



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

MAY 28 2014

Mr. Ken Bork
Freeport McMoran Oil & Gas
1200 Discovery Drive, Suite 100
Bakersfield, CA 93309

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1372
Project # 1141425**

Dear Mr. Bork:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project authorizes the installation of a 2000 bbl fixed-roof crude oil wash tank and results in an increase in VOC emissions of 2,243 lb/yr.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authority to Construct with a Certificate of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the 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,



Arnaud Marjollet
Director of Permit Services

AM:DT/st

Enclosures

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

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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Authority to Construct Application Review

Fixed Roof Oil Field Production Tank < 5000 BBLs
Uncontrolled Emissions Less than 6 tons/year
Heavy Oil, Not Connected to Vapor Control,
Not subject to NSPS

Facility Name: Freeport McMoran Oil & Gas

Date: May 20, 2014

Mailing Address: 1200 Discovery Drive, Suite 100
Bakersfield, CA 93309

Engineer: Richard Edgehill

Lead Engineer: Allan Phillips *ASWZ AOE*

Contact Person: Kenneth Bork

MAY 20 2014

Telephone: (661) 395-5458

Application #(s): S-1372-226-3, '-416-0

Project #: 1141425

Deemed Complete: May 10, 2014

I. Proposal

Freeport McMoran Oil & Gas (Freeport) is applying for an Authority to Construct for a new 2000 bbl fixed roof crude oil storage tank. VOC emissions from the tank will be mitigated by deletion of PTO S-1372-223-2. The (3) three Free Water Knockouts (FWKOs) currently listed on S-1372-223 will be transferred to permit S-1372-226 (ATC S-1372-226-2).

The project is a Federal Major Modification triggering BACT and public notice. Offsets are not required.

Disposition of Outstanding ATCs

PTOs S-1372-223-2 (to be cancelled) and '-226-2 is included in Attachment I.

Freeport is a major stationary source with a Title V permit. The project is a Federal Major Modification and therefore it is 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. Freeport McMoran Oil & Gas must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

II. Applicable Rules

- Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
- Rule 2520 Federally Mandated Operating Permits (6/21/01)
- Rule 2530 Federally Enforceable Potential to Emit
- Rule 2410 Prevention of Significant Deterioration (Adopted 6/16/11, effective 11/26/12)
- Rule 4001 New Source Performance Standards,

Subpart Kb (Amended 4/14/99) - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) is not applicable. This subpart does not apply to vessels with a design capacity $\leq 1,589.874 \text{ m}^3$ ($\leq 420,000$ gallons) used for petroleum or condensate stored, processed, or treated prior to custody transfer. The capacity of these tanks is $\leq 420,000$ gallons, and they store crude oil prior to custody transfer; therefore, this subpart does not apply to the tanks in this project.

Subpart OOOO (Adopted 8/16/2012) - Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution.

- Rule 4101 Visible Emissions (04/20/05)
- Rule 4102 Nuisance (12/17/92)
- Rule 4623 Storage of Organic Liquids (05/19/05)
- CH&SC 41700 Health Risk Assessment
- CH&SC 42301.6 School Notice
- Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
- California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The new tank ('-416) will be located at the Star Fee Lease, SW Section 6, T30S, R22E. Existing tanks '-223 (to be cancelled) and '-226 are located at the Welpport Lease, Section 36, T29S, R21. The Star Fee and Welpport leases are location within the heavy oil western stationary source. The equipment is not located within 1,000 feet of the outer boundary of any K-12 school. Therefore, pursuant to CH&SC 42301.6, California Health and Safety Code (School Notice), public notification is not required.

IV. Process Description

The tanks and vessels at the tank battery receive production prior to custody transfer. The 2000 bbl tank in this project operates as a crude oil wash tank.

Note that the 3 FWKOs being transferred from '-223 (to be cancelled) to '-226 serve as separator vessels for oil and water. They are not 3-phase separators i.e. no gas exits the vessels as a separate stream. The FWKOs are >100 bbl (applicant email 4-15-14).

Pre- and post-project facility diagrams are found in Attachment II.

V. Equipment Listing

Pre-Project Equipment Description:

~~S-1372-223-2: 2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK #WP-WT 2 AND THREE FREE WATER KNOCKOUT VESSELS (WELLPORT) (TO BE CANCELLED)~~

S-1372-226-2: 5,000 BBL FIXED ROOF CRUDE OIL STORAGE/ CLARIFIER TANK

Proposed Modification:

S-1372-226-3: MODIFICATION OF 5,000 BBL FIXED ROOF CRUDE OIL STORAGE/ CLARIFIER TANK: ADD FWKOS LISTED ON S-1326-223

Post Project Equipment Description:

S-1372-226-3: 5,000 BBL FIXED ROOF CRUDE OIL STORAGE/ CLARIFIER TANK AND THREE FREE WATER KNOCKOUT VESSELS

S-1372-416-0: 2000 BBL FIXED-ROOF CRUDE OIL WASH TANK (STAR FEE)

VI. Emission Control Technology Evaluation

The tank(s) in this project are (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.
- Tank '-223 (to be cancelled) and new tank '-416 have the same dimensions and operate under the same conditions (throughput = 8,000 bbl/day, tvp = 0.5 psia (5-19-14 email), temperature = 205 deg F). Both tanks '-223 and '-416 operate at constant level i.e. they are wash tanks. Tanks '-223 and '-416 throughput (8,000 bbl/day) were verified to be realistic by actual Star Fee and Welpport data from applicant. (emails 5/12/14 and 5/2/14).
- The tanks emit only volatile organic compounds (VOCs).
- The change to tank '-226 to add the 3 FWKO from '-223 is administrative and therefore is not a NSR modification. The FWKOs are assumed to have no emissions. PE2 for tank '-226 will be calculated for inclusion in the PAS emissions profile.
- S-1372-226 PE2 has not been established. For this project it is based on 1 turnover (5,000 bbl) per day, tvp = 0.48 psia (lab result, 5-19-14 email), temperature = 205 deg F, standard tank dimensions (38.75 ft dia and 24 ft high). The tank operates at variable level.

B. Emission Factors

Both the daily and annual PE's for the new (ATC '-417-0) and existing ('-223 and '-226) are calculated using 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)

Pre-project potential to emit is calculated based on the fugitive component counts. The following table summarizes the pre-project potential to emit for units included in this project.

Permit unit	VOC - Daily PE1 (lb/day)	VOC- Annual PE1 (lb/Year)
S-1372-223	6.4	2,342

2. Post Project Potential to Emit, (PE₂)

Post-project potential to emit is calculated based on the fugitive component counts. The following table summarizes the post-project potential to emit for units included in this project.

Permit Unit	VOC - Daily PE ₂ (lb/day)	VOC - Annual PE ₂ (lb/Year)
S-1372-226	246.2	89,850
S-1372-416	6.4	2,342

Emissions Profiles are included in Attachment IV.

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

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

Facility-wide VOC emissions exceed both the offset threshold for VOC's (20,000 lb VOC/ yr) and the Major Source threshold for VOC's (20,000 lb VOC/ yr). No other pollutants are emitted by this project; therefore, SSPE1 calculations for these pollutants are not necessary.

4. Post-Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

Facility-wide VOC emissions exceed both the offset threshold for VOC's (20,000 lb VOC/ yr) and the Major Source threshold for VOC's (20,000 lb VOC/ yr). No other pollutants are emitted by this project; therefore, SSPE2 calculations for these pollutants are not necessary.

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source

- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

This source is an existing Major Source for VOC emissions and will remain a Major Source for VOC. No change in other pollutants are proposed or expected as a result of this project.

Rule 2410 Major Source Determination:

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

PSD Major Source Determination (tons/year)*							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Estimated Facility PE before Project Increase	211	212	1273	1384	185	185	>100,000**
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
PSD Major Source ? (Y/N)	N	N	Y	Y	N	N	Y

*SSPE calculator

**the facility has several 62.5 MMBtu/hr steam generators

As shown above, the facility is an existing major source for PSD for at least one pollutant. Therefore the facility is an existing major source for PSD.

6. Baseline Emissions (BE)

a. Annual 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.

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 3.23

S-1372-223

Since tank S-1372-223 has a PV vent, it is considered a Clean Emissions Unit.

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

S-1372-416

Since this is a new tank, the BE is equal zero.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this facility is a major source for VOCs, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	2,342	50,000	No

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

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

The project's combined total emission increases and compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NO _x *	0	0	No
VOC*	2,342	0	Yes
PM ₁₀	0	30,000	Step 2 No
PM _{2.5}	0	20,000	Step 2 No
SO _x	0	80,000	Step 2 No

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

The project is a Federal Major Modification for VOC emissions.

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

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

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

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

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

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

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

I. Project Location Relative to Class 1 Area

As demonstrated in the "PSD Major Source Determination" Section above, the facility was determined to be an existing major source for PSD. Because the project is not located within 10 km of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Significance of Project Emission Increase Determination

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

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

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)						
	NO2	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	0	0	0	0	0	23
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	N	N	N	N	N	N

As demonstrated above, because the project has a total potential to emit from all new and modified emission units below the PSD significant emission increase thresholds, this project is not subject to the

requirements of Rule 2410 due to a significant emission increase and no further discussion is required.

10. 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 - BE, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
BE = Baseline Emissions (per Rule 2201) for each emissions unit, lb/qtr.

As tank S-1372-416 is a new permit unit, QNEC = PE2/4.

VIII. Compliance

Rule 2201 - New and Modified Stationary Source Review Rule

S-1372-226

Transfer of the FWKO from '223 (to be cancelled to '226 does not meet the following criteria for a Modification, as defined in Section 3.26, and is therefore not subject to this rule.

- Any change in hours of operation, production rate, or method of operation of an existing emissions unit, which would necessitate a change in permit conditions.
- Any structural change or addition to an existing emissions unit which would necessitate a change in permit conditions. Routine replacement shall not be considered to be a structural change.
- An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.
- Addition of any new emissions unit which is subject to District permitting requirements.
- A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

Therefore, S-1372-226 is not being modified.

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

- 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 SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

The applicant is proposing to install a new emissions unit with a PE of 6.4 lb/day for VOC as calculated in section VII.C.2. Since the daily VOC emissions are greater than 2.0 lbs/day, BACT is triggered.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

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

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 and VII.C.8 above, this project is a Federal Major Modification for VOC emissions. Therefore BACT is triggered.

2. BACT Guidance

Per District Policy APR 1305, Section IX, "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 for source categories or classes covered in the BACT Clearinghouse, relevant information under each of the following steps may be simply cited from the Clearinghouse without further analysis."

BACT Guideline 7.3.1, applies to Petroleum and Petrochemical Production – Fixed Roof Organic Liquid Storage or Processing Tank, < 5,000 bbl tank capacity (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: pressure and vacuum (PV) relief valve on tank vent set to within 10% of maximum allowable pressure

B. Offsets

1. Offset Applicability

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

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

Offset Applicability			
Pollutant	SSPE2 (lb/yr)	Offset Threshold Levels (lb/yr)	Offsets Calculations Required?
VOC	>20,000	20,000	Yes

2. Quantity of Offsets Required

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

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

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

As shown above BE = PE1. Also, there are no increases in cargo carrier emissions; therefore, ICCE = 0 for all units.

The offset requirement is calculated as follows:

PE2 - BE Summary for VOC Emissions		
	lb/day	lb/year
S-1372-223	-6.4	-2,342
S-1372-416	6.4	2,342
Total	0	0
$\Sigma[PE2 - BE]$	0	0

Offsets required (lb/year) = $(\Sigma[PE2 - BE] + ICCE) \times DOR$, for all new or modified emissions units in the project,
= 0 lb-VOC/yr

Offsets are not required for the project.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, 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 SB 288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

As demonstrated in VII.C.7 and C.8, this project does constitute a Federal Major Modification; therefore, public noticing for SB 288 or Federal Major Modification purposes is required.

b. PE > 100 lb/day

The PE2 for this new unit is compared to the daily PE Public Notice thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds			
Pollutant	PE2 (lb/day)	Public Notice Threshold	Public Notice Triggered?
VOC	6.4	100 lb/day	No

Therefore, public noticing for PE > 100 purposes is not required

c) Offset Threshold

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

Offset Threshold				
Pollutant	SSPE1 (lb/yr)	SSPE2 (lb/yr)	Offset Levels (lb/yr)	Public Notice Required?
VOC	>20,000	>20,000	20,000	No

Since the SSPE2 does not surpass the offset threshold levels, public noticing is not triggered for this project.

d) **SSIPE > 20,000 lb/yr**

The SSIPE (NEC) is calculated and shown as follows:

$$\text{SSIPE} = \text{SSPE2} - \text{SSPE1}$$

Stationary Source Increase in Permitted Emissions (SSIPE)			
Pollutant	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)
VOC	>20,000	>20,000	0

As shown in the above table, the SSIPE for this project does not exceed the 20,000 lb/yr public notice threshold.

Therefore, public noticing is not required for SSIPE purposes.

2. Public Notice Action

As discussed above, public noticing is required for this project for Federal Major Modification purposes. 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 Emissions Limits (DEL)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rule 2201] Y

Tank shall be operated at constant level. [District Rule 2201] Y

E. Compliance Assurance

The following measures shall be taken to ensure continued compliance with District Rules:

1. Source Testing

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

2. Monitoring

The following monitoring condition is required:

Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start-up, at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2201 and 4623] Y

3. Record Keeping

Recordkeeping 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:

The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Y

{2490} All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Y

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality

standard. The project emissions are VOCs which does not have a Federal or State Air Quality standard. AAQA is not required.

G. Compliance Certification

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

H. Alternate Siting Analysis

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

Rule 2410 Prevention of Significant Deterioration

As demonstrated above this project will not result in a significant increase in emissions; therefore, Rule 2410 does not apply.

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 VIII is the Title V Compliance Certification form for facility S-1372. Continued compliance with this rule is expected.

Rule 4001 New Source Performance Standards

This rule incorporates the New Source Performance Standards from 40 CFR Part 60. 40 CFR Part 60, Subparts, K, Ka, Kb, and OOOO and could potentially apply to the storage tanks located at this facility.

40 CFR Part 60, Subparts, K, Ka, and Kb could potentially apply to the storage tanks located at this facility. However, pursuant to 40 CFR 60.110 (b), 60.110(a)

(b), and 60.110(b) (b), these subparts do not apply to storage vessels less than 10,000 bbls, used for petroleum or condensate, that is stored, processed, and/or treated at a drilling and production facility prior to custody transfer.

40 CFR Part 60, Subpart OOOO—Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution (constructed, reconstructed, or modified after 8/23/11) applies to single storage vessel, located in the oil and natural gas production segment, natural gas processing segment or natural gas transmission and storage segment. The subject tanks are subject to this subpart. However, Subpart OOOO has no standards for tanks with annual VOC emissions less than 6 tons per year. Therefore, the subject tanks are not an affected facility and subpart OOOO does not apply.

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

Rule 4101 - Visible Emissions

Rule 4101 states that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity.

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

Rule 4102 - Public Nuisance

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

CH&SC 41700 - California Health and Safety Code

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 one. According to the Technical Services Memo for this project (Attachment IX), the total facility prioritization score including this project was greater than one. Therefore, an HRA 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-1372-416-0	0.0364 per million	No

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.

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. Therefore, the following conditions shall be placed on the ATC:

This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rules 2201 and 4623] Y

{Modified 2910} Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start-up, at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2201 and 4623] Y

The permittee shall conduct API gravity testing upon initial start-up. [District Rules 4623] Y

{Modified 2911} The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Y

{Modified 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 Rules 2201 and 4623] Y

{Modified 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 Rules 2201 and 4623] Y

The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Y

{2490} All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Y

CH&SC 42301.6 California Health & Safety Code (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

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

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

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 § 15301 (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. Recommendations

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATCs S-1372-226-3 and '416-0 subject to the permit conditions on the attached draft ATCs in Attachment X.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1372-226	3020-05	210,000 gal	\$246.00
S-1372-416	3020-05	84,000 gal	\$185.00

Attachments

- I. PTO S-1372-223-3 and '-226-2
- II. Pre- and Post- Project Facility Diagrams
- III. Tank Emissions Calculations
- IV. Emissions Profiles
- V. BACT Guideline
- VI: BACT Analysis
- VII: Statewide Compliance Statement
- VIII: Title V Compliance Certification form
- IX: HRA
- X: Draft ATCs

ATTACHMENT I
PTOs S-1372-223-2 and '-226-2

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-223-2

EXPIRATION DATE: 05/31/2016

SECTION: 36 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK #WP-WT-2 AND THREE FREE WATER KNOCKOUT VESSELS (WELLPORT)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. 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 leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. 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, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] 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-1372-226-2

EXPIRATION DATE: 05/31/2016

SECTION: 36 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF CRUDE OIL STORAGE/ CLARIFIER TANK

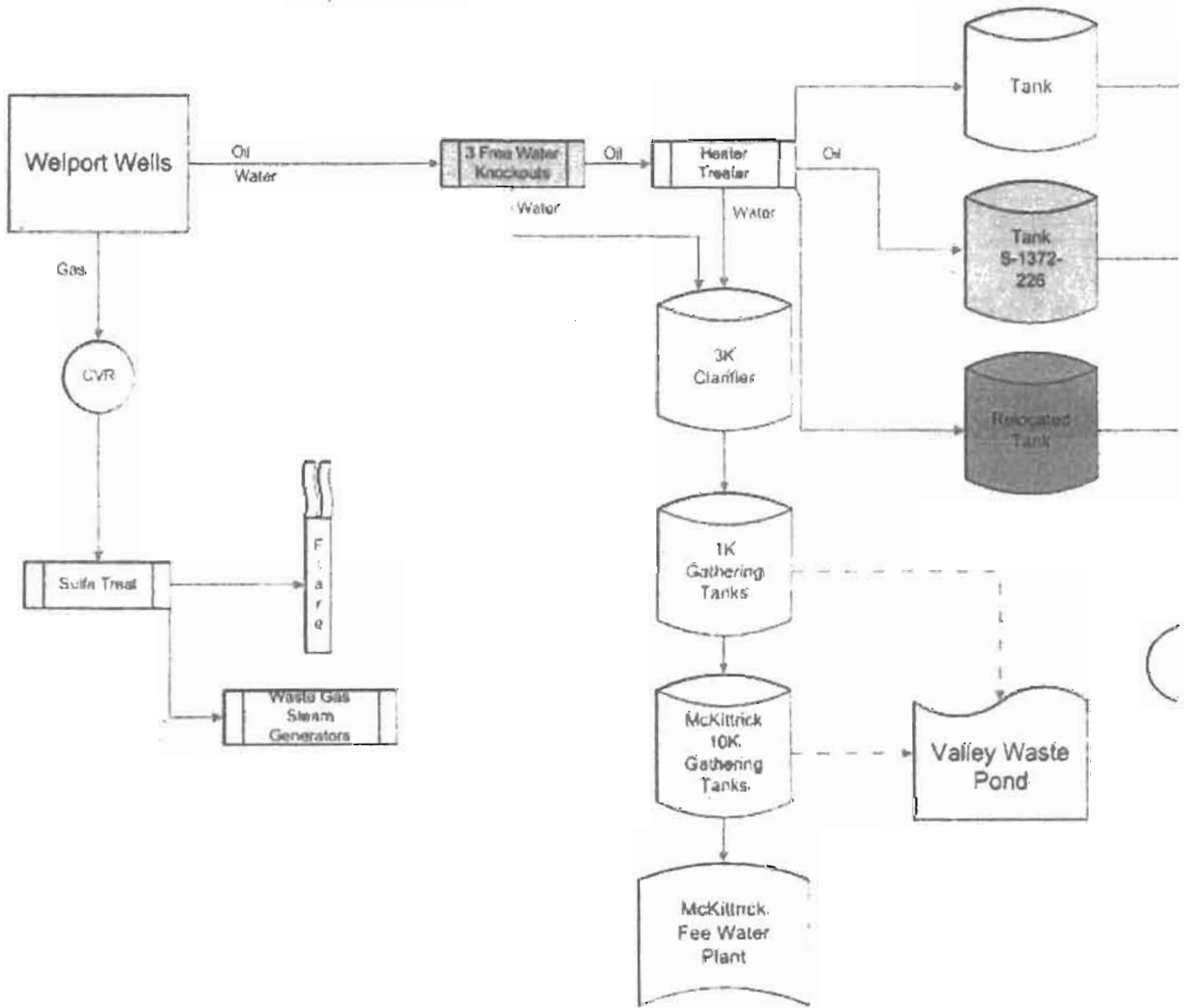
PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. 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 leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. 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, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

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

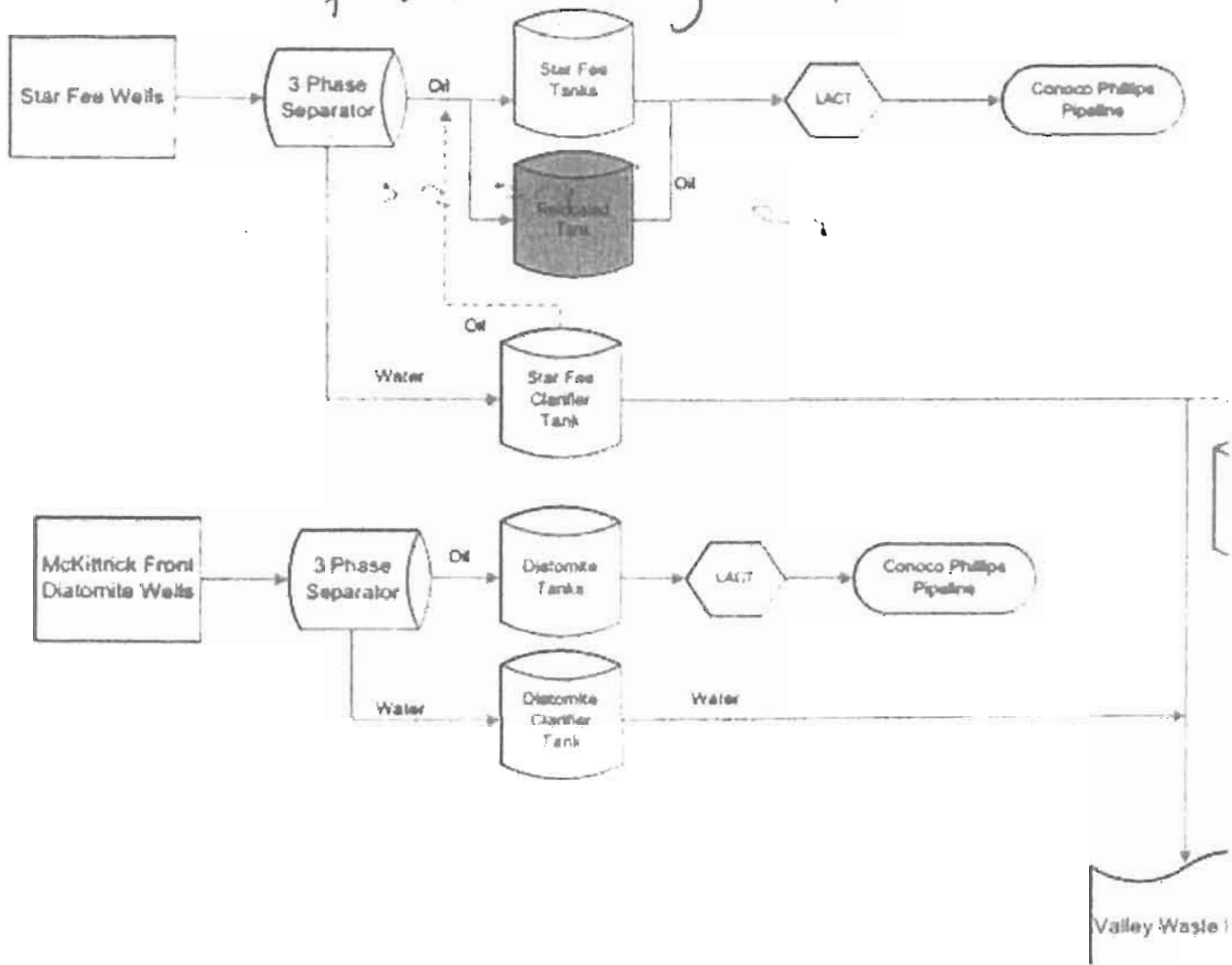
ATTACHMENT II
Pre- and Post-Project Facility Diagrams

Pre Project



II. ~~Star Fee (Post Project)~~

Post Project



ATTACHMENT III
Tank Emissions Calculations

1223, 1416

Tank Input Data	
permit number (S-xxxx-xx-xx)	226new
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.5
liquid bulk storage temperature, Tb (°F)	205
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)		8,000
maximum annual fluid throughput (bbl)		2,920,000
-----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 _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insolation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{ix}), P _{vx} (psia)	154.0	4.1359
water vapor pressure at daily minimum liquid surface temperature (T _{in}), P _{vn} (psia)	143.3	3.1631
water vapor pressure at average liquid surface temperature (T _{ia}), P _{va} (psia)	148.7	3.6105
roof outage, H _{ro} (feet)		0.3125
vapor space volume, V _v (cubic feet)		5875.76
paint factor, alpha		0.39
vapor density, W _v (lb/cubic foot)		0.0077
daily vapor temperature range, delta T _v (degrees Rankine)		35.65
vapor space expansion factor, K _e		0.1426

Results	lb/year	lb/day
Standing Storage Loss	2,342	6.42
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	2,342	6.4

Summary Table	
Permit Number	226new
Facility Tank I.D.	
Tank capacity (bbl)	2,000
Tank diameter (ft)	30
Tank shell height (ft)	16
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	8,000
Maximum Annual Fluid Throughput (bbl/year)	2,920,000
Maximum Daily Oil Throughput (bbl/day)	N/A
Maximum Annual Oil Throughput (bbl/year)	N/A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	6.4
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	2,342

Tank Input Data	
permit number (S-xxxx-xx-xx)	-226
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.479
liquid bulk storage temperature, Tb (°F)	205
is this a constant-level tank? {yes, no}	no
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	38.75
capacity of tank (bbl)	5,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	25
average liquid height (feet)	20
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)		5,000
maximum annual fluid throughput (bbl)		1,825,000
-----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 _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	154.0	4.1359
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	143.3	3.1631
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	148.7	3.6105
roof outage, H _{ro} (feet)		0.4036
vapor space volume, V _v (cubic feet)		6372.65
paint factor, alpha		0.39
vapor density, W _v (lb/cubic foot)		0.0073
daily vapor temperature range, delta T _v (degrees Rankine)		35.65
vapor space expansion factor, K _e		0.1426

Results	lb/year	lb/day
Standing Storage Loss	2,433	6.67
Working Loss	87,418	239.50
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	89,850	246.2

Summary Table	
Permit Number	-226
Facility Tank I.D.	--
Tank capacity (bbl)	5,000
Tank diameter (ft)	38.75
Tank shell height (ft)	25
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	5,000
Maximum Annual Fluid Throughput (bbl/year)	1,825,000
Maximum Daily Oil Throughput (bbl/day)	N/A
Maximum Annual Oil Throughput (bbl/year)	N/A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	246.2
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	89,850

ATTACHMENT IV
Emissions Profile

Permit #: S-1372-226-3	Last Updated
Facility: FREEPORT-MC MORAN OIL & GAS	05/10/2014 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	89850.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	246.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
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

**San Joaquin Valley
Unified Air Pollution Control District**

Best Available Control Technology (BACT) Guideline 7.3.1*

Last Update 10/1/2002

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

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

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

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

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

ATTACHMENT VI BACT Analysis

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

Step 1 - Identify All Possible Control Technologies

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

Technologically feasible:

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

Achieved in Practice:

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

Step 2 - Eliminate Technologically Infeasible Options

All of the above identified control options are technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. 99% control (waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of uncondensed vapors to gas pipeline or reinjection to formation (if appropriate wells are available).
2. PV relief valve set to within 10% of maximum allowable pressure.

Step 4 - Cost Effectiveness Analysis

Applicant has provided a detailed installation and annual operating cost for a vapor control system achieving 99% vapor control efficiency. The detailed cost effectiveness calculation is presented below.

Cost effectiveness calculation to add tank vapor recovery

Compressor skid costs:	\$350,000
Piping costs:	\$120,000
Heat exchanger cost:	\$100,000
Foundation and installation costs:	<u>\$125,000</u>
Total:	\$695,000

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

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

$$A = P * ((i*(1 + i)^n) / ((1 + i)^n - 1))$$
$$A = \$695,000 * ((.10*(1 + .10)^{10}) / ((1 + .10)^{10} - 1))$$
$$A = \$113,108$$

Total Annual Costs calculation per Section X(A)(3)

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

$$\text{Total Annual Costs} = \$113,108 + \$32,128 = \$142,239$$

Annual Emissions Reduction

Uncontrolled emissions (see attached calculation) = 2,342 lbs./yr. or 1.17
tons/yr.

Control System with 99% efficiency = 1.17 tons/yr. * 0.99 = 1.16 tons/yr.
reduction

Control Cost per Section X(A)(4)

$$\text{Control Cost} = (\$142,239/\text{yr.}) / (1.16 \text{ tons VOC}/\text{yr.}) = \$122,620/\text{ton VOC}$$

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

Step 5 - Select BACT

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

ATTACHMENT VII
Statewide Compliance Form



**FREEPORT-McMoRAN
OIL & GAS**

Freeport-McMoRan Oil & Gas
201 S. Broadway
Orcutt, CA 93465

Telephone: 805-739-9111

March 18, 2014

San Joaquin Valley Pollution District
34946 Flyover Court
Bakersfield, CA 93308

**RULE 2201 COMPLIANCE STATEMENT
ATC FEDERAL MAJOR MODIFICATION – TWO STEAM GENERATORS
FACILITY s-1372 HEAVY OIL WESTERN**

Mr. Torii:

In accordance with Rule 2201, Section 4.15 "Additional Requirements for Major Sources and Federal Major Modifications", FM O&G is providing this compliance statement regarding our ATC applications for two new 85.0 MMBtu/hr steam generators.

All major stationary sources in California owned and operated by FM O&G, or by any entity controlling, controlled by, or under common control with FM O&G, 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. Gaviota Oil Heating Facility, Point Arguello Title V Stationary Source
4. Lompoc Oil and Gas Processing Plant, 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 me at (661) 395-5458 or Charlotte Campbell at (661) 395-5427.

Sincerely,

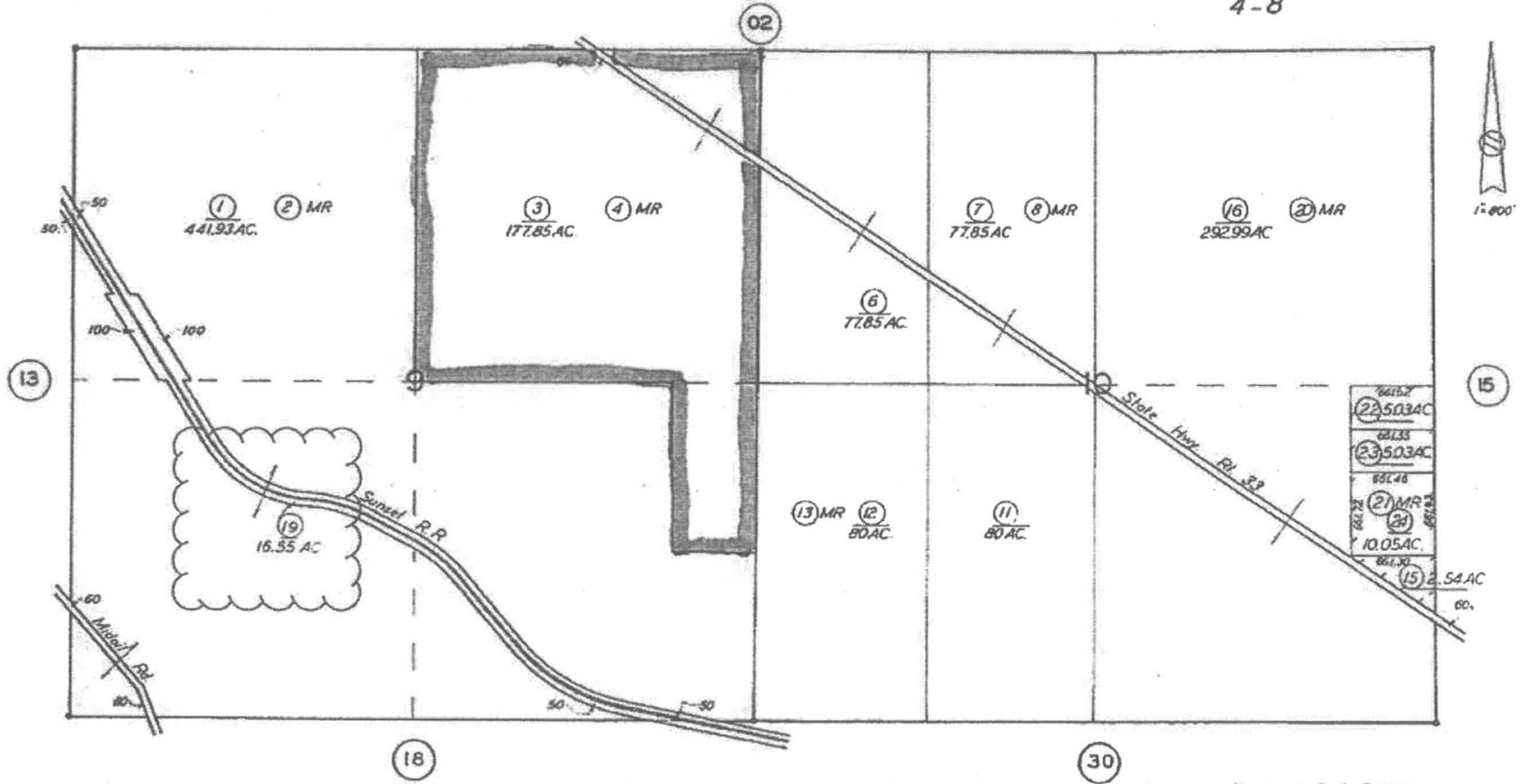
Steve Rusch
Vice President of EH&S and Government Affairs

198-14

T. 32 S. R. 23 E.

SCHOOL DIST. 124-2
4-8

198-14



Revised Oct. 9, 2001

APN 198-140-01 Chevron surface

APN 198-140-03 ~~XXXXXXXXXX~~

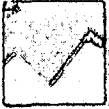
MH = For mobilehome A.P.N. see page 32

old Sunset R.R. is now owned by City of Taft

Note: This map is for assessment purposes only. It is not to be construed as portraying legal ownership or divisions of land for purposes of zoning or subdivision law.

ASSESSORS MAP NO. 198-14
COUNTY OF KERN

ATTACHMENT VIII
Title V Compliance Certification Form



**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: Freeport-McMoRan Oil & Gas	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: Freeport-McMoRan Oil & Gas	
3. Agent to the Owner: Kenneth Bork	

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

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- 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:

Kenneth R. Bork

5/6/14

Signature of Responsible Official

Date

Kenneth R. Bork

Name of Responsible Official (please print)

Sr. Environmental Advisor

Title of Responsible Official (please print)

ATTACHMENT IX
HRA

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Richard Edgehill– Permit Services
From: Kou Thao– Technical Services
Date: 5-12-14
Facility Name: Freeport McMoRan Oil & Gas
Location: HOWSS
Application #(s): S1372-416-0
Project #: S-1141425

A. RMR SUMMARY

RMR Summary			
Categories	Oil Tank (Unit 416-0)	Project Totals	Facility Totals
Prioritization Score	0.48	0.48	>1.0
Acute Hazard Index	1.51E-02	1.51E-02	1.07E-01
Chronic Hazard Index	4.01E-04	4.01E-04	5.35E-02
Maximum Individual Cancer Risk (10⁻⁶)	3.64E-08	3.64E-08	1.93E-06
T-BACT Required?	No		
Special Permit Conditions?	No		

Proposed Permit Conditions

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

Unit # 416-0

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on May 5, 2014 to perform a Risk Management Review for a proposed installation of a 2,000 bbl crude oil tank.

II. Analysis

Technical Services performed a health risk assessment using the District developed spreadsheet of toxic fugitive emissions from Oilfield Equipment. Dispersion modeling was conducted using the AERMOD model, with the parameters outlined below and meteorological data for 2005-2009 from Missouri Triangle 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 416-0			
Source Type	Circular Area	Location Type	Rural
Tank Diameter (m)	4.52	Closest Receptor (m)	1300
		Type of Receptor	Business
Release Height (m)	4.87	Pollutant Type	VOC
		Emission Rate	0.25 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 X
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1372-416-0

LEGAL OWNER OR OPERATOR: FREEPORT-MC MORAN OIL & GAS
MAILING ADDRESS: 1200 DISCOVERY DR - STE 500
BAKERSFIELD, CA 93309

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: 6 TOWNSHIP: 30S RANGE: 22E

EQUIPMENT DESCRIPTION:
2000 BBL FIXED-ROOF CRUDE OIL STORAGE TANK WITH PV VALVE (STAR FEE)

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Tank shall be operated at constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.5 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] 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

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Araud Marjolle, Director of Permit Services
S-1372-416-0 - May 18 2014 4:23PM - EDG/HLR - Joint Inspection NOT Required

7. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start-up, at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
8. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
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 Rule 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 Rule 2201 and 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 Rules 2201 and 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 Rules 1070 and 4623] Federally Enforceable Through Title V Permit
13. PTO S-1372-223-2 shall be cancelled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

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