

***A/N 455153***



South Coast Air Quality Management Dist  
 P. O. Box 4944  
 Diamond Bar, CA 91785  
 (909) 396-2000

# APPLICATION FOR PERMIT TO CONSTRUCT AND PERMIT TO OPERATE FORM 400 - A

Non-Title V Facilities: This form must be accompanied by one or more 400-E-xx series form(s). Complete this side of form only.  
 Title V Facilities: Complete both sides of this form. Include additional forms as necessary.

NC/NOV NUMBER: \_\_\_\_\_  
 INSPECTOR \_\_\_\_\_ SECTOR \_\_\_\_\_  
 ISSUE DATE \_\_\_\_\_

## Section I - Company Information

LEGAL NAME OF OPERATOR  IRS OR  S. S. NUMBER  
**ExxonMobil Oil Corporation**

PERMIT TO BE ISSUED TO (SEE INSTRUCTIONS) **ExxonMobil Oil Corporation**

BUSINESS MAILING ADDRESS **3700 West 190th Street, Torrance, CA 90509-2929**

PERMIT MAILING ADDRESS, IF DIFFERENT FROM BUSINESS MAILING ADDRESS \_\_\_\_\_

TYPE OF ORGANIZATION  
 Corporation  Limited Partnership  Government Entity  
 Individual  General Partnership  Other (Fill in): \_\_\_\_\_

ARE YOU A SMALL BUSINESS? (SEE INSTRUCTIONS)  Yes  No

AVERAGE ANNUAL GROSS RECEIPTS \$ \_\_\_\_\_  
 NUMBER OF EMPLOYEES **Approximately 750**

IS YOUR BUSINESS 51% OR MORE WOMAN/MINORITY OWNED?  Yes  No

THIS SECTION IS REQUIRED FOR ALL APPLICATIONS FOR NEW CONSTRUCTION OR MAJOR MODIFICATIONS.  
 ARE ALL MAJOR SOURCES UNDER SAME OWNERSHIP IN CALIFORNIA IN COMPLIANCE WITH FEDERAL, STATE, AND LOCAL AIR POLLUTION CONTROL RULES?  Yes  No

ARE YOU THE OWNER OF THE EQUIPMENT UNDER THIS APPLICATION?  Yes  No  IRS OR  S. S. NUMBER OF OWNER \_\_\_\_\_  
 IF NO, ENTER THE LEGAL NAME OF OWNER \_\_\_\_\_

## Section II - Facility Information

EQUIPMENT ADDRESS/LOCATION  
**3700 West 190th Street**  
 NUMBER/STREET  
**Torrance** **CA, 90509-2929**  
 CITY OR COMMUNITY ZIP CODE

FACILITY NAME  
**ExxonMobil Oil Torrance Refinery**

FACILITY ID NUMBER **10407**

PRINT NAME OF CONTACT PERSON **Meena Nainan** TITLE OF CONTACT PERSON **Environmental Advisor**

TYPE OF BUSINESS AT THIS FACILITY **Petroleum Refining** PRIMARY SIC CODE FOR THIS FACILITY **2911** NUMBER OF EMPLOYEES AT THIS FACILITY **Approximately 750**

CONTACT PERSON'S TELEPHONE NUMBER **(310) 212-4673** CONTACT PERSON'S FAX NUMBER **(310) 212-4681** CONTACT PERSON'S E-MAIL ADDRESS **meena.m.nainan@exxonmobil.com**

## Section III - Application Type

DESCRIPTION OF EQUIPMENT: **Add Rule Applicability to Boiler, 2F-4**

PREVIOUS PERMIT #(S): **A/N:145248** **D03813** **AC706**

APPLICATION FOR (SEE INSTRUCTIONS):  
 NEW CONSTRUCTION  MODIFICATION  CHANGE OF LOCATION  
 EXISTING EQUIPMENT WITHOUT PERMIT  CHANGE OF PERMITTEE  CHANGE OF PERMIT CONDITION

ARE YOU SUBMITTING MULTIPLE APPLICATIONS FOR EQUIPMENT IDENTICAL TO THAT DESCRIBED ABOVE?  Yes  No

APPLICATION FOR NON-TITLE V EQUIPMENT PERMIT. CHECK THE SUPPLEMENTAL SERIES 400-E-xx FORM(S) SUBMITTED WITH THIS 400-A FORM:

<input type="checkbox"/> 400-E-1 • PARTICULATE MATTER (PM <sub>10</sub> ) CONTROL EQUIPMENT	<input type="checkbox"/> 400-E-13 • INTERNAL COMBUSTION EQUIPMENT
<input type="checkbox"/> 400-E-2 • VOLATILE ORGANIC COMPOUND (VOC) CONTROL EQUIPMENT	<input type="checkbox"/> 400-E-14 • OPEN PROCESS TANK
<input type="checkbox"/> 400-E-3 • SCRUBBER	<input type="checkbox"/> 400-E-14a • OPEN PROCESS TANK; PROCESS LINE
<input type="checkbox"/> 400-E-4 • ABRASIVE BLASTING EQUIPMENT	<input type="checkbox"/> 400-E-15 • PRINTING EQUIPMENT
<input type="checkbox"/> 400-E-6 • DEGREASER	<input type="checkbox"/> 400-E-16 • SOLID MATERIALS STORAGE EQUIPMENT
<input type="checkbox"/> 400-E-7 • DRY CLEANING EQUIPMENT	<input type="checkbox"/> 400-E-17 • SPRAY BOOTH/OPEN SPRAY
<input type="checkbox"/> 400-E-8 • ETHYLENE OXIDE STERILIZER	<input type="checkbox"/> 400-E-17a • POWDER SPRAY BOOTH
<input type="checkbox"/> 400-E-9 • EXTERNAL COMBUSTION EQUIPMENT	<input type="checkbox"/> 400-E-18 • STORAGE TANK (LIQUID & GASEOUS MATL)
<input type="checkbox"/> 400-E-10 • FOOD BROILER/FRYER	<input type="checkbox"/> 400-E-19 • WAVE SOLDER MACHINE
<input type="checkbox"/> 400-E-11 • FUEL DISPENSING AND STORAGE EQUIPMENT	<input type="checkbox"/> 400-E-20 • ASBESTOS REMOVAL EQUIPMENT
<input type="checkbox"/> 400-E-12 • GAS TURBINE	<input checked="" type="checkbox"/> NONE • ADDITIONAL INFORMATION SUBMITTED AS REQUESTED ON FORM 400-E-GI

APPLICATION FOR TITLE V FACILITY PERMIT. PROVIDE INFORMATION REQUESTED ON REVERSE SIDE OF THIS FORM.

I HEREBY CERTIFY THAT ALL INFORMATION CONTAINED HEREIN AND INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT.  
 SIGNATURE OF RESPONSIBLE OFFICIAL OF FIRM: **Peter W. Trelenberg** TITLE OF RESPONSIBLE OFFICIAL OF FIRM: **ExxonMobil Refinery Manager**

TYPE OR PRINT NAME OF RESPONSIBLE OFFICIAL OF FIRM: **Peter W. Trelenberg** RESPONSIBLE OFFICIAL'S TELEPHONE NUMBER **(310) 212-4500** DATE SIGNED: **3/22/2006**

I HEREBY CERTIFY THAT ALL INFORMATION CONTAINED HEREIN AND INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT.  
 SIGNATURE OF PREPARER, IF PREPARED BY PERSON OTHER THAN RESPONSIBLE OFFICIAL OF FIRM: \_\_\_\_\_ TITLE OF PREPARER: **Senior Project Engineer**

TYPE OR PRINT NAME OF PREPARER, IF PREPARED BY PERSON OTHER THAN RESPONSIBLE OFFICIAL OF FIRM: **Craig Sakamoto, URS Corporation** PREPARER'S TELEPHONE NUMBER **(310) 212-1884** DATE SIGNED: **3-16-06**

### TITLE V FACILITIES ONLY: COMPLETE OTHER SIDE

AQMD USE ONLY	APPLICATION/TRACKING # <b>455153</b>	PROJECT #	TYPE (B C D)	EQUIPMENT CATEGORY CODE: <b>01105</b>	FEE SCHEDULE: <b>0</b>	VALIDATION: <b>03/24/06</b>
ENG. A R N DATE <b>6/21/06</b>	ENG. A R N DATE	CLASS I II III	ASSIGNMENT UNIT <b>C</b>	ENGINEER	ENF. SECT.	CHECK/MONEY ORDER AMOUNT: <b>250082312A</b> , <b>3312/36</b>

**2500823123 3312/36**  
**2500823124 3312/36**  
**2500823125 3312/36**  
**CKM# 52786**

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

**ENGINEERING AND COMPLIANCE**

**M E M O R A N D U M**

**DATE:** June 4, 2013  
**TO:** File  
**FROM:** Chingli Lin, Air Quality Engineer  
**SUBJECT:** AN 455153 (Boiler 2F-4), ExxonMobil, Id 800089

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This application was recommended to be issued PO per Previous Engineer, Ngoc Tran, Team C on 10/04/2011. It was transferred from Team C to Team O on 10/19/12. It is a PO no PC type application. I have reviewed the evaluation and agreed with Ms. Tran. I recommend to issue Permit to Operate Boiler 2F-4 (Device D 803), too.

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APPLICATION PROCESSING AND CALCULATIONS	Processed by:	Ngoc Tran
	Checked by:	
	Date:	10/04/11

**PERMIT TO OPERATE for Boiler 2F-4**

**COMPANY NAME:** EXXONMOBIL OIL CORP.  
**COMPANY ID:** 800089  
**MAILING ADDRESS:** 3700 W 190<sup>th</sup> St  
Torrance, CA 90509-2929  
**EQUIPMENT LOCATION:** Same as above

**I. EQUIPMENT DESCRIPTION: Section D**

<b>Process 16: STEAM GENERATION PROCESS</b>					
<b>System 1: UTILITY BOILERS</b>					
BOILER, AUXILIARY, 2F-4, NATURAL GAS, REFINERY GAS, 309 MMBTU/HR WITH A/N: 445248 455153	D803		NOX: MAJOR SOURCE**; SOX: MAJOR SOURCE**	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; PM: 0.01 GRAINS/SCF (5A) [RULE 476, 10-8-1976]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; PM: 11 LBS/HR (5B) [RULE 476, 10-8-1976]	A327.2, B61.3, D90.12, D328.1, E193.16, H23.13
BURNER, NATURAL GAS, REFINERY GAS, COEN, MODEL DAF2829, 4-BURNERS, WITH LOW NOX BURNER, 4 TOTAL; 309 MBTU/HR					

**II. BACKGROUND:**

The relevant permitting history of this Boiler 2F-4 is as follows:

- 11/20/67: PO P23274 (AN A32383) issued for the newly installed 2F-4 boiler consisting of four (4) fuel oil burners, a 3 HP air pre-heater, and a steam driven forced draft fan (no firing rate indicated). The steam atomization was required per permit condition for fuel oil burning.
- 12/02/88: PO D03873 (AN 145248) issued to replace the 4 oil burners with 4 combination fuel gas/fuel oil low-NOx burners, 309 MMBtu/hr rating was described.
- Aug 1989: An application (AN 211720) was submitted to install the urea injection system to control NOx emissions. This application was cancelled in April 1991 per EM's request due to EM's revised R1109 compliance plan.
- Jan 1993: An application (AN 277987) was submitted to install an SCR to control NOx emissions. This application was cancelled in February 1995 per EM's request following the RECLAIM rules adoption.
- Feb 1993: Rule 1109 Compliance Plan was approved (AN 271203) including this 2F-4 boiler rated at 309 MMBtu/hr, low-NOx burners with 0.23 lb/MMBtu (1706 lb/d) NOx emission rate. This compliance plan was cancelled in 1995 following the RECLAIM rules.

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03/24/06: As per EPA CD, all existing heaters and boilers operated at EM's refinery plant shall be subject to 40CFR60 Subparts A & J, effective on the CD entry date as of 12/13/05, regardless of the installation/modification date. EM then submitted this application (AN 455153) to add conditions for 1)SOx emission limitations and 2)monitoring requirements compliance.

03/12/08: EM submitted two applications (ANs 479152-53) to modify the boiler system to control NOx emissions by replacing the low-NOx burners with new burners and installing an FGR with "as needed" steam injection. In addition, the existing air preheater will be replaced with a new economizer. These applications were submitted to comply with the Supplement Environmental Project (SEP) to resolve the violation of R2009.1 NOx compliance plans, issued to EM from 2001 to 2005 as follows:

parent_Fac_id	appl_nbr	appl_type	appl_status	appl_date	eng_init_asgnd	equip_bcat
800089	390662	25	32	9/5/2001	ER02	666208
800089	398525	25	40	3/7/2002	ER02	666208
800089	407698	25	32	10/15/2002	ER02	666208
800089	413050	25	32	3/13/2003	ER02	666208
800089	421329	25	32	10/16/2003	ER02	666208
800089	430663	25	32	6/1/2004	ER02	666208
800089	436100	25	32	10/22/2004	ER02	666208
800089	442410	25	32	4/7/2005	ER02	666208

Two additional information (AI) request emails, dated 4/28/11, and 05/18/11, were sent to EM concerning permits. EM, on 05/19/11, requested that these two SEP applications be cancelled and therefore, no AIs were submitted. Cancellation took place on 5/19/11.

This evaluation covers the EPA CD application (AN 455153) submitted by EM on 03/24/06, for a change of condition to Boiler 2F-4. As ordered by the EPA's Consent Decree entered on 12/13/2005, Case No. 05 C 5809 (CD), new conditions will be added to address the 40CFR60 - "Standards of Performance for New Stationary Sources" requirements (NSPS).

EM submitted applications for the entire refinery combustion equipment to address the NSPS requirements per EPA's CD. The application status to date is included in Attachment 1.

### III. ENFORCEMENT RECORD REVIEW:

AQMD: There is no NOV or NTC issued by the district to this boiler in the past two years.

EPA: On December 13, 2005, ExxonMobil and EPA entered into a judicial CD, Case No. 05 C 5809, for violation of Clean Air Act (CAA) under EPA's National Petroleum Refinery

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Initiative, which focused on the following four most significant CAA compliance challenges for the refinery and the emissions units as they are the source of most of pollution:

1. New Source Review/Prevention of Significant Deterioration: FCCU, heaters, and boilers.
2. NSPS: Flares, sulfur recovery units, fuel gas combustion devices (including incinerators, heaters, and boilers).
3. Leak detection and repair requirements.
4. Benzene national emissions standards for hazardous air pollutants.

The CD requirements are addressed in this evaluation for 2F-4 boiler subject to NSPS 40CFR60 Subparts A & J as **fuel gas combustion devices**.

#### IV. PROCESS DESCRIPTION:

According to the EPA, "*amine treating of refinery process gas to remove H<sub>2</sub>S prior to combustion in refinery fuel gas combustion devices is the primary control mechanism for Subpart J to reduce sulfur dioxide emissions to the atmosphere from petroleum refineries*" (Page 4 of Attachment 2 - Control Number 9900013 - listed in the EPA Website, <http://cfpub.epa.gov/adj/index.cfm?CFID=10315732&CFTOKEN=73452995&jsessionid=60303ee4175846b783e5TR60306630c230&requesttimeout=180>). This section, therefore, describes EM's fuel gas treating processes consisting of the fuel gas treating systems, followed by the fuel gas conditioning systems and the fuel gas filtration systems.

##### **a. Process gas treatment (fuel gas treating) prior to combustion at the fuel gas combustion devices:**

Process off-gas streams from various refinery process units are sour gas streams that contain primarily methane and ethane as fuel gas and undesirable quantities of impurities (e.g., hydrogen sulfide (H<sub>2</sub>S), mercaptans (RSH), carbonyl sulfide (COS), carbon disulfide (CS<sub>2</sub>), water (H<sub>2</sub>O), carbon dioxide (CO<sub>2</sub>), etc.) The sour gas streams need to be treated to remove these contaminants for the following reasons:

1. Safety (H<sub>2</sub>S is a highly toxic gas with 10 ppmv TLV) & corrosion control,
2. To meet gas product specifications,
3. To decrease compression cost,
4. To prevent poisoning of catalysts in downstream facilities,
5. To meet environmental requirements (H<sub>2</sub>S/SO<sub>x</sub> emission limit set forth in Subpart J and/or BACT),
6. To recover saleable elemental sulfur.

To remove H<sub>2</sub>S compounds from the sour gas, EM currently operates two main amine treating systems: A diethanolamine (DEA - P11S4) and a monoethanolamine (MEA - P11S3). Following the MEA system, EM utilizes the MEROX process and the oil kerosene absorber (P11S12) to remove RSH compounds from the sour gas. The DEA treated refinery gas is sent to the refinery fuel gas mix drum/knockout pot (Vessel 64C-4). The MEA/MEROX/oil absorption treated refinery gas is sent to the 1)mix

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drum (Vessel 64C-4), 2), gas turbine knockout pot (Vessel 24C-1), and Unit 30 boiler knockout pot (Vessel 30C-4).

EM also operates a caustic scrubber (Vessel 75C-14) to remove H<sub>2</sub>S compounds from hydrogen gas stream, which is a side product generated from the platinum reforming units (Units 19 & 20 of P5). The treated hydrogen gas leaving the scrubber is vented to the 1)mix drum 64C-4 as fuel gas and 2)hydrocracking unit as feed.

Sour gas is also treated by the DEA absorbers located within the process units (e.g., unsaturated gas plant's (USGP) absorber 8C-5, FCCU HDS' absorber 25C-13/C-14, etc.) in addition to the above treating systems.

The sulfur compounds removed from the sour gas treatment plants as acid gas are sent to the sulfur recovery units to produce element sulfur.

**b. Refinery fuel gas conditioning systems (fuel gas mix drum/knockout pot):**

The treated sour gas as sweet gas from the DEA and MEA/MEROX/oil absorption is sent to the refinery fuel gas conditioning system before being consumed in various combustion equipment in the refinery. The purpose of the refinery fuel gas conditioning system is to provide a supply of fuel gas to combustion equipment at a regulated pressure and reasonably constant heating value.

There are several fuel gas conditioning systems, shown in Figure 1, operated at EM as follows:

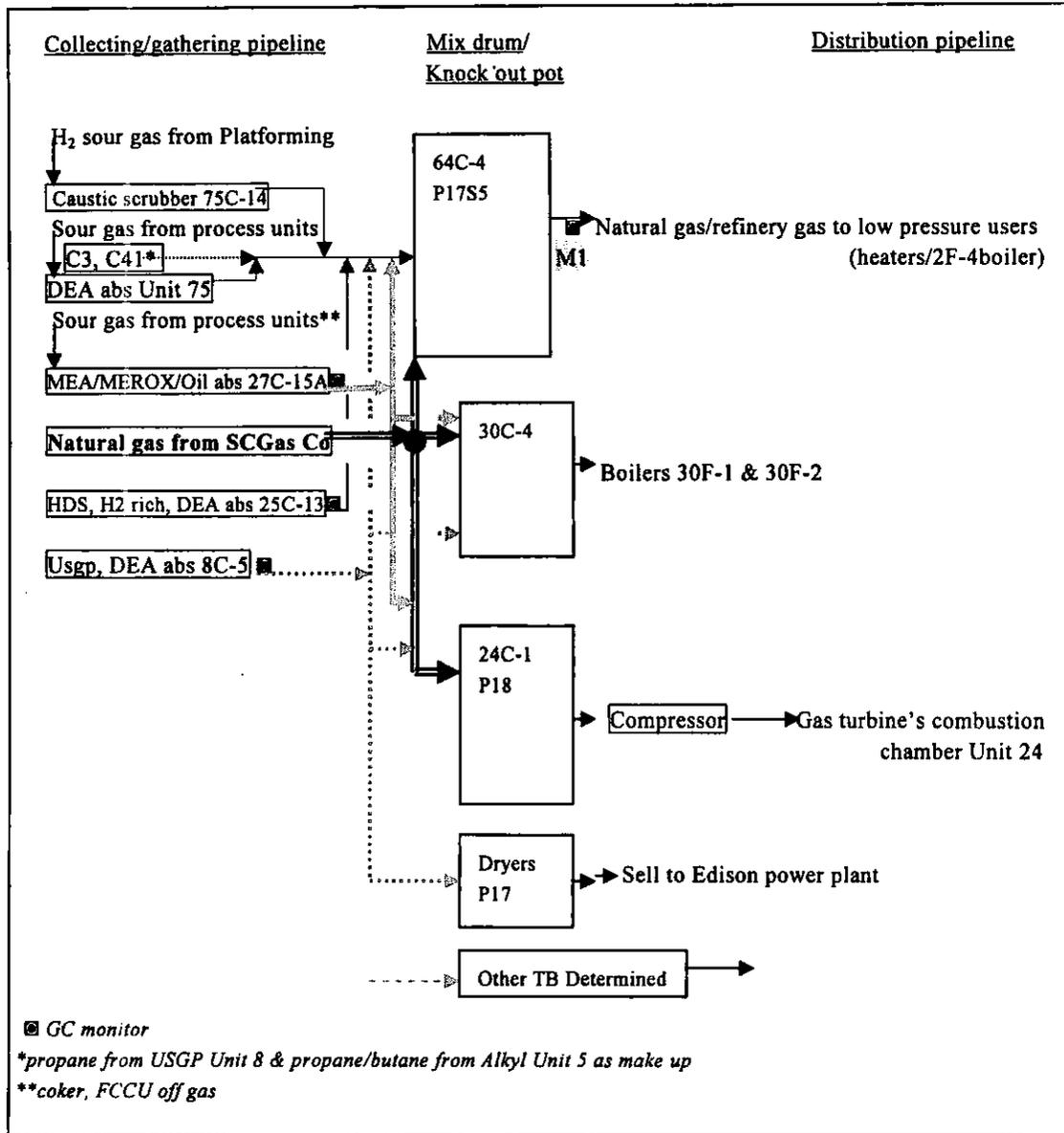
1. Low pressure system: This system is considered the central fuel gas conditioning system that provides fuel gas to heaters and boilers, which are low pressure fuel gas users (15 to 20 psig at headers/burners). The system consists of collecting piping, mixing drum (knockout pot), and distribution piping (P&IDs 64A0202D01 dated 12/4/09). The treated fuel gas streams are sent to the mix drum (Vessel 64C-4, Device D838, P17S5), where the gas is mixed and the liquid droplets are separated from the gas. Natural gas (methane), purchased from Southern California Gas Co., equipped with a flow-indicating controller, is added to the mix drum to adjust the heating value. The mixed gas is distributed, at controlled pressure, and combusted at the heaters and boilers including this 2F-4 boiler (P&IDs 64A0110D01 dated 9/16/05, 02A0162D01 dated 4/2/09, and 02A0162D02 dated 4/2/09).

A GC (No. 34, Tag ID A6434127.pv) installed in 1992, located at the outlet of the mix drum 64C-4 and denoted as M1 in Figure 1, is utilized to continuously monitor the 1)fuel gas compositions to determine its high heating value and 2)H<sub>2</sub>S content in the fuel gas (Attachment 3 data dated 8/22/07)). This GC is common to other heaters and 2F-4 boiler.

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2. Low pressure system, newly installed boilers: For Unit 30 boilers (30F-1 & 30F-2), installed in 1994 and triggered NSPS and NSR requirements, a separate newly installed knockout pot/mix drum (Vessel 30C-4) is utilized to condition the fuel gas, which will be discussed separately in the evaluation for the boilers applications (CD ANs 455156-58).
3. High pressure system: For the gas turbine classified as high pressure fuel gas user (120 psig or varying with manufacturer), a separate fuel gas conditioning system equipped with gas booster compressors is utilized (Mix drum/knockout pot 24C-1). Since the gas turbines require more rigorous fuel specifications than does lower pressure system (e.g., free of solid contaminants, water moisture, impurities, etc.), refinery fuel gas is treated by the MEA, MEROX extraction, and lean oil absorption processes (see fuel gas upgrade project AN 435110 et al) before being compressed to the gas turbine's combustion chamber.
4. Dehydration system: The treated fuel gas from the DEA absorber (Vessel 8C-5) is sent to the dryers/absorbers for water removal (dehydration) to meet the product specifications to sell to Edison power plant.
5. Others: The PSA gas burned in the hydrogen plant' heater (24F-1), in addition to the refinery fuel gas, requires a separate fuel gas conditioning system, which will be addressed in a separate evaluation (AN 455135).

Figure 1 – Refinery fuel gas conditioning systems:



**c. Fuel gas filtration:**

Since the ultra low-NOx burners require better filtration than older burner technology, several filter separators applying coalescing technology have been installed downstream of the mix drum/knockout pot 64C-4 to remove solid particulates and liquid aerosols. The filter separator(s) is permitted as fuel gas filter (FGF) separator and listed in a separate system of the facility permit (e.g., crude unit, FCCU, etc.) For 2F-4 boiler, the FGF 2J-57 will be permitted and listed in a separate system of this Process 16 (EM to submit new application).

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## V. EMISSION CALCULATIONS:

**SO<sub>x</sub> emissions:** EM's 2F-4 boiler will continue to burn fuel gas conditioned by the central fuel gas mix drum/knockout pot 64C-4. As per Subpart J limit of 160 ppmv H<sub>2</sub>S, the maximum potential SO<sub>x</sub> emission rate of this boiler is determined by the following formula:

$$\text{SO}_x, \text{ lb/d} = \text{ppmv} \times \text{lbmole}/379\text{cf} \times 64 \text{ lbSO}_x/\text{lbmole} \times 309 \text{ MMBtu}/\text{hr}/1173 \text{ Btu}/\text{scf} \times 24 \text{ hr}/\text{d}$$

$$\text{SO}_x, \text{ lb/d, Boiler 2F-4} = 160/379 \times 64 \times 309/1173 \times 24 = 170.8$$

Where,

309 MMBtu/hr: Maximum capacity of the boiler

1173 Btu/scf: High heating value of fuel gas after mix drum 64C-4.

Since the application was submitted to tag Subpart J applicability, emissions rates for other pollutants are not re-calculated.

## VI. RULE EVALUATION:

Rule 212: R212(c)(1):

The equipment is not located within 1000 feet from the boundary of a school. Therefore, public notice required under R212(c)(1) does not apply.

R212(c)(2):

The change of permit condition per CD does not result in an emission increase exceeding any of the daily limits specified under R212(g). Therefore, public notice required under R212(c)(2) does not apply.

R212(c)(3):

The change of permit condition per CD does not result in a toxic emission increase. Therefore, public notice required under R212(c)(3) does not apply.

R212(g):

The change of permit condition per CD for this RECLAIM facility does not result in an emission increase exceeding any of the daily limits specified under R212(g). Therefore, public notice required under R212(g) does not apply.

Rule 401: With proper operation and maintenance of the boiler, opacity is not expected.

Rule 402: With proper operation and maintenance of the boiler, nuisance is not expected.

Rule 407: Compliance with R407 limit for CO at 2000 ppmv is expected under normal operating condition.

Rule 409: Compliance with R409 limit for PM at 0.1 gr/scf is expected under normal operating condition.

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Rule 476: Compliance with R476 limit for PM at 11 lb/hr or 0.01 gr/scf is expected under normal operating condition.

Regulation IX – New Source Performance Standards (NSPS):

**40CFR60 Subparts A & J – Fuel gas combustion device:** Under the Consent Decree (CD) ordered by the EPA on 12/13/06, this boiler is subject to 40CFR60 Subpart A & J requirements as follows:

**Table 1 – Boiler 2F-4 & Subpart J:**

Equip	Subpart, Section	Requirements	Compliance/ Conditions
Boiler 2F-4	A	General provisions	E193.16
	J, 60.104(a)(1)	Limit 160 ppm H <sub>2</sub> S content in fuel gas	B61.3, H23.13
	J, 60.105(a)(3)	Monitoring of SO <sub>x</sub> at stack, or	
	J, 60.105(a)(4)	H <sub>2</sub> S content in fuel gas	D90.12 (GC 34)

As listed on Table 1, permit conditions will be imposed to address and to ensure compliance with the requirements. For 2F-4 boiler and Subpart J monitoring requirements, EM monitors H<sub>2</sub>S content in fuel gas as indicated in Condition D90.12. Fuel gas sample is taken online every 5 minutes at the outlet of the mix drum (Vessel 64C-4) for GC analysis (GC 34, Tag ID A6434127.pv). The analyzed results are recorded every 5 minutes. H<sub>2</sub>S content in the fuel gas shown on Attachment 3 is less than 6 ppmv.

Regulation X – National Emission Standards for Hazardous Air Pollutants (NESHAPS):

**40CFR63, Subpart CC – Standards for Hazardous Air Pollutants (HAPs) from Petroleum Refineries:**

63.640 – Applicability & designation of effected sources: Refining process units and equipment located at EM Torrance plant are subject to this Subpart CC requirements including: 1) miscellaneous process vents, 2) storage vessels, 3) wastewater streams, and 4) equipment leaks.

Section J of the Title V permit includes the applicable requirements.

Regulation XIII – New Source Review (NSR):

This change of condition does not result in an emission increase of any nonattainment air contaminant, any ozone depleting compound, or ammonia. Therefore, Reg XIII does not apply.

Rule 1401: Since the emission level of toxic H<sub>2</sub>S is not increased, Rule 1401 does not apply.

Reg XVII: Prevention of Significant Deterioration (PSD)-Standard Prepared Statement by the District

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No Authority. The District Governing Board in its action on February 7, 2003, authorized the Executive Officer, upon withdrawal of the EPA PSD delegation, not to request any further delegation and to allow the EPA to terminate the AQMD's PSD delegation agreement and for EPA to become the permitting agency for PSD sources in the AQMD. The Board determined that Regulation XVII is inactive upon EPA's withdrawal of delegation and shall remain inactive unless and until the EPA provides the AQMD with new delegation of authority to act either in full or on a Facility/Permit-Specific basis. The delegation was rescinded on March 3, 2003 by EPA.

The District Governing Board in its April 1, 2005 meeting reaffirmed its previous action on February 7, 2003 to relinquish PSD analysis back to federal government and render Regulation XVII inactive unless the District receives new delegation in part or in full from the EPA.

R2011: Boiler 2F-4 is subject to R2011 as SOx major sources. To comply with monitoring requirements of this rule, ACEM is used. SOx is determined by calculations from measuring SO2 concentrations at 3F-3/4 and 75F-1 (Attachment 4).

R2012: Boiler 2F-4 is subject to R2012 as major source. CEMS for NOx and O2 were installed to comply with this rule requirement.

**Regulation XXX – Title V Permits:**

R3005 – Permit Revision: The initial Title V permit was issued to EM and in effect beginning 01/25/10. The proposed change of conditions is treated as minor permit revision pursuant to R3005(c) as described under R3000(b)(15). The permit is exempt from public comment under R3006(b).

**VII. CONCLUSION AND RECOMMENDATION**

Boiler 2F-4 is expected to comply with all applicable AQMD and federal Rules and Regulations. Permits to operate are recommended subject to the following conditions (B61.3 & D90.12 are added):

Process/System	Device Cond
Boiler	A327.2, B61.3, D90.12, D328.1, E193.16, H23.13

A327.2 For the purpose of determining compliance with District Rule 476, combustion contaminant emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.

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	Date:	10/04/11

**[RULE 476, 10-8-1976]**

[Devices subject to this condition: D803, D805, D1236, D1239]

B61.3 The operator shall not use fuel gas containing the following specified compounds:

<u>Compound</u>	<u>ppm by volume</u>
H2S greater than	160

**[40CFR 60 Subpart J, 10-4-1991]; Consent Decree Civil Case No. C 5809, 12-13-2005]**

[Devices subject to this condition : D83, D84, D85, D120, C164, D231, D232, D234, D235, D270, D367, D803, D833, D913, D914, D917, D918, D920, D925, D927, D928, D929, D930, D931, D949, D950, D1403]

D90.12 The operator shall continuously monitor the H2S concentration in the fuel gases before being burned in this device according to the following specifications:

The operator shall monitor the H2S concentration at the outlet of the fuel gas mix drum 64C-4 (Device D838) for fuel combustion devices.

The operator shall use Gas Chromatography (GC 34) meeting the requirements of 40CFR60 Subpart J, Method 11 to monitor the parameter.

The operator shall also install and maintain a device to continuously record the parameter being monitored.

**[40CFR 60 Subpart J, 6-24-2008; CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]**

[Devices subject to this condition : D83, D84, D85, D120, C164, D231, D232, D234, D235, D270, D367, D803, D833, D913, D914, D917, D918, D920, D927, D928, D929, D930, D931, D949, D950, D1403]

D328.1 The operator shall determine compliance with the CO emission limit(s) either: (a) conducting a source test at least once every five years using AQMD Method 100.1 or 10.1; or b) conducting a test at least annually using a portable analyzer and AQMD-approved test method. The test shall be conducted when the equipment is operating under normal conditions to demonstrate compliance with the emission limits.

The operator shall comply with all general testing, reporting, and recordkeeping requirements in Sections E and K of this permit.

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 407, 4-2-1982]**

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[Devices subject to this condition: D83, D84, D85, D120, D231, D232, D234, D235, D269, D270, C626, D803, D805, D833, D913, D914, D917, D918, D920, D922, D924, D927, D928, D929, D930, D931, D949, D950, D1236, D1239, D1403]

E193.16 The operator shall operate and maintain this equipment according to the following specifications:

The operator shall comply with all applicable requirements specified in Subpart A of the 40CFR60

**[40CFR 60 Subpart A, 5-16-2007; CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]**

H23.13 This equipment is subject to the applicable requirements of the following rules or regulations:

<u>Contaminant</u>	<u>Rule</u>	<u>Rule/Subpart</u>
H2S	40CFR60, SUBPART	J

**[40CFR 60 Subpart J, 10-4-1991]; Consent Decree Civil Case No. C 5809, 12-13-2005]**

[Devices subject to this condition : D83, D84, D85, D120, C164, D231, D232, D234, D235, D269, D270, D367, C626, C686, C687, D803, D805, D833, C891, C892, C894, D913, D914, D917, D918, D920, D922, D924, D927, D928, D929, D930, D931, D949, D950, C952, D1236, D1239, D1403, C1558]

**Attachment 1  
ExonMobil Consent Decree – Applications Submittal and Status**

#	AN	Equipment	Device ID	Process/ System	Status
1	455166	Heater 1F-2	D914	P1S6	PO issued 02/20/08
2	455091	Heater 21F-6	D83	P2S6	PO issued 02/20/08
3	455092	Heater 21F-7	D84		PO issued 02/20/08
4	455094	Heater 21F-8	D85		PO issued 02/20/08
5	455098	Heater 22F-1	D120		PO issued 02/20/08
6	455102	Heater 22F-2	D917		PO issued 02/20/08
7	455103	Heater 22F-3	D918		PO issued 02/20/08
8	455109	Heater 25F-1A	D232		P4S2
9	455111	Heater 25F-1B	D234	PO issued 02/20/08	
10	455113	Heater 25F-2A	D231	PO issued 02/20/08	
11	455116	Heater 25F-2B	D235	PO issued 02/20/08	
12	455118	Heater 6F-1	D949	P4S4	PO issued 02/20/08
13	455120	Heater 6F-2	D950		PO issued 02/20/08
14	455131	Heater 20F-4	D270		PO issued 02/20/08
15	455133	Heater 4F-1	D367	P6S3	PO issued 02/20/08
16	455136	Heater 3F-1A	D927	P7S2	PO issued 02/20/08
17	455137	Heater 3F-1B	D928		PO issued 02/20/08
18	455141	Heater 3F-2A	D929		PO issued 02/20/08
19	455146	Heater 3F-2B	D1403		PO issued 02/20/08
20	455142	Heater 3F-3	D930		PO issued 02/20/08
21	455144	Heater 3F-4	D931		PO issued 02/20/08
22	455159	Heater 50F-1	D833		P17S4
23	455165	Heater 1F-1	D913	P1S6	Cancelled & consolidated into Crude Desalter Project AN 442858, PO issued 10/18/06
24	455130	Heater 20F-1 A/B	D269	P4S4	Pending evaluation
25	455132	Heater 20F-2	D922	P5S4	Pending evaluation
26	458254	Heater 19F-1	D924	P5S5	Pending evaluation, AMP
27	455135	Heater 24F-1	D925	P6S3	Pending evaluation
28	455153	Boiler 2F-4	D803	P16S1	This evaluation ✓
29	455156	Boiler 75F-1	D805	P16S1	Pending evaluation
30	455157	Boiler 30F-1	D1236	P16S1	Pending evaluation
31	455158	Boiler 30F-2	D1239	P16S1	Pending evaluation
32	455160	Flare 65F-3	C891	P19S1	Pending evaluation
33	455161	Flare 65F-4	C892	P19S1	Pending evaluation
34	455164	Flare 65F-8	C894	P19S1	Pending evaluation
35	466742	Flare 55F-1	C1558	P19S6	Pending evaluation, AMP
36	466743	Incinerator 50J-30	C1776	P13S10	Pending evaluation, AMP
37	466745	Incinerator 72F-2	C686	P14S2	Pending evaluation, AMP
38	466744	Incinerator 72F-4	C687	P14S2	Pending evaluation, AMP
39	455149	Claus Train A	D1912	P12S1	Pending evaluation
40	455150	Claus Train B	D1943	P12S2	Pending evaluation
41	455147	Tail gas Train A	D653	P12S3	Pending evaluation
42	455148	Tail gas Train B	To be created	P12S4	Pending evaluation, System 4 to be created
43	455152	Tail gas incinerator 29F-4	C952	P12S5	Pending evaluation
44	455151	Tail gas incinerator 29F-5	C951	P12S5	Cancelled 10/30/08 & removed from FP (not in use equipment)

**ExxonMobil Consent Decree – Applications Submittal and Status**

#	AN	Equipment	Device ID	Process/Sy stem	Status
45	455106	Heater 2F-2	D920	P3S4	PO issued 03/30/07
46	455108	FCCU CO Boiler 2F-3	C164	P3S2	Cancelled & consolidated into R1105.1 Project AN 458744, PC issued 03/27/07
47	455104	FCCU Regenerator 2C-3	D151	P3S1	
48	475236	MEROX Fuel Gas Treating	D1324	P11S12	
49	475234	Sulfur Storage Pit 28R-137	D1375	P12S6	
50	475232	Sulfur Truck Loading System	D644	P13S6	
51	432510	Sulfur Vapor Collection	D2391	P13S7	
52	475231	Carbon Adsorber, H2S Reduction	C2393	P13S8	
53	477259	Carbon Adsorber, H2S Reduction	C2394	P13S8	
54	483878	Waste Gas Incinerator 28F-11	C626	P13S8	