



**JUL 21 2014**

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

**Re: Proposed Authority to Construct/Certificate of Conformity (Minor Mod)  
District Facility # S-1372  
Project # 1142651**

Dear Mr. Mudge:

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 an additional location of operation and lowering of the sulfur emissions limit for Rule 4320 compliance of a 62.5 MMBtu/hr natural gas-fired steam generator.

After addressing all comments made during the 45-day EPA comment period, the District intends to issue the Authority to Construct 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.

**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  
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Bakersfield, CA 93308-9725  
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Thank you for your cooperation in this matter.

Sincerely,



Arnaud Marjollet  
Director of Permit Services

Enclosures

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

**San Joaquin Valley Air Pollution Control District**  
**Authority to Construct Application Review**  
 Transfer of Location of Steam Generator

Facility Name: Freeport McMoran Oil & Gas

Date: July 15, 2014

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

Engineer: Richard Edgehill  
 Lead Engineer: Richard Karrs

Contact Person: Daniel Mudge  
 Telephone: (661) 395-5458

Application #(s): S-1372-34-26

Project #: 1142651

Deemed Complete: May 10, 2014

**I. PROPOSAL:**

Freeport McMoran Oil & Gas (FMM) is requesting an Authority to Construct (ATC) for authorization of a new location within the same stationary source (S-1372) of a 62.5 MMBtu/hr natural gas-fired steam generator S-1372-34. The unit will be authorized to operate at the McKittrick Unit (NE Section 6 T30S, R22E). Applicant has also requested that the sulfur emissions limit be lowered to 1 gr S/100 scf, the District standard for natural gas.

The transfer of location within the same stationary source is a not modification in accordance with District Rule 2201 Section 3.25.3.3. Lowering of the sulfur emissions limit is also not a NSR modification as the unit currently meets the lower emissions limit (applicant email (6-24-14) and therefore is consistent with FYI 111 category 5 below.

	ATC req'd ?	TV application req'd ?	NSR mod ?	Description	Comments
5	Yes	Yes	No	revising emission limits to lower values to comply with Regulation IV rule	Not a modification provided that the unit currently meets the revised emission limits and there is no change to the method of operation needed, e.g. no change to water injection rate for a GTE.

Therefore Rule 2201 is not applicable. Requirements of BACT, offsets, and public notice do not need to be considered.

Disposition of Outstanding ATCs

There are no outstanding ATCs for S-1372-34. PTO S-1372-34-24 is included in **Attachment I**.

FMM S-1372 has been issued a Title V permit. This modification can be classified as a Title V minor modification pursuant to Rule 2520, 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. FMM must apply to administratively amend their Title V permit.

**II. APPLICABLE RULES:**

- Rule 2410 Prevention of Significant Deterioration (6/16/11) – **not applicable** – no emissions increase
- Rule 2520 Federally Mandated Operating Permits (June 6, 2001)
- Rule 4001 New Source Performance Standards Subpart Dc (April 14, 1999)
- Rule 4101 Visible Emissions (February 17, 2005)
- Rule 4102 Nuisance (December 17, 1992)
- Rule 4201 Particulate Matter Concentration (December 17, 1992)
- Rule 4301 Fuel Burning Equipment (December 17, 1992)
- Rule 4305 Boilers, Steam Generators, and Process Heaters - Phase 2 (August 21, 2003)
- Rule 4306 Boilers, Steam Generators, and Process Heaters - Phase 3 (October 16, 2008)
- Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters - Phase 3 (October 16, 2008)
- Rule 4351 Boilers, Steam Generators, and Process Heaters - Phase 1 (August 21, 2003)
- Rule 4801 Sulfur Compounds (December 17, 1992)
- 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 steam generator in this project is permitted to operate in the FMM's heavy oil western stationary source (HOWSS).

Current and proposed locations of the steam generator are listed in the table below.

Unit	Current Locations*	Proposed Locations
S-1372-34	NW/4 Section 16, T31S, R22E (Bremer Fee Lease), NW/4 Section 23, T31S, R22E (Dome Fee Lease) and NE/4 Section 8, T30S, R22E (Morris lease)	NW/4 Section 16, T31S, R22E (Bremer Fee Lease), NW/4 Section 23, T31S, R22E (Dome Fee Lease) NE/4 Section 8, T30S, R22E (Morris lease), and NE/4 Section 6, T30S, R22E (Cymric Unit)

\*Condition #1 of the current PTO '-34-24

The proposed additional location is not within a 1,000 feet of any K-12 school.

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

#### **IV. PROCESS DESCRIPTION:**

FMM operates permitted equipment in the McKittrick Unit Lease utilized for the production of crude oil and natural gas. In thermally enhanced oil recovery (TEOR) operations, natural gas is combusted in steam generators to produce steam for injection into heavy crude oil bearing strata via injection wells to reduce the viscosity of the crude oil, thereby facilitating thermally enhanced oil production.

McKittrick Unit produces approximately 600 bbl oil/day and 18,000 bbl of produced water per day. The steam generator produces 3,500 bbl of steam per day.

For this project, ATC approval is requested an additional location of operation location of a 62.5 MMBtu/hr natural gas-fired steam generator, NE Section 6 of T30S, R22E (McKittrick Unit). The steam generator will be used to assist TEOR production of the Cymric field.

The sulfur emissions limit will be revised from 0.0653 lb SO<sub>2</sub>/MMBtu (x 0.5 lb S/lb SO<sub>2</sub> x 7000 gr S/lb x 10<sup>-3</sup> MMBtu/scf x 100 = 22.9 gr S/scf) to a maximum sulfur content in combusted as of 1 gr S/100 scf, the District standard for natural gas.

A photograph of the steam generator is included in **Attachment III**.

#### **V. EQUIPMENT LISTING:**

##### Pre-Project Equipment Description:

S-1372-34-24: 62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#37) (DIS# 45237-82) WITH O2 CONTROLLER, LOW NOX BURNER, AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

##### Proposed Modification:

S-1372-34-26: MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#37) (DIS# 45237-82) WITH O2 CONTROLLER, LOW NOX BURNER, AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS: AUTHORIZE NEW LOCATION AT NE SECTION 6, T30S, R22E (MCKITTRICK UNIT), REVISE SULFUR EMISSIONS LIMIT TO 1 GR S/100 SCF IN COMBUSTED GAS

Post Project Equipment Description:

S-1372-34-26: 62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#37) (DIS# 45237-82) WITH O2 CONTROLLER, LOW NOX BURNER, AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

**VI. EMISSION CONTROL TECHNOLOGY EVALUATION:**

The steam generator in this project is capable of emitting NO<sub>x</sub>, CO, VOC, PM10, and SO<sub>x</sub> due to the combustion of natural gas.

NO<sub>x</sub> is the major pollutant of concern when burning natural gas. NO<sub>x</sub> formation is either due to thermal fixation of atmospheric nitrogen in the combustion air (thermal NO<sub>x</sub>) or due to conversion of chemically bound nitrogen in the fuel (fuel NO<sub>x</sub>). Due to the low fuel nitrogen content of natural gas, nearly all NO<sub>x</sub> emissions are thermal NO<sub>x</sub>. Formation of thermal NO<sub>x</sub> is affected by four furnace zone factors: (1) nitrogen concentration, (2) oxygen concentration, (3) peak temperature, and (4) time of exposure at peak temperature.

Flue gas recirculation (FGR) reduces NO<sub>x</sub> emissions by recirculating a percentage of the exhaust gas back into the windbox. This reduces the oxygen concentration in the air-fuel mixture and regulates the combustion process, lowering the combustion temperature. The lowered availability of oxygen in conjunction with lowered combustion temperature reduces the formation of NO<sub>x</sub>.

The steam generator has demonstrated compliance, via source testing, with the NO<sub>x</sub> and CO limits in Rule 4320.

**VII. General Calculations**

**A. Assumptions**

24 hr/day, 365 days/yr operation

Natural gas heating value: 1000 Btu/scf

The project is not a NSR modification and therefore calculations are not required. PE1 and PE2 are calculated for inclusion in the PAS emissions profiles and for calculation of QNEC.

**B. Emission Factors**

**PTO S-1372-34-24**

<b>Pollutant</b>	<b>EF1</b>		<b>Source</b>
NO <sub>x</sub>	0.008 lb-NO <sub>x</sub> /MMBtu	7 ppmvd NO <sub>x</sub> (@ 3% O <sub>2</sub> )	PTO
SO <sub>x</sub>	0.0653 lb-SO <sub>x</sub> /MMBtu		"
PM10	0.014 lb-PM10/MMBtu		"
CO	0.0364 lb-CO/MMBtu	50 ppmvd CO (@ 3% O <sub>2</sub> )	"
VOC	0.003 lb-VOC/MMBtu		"

<b>Pollutant</b>	<b>EF1 Startup &amp; Shutdown</b>		<b>Source</b>
NO <sub>x</sub>	0.018 lb-NO <sub>x</sub> /MMBtu	15 ppmvd NO <sub>x</sub> (@ 3% O <sub>2</sub> )	PTO
SO <sub>x</sub>	0.0653 lb-SO <sub>x</sub> /MMBtu		"
PM10	0.014 lb-PM10/MMBtu		"
CO	0.0364 lb-CO/MMBtu	50 ppmvd CO (@ 3% O <sub>2</sub> )	"
VOC	0.003 lb-VOC/MMBtu		"

**ATC S-1372-34-26**

<b>Pollutant</b>	<b>EF2</b>		<b>Source</b>
NO <sub>x</sub>	0.008 lb-NO <sub>x</sub> /MMBtu	7 ppmvd NO <sub>x</sub> (@ 3% O <sub>2</sub> )	PTO
SO <sub>x</sub>	0.00285 lb-SO <sub>x</sub> /MMBtu		Proposed
PM10	0.014 lb-PM10/MMBtu		PTO
CO	0.0364 lb-CO/MMBtu	50 ppmvd CO (@ 3% O <sub>2</sub> )	"
VOC	0.003 lb-VOC/MMBtu		"

<b>Pollutant</b>	<b>EF2 Startup &amp; Shutdown</b>		<b>Source</b>
NO <sub>x</sub>	0.018 lb-NO <sub>x</sub> /MMBtu	15 ppmvd NO <sub>x</sub> (@ 3% O <sub>2</sub> )	PTO
SO <sub>x</sub>	0.00285 lb-SO <sub>x</sub> /MMBtu		Proposed
PM10	0.014 lb-PM10/MMBtu		PTO
CO	0.0364 lb-CO/MMBtu	50 ppmvd CO (@ 3% O <sub>2</sub> )	"
VOC	0.003 lb-VOC/MMBtu		"

**C. Calculations**

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

**PTO S-1372-34-24 (project 1094140):**

Daily Emissions:

Pollutant	Daily Pre-Project Potential to Emit (PE1) - Steady State			
	Emission Factors	Heat input	Hours per day	Daily P E1
<b>NO<sub>x</sub></b>	0.008 (lb-NO <sub>x</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 20 (hr/day)	= 10.0 (lb-NO <sub>x</sub> /day)
<b>SO<sub>x</sub></b>	0.0653 (lb-SO <sub>x</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 20 (hr/day)	= 81.6 (lb-SO <sub>x</sub> /day)
<b>PM<sub>10</sub></b>	0.014 (lb-PM <sub>10</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 20 (hr/day)	= 17.5 (lb-PM <sub>10</sub> /day)
<b>CO</b>	0.0364 (lb-CO/MMBtu)	x 62.5 (MMBtu/hr)	x 20 (hr/day)	= 45.5 (lb-CO/day)
<b>VOC</b>	0.003 (lb-VOC/MMBtu)	x 62.5 (MMBtu/hr)	x 20 (hr/day)	= 3.8 (lb-VOC/day)

Pollutant	Daily Pre-Project Potential to Emit (PE1) – Start-up and Shutdown			
	Emission Factors	Heat input	Hours per day	Daily PE1
<b>NO<sub>x</sub></b>	0.018 (lb-NO <sub>x</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 4 (hr/day)	= 4.5 (lb-NO <sub>x</sub> /day)
<b>SO<sub>x</sub></b>	0.0653 (lb-SO <sub>x</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 4 (hr/day)	= 16.3 (lb-SO <sub>x</sub> /day)
<b>PM<sub>10</sub></b>	0.014 (lb-PM <sub>10</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 4 (hr/day)	= 3.5 (lb-PM <sub>10</sub> /day)
<b>CO</b>	0.0364 (lb-CO/MMBtu)	x 62.5 (MMBtu/hr)	x 4 (hr/day)	= 9.1 (lb-CO/day)
<b>VOC</b>	0.003 (lb-VOC/MMBtu)	x 62.5 (MMBtu/hr)	x 4 (hr/day)	= 0.8 (lb-VOC/day)

Annual Emissions:

Pollutant	Annual Pre-Project Potential to Emit (PE1) - Steady State			
	Emission Factors	Heat input	Hours per year	Annual P E1
<b>NO<sub>x</sub></b>	0.008 (lb-NO <sub>x</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 7,300 (hr/yr)	= 3,650 (lb-NO <sub>x</sub> /yr)
<b>SO<sub>x</sub></b>	0.0653 (lb-SO <sub>x</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 7,300 (hr/yr)	= 29,793 (lb-SO <sub>x</sub> /yr)
<b>PM<sub>10</sub></b>	0.014 (lb-PM <sub>10</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 7,300 (hr/yr)	= 6,388 (lb-PM <sub>10</sub> /yr)
<b>CO</b>	0.0364 (lb-CO/MMBtu)	x 62.5 (MMBtu/hr)	x 7,300 (hr/yr)	= 16,608 (lb-CO/yr)
<b>VOC</b>	0.003 (lb-VOC/MMBtu)	x 62.5 (MMBtu/hr)	x 7,300 (hr/yr)	= 1,369 (lb-VOC/yr)

Pollutant	Annual Pre-Project Potential to Emit (PE1) - Start-Up & Shutdown			
	Emission Factors	Heat input	Hours per year	Annual P E1
NO <sub>x</sub>	0.018 (lb-NO <sub>x</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 1,460 (hr/yr)	= 1,643 (lb-NO <sub>x</sub> /yr)
SO <sub>x</sub>	0.0653 (lb-SO <sub>x</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 1,460 (hr/yr)	= 5,959 (lb-SO <sub>x</sub> /yr)
PM <sub>10</sub>	0.014 (lb-PM <sub>10</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 1,460 (hr/yr)	= 1,278 (lb-PM <sub>10</sub> /yr)
CO	0.0364 (lb-CO/MMBtu)	x 62.5 (MMBtu/hr)	x 1,460 (hr/yr)	= 3,322 (lb-CO/yr)
VOC	0.003 (lb-VOC/MMBtu)	x 62.5 (MMBtu/hr)	x 1,460 (hr/yr)	= 274 (lb-VOC/yr)

Pollutant	Total Annual Pre-Project Potential to Emit (PE1)		
	Emissions from Combustion Steady State (lb/year)	Emissions from Startup and Shutdown (lb/year)	Total Emissions (lb/year)
NO <sub>x</sub>	3,650	1,643	5,293
SO <sub>x</sub>	29,793	5,959	35,752
PM <sub>10</sub>	6,388	1,278	7,666
CO	16,608	3,322	19,930
VOC	1,369	274	1,643

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

### ATC S-1372-34-26

Daily Emissions:

Pollutant	Daily Post-Project Potential to Emit (PE2) - Steady State			
	Emission Factors	Heat input	Hours per day	Daily P E2
NO <sub>x</sub>	0.008 (lb-NO <sub>x</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 20 (hr/day)	= 10.0 (lb-NO <sub>x</sub> /day)
SO <sub>x</sub>	0.0029 (lb-SO <sub>x</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 20 (hr/day)	= 3.6 (lb-SO <sub>x</sub> /day)
PM <sub>10</sub>	0.014 (lb-PM <sub>10</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 20 (hr/day)	= 17.5 (lb-PM <sub>10</sub> /day)
CO	0.0364 (lb-CO/MMBtu)	x 62.5 (MMBtu/hr)	x 20 (hr/day)	= 45.5 (lb-CO/day)
VOC	0.003 (lb-VOC/MMBtu)	x 62.5 (MMBtu/hr)	x 20 (hr/day)	= 3.8 (lb-VOC/day)

Pollutant	Daily Post-Project Potential to Emit (PE2) – Start-up and Shutdown			
	Emission Factors	Heat input	Hours per day	Daily PE2
NO <sub>x</sub>	0.018 (lb-NO <sub>x</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 4 (hr/day)	= 4.5 (lb-NO <sub>x</sub> /day)
SO <sub>x</sub>	0.00285 (lb-SO <sub>x</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 4 (hr/day)	= 0.7 (lb-SO <sub>x</sub> /day)
PM <sub>10</sub>	0.014 (lb-PM <sub>10</sub> /MMBtu)	x 62.5 (MMBtu/hr)	x 4 (hr/day)	= 3.5 (lb-PM <sub>10</sub> /day)
CO	0.0364 (lb-CO/MMBtu)	x 62.5 (MMBtu/hr)	x 4 (hr/day)	= 9.1 (lb-CO/day)
VOC	0.003 (lb-VOC/MMBtu)	x 62.5 (MMBtu/hr)	x 4 (hr/day)	= 0.8 (lb-VOC/day)

Annual Emissions:

Pollutant	Annual Post-Project Potential to Emit (PE2) - Steady State			
	Emission Factors	Heat input	Hours per year	Annual PE2
NO <sub>x</sub>	0.008 (lb-NO <sub>x</sub> /MMBtu) x	62.5 (MMBtu/hr) x	7,300 (hr/yr) =	3,650 (lb-NO <sub>x</sub> /yr)
SO <sub>x</sub>	0.0029 (lb-SO <sub>x</sub> /MMBtu) x	62.5 (MMBtu/hr) x	7,300 (hr/yr) =	1,300 (lb-SO <sub>x</sub> /yr)
PM <sub>10</sub>	0.014 (lb-PM <sub>10</sub> /MMBtu) x	62.5 (MMBtu/hr) x	7,300 (hr/yr) =	6,388 (lb-PM <sub>10</sub> /yr)
CO	0.0364 (lb-CO/MMBtu) x	62.5 (MMBtu/hr) x	7,300 (hr/yr) =	16,608 (lb-CO/yr)
VOC	0.003 (lb-VOC/MMBtu) x	62.5 (MMBtu/hr) x	7,300 (hr/yr) =	1,369 (lb-VOC/yr)

Pollutant	Annual Post-Project Potential to Emit (PE2) - Start-Up & Shutdown			
	Emission Factors	Heat input	Hours per year	Annual P E2
NO <sub>x</sub>	0.018 (lb-NO <sub>x</sub> /MMBtu) x	62.5 (MMBtu/hr) x	1,460 (hr/yr) =	1,643 (lb-NO <sub>x</sub> /yr)
SO <sub>x</sub>	0.0029 (lb-SO <sub>x</sub> /MMBtu) x	62.5 (MMBtu/hr) x	1,460 (hr/yr) =	260 (lb-SO <sub>x</sub> /yr)
PM <sub>10</sub>	0.014 (lb-PM <sub>10</sub> /MMBtu) x	62.5 (MMBtu/hr) x	1,460 (hr/yr) =	1,278 (lb-PM <sub>10</sub> /yr)
CO	0.0364 (lb-CO/MMBtu) x	62.5 (MMBtu/hr) x	1,460 (hr/yr) =	3,322 (lb-CO/yr)
VOC	0.003 (lb-VOC/MMBtu) x	62.5 (MMBtu/hr) x	1,460 (hr/yr) =	274 (lb-VOC/yr)

Pollutant	Total Annual Post-Project Potential to Emit (PE2)		
	Emissions from Combustion Steady State (lb/year)	Emissions from Startup and Shutdown (lb/year)	Total Emissions (lb/year)
NO <sub>x</sub>	3,650	1,643	5,293
SO <sub>x</sub>	1,300	260	1,560
PM <sub>10</sub>	6,388	1,278	7,666
CO	16,608	3,322	19,930
VOC	1,369	274	1,643

**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.

QNEC = 0 for NO<sub>x</sub>, PM<sub>10</sub>, CO, and VOC.

$$\begin{aligned}
 \text{QNEC} &= (\text{PE2} - \text{PE1})/4 \text{ for SO}_x \\
 &= (1,560 - 35,752)/4 \\
 &= -8.548 \text{ lb/qtr}
 \end{aligned}$$

Emissions Profile is included in **Attachment IV**.

## **VIII. Compliance**

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

FMM has a Title V permit. This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit.

In accordance with Rule 2520, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
  - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
  - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

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. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment application.

### **District Rule 4001 New Source Performance Standards**

40 CFR Part 60, Subpart Dc applies to Small Industrial-Commercial-Industrial Steam Generators between 10 MMBtu/hr and 100 MMBtu/hr (post-6/9/89 construction, modification or, reconstruction)

40 CFR Part 60, Subpart A, section 14, defines the meaning of modification to which the standards are applicable. §60.14, paragraph (e)(5) states that the following will not be considered as a modification: *“the addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or replaced by a system which the Administrator determines to be less environmentally beneficial”*.

No newly constructed or reconstructed units are proposed in this project, nor is the unit being modified (as defined above). Therefore NSPS requirements are not triggered.

**District Rule 4101 Visible Emissions**

District Rule 4101, Section 5.0, indicates 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 dark or darker than Ringlemann 1 or equivalent to 20% opacity. The unit is currently operating in compliance with the rule and the project is not expected to affect compliance status. Continued compliance is expected.

**District Rule 4102 Nuisance**

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. The unit is currently operating in compliance with the rule and the project is not expected to affect compliance status. Continued compliance is expected.

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

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

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (**Attachment V**), 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-1372-34	0.01 per million	no

The project is approved without TBACT.

However, to ensure that human health risks will not exceed District allowable levels; the following permit condition is included on the ATC:

{1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102] N

#### **District Rule 4201 Particulate Matter Concentration**

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot. The unit is currently operating in compliance with the rule and the project is not expected to affect compliance status. Continued compliance is expected.

#### **District Rule 4301 Fuel Burning Equipment**

This rule specifies maximum emission rates in lb/hr for SO<sub>2</sub>, NO<sub>2</sub>, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to ≤ 0.1 gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1 μm in diameter. The unit is currently operating in compliance with the rule and the project is not expected to affect compliance status. Continued compliance is expected.

#### **District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2**

The subject unit(s) is subject to Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*.

In addition, the unit(s) is also subject to District Rule 4306. Since emissions limits of Rule 4306 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4306 requirements will satisfy requirements of District Rule 4305.

Therefore, compliance with District Rule 4305 requirements is expected and no further discussion is required.

#### **District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3**

The units are subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*. The units will meet the requirements of the rule with implementation of the base document ATCs and therefore compliance is expected.

#### **District Rule 4320 – Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr**

The unit is subject to the rule and meets the NO<sub>x</sub> and CO requirements of the rule (7 ppm NO<sub>x</sub> @ 3% O<sub>2</sub> and 50 ppmv CO @ 3% O<sub>2</sub>). The unit will meet the PM<sub>10</sub> control requirements as the sulfur emissions limit has been lowered to 1 gr S/100 scf (Section 5.4.1.2).

The unit is in compliance with monitoring, source testing, and recordkeeping requirements of the rule.  
Continued compliance is expected.

### **District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1**

This rule applies to boilers, steam generators, and process heaters at NO<sub>x</sub> Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. If applicable, the emission limits, monitoring provisions, and testing requirements of this rule are satisfied when the unit is operated in compliance with Rule 4320. Therefore, compliance with this rule is expected.

### **District Rule 4801 Sulfur Compounds**

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO<sub>2</sub>, on a dry basis averaged over 15 consecutive minutes.

Compliance with the PM10 control requirements of Rule 4320 ensures that the much higher emission limit of Rule 4801 will be met. Continued compliance is expected.

### **California Health & Safety Code 42301.6 (School Notice)**

This facility is not located within 1,000 feet of a school. Regardless, there is no increase in emissions of any hazardous air pollutants with this project; therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

### **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.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) are exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District has determined that potential emission increases would have a less than significant health impact on sensitive receptors.

Issuance of permits for emissions units not subject to BACT requirements and with health impact less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Thus, the District concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

**X. Recommendation**

Issue ATC S-1372-34-26 subject to the permit conditions listed on the attached draft ATCs included in **Attachment VI**.

**XI. Billing Information**

Billing Schedule			
Permit Number	Fee Schedule	Fee Description	Fee Amount
S-1372-34-26	3020-02-H	62.5 MMBtu/hr	\$1030.00

**Attachments**

- I: Current PTO
- II: Location Map
- III: Photograph of Steam Generator
- IV: Emissions Profile
- V: HRA
- VI: Draft ATC

Freeport McMoran  
S-1372, 1142651

**Attachment I**  
***Current PTO***

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Freeport McMoran  
S-1372, 1142651

**Attachment I**  
***Current PTO***

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-1372-34-24

**EXPIRATION DATE:** 05/31/2016

**SECTION:** NW16 **TOWNSHIP:** 31S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#37) (DIS# 45237-82) WITH O2 CONTROLLER, LOW NOX BURNER, AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

## PERMIT UNIT REQUIREMENTS

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1. This permit unit is authorized to operate at the following locations: NW/4 Section 16, T31S, R22E (Bremer Fee Lease), NW/4 Section 23, T31S, R22E (Dome Fee Lease) and NE/4, Section 8, T30S, R22E. [District NSR Rule] Federally Enforceable Through Title V Permit
2. When located at NW/4 Section 23, T31S, R22E and NE/4, Section 8, T30S, R22E this unit shall be fired on PUC quality natural gas only. [District NSR Rule] Federally Enforceable Through Title V Permit
3. When located at NW/4 Section 16, T31S, R22E, compliance with gas fired sulfur compound (SO<sub>2</sub>) emission limit shall be determined by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1070] Federally Enforceable Through Title V Permit
4. When located at NW/4 Section 16, T31S, R22E, compliance with SO<sub>x</sub> (as SO<sub>2</sub>) emission limits shall be demonstrated by record keeping of casing gas flowrate and H<sub>2</sub>S concentration and multiplying H<sub>2</sub>S lb/day x 1.88 to get SO<sub>2</sub> lb/day from stack after incineration. [District NSR Rule] Federally Enforceable Through Title V Permit
5. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Permittee shall measure and record, at least monthly, the sulfur content and BTU content of the casing gas incinerated in this unit. [District Rule 4406, 4.0] Federally Enforceable Through Title V Permit
7. If continuous operation oxygen analyzer/controller is utilized, excess O<sub>2</sub> shall be maintained between 0.5 and 4.0%. If not utilized, excess air shall be maintained at no less than 15%. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when steam generators S-1372-8, -17, -18, -19, and -20 are incinerating TEOR vapors. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.008 lb-NO<sub>x</sub>/MMBtu, 0.0653 lb-SO<sub>x</sub>/MMBtu, 0.014 lb-PM<sub>10</sub>/MMBtu, 50 ppmvd CO @ 3% O<sub>2</sub> or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.018 lb-NO<sub>x</sub>/MMBtu, 0.0653 lb-SO<sub>x</sub>/MMBtu, 0.014 lb-PM<sub>10</sub>/MMBtu, 50 ppmvd CO @ 3% O<sub>2</sub> or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
12. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. Source testing to measure NO<sub>x</sub> and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
23. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
28. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
30. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
33. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit
34. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

35. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
42. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
43. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

45. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

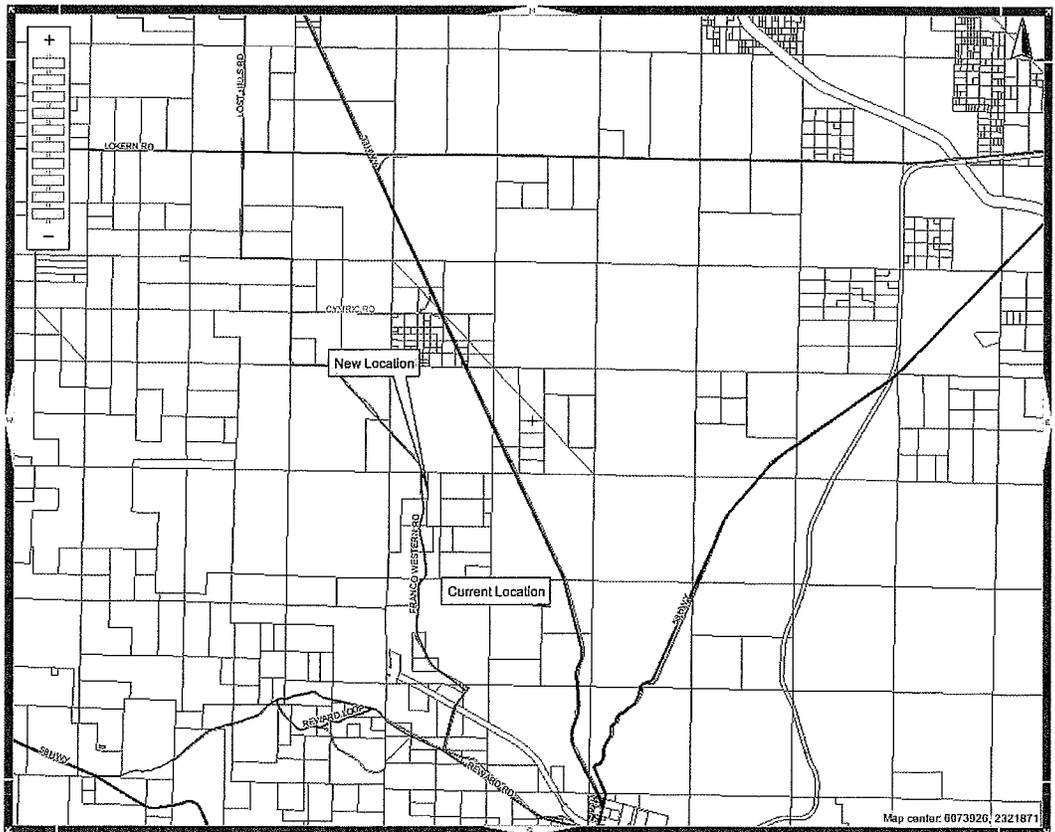
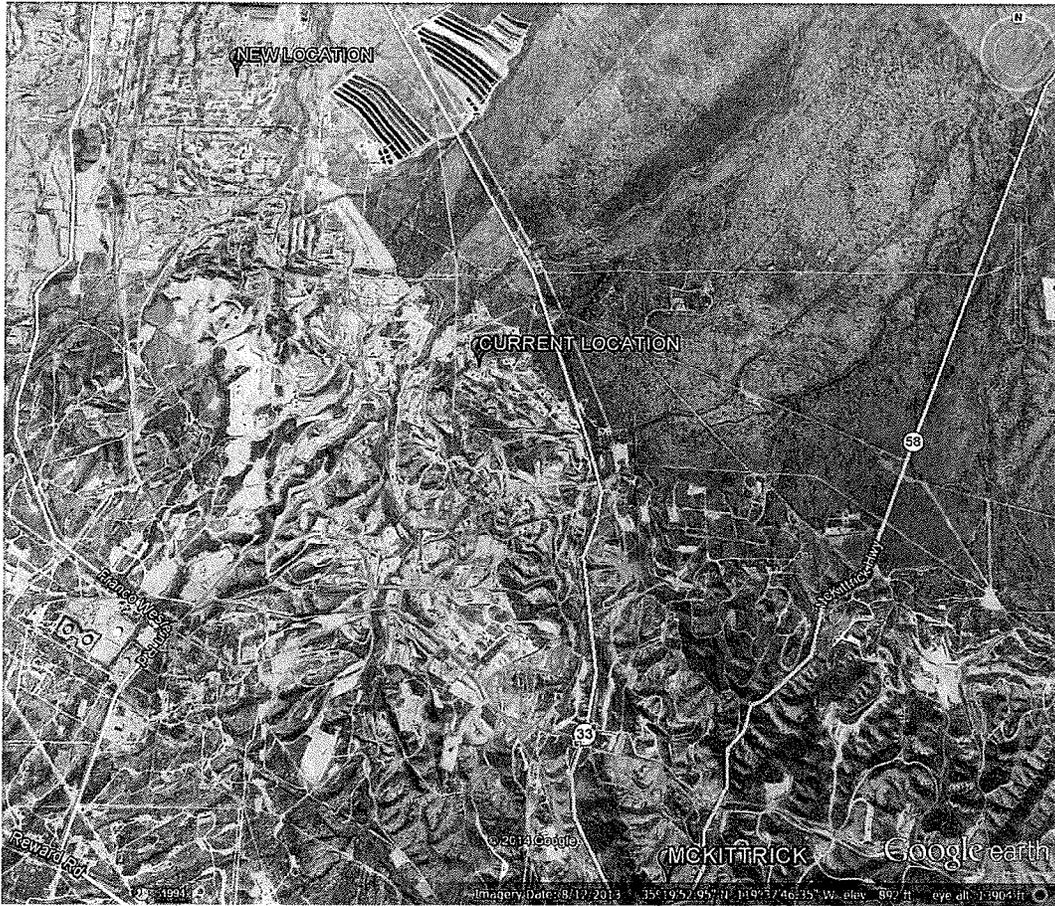
These terms and conditions are part of the Facility-wide Permit to Operate.

Freeport McMoran  
S-1372, 1142651

**Attachment II**  
**Location Map**

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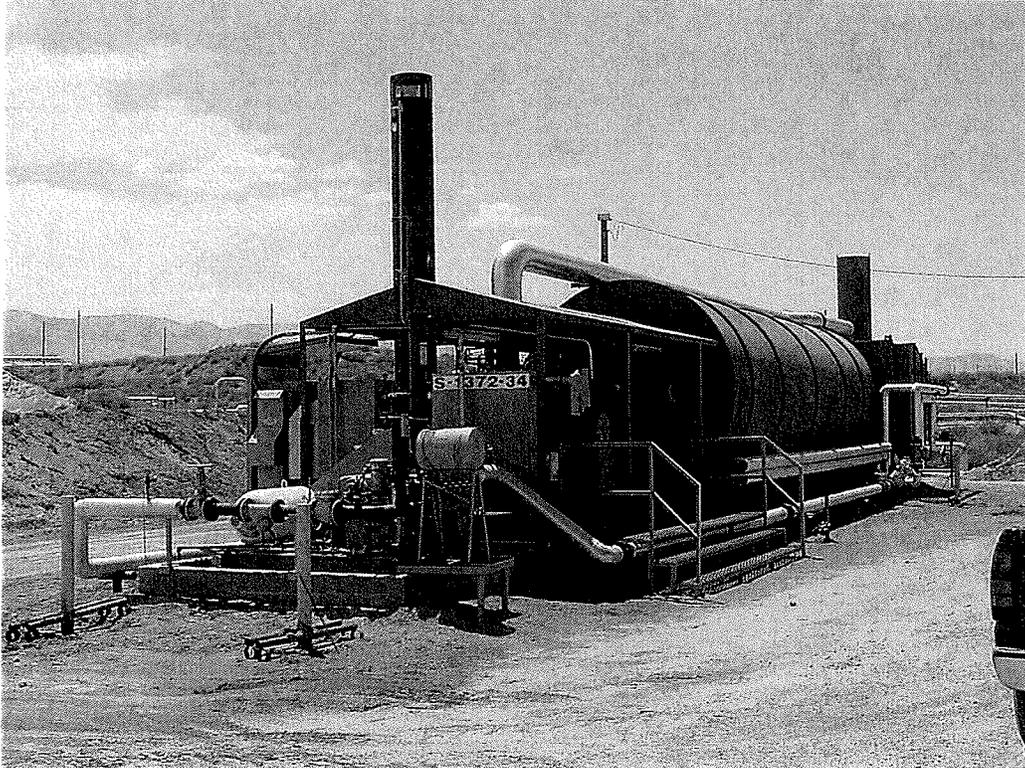
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Freeport McMoran  
S-1372, 1142651

**Attachment III**  
**Photograph of Steam generator**

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**Location:**

Western Kern County  
Cymric Oilfield  
McKittrick Unit Lease  
Northeast corner of Section 6, T30S/R22E

The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

Freeport McMoran  
S-1372, 1142651

## **Attachment IV Emissions Profile**

Permit #: S-1372-34-26	<b>Last Updated</b>
Facility: FREEPORT-MC MORAN OIL & GAS	06/21/2014 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):	5293.0	1560.0	7666.0	19930.0	1643.0
Daily Emis. Limit (lb/Day)	14.5	4.3	21.0	54.6	4.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	-8548.0	0.0	0.0	0.0
Q2:	0.0	-8548.0	0.0	0.0	0.0
Q3:	0.0	-8548.0	0.0	0.0	0.0
Q4:	0.0	-8548.0	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:					

Freeport McMoran  
S-1372, 1142651

**Attachment V**  
**HRA**

# San Joaquin Valley Air Pollution Control District Risk Management Review

To: Richard Edgehill – Permit Services  
 From: Yu Vu – Technical Services  
 Date: June 12, 2014  
 Facility Name: Freeport McMoRan  
 Location: Sec 6/T30S/R22E  
 Application #(s): S-1372-34-26  
 Project #: S-1142651

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## A. RMR SUMMARY

RMR Summary			
Categories	NG-Fired Steam Generator (Unit 34-26)	Project Totals	Facility Totals
Prioritization Score	0.00	0.00	>1
Acute Hazard Index	0.00	0.00	0.11
Chronic Hazard Index	0.00	0.00	0.05
Maximum Individual Cancer Risk ( $10^{-6}$ )	0.01	0.01	1.94
T-BACT Required?	No		
Special Permit Conditions?	Yes		

### Proposed Permit Conditions

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

#### Unit # 34-26

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

## B. RMR REPORT

### I. Project Description

Technical Services received a request on June 10, 2014, to perform a Risk Management Review for a proposed modification to a 62.5 MMBtu/hr Natural Gas-Fired steam generator. The applicant is proposing to move the unit from their Morris Lease to their McKittrick Unit.

## II. Analysis

Technical Services performed a prioritization using the District's HEARTs database. Since the total facility prioritization score was greater than one, a refined health risk assessment was required. Emissions calculated using Ventura County emission factors for external combustion of natural gas (10-100 MMBtu/hr) were input into the HEARTs database. The AERMOD model was used, with the parameters outlined below and meteorological data for 2005-2009 from Bakersfield to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the Hot Spots Analysis and Reporting Program (HARP) risk assessment module to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 34-26			
Source Type	Point	Location Type	Rural
Stack Height (m)	6.096	Closest Receptor (m)	~4800
Stack Diameter. (m)	0.914	Type of Receptor	Business
Stack Exit Velocity (m/s)	12.936	Max Hours per Year	8760
Stack Exit Temp. (°K)	449.817	Fuel Type	NG
Burner Rating (MMBtu/hr)	62.5		

## 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

Freeport McMoran  
S-1372, 1142651

**Attachment VI**  
**Draft ATC**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT

PERMIT NO: S-1372-34-26

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: NW16 TOWNSHIP: 31S RANGE: 22E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#37) (DIS# 45237-82) WITH O2 CONTROLLER, LOW NOX BURNER, AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS: AUTHORIZE NEW LOCATION AT NE SECTION 6, T30S, R22E (MCKITTRICK UNIT)

**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. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
4. This permit unit is authorized to operate at the following locations: NW/4 Section 16, T31S, R22E (Bremer Fee Lease), NW/4 Section 23, T31S, R22E (Dome Fee Lease), NE/4, Section 8, T30S, R22E (Morris Lease), and NE Section 6, T30S, R22E (McKittrick Unit). [District Rule 2201] Federally Enforceable Through Title V Permit
5. When located at NW/4 Section 23, T31S, R22E and NE/4, Section 8, T30S, R22E this unit shall be fired on PUC quality natural gas only. [District NSR Rule] 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

Arnaud Marjollet, Director of Permit Services

S-1372-34-26 : Jul 17 2014 9:30AM - EDGEHLR : Joint Inspection NOT Required

6. When located at NW/4 Section 16, T31S, R22E, compliance with gas fired sulfur compound (SO<sub>2</sub>) emission limit shall be determined by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1070] Federally Enforceable Through Title V Permit
7. When located at NW/4 Section 16, T31S, R22E, compliance with SO<sub>x</sub> (as SO<sub>2</sub>) emission limits shall be demonstrated by record keeping of casing gas flowrate and H<sub>2</sub>S concentration and multiplying H<sub>2</sub>S lb/day x 1.88 to get SO<sub>2</sub> lb/day from stack after incineration. [District Rule 2201] Federally Enforceable Through Title V Permit
8. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Permittee shall measure and record, at least monthly, the sulfur content and BTU content of the casing gas incinerated in this unit. [District Rule 4406, 4.0] Federally Enforceable Through Title V Permit
10. If continuous operation oxygen analyzer/controller is utilized, excess O<sub>2</sub> shall be maintained between 0.5 and 4.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when steam generators S-1372-8, -17, -18, -19, and -20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Sulfur content of combusted gas shall not exceed 1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.008 lb-NO<sub>x</sub>/MMBtu, 0.014 lb-PM<sub>10</sub>/MMBtu, 50 ppmvd CO @ 3% O<sub>2</sub> or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.018 lb-NO<sub>x</sub>/MMBtu, 0.014 lb-PM<sub>10</sub>/MMBtu, 50 ppmvd CO @ 3% O<sub>2</sub> or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
16. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
19. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
23. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
24. Source testing to measure NO<sub>x</sub> and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. NO<sub>x</sub> emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
31. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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32. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
33. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
34. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
36. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
37. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO<sub>x</sub> and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO<sub>x</sub> or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO<sub>x</sub> and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. All units in a group for which representative units are source tested to demonstrate compliance for NO<sub>x</sub> and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. All units in a group for which representative units are source tested to demonstrate compliance for NO<sub>x</sub> and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. The number of representative units source tested to demonstrate compliance for NO<sub>x</sub> and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit
42. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. When complying with SO<sub>x</sub> emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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44. If the unit is fired on noncertified gaseous fuel and compliance with SO<sub>x</sub> emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
45. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
46. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
49. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
50. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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