature, Tb (°F)	140
is this a constant-level tank? (yes, no)	no
will flashing losses occur in this tank (only if first-line tank)? (yes, no)	yes
breather vent pressure setting range (psi)	0.08
diameter of tank (feet)	13.4
capacity of tank (bbl)	300
conical or dome roof? (c, d)	c
shell height of tank (feet)	12
average liquid height (feet)	6
are the roof and shell the same color? (yes,no)	yes
For roof:	
color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	4
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Data	
maximum daily fluid throughput (bbl)	300
maximum annual fluid throughput (bbl)	109,500
maximum daily oil throughput (bbl)(used to calculate flashing loss)	300
maximum annual oil throughput (bbl)(used to calculate flashing loss)	109,500
molecular weight, Mw (lb/lb-mol)	100

Calculated Values	A	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>ix</sub> ), P <sub>vx</sub> (psi)	121.4	1.7703
water vapor pressure at daily minimum liquid surface temperature (T <sub>in</sub> ), P <sub>vn</sub> (psi)	110.6	1.3034
water vapor pressure at average liquid surface temperature (T <sub>ia</sub> ), P <sub>va</sub> (psia)	116.0	1.5288
roof outage, H <sub>ro</sub> (feet)		0.1396
vapor space volume, V <sub>v</sub> (cubic feet)		865.84
paint factor, alpha		0.68
vapor density, W <sub>v</sub> (lb/cubic foot)		0.0243
daily vapor temperature range, delta T <sub>v</sub> (degrees-Rankine)		49.04
vapor space expansion factor, K <sub>e</sub>		0.1166

Results	lb/year	lb/day
Standing Storage Loss	894	2.45
Working Loss	16,425	45.00
Flashing Loss	6,290	17.23
<b>Total Uncontrolled Tank VOC Emissions</b>	<b>23,608</b>	<b>64.7</b>

Summary Table	
Permit Number	S-1372-239
Facility Tank I.D.	--
Tank capacity (bbl)	300
Tank diameter (ft)	13.4
Tank shell height (ft)	12
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	300
Maximum Annual Fluid Throughput (bbl/year)	109,500
Maximum Daily Oil Throughput (bbl/day)	300
Maximum Annual Oil Throughput (bbl/year)	109,500
<b>Total Uncontrolled Daily Tank VOC Emissions (lb/day)</b>	<b>64.7</b>
<b>Total Uncontrolled Annual Tank VOC Emissions (lb/year)</b>	<b>23,608</b>

Input Data	
permit number (S-xxxx-xx-xx)	S-1372-240
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	1.6
liquid bulk storage temperature, Tb (°F)	140
is this a constant-level tank? {yes, no}	no
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.08
diameter of tank (feet)	17
capacity of tank (bbbl)	600
conical or dome roof? {c, d}	c
shell height of tank (feet)	12
average liquid height (feet)	6
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, 8:White}	4
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-----	

Input Data	
maximum daily fluid throughput (bbbl)	600
maximum annual fluid throughput (bbbl)	182,500
-----This row only used if flashing losses occur in this tank-----	
-----This row only used if flashing losses occur in this tank-----	
molecular weight, Mw (lb/lb-mol)	100

Calculated Values	A	B
daily maximum ambient temperature, T <sub>ax</sub> (°F)		77.65
daily minimum ambient temperature, T <sub>an</sub> (°F)		53.15
daily total solar insulation 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>b</sub> ), P <sub>vx</sub> (psi)	121.4	1.7703
water vapor pressure at daily minimum liquid surface temperature (T <sub>in</sub> ), P <sub>vn</sub> (psi)	110.8	1.3034
water vapor pressure at average liquid surface temperature (T <sub>la</sub> ), P <sub>va</sub> (psia)	116.0	1.5288
roof outage, H <sub>ro</sub> (feet)		0.1771
vapor space volume, V <sub>v</sub> (cubic feet)		1402.07
paint factor, alpha		0.88
vapor density, W <sub>v</sub> (lb/cubic foot)		0.0243
daily vapor temperature range, delta T <sub>v</sub> (degrees Rankine)		49.04
vapor space expansion factor, K <sub>e</sub>		0.1166

Results	lb/year	lb/day
Standing Storage Loss	1,448	3.97
Working Loss	27,375	75.00
Flashing Loss	N/A	N/A
<b>Total Uncontrolled Tank VOC Emissions</b>	<b>28,823</b>	<b>79.0</b>

Summary Table	
Permit Number	S-1372-240
Facility Tank I.D.	--
Tank capacity (bbbl)	500
Tank diameter (ft)	17
Tank shell height (ft)	12
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbbl/day)	500
Maximum Annual Fluid Throughput (bbbl/year)	182,500
Maximum Daily Oil Throughput (bbbl/day)	N/A
Maximum Annual Oil Throughput (bbbl/year)	N/A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	79.0
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	28,823

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1372-287
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	1.6
liquid bulk storage temperature, Tb (°F)	185
is this a constant-level tank? {yes, no}	no
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.08
diameter of tank (feet)	21
capacity of tank (bbl)	1,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	16
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}	4
condition {1: Good, 2: Poor}	1
----- This row only used if shell is different color from roof-----	
----- This row only used if shell is different color from roof-----	

Liquid Input Data	
maximum daily fluid throughput (bbl)	1,000
maximum annual fluid throughput (bbl)	365,000
----- This row only used if flashing losses occur in this tank-----	
----- This row only used if flashing losses occur in this tank-----	
molecular weight, Mw (lb/lb-mol)	100

Calculated Values		A	B
daily maximum ambient temperature, T <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> (psi)	148.6		3.4418
water vapor pressure at daily minimum liquid surface temperature (T <sub>ln</sub> ), P <sub>vn</sub> (psi)	135.8		2.8150
water vapor pressure at average liquid surface temperature (T <sub>la</sub> ), P <sub>va</sub> (psia)	141.2		2.9944
roof outage, H <sub>ro</sub> (feet)			0.2188
vapor space volume, V <sub>v</sub> (cubic feet)			2846.65
paint factor, alpha			0.88
vapor density, W <sub>v</sub> (lb/cubic foot)			0.0232
daily vapor temperature range, delta T <sub>v</sub> (degrees Rankine)			49.04
vapor space expansion factor, K <sub>e</sub>			0.1484

Results	lb/year	lb/day
Standing Storage Loss	3,584	9.82
Working Loss	54,750	150.00
Flashing Loss	N/A	N/A
<b>Total Uncontrolled Tank VOC Emissions</b>	<b>58,334</b>	<b>159.8</b>

Summary Table	
Permit Number	S-1372-287
Facility Tank I.D.	--
Tank capacity (bbl)	1,000
Tank diameter (ft)	21
Tank shell height (ft)	16
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	1,000
Maximum Annual Fluid Throughput (bbl/year)	365,000
Maximum Daily Oil Throughput (bbl/day)	N/A
Maximum Annual Oil Throughput (bbl/year)	N/A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	159.8
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	58,334

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1372-324
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.375
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}	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)	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-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		2,000
maximum annual fluid throughput (bbl)		730,000
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		-
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T <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, Pa (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)		0.3125
vapor space volume, V <sub>v</sub> (cubic feet)		5875.76
paint factor, alpha		0.39
vapor density, W <sub>v</sub> (lb/cubic foot)		0.0057
daily vapor temperature range, delta T <sub>v</sub> (degrees Rankine)		35.65
vapor space expansion factor, K <sub>e</sub>		0.1495

Results	lb/year	lb/day
Standing Storage Loss	1,833	5.02
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
<b>Total Uncontrolled Tank VOC Emissions</b>	<b>1,833</b>	<b>5.0</b>



<b>Summary Table</b>	
<b>Permit Number</b>	<b>S-1372-324</b>
<b>Facility Tank I.D.</b>	<b>--</b>
<b>Tank capacity (bbl)</b>	<b>2,000</b>
<b>Tank diameter (ft)</b>	<b>30</b>
<b>Tank shell height (ft)</b>	<b>16</b>
<b>Conical or Dome Roof</b>	<b>Conical</b>
<b>Maximum Daily Fluid Throughput (bbl/day)</b>	<b>2,000</b>
<b>Maximum Annual Fluid Throughput (bbl/year)</b>	<b>730,000</b>
<b>Maximum Daily Oil Throughput (bbl/day)</b>	<b>N/A</b>
<b>Maximum Annual Oil Throughput (bbl/year)</b>	<b>N/A</b>
<b>Total Uncontrolled Daily Tank VOC Emissions (lb/day)</b>	<b>5.0</b>
<b>Total Uncontrolled Annual Tank VOC Emissions (lb/year)</b>	<b>1,833</b>

## ATTACHMENT IV Emissions Profiles

Permit #: S-1372-324-1	Last Updated
Facility: PLAINS EXPLORATION &	04/02/2011 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	1833.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	5.0
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	458.0
Q2:	0.0	0.0	0.0	0.0	459.0
Q3:	0.0	0.0	0.0	0.0	459.0
Q4:	0.0	0.0	0.0	0.0	459.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

**ATTACHMENT V  
BACT Guideline 7.3.1**

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 - Permit Specific BACT Determinations on Next Page(s)**

## **ATTACHMENT VI BACT Analysis**

### **I. INTRODUCTION**

In accordance with District Rule 2201 and District BACT policy APR-1305, a Top-Down Best Available Control Technology (BACT) analysis has been performed for the reauthorized tank S-1372-324.

The project proposal meets the requirements for VOC emissions identified in the current District BACT guidance document 7.3.1 for fixed-roof organic liquid storage tanks with capacities of less than 5,000 bbl. BACT is not triggered for any other air contaminants. The proposed equipment meets the control technology requirements identified by the referenced BACT Guideline.

### **II. EMISSIONS CALCULATIONS**

Per Rule 2201, Section 4.1, BACT requirements shall be triggered for a new emissions unit with a potential to emit, on a pollutant-by-pollutant basis, exceeding two pounds per day. The VOC emission calculations performed in the ATC evaluation for the proposed tank S-324 resulted in a potential to emit (PE) greater than 2 lb/day; therefore, Rule 2201 requirements for BACT are applicable.

### **III. TOP-DOWN BACT ANALYSIS**

#### **(a) BACT Guidance – Fixed Roof Organic Liquid Storage Tanks $\leq$ 5,000 Bbl**

Pursuant to the District's BACT policy APR-1305, BACT determinations shall be based on the control technologies and methods for the same or similar stationary source categories listed in the District's BACT Clearinghouse. BACT Guideline 7.3.1 identifies BACT for a fixed-roof organic liquid storage or processing tank, with a rated capacity less than 5,000 bbl.

This guideline shall be the basis for a "top-down" BACT analysis per District Policy. The following BACT performance levels for VOC are identified by Guideline 7.3.1:

**District BACT Guideline 7.3.1**

	Achieved in Practice BACT	Technologically Feasible BACT	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; re-injection to formation; or equal.	None Identified

**(b) Top-Down BACT Review (ATC S-1372-324)**

**BACT Analysis for VOC:**

VOC emissions are generated from standing and working losses resulting from the handling and storage of organic liquids.

**Step 1 – Identify All Control Technologies**

***Alternate Basic Equipment:***

None Identified.

***Technologically Feasible:***

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; re-injection to formation (if appropriate wells are available); or equal.

***Achieved in Practice:***

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

**Step 2 – Eliminate Technologically Infeasible Options**

All of the above control options are technologically feasible for the proposed equipment and are not eliminated.

**Step 3 – Rank Remaining Control Technologies by Control Effectiveness**

**VOC Control Technologies**

<b>Control Technology with Ranking</b>	<b>Control Efficiency or Emission Factor</b>	<b>Achieved in Practice (Y/N)</b>
Vapor Recovery System connected to gas pipeline, or incineration devices	99%	N
PV-vent set to within 10% of maximum allowable pressure.	10%	Y

**Step 4 - Cost Effectiveness Analysis**

The following cost effectiveness analysis has been submitted by applicant which demonstrates that installation of a vapor control system is not cost effective:

Applicant has provided the following costs for installation of equipment (compressor and heat exchanger) to pipe the tank vapors to an existing waste gas gathering system served by vapor control. Applicant 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

Calculate an equivalent annual cost from a capital cost using a capital recovery factor as shown below (District Policy APR-1305, BACT Determinations):

$$A = P \frac{i(1+i)^n}{(1+i)^n - 1} \quad \text{where;}$$

A = Equivalent Annual Control Equipment Capital Cost

P = Present value of the control equipment, including installation cost

i = interest rate (use 10%, or demonstrate why alternate is more representative of the specific operation).

n = equipment life (assume 10 years or demonstrate why alternate is more representative of the specific operation)

$$= P \times 0.1628$$

$$\begin{aligned} \text{Annualized capital cost} &= 0.1628 \times \$460,687 \\ &= \$75,000 \end{aligned}$$



Annual operating costs = \$10,280 (electricity)

Total annual costs = \$85,279/yr

Reductions to Industrial Standard = 95% control of uncontrolled emissions i.e.  $0.95 \times 1833$   
= 1,741 lb/yr (0.9 tons/yr)

Cost Effectiveness  
 $\$85,279/0.9 \text{ tons} = \underline{\$ 94,754/\text{ton}}$

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

**ATTACHMENT VII**  
**Title V and Statewide 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

# 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>KRB</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>KRB</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>KRB</sup> Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- <sup>KRB</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-BH&S & Governmental Affairs  
 \_\_\_\_\_  
 Title of Responsible Official (please print)

**ATTACHMENT VIII  
HRA**

# San Joaquin Valley Air Pollution Control District Risk Management Review

To: Richard Edgehill – Permit Services  
 From: Leland Villalvazo – Technical Services  
 Date: May 6, 2011  
 Facility Name: Plains Exploration & Production Company  
 Location: Western Oil Fields (NW Sec 2 , TWN30S, RNG 22E – HOWSS)  
 Application #(s): S-1372-324-1  
 Project #: S-1105279

## A. RMR SUMMARY

RMR Summary				
Categories	Type of Unit (Unit 324-1)		Project Totals	Facility Totals
Prioritization Score	0.004		0.004	>1.0
Acute Hazard Index	0.0		0.0	0.03
Chronic Hazard Index	0.0		0.0	0.08
Maximum Individual Cancer Risk (10 <sup>-6</sup> )	0.033		0.033	0.937
T-BACT Required?	NO			
Special Permit Conditions?	NO			

<sup>1</sup> Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0.

<sup>2</sup> Acute and Chronic Hazard Indices were not calculated since there is no risk factor or the risk factor is so low that it has been determined to be insignificant for this type of unit.

<sup>3</sup> Acute and Chronic Hazard Index and Maximum Individual Cancer Risk were not calculated since the total facility prioritization score was less than 1.0.

<sup>4</sup> A prioritization was not performed since it was determined that no hazardous air pollutants were present. No further analysis was required.

### Proposed Permit Conditions

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

#### Unit # 324-1

No special conditions are required.

## B. RMR REPORT

### I. Project Description

Technical Services received a request on March 31, 2011, to perform a Risk Management Review for a proposed installation of a 2,000 bbl fixed roof crude oil storage tank with p/v valve located on the McKittrick Front Lease.

### 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 Fellow 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 324-1			
Source Type	Area	Location Type	Rural
X-Length (m)	9.144	Closest Receptor (m)	Various
Y-Length (m)	9.144	Type of Receptor	Res / Wrk
Release Height (m)	4.877	Pollutant Type	VOC
		Emission Rate	0.21 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).**

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on page 1 of this report must be included for this proposed unit.

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

### IV. Attachments

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

**ATTACHMENT IX**  
**Draft ATC**



San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT

PERMIT NO: S-1372-324-1

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. {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 NSR Rule] 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. 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 : Apr 14 2011 10:40AM - EDGEHILR : 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

DRAFT