A/N 473142
A/N 473143
A/N 473144
A/N 473145

South Coast Air Quality Management District

Form 400-A

Application For Permit To Construct and Permit To Operate

Mail Application To:
P.O. Box 4944
Diamond Bar, CA 91765

Tel: (909) 396-3385
www.aqmd.gov

Section A: Operator Information

1. Business Name of Operator To Appear On The Permit: ExxonMobil Oil Corporation

2. Valid AQMD Facility ID (Available on Permit or Invoice issued by AQMD): 53195

3. Owner's Business Name (only if different from Business Name of Operator):

Section B: Equipment Location

4. Equipment Location Address:
For equipment operated at various locations in AQMD's jurisdiction, provide address of initial site

3700 West 190th Street
Street Address

Torrance — CA, 90509 - 2929
City — State — Zip Code

County: (●) Los Angeles ( ) Orange ( ) San Bernardino ( ) Riverside

Contact Name: Craig Sakamoto

Contact Title: Env. Advisor — Phone: (310) 212-1884

Fax: — E-Mail:

Section C: Permit Mailing Address

5. Permit and Correspondence Information:
[X] Check here if same as equipment location address

Street Address

City — State — Zip Code

Contact Name:

Contact Title: — Phone:

Fax: — E-Mail:

Section D: Application Type

The facility is in (●) RECLAIM ( ) Title V ( ) RECLAIM & Title V Program (please check if applicable)

6. Reason for Submitting Application (Select only ONE):

- ( ) New Construction (Permit to Construct)
- (●) Permitted Equipment Altered/ Modified Without Permit Approval*
- ( ) Equipment Operating Without A Permit or Expired Permit*
- ( ) Proposed Alteration/Modification to Permitted Equipment
- ( ) Administrative Change
- ( ) Change of Condition For Permit To Operate
- ( ) Equipment On-Site But Not Constructed or Operational
- ( ) Change of Condition For Permit To Construct
- ( ) Title V Application (Initial, Revisions, Modifications, etc.)
- ( ) Change of Location—Moving to New Site
- ( ) Compliance Plan
- ( ) Facility Permit Amendment
- ( ) Registration/Certification
- ( ) Streamlined Standard Permit

Existing Or Previous Permit/Application Number:
(If you checked any of the items in this column, you MUST provide a existing Permit/ Application Number)
281305 / F4777 (active)

* A Higher Permit Processing Fee applies to those items with an asterisk (Rule 301 (c) (1) (D)

7. Estimated Start Date of Operation/Construction (MM/DD/YYYY):

8. Description of Equipment:
BOILER, UTILITY B-TRAIN, 30F-2, LIQUIFIED PETROLEUM GAS, NATURAL GAS, REFINERY GAS, ABCO, MODEL "D" TYPE, 340 MMBTU/HR BURNER, LIQUIFIED PETROLEUM GAS, REFINERY GAS, COEN, MODEL DAF-36, WITH LOW NOX BURNER, 2 TOTAL; 340 MMBTU/HR

9. Is this equipment portable AND will it be operated at different locations within AQMD's jurisdiction? (●) No ( ) Yes

10. For identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each) 1

11. Are you a Small Business as per AQMD's Rule 102 definition? (10 employees or less and total gross receipts are $500,000 or less, or a not-for-profit training center?) (●) No ( ) Yes

12. Has a Notice of Violation (NOV) or a Notice To Comply (NC) been issued for this equipment? ( ) No ( ) Yes If yes, provide NOV/NC #:

Section E: Facility Business Information

13. What type of business is being conducted at this equipment location? Petroleum Refining

14. What is your businesses primary NAICS Code (North American Industrial Classification System)? 324110

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? (●) No ( ) Yes

16. Are there any schools (K-12) within a 1000-ft. radius of the equipment physical location? (●) No ( ) Yes

Section F: Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

17. Signature of Responsible Official: [signature]

18. Title: Refinery Manager

19. Print Name: Robert Fountain for Maxwell A. Ocansey

20. Date: 8/22/07

Check List
- [ ] Form(s) signed and dated by authorized official
- [ ] Supplemental Equipment Form (400-E-XX or 400-E-GEN)
- [ ] CEQA Form (400-CEQA) attached
- [ ] Payment for permit processing fee attached

Your application will be rejected if any of the above items are missing.

AQMD USE ONLY	APPLICATION/TRACKING #	TYPE	EQUIPMENT CATEGORY CODE:	FEE SCHEDULE:	VALIDATION
	473142	B C D	011505/81 011600	$2949.92 E penalty $4424.88	8.24.07

ENG.	ENG.	CLASS	ASSIGNMENT	CHECK/MONEY ORDER	AMOUNT	Tracking #
A M R	A R	I II III IV	Unit A Engineer	# 798162	$19,076.92	
DATE 3/28/08	DATE					

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CIT 63575 — 19 4

$2949.92 | Sch E
$4424.88 w/ penalty 50%
deemed date 8/24/2007

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE

MEMORANDUM

DATE: February 20, 2013

TO: File

FROM: Chingli Lin, Air Quality Engineer

SUBJECT: ExxonMobil, Id 800089

AN 533846 has been rejected on 2/20/13, ANs 473565 and 473566 have been cancelled on 2/20/2013. FGRs (flue gas recirculation) will be the control system for boilers under ANs 533847, 473143 and 473142, respectively.

Boiler	FGR	CO catalyst
AN 533847, 2F-4	AN 533846 (rejected)	none
AN 473143, 30F-1	AN 473565 (cancelled)	473144
AN 473142, 30F-2	AN 473566 (cancelled)	473145

South Coast Air Quality Management District

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Section B: Equipment Location

4. Equipment Location Address:
For equipment operated at various locations in AQMD's jurisdiction, provide address of initial site

3700 West 190th Street
Street Address

Torrance — CA, 90509 - 2929
City — State — Zip Code

County: (●) Los Angeles ( ) Orange ( ) San Bernardino ( ) Riverside

Contact Name: Craig Sakamoto

Contact Title: Env. Advisor — Phone: (310) 212-1884

Fax: — E-Mail:

Section C: Permit Mailing Address

5. Permit and Correspondence Information:
[X] Check here if same as equipment location address

Street Address

City — State — Zip Code

Contact Name:

Contact Title: — Phone:

Fax: — E-Mail:

Section D: Application Type

The facility is in (●) RECLAIM ( ) Title V ( ) RECLAIM & Title V Program (please check if applicable)

6. Reason for Submitting Application (Select only ONE):

- ( ) New Construction (Permit to Construct)
- (●) Permitted Equipment Altered/ Modified Without Permit Approval*
- ( ) Equipment Operating Without A Permit or Expired Permit*
- ( ) Proposed Alteration/Modification to Permitted Equipment
- ( ) Administrative Change
- ( ) Change of Condition For Permit To Operate
- ( ) Equipment On-Site But Not Constructed or Operational
- ( ) Change of Condition For Permit To Construct
- ( ) Title V Application (Initial, Revisions, Modifications, etc.)
- ( ) Change of Location—Moving to New Site
- ( ) Compliance Plan
- ( ) Facility Permit Amendment
- ( ) Registration/Certification
- ( ) Streamlined Standard Permit

Existing Or Previous Permit/Application Number:
(If you checked any of the items in this column, you MUST provide a existing Permit/ Application Number)
281304 F4729 (Cedar)

* A Higher Permit Processing Fee applies to those items with an asterisk (Rule 301 (c) (1) (D)

7. Estimated Start Date of Operation/Construction (MM/DD/YYYY):

8. Description of Equipment:
BOILER, UTILITY A-TRAIN, 30F-1, LIQUIFIED PETROLEUM GAS, REFINERY GAS, ABCO INDUSTRIES, MODEL "D" TYPE, 340 MMBTU/HR WITH BURNER, LIQUIFIED PETROLEUM GAS, REFINERY GAS, COEN, MODEL DAF-36, WITH LOW NOX BURNER, 2 TOTAL; 340 MMBTU/HR

9. Is this equipment portable AND will it be operated at different locations within AQMD's jurisdiction? (●) No ( ) Yes

10. For identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each)

11. Are you a Small Business as per AQMD's Rule 102 definition? (10 employees or less and total gross receipts are $500,000 or less, or a not-for-profit training center?) (●) No ( ) Yes

12. Has a Notice of Violation (NOV) or a Notice To Comply (NC) been issued for this equipment?
( ) No ( ) Yes If yes, provide NOV/NC #:

Section E: Facility Business Information

13. What type of business is being conducted at this equipment location? Petroleum Refining

14. What is your businesses primary NAICS Code (North American Industrial Classification System)? 324110

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? (●) No ( ) Yes

16. Are there any schools (K-12) within a 1000-ft. radius of the equipment physical location? (●) No ( ) Yes

Section F: Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

17. Signature of Responsible Official: [signature]

18. Title: Refinery Manager

19. Print Name: Robert Fontan for Maxwell A. Ocansey

20. Date: 8/22/07

Check List
- [ ] Form(s) signed and dated by authorized official
- [ ] Supplemental Equipment Form (400-E-XX or 400-E-GEN)
- [ ] CEQA Form (400-CEQA) attached
- [ ] Payment for permit processing fee attached

Your application will be rejected if any of the above items are missing.

AQMD USE ONLY	APPLICATION/TRACKING #	TYPE	EQUIPMENT CATEGORY CODE:	FEE SCHEDULE:	VALIDATION
	473143	B C D	~~011505/81~~ 011600	$ 2,949.94	8-24-07

ENG.	DATE	ENG.	DATE	CLASS	ASSIGNMENT	CHECK/MONEY ORDER	AMOUNT	Tracking #
(A) NT R	3/28/08	A R		I (III) IV	Unit A Engineer	#798162	$9076.9	3

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BACT: 011505 CT 63975 — 0 of 4 — #4424.88 w/ penalty 50%

Permit to Operate

Permitted Equipment Modified without Permit Approval
Boilers

AN 473143	Modification	Boiler 30F-1
AN 473144	Existing Equipment	CO Catalyst Reactor
AN 473142	Modification	Boiler 30F-2
AN 473145	Existing Equipment	CO Catalyst Reactor

APPLICANT'S NAME: EXXONMOBIL OIL CORPORATION
(Fac. ID 800089)

MAILING ADDRESS: 3700 W 190 TH ST
TORRANCE, CA 90504

EQUIPMENT LOCATION: 3700 W 190 TH ST
TORRANCE, CA 90504

EQUIPMENT DESCRIPTION (Facility Permit)

See facility permit (Section D) and the following description

Application 533844

Application to reissue Reclaim Facility Permit with the modification requester under ANs 473143, 473144, 473142, 473145.

Application 473143 **[Permit to Operate, PO no PC, Modification of Existing Boiler 30F-1 (previous AN 281304, P/O F 4729)]**

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
PROCESS 16: STEAM GENERATION PROCESS					
System 1: Utility Boilers					

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
BOILER, UTILITY A-TRAIN, 30F-1, LIQUEFIED PETROLEUM GAS, **NATURAL GAS**, REFINERY GAS, ABCO INDUSTRIES, MODEL "D" TYPE, 340 MMBTU/HR **WITH FLUE GAS RECIRCULATION AND** WITH BURNER, LIQUIFIED PETROLEUM GAS, **NATURAL GAS**, REFINERY GAS, COEN, MODEL DAF-36, WITH LOW NOX BURNER, 2 TOTAL; 340 MMBTU/HR **HEAT EXCHANGER, ECONOMIZER, 30F-3**	D1236	**C2451**, C1238	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] **NOX: 0.015 LBS/MMBTU (8) [CONSENT DECREE CIVIL NO. H-05-0258, 8-11-2008]; PM: (9) [RULE 404, 2-7-1986]**	**A195.9**, A327.2, **B61.1**, **C1.14**, **D29.2**, **D90.12**, **D328.1**, **E193.16** **E448.7** **H23.13** **H23.19** **H23.33**
BLOWER, 30K-1, FORCED DRAFT FAN, COMMON TO FRESH AIR & CIRCULATED FLUE GAS, 700-HP	**D2450**				

Application 473144 [Permit to Operate, PO no PC, Existing CO Catalyst Reactor for Boiler 30F-1]

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
PROCESS 16: STEAM GENERATION PROCESS					
System 4: APC System					
CO CATALYST REACTOR FOR BOILER 30F-1, PEERLESS MFG, WITH PLATINUM TYPE CATALYST, WIDTH: 8 FT 8 IN; HEIGHT: 15 FT 23/8 IN; LENGTH: 2 FT ¼ IN.	**C2451**	**D1236**			

Application 473142 **[[Permit to Operate, PO no PC, Modification of Existing Boiler 30F-2 (previous AN 281305, P/O F4777)]**

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
PROCESS 16: STEAM GENERATION PROCESS					
System 1: Utility Boilers					
BOILER, UTILITY A-TRAIN, 30F-2, LIQUIFIED PETROLEUM GAS, **NATURAL GAS**, REFINERY GAS, ABCO INDUSTRIES, MODEL "D" TYPE, 340 MMBTU/HR **WITH FLUE GAS RECIRCULATION** AND WITH BURNER, NATURAL GAS, LIQUIFIED PETROLEUM GAS, **NATURAL GAS**, REFINERY GAS, COEN, MODEL DAF-36, WITH LOW NOX BURNER, 2 TOTAL; 340 MMBTU/HR **HEAT EXCHANGER, ECONOMIZER, 30F-4,**	D1239	**C2454, C1241**	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] **NOX: 0.015 LBS/MMBTU (8) [CONSENT DECREE CIVIL NO. H-05-0258, 8-11-2008]; PM: (9) [RULE 404, 2-7-1986]**	**A195.9,** A327.2, **B61.1, C1.14, D29.2, D90.12, D328.1, E193.16 E448.7 H23.13 H23.19 H23.33**
BLOWER, 30K-2, FORCED DRAFT FAN, COMMON TO FRESH AIR & CIRCULATED FLUE GAS, 700-HP	**D2453**				

Application 473145 [Permit to Operate, PO no PC, Existing CO Catalyst Reactor for Boiler 30F-2]

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
PROCESS 16: STEAM GENERATION PROCESS					
System 4: APC System					
CO CATALYST REACTOR FOR BOILER 30F-2, PEERLESS MFG, WITH PLATINUM TYPE CATALYST, WIDTH: 8 FT 8 IN; HEIGHT: 15 FT 23/8 IN; LENGTH: 2 FT ¼ IN.	C2454	D1239			

BACKGROUND

ExxonMobil Oil Corporation (ExxonMobil) filed Applications473143, 473144, 473142, 473145 on 8/24/2007, and Applications 473565, 473566 on 9/13/2007 as Class III, PO no PC. Both boilers are operated in the steam generation process. Since the flue gas recirculation system is part of the boiler construction for controlling NOx emissions, it is not necessary to evaluate the boiler and recirculation system separately, hence, the addition of two recirculation systems will be rolled into Applications 473142 (Boiler 30F-2) and 473143 (Boiler 30F-1). The two flue gas recirculation applications, 473565 and 473566 were then cancelled on 2/20/2013. The two identical existing CO catalyst reactors under ANs 473144 and 473145 and two identical flue gas recirculation systems are used for reduction the two Boilers' CO and NOx emissions.

ExxonMobil is requesting the District:

1. to update the permit equipment description with addition of one existing Economizer and one Flue Gas Recirculation and one CO Catalyst Reactor to each existing boiler (30F-1: PO# F4729/AN281304; 30F-2: PO# F4777/AN 281305),

2. to remove Condition 40CFR 60 Subpart D/Db for Boiler 30F-1 and 30F-2, and

3. to add Condition A99.X and to revise Condition E71.1 for clarifying Boiler 30F-1 (30F-2) operating in startup and shut down period. *(Addition is shown in underline; deletion is shown in cross line)*

   A99.X NOx emissions associated with the subject devices shall not exceed 9 PPMV at 3% oxygen averaged over 60 minutes.

   This limit shall not apply during startup and shutdown conditions. A startup or shutdown period shall not exceed 48 hours for the subject devices. Initial startup period for the subject dev ices shall be permitted up to 144 hours to all the curing of refractory materials in each boiler.

[RULE 2005(b) (1)-BACT, 5-6-2005]
[Devices subject to this condition: D1236, D1239]

E71.7 The operator shall only inject NH3 into this equipment if the flue gas inlet temperature is at least 550 degrees F.

~~[RULE 1303(a) (1) BACT, 5-10-1996]~~[RULE 2005(b) (1)-BACT, 5-6-2005]
[Devices subject to this condition: C301, C395, C916, C1238, C1241]

Permitting History

These two identical Boilers, 30F-1 and 30F-2, were first permitted on Jan 1997 under Permit No. F4729 and F4777, respectively. Followed, two subsequent applications 455157 and 455158 were submitted to the District for change of conditions by adding Subpart J to permit condition for boiler 30F-1 and 30F-2 on 12/13/2005, respectively, both were cancelled on 10/17/2012. These two applications will be consolidated into the subsequent applications 473142 and 473143, correspondingly.

Subjects to be evaluated in this report

In summary, this report will cover the following issues:

1. Evaluation of two boilers when controlling with FGR, Economizer, CO Catalyst Reactor and SCR.
2. Evaluation 40CFR 60 Subparts D/Db and J.
3. Startup and Shutdown Conditions.

The Company

ExxonMobil at Torrance, CA operates petroleum refinery plant. Currently, it is a Title V and Reclaim facility under SCAQMD's regulations.

OPERATION SCHEDULE

Maximum and Average: 24 hrs/day, 7 days/wk, 52 wks/yr

PROCESS DESCRIPTION

Boilers 30F-1(Device D1236) and 30F-2 (Device D1239) provide a majority of steam for distribution to the Refinery process units. Each produces 225 million pounds per hour of steam at 450 psig pressure.

Each boiler is used in the process of steam generation by running boiler feed water through tubes, which are exposed to heat generated by fired burners. The boilers 30F-1 and 30F-2 are identical systems and combust the same fuels namely **liquefied petroleum gas, refinery gas**, and **natural gas**. After the water is heated, it is then sent to the steam drum where it is flashed to become steam. The steam is used by various process units in the Refinery.

Hot flue gas generated by boiler 30F-1(30F-2)operation is first sent through a **CO catalyst reactor** under AN 473144 (AN 473145), followed by a **Selective Catalytic Reduction** Device C1238 (Device C1241), an **Economizer** unit, 30F-3 (30F-x), then exit to the stack.

To further minimize boiler NOx reduction, a portion of the boiler flue gas is recirculated back to the main combustion chamber using a main duct system. The **Flue Gas Recirculation** (FGR) system reduces NOx emissions by reducing the peak combustion temperature and lowering the percentage of oxygen in the combustion air/flue gas mixture, thus retarding the formation of NOx caused by high flame temperatures.

The remaining flue gas is directed through the boiler's stack. A continuous emissions monitoring system **(CEM)** is attached to this stack to monitor NOx emissions.

Basic Equipment

BOILER, 30F-1 (30F-2), WATER TUBE, ABCO INDUSTRIES, MODEL "D" TYPE, 340,000,000 BTU/HR., LIQUIFIED FUEL, PETROLEUM GAS, REFINERY GAS AND NATURAL GAS –BURNED TWO LOW NOX BURNERS, A TOTAL HEAT RATE OF 340,000,000 BTU/HR, ONE FLUE GAS RECIRCULATION, ONE ECONOMIZER VENTING TO ONE CO CATALYTIC REACTOR AND ONE SCR.

APC Equipment

1. ONE CO CATALYST REACTOR, 30F-x (30F-y), PEERLESS MFG, WITH PLATINUM TYPE CATALYST, WIDTH: 8 FT 8 IN; HEIGHT: 15 FT 23/8 IN; LENGTH: 2 FT ¼ IN.

2. ONE SELECTIVE CATALYTIC REDUCTION, C12398(C1241) WITH CAPACITY OF 4,303,600 STANDARD CUBIC FEET PER HOUR (SCFH).

Operation during Startup and Shutdown

Boiler 30F-1 (30F-2) must be shut down in order to safely conduct the CalOSHA-mandated inspection and other maintenance activities. Once the activities are completed, 30F-1 (30F-2) must be started up in order to maintain a safe and adequate supply of steam for Refinery process units. Recently, ExxonMobil has submitted the petition for a short variance and AOC relief to start-up Boiler 30F-1 at Torrance, CA on 1/10/2013 under Case No. 1183-473, due to performance the inspection of the Boiler 30F-1.

During startup and shutdown periods, the temperature of the flue gas is not sufficient for the proper operation of the SCR, low flue gas temperatures would not convert the NH3 properly, while high temperature would damage and/or destroy the catalyst. The startup period would normally require **144 hours** of operation has been verified per ExxonMobil on 3/27/2013. During the startup period, the flue gas shall be diverted to the SCR as reported by previous Engineer in evaluation of AN 281304, 1/04/1994. NH3 will not be injected until the proper inlet temperature is reached to 550 degrees F at least.

Specifically, the start-up of boiler will violate the boiler's Title V Permit NOx limit of 0.01 lb/mmbtu, because it takes time for the control equipment, SCR, to reach the optimal operating temperature, and thus, to sufficiently control NOx emissions to meet this limit.

Non-compliance will occur during start-up of the boiler after completion of inspections and other maintenance on the Boilers. This non-compliance (NOx emissions will be expected to exceed 0.01 lb/mmbtu) will occur for up to **30** non-consecutive hours.

The excess NOx emissions during the startup/shut down period shall be calculated from Boiler for the periods when the SCR System is not in use (see Emission Calculation Section).

CONDITIONS FOR STARTUP AND SHUTDOWN

ExxonMobil is requesting to include startup /shut down conditions into the facility permit for future operating Boilers 30F-1 and 30F-2 without petition of variance due to a startup required.

Condition A195.1 will be imposed for start up and shutdown of the boilers (30F-1 or 30F-2).

A195.9 The 9 ppmv NOx emission limit(s) is averaged over 60 minutes corrected to **3%** oxygen, dry basis. For the purpose of this condition, this limit is a long term limit which applies at all times except during startup, shut down, or malfunction.

For purpose of this condition, start-up and shutdown shall be defined as the time period during the startup and shutdown of the SCR (Devices C1238, C1241) when the temperature of the exhaust gas at the inlet to SCR is below 500 degrees F and NH3 is not injected.

[RULE 2005, **6-3-2011**]
[Devices subject to these conditions: D1236, D1239]

Since section E of the facility permit requires full use of APC whenever the basic equipment is in operation, conditions E448.x will be added to clarify that the SCR **may not operate** during shut down/start up events.

E448.7 The operator shall comply with the following requirements:

The emissions from the boiler may be vented from CO catalyst reactor, economizer, and SCR directly to atmosphere via stack. After the CalOSHA-mandated inspections and other maintenance activities are completed, boiler must be started up.

A startup or shutdown period shall not exceed 30 non-consecutive hours when the SCR system has no control effect for the subject devices.

Initial startup period of the subject devices shall be permitted to 144 hours per occurrence in each boiler.

The District shall be notified 24 hours in advance of any scheduled startup when SCR has no control effect.

The District shall be notified within 24 hours following any unscheduled startup when SCR has no control effect.

Records should be kept to demonstrate compliance with this condition.

[RULE 2005, **6-3-2011**]
[Devices subject to this condition: D1236, C1238, D1239, C1241].

EMISSION CALCULATIONS

The amount of emission during startup and shutdown was not quantified, nor was a condition requiring ExxonMobil to determine start-up NOx emissions incorporated into the permit.

Note that only start-up NOx emissions and NH3 are affected by the requested start-up condition – emissions of CO, PM10, ROG remain the same irrespective of start-up or normal mode of operation. We shall discuss normal operation and startup/shutdown operation as follows:

1. Normal Operation

The emissions for the normal operation have been determined as recorded in previous evaluation report. Please refer to Applications 281304 and 281305 for Boiler 30F-1 and Boiler 30F-2, respectively. These two applications have been granted PO and are still active till present. Hence, there is no intention to use different parameters such as flow rate, fuel gas, emission factor, SCR size etc other than those shown in the report. Per applicant's cover letter, the Boilers 30F-1 and 30F-2 were originally constructed in 1994 and were supplied by the vendor as a complete package, which beside the major equipment, the boiler, the construction also include the economizer, the FGR system and the CO catalyst reactor. With SCR as additional control equipment, the resulted controlled emissions from AN 281304 (AN281305) should be the same as that obtained from Application 473143 (AN 473142). Hence, the emissions shall be carried over from AN281304 (AN281305) to AN 473143 (AN 473142) as follows (data quoted from NSR program, 3/28/13). Table 1 shows the emission factor and source comes from, Table 2 is the summary of equipment PTE .

Table 1 Emission Factors

Emitter	Emission Factor	Source	Ref AN
NOx	9 ppm	BACT	AN 281304
ROG	7 lbs/mmscf	District E.F.B	AN 281304
PM10	21 lbs/mmscf	District E.F.B	AN 281304
SOx	16.9 lbs/mmscf	100 ppm H2S adjusted	AN 281304
CO	40 lbs/mmscf	AP42	AN 281304

Table 2 Emissions under Normal Operation for Boiler 30F-1 (AN 281304)

Emitter	Hourly Emissions (lb/hr)		Daily Emissions (lb/day)		Annual Emissions (lb/yr)	30-AV DY (lb/day)
	R1	R2	R1	R2		
NOx	**40.61**	3.7	**974.64**	90	32762	90
ROG	1.8	1.8	43	43	15704	43
PM10	5.3	5.3	64	64	23199	64
SOx	**4.26**	1.7	**102.24**	41	14936	41
CO	10	10	242	242	88380	242

2. *Startup and Shutdown Operations*

2.1 *Emission Calculation:*

Table 3 Operation Schedule

Operation Mode	Hours Per Day	Days Per Year
Normal Operations	24	365
Startup-Requested Changes to Permit Conditions	24	6 (144 hrs)
Total Hours in Normal Operations	24	359

Note: The start-up hours requested by ExxonMobil are 144 hrs per start-up, at maximum. Assumed 1 start-up each year.

2.1.1 ***NOx Emissions During Startup***

37 ppm of NOx at the SCR inlet is expected per previous engineering report. However, for conservative, an 80 lbs/mmscf is used as the emission factor for NOx in R1 calculation. Although, the current heating value of the fuel gas after mix drum 64C-4, which produces low pressure fuel, is 1228 btu/scf per ExxonMobil information, we still use the old data as 1348 btu/scf for R1 calculation.

Hourly Emissions during start up = **R1** = (80 lb/mmscf) x (340 mmbtu/hr) / (**1348 btu/scf**)
= 20.18 lbs/hr

Daily Emissions during startup = **R1DY** = 20.18 (lbs/hr) x 24 (hrs/day)
= 484.27 lbs/day
Max allowed startup days = 6 days
Yearly Emissions during startup = **YRLY startup** = 484.27 lbs/day x 6 days / yr
= **2905.62 lbs/yr**

Hourly Emissions during Normal Operations with 77.8% NOx control efficient of SCR = 3.7 lbs/hr
Daily Emissions during Normal Operations = 90 lbs/day
Normal operating days = 359 days
Yearly Emissions during Normal Operations = **32310.0 lbs/yr**

Combined NOx Emissions (30 Day Average) = **30 DA with startup**
= (32310.0 + 2905.62) lbs/year ÷ 12 mo/yr ÷ 30 days/mo
= **97.82 lbs/day**

NOx Emission Rate
Max NOx Emission Rate = 80 lb/mmscf x 1sc/1348 but = 0.0593 lb/mmbtu.
Rule 3002 (c) (1) NOx limits = 0.01 lb/mmbtu

NSR Data Entry

Table 2 Emissions Summary for Each Boiler

Emitter	Operation Mode	Hourly Emissions (lb/hr)	Daily Emissions (lb/day)	Annual Emissions (lb/yr)	30-Day Average Emissions (lb/day)
NOx	During Startup	20.18	484.27	2905.62	-
	During Normal Operations	3.7	90.0	32762	90
	Combined	-	-	484,409.1	**97.82**
ROG	During Startup	1.8	43	15704	43
	During Normal Operations	1.8	43	15704	43
PM10	During Startup	5.3	64	23199	64
	During Normal Operations	5.3	64	23199	64
SOx	During Startup	1.7	41	14936	41
	During Normal Operations	1.7	41	14936	41
CO	During Startup	10	242	88380	242
	During Normal Operations	10	242	88380	242

CONTROL EQUIPMENT

1. *Economizer*
   Each economizer for Boilers 30F-1 and 30F-2, is the component that transfers heat from the combustions of fuels through the steam-generating and superheating sections to the fee water, which it receives from the boiler feed pump and delivers to the steam-generation sector of the boiler. As such, an economizer is an integral part of a boiler. The two original economizers used for Boiler 30F-1 and 30F-2 have been replaced by two new economizers under ExxonMobil Ids 30F-3 and 30F-4 on 4/30/2010 per the settlement agreement Case # 1183-418 due to leak development. Each one is located downstream of SCR and upstream of FGR.

2. *FGR*
   FGR system is used to reduce NOx emissions in boiler by recirculation a portion (20%) of the boiler flue gas into the main combustion chamber using a main duct system. This process reduces the peak combustion temperature and lowers the percentage of oxygen in the combustion air/flue gas mixture; retarding the formation of NOx caused by high flame temperatures. The FGR system was included in the original boiler construction. Hence, it is an integral part of a boiler.

3. *CO Catalyst Reactors under ANs 473144 and 473145*
   The CO Catalyst Reactor uses a CO catalyst to further complete the combustion of CO content in the flue gas to CO2. Since this equipment is used as APC of the boiler, there are no criteria emissions. R1 and R1, AV 30 data should be zero.

RULES AND REGULATIONS EVALUATION

Operation of the sulfur vapor collection system with control devices is expected to comply with all applicable District rules and regulations. Specific compliance with the following rules is as follows:

Rule 212 **Public Notice**

(c)(1) This section requires a public notice for all new or modified permit units located within 1000 feet of the outer boundary of a school. This equipment is not located within 1,000 feet of a K-12 school, so a public notice is NOT required.

(c)(2) - This section requires a public notice for all new or modified facilities that have on-site emission increase exceeding any of the daily maximums specified in subdivision (g) of this rule. The increases in facility wide emissions will not exceed the daily maximum limits. Therefore, a public notice is not required for this section.

Section (g)

Pollutant	Boilers (ANs 473142 and 473143)	Allow limit-lb/day	Trigger Public notice
ROG	0	30	No
NOx	+15.64	40	No
SOx	0	60	No
CO	0	220	No
PM10	0	30	No

(c)(3)- This section requires a public notice for all new or modified permit units with increases in emissions of toxic air contaminants. There will not be an increase in TACs resulting from change of condition by adding the startup and shut down conditions to the two Boilers 30F-1 and 30F-2, no changes in through put and operation schedule. Therefore, a public notice will not be required per this section.

Rule 401 **Visible Emissions**

Compliance is expected under proper operation.

Rule 402 **Nuisance**

Compliance is expected under proper operation.

Rule 404 **Particulate Matters (PM)-Concentration**

PM Emissions = 5.3 lbs/hour x 1hr/60 min x 7000 grain/lb = 618.33 grains/min
Boiler = 340 mmbtu/hr
Fd = 8710 scf/mmbtu
Flue gas flow rate = 340 mmbtu/hr x 8710 scf/mmbtu x1 hr/60 min
= 49356.67 scf/min
PM10 Concentration = (618.33 grains/min) / (49356.67 scf/min) = 0.01253 grains/scf
0.0125 grains/scf is less than 0.0437 grains/scf Rule 404 limt at 49449 scoff/min

Compliance is expected.

Rule 407 **Liquid and Gaseous Air Contaminants**

The District's Rule 407 establishes the maximum limits for Carbon Monoxide (CO), and Sulfur Oxides (SOx) for any equipment that discharges air pollutants in the District's jurisdiction. The following table gives the emission limits that currently apply to any equipment:

CO (ppmv)	SOx (ppmv)
2000 ppm (dry basis, 3% O2) at 15 minute average	500 ppm (dry basis, 3% O2) at 15 minute average

Because ExxonMobil is a RECLAIM facility for both NOx and SOx, the company only has to comply with the CO concentration limit as it is exempt by Rule 2001 (j)(2) for SOx. Compliance with R407 limit for CO at 2000 ppmv is expected under normal operating condition. Condition **D328.1** is imposed to require periodic monitoring for compliance purpose.

Rule 409 **Combustion Contaminants**

The District's Rule 409 imposes an overall pollutant limit of 0.10 grain per cubic foot of combustion contaminants from a combustion source at 12% CO2 (0 % O2). Compliance with R409 limit for PM at 0.1 gr/scf is expected under normal operating condition.

Rule 429 **Start-up and Shutdown Exemption Provisions for NOx**

Although the District's Rule 429 specifically governs the startup and shutdown of heaters and boilers, ExxonMobil is RECLAIM facility subject to the District's Regulation XX and therefore not subject to Rule 429 by Rule 2001 (j).

Rule 476 **Steam Generating Equipment**

The District's Rule 476 limits NOx and PM emissions resulting from a steam generating equipment with a heat rate more than 50 mmbtu/hr as follows:

NO2	125 ppm for gas or 225 ppm for Liquid or Solid	Note: at 3% Oxygen and over a minimum 15 minutes
PM	11 lbs/hr	
PM	0.01 grain/scf	Note: at 3% Oxygen and over a minimum 15 minutes

ExxonMobil is operating the Boiler 30F-1 and Boiler 30F-2 which has 340 mmbtu per hour each for steam generation in Process 16, Rule 476 is applied. Compliance with R476 limit for NOx and PM are expected. Condition **A327.2** requires the compliance with either PM limit.

Reg. IX **New Source Performance Standards (NSPS)**
40CFR60

Under EPA Consent Decree order on 12/13/05, the two Boilers 30F-1 and 30F-2 are subject to this Rule amended 6/24/08 as follows:

Subpart A General Provision

The requirement is general provision. Condition **E193.16** is imposed, two Boilers 30F-1 and 30F-2 are expected to comply with this section.

Subpart Db Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

60.44b (a) (1) Standard for nitrogen oxides (NO_X)

Fuel/steam generating unit type	Nitrogen oxide emission limits (expressed as NO_2) heat input
Natural gas and distillate oil	
(i) Low heat release rate	0.10 lb/mmbtu
(ii) High heat release rate	0.20 lb/mmbtu

Condition **H23.19** is imposed, tow Boilers 30F-and 30F-2 are expected to comply with this section.

Subpart J Standards of Performance for Petroleum Refineries

104(a) (1)-- limit 160 ppm H_2S content in natural gas/refinery gas fired, acid gas fired, acid streams.

ExxonMobil's two Boilers 30F-1 and 30F-2 run on fuel gas. Because both burn fuel gas, ExxonMobil must comply with the requirements of Subpart J under the CD ordered by the EPA on 12/13/2005, which has a limit of 160 ppmv H2S at the inlet or 20 ppmv SO2 at 0% at the outlet. The limit of H_2S described in Subpart J 60.104(a) (1) is not in excess of 230 mg/dscm (0.1 gr/dscf). The permits had used 100 ppm H2S as maximum emissions for estimation SOx emission factors as 16.9 lbs per mm scf, hence Condition **B61.1** specifies the H2S limits in fule gas, and Condition **H23.13** is imposed for the Boilers. Compliance is expected.

105(a)(3) — requirement of continuous monitoring, for fuel gas combustion devices subject to 104(a)(1), either an instrument for continuously monitoring and recording the concentration by volume (dry basis, zero percent excess air) of SO_2 emissions into the atmosphere or monitoring as provided in paragraph (a)(4) of this section.

105(a)(4)— requirement of continuous monitoring, for fuel gas combustion devices subject to 104(a)(1), instead of the SO2 monitor in paragraph (a)(3) of this section for fuel gas combustion devices subject to 60.104(a)(1), an instrument for continuously monitoring and recording H_2S in fuel gases before being burned in any fuel gas combustion device.

ExxonMobil has installed a GC located at the outlet of the mix drum 64C-4 to monitor the fuel gas compositions for heating value determination and H2S content the fuel gas. This GC is common to this boiler and others. Conditions **D90.12** is imposed to meet 105(a) (4). Compliance is expected.

Reg. 13 **New Source Review**
ExxonMobil is a NOx and Sox Reclaim facility in the District, the company does not need to comply with Reg. 13 by Rule 1301 (b)(1)- rather it needs to comply with the NASR requirements under Rule 2005. This rule does not apply.

Rule 1401 **New Source Review of Toxic Air Contaminants**
The total operation hours for startup and shut down the Boiler which burning mixed fuel gas is limited not exceeding 144 hrs per calendar year, which is 1.6% of yearly operation time. The resulted excess HAP emissions are negligible. H2S emission is expected to be reduced since no injection of NH3 during startup/shutdown period. Compliance with Rule 1401 is expected.

Reg. 17 **Prevention of Significant Deterioration Requirements Standard Prepared Statement by the District**
Limited Authority: The District was granted a limited delegation authority from the EPA starting 7/25/07. This project does not result in emission increases since the excess NOx emissions due to startup/shutdown will be offset by RTC available from the facility.

Rule 2005 **New Source Review for RECLAIM**
With the control systems of FGR, economizer, CO catalyst reactor and SCR, there is no increase in NOx emission under normal operation, with startup/shutdown operation at short time up to 144 hrs per year, the excess NOx emissions derived from CEM reading shall be offset by the RTC available from the facility, hence, the equipment comply with Rule 2005.

Rule 2011 **Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Sulfur (SO_X) Emissions**
The Boiler 30F-1 (30F-2) is subject to this rule as major source. A CEMS for NOx emissions was installed. This equipment is expected to comply with this rule.

Rule 2012 **Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NO_X) Emissions**
The Boiler 30F-1 (30F-2) is subject to this rule as major source. A CEMS for SOx emissions was installed. This equipment is expected to comply with this rule.

Reg 30 **Title V Permits**
With the installation of the existing FGR, economizer as the internal controls, a CO catalyst reactor and a permitted SCR for each boiler, and change conditions of startup and shutdown to the Boiler 30F-1 (30F-2), the boiler project shall be treated as Minor permit revision per Rule 3005 (c).

CONCLUSION AND RECOMMENDATION

The modified Boiler 30F-1 (30F-2) operating under normal with additional startup shutdown condition controlled by a FGR, an economizer, a CO catalyst reactor and a SCR or startup/shutdown period is expected to comply with all applicable AQMD and federal Rules and Regulations. The recommendation is to issue a revision of the facility permit in Section D with the following conditions:

PERMIT CONDITIONS

A195.9

The 9 ppmv NOx emission limit(s) is averaged over 60 minutes corrected to **3%** oxygen, dry basis. For the purposes of this condition, this limit is a long term limit which applies at all times except during startup, shut down, or malfunction.

For purpose of this condition, start-up and shutdown shall be defined as the time period during the startup and shutdown of the SCR (Devices C1238, C1241) when the temperature of the exhaust gas at the inlet to SCR is below 500 degree F and NH3 is not injected.

[RULE 2005, **6-3-2011**]
[Devices subject to these conditions: D1236, D1239]

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.

[RULE 476, 10-8-1976]
[Devices subject to this condition: D1236, D1239]

B61.1

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

Compound	Ppm by volume
Total sulfur calculated as H2S less than	100

[40CFR 60 Subpart J, 6-24-2008; CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]
[Devices subject to this condition: D1236, D1239]

C1.14

The operator shall limit the firing rate to no more than 340 MM Btu per hour.

[RULE 1303(b) (2)-Offset, 5-10-1996]
[Devices subject to this condition: D1236, D1239]

D29.2

The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
PM emissions	Approved District method	1 hour	Outlet of the SCR serving this equipment
ROG emissions	Approved District method	District-approved time	Outlet of the SCR serving this equipment

The test(s) shall be conducted at least once every three years.

[RULE 1303(b) (2)-Offset, 5-10-1996; RULE 3004(a) (4)-Periodic Monitoring, 12-12-1997]
[Devices subject to this condition: D1236, D1239]

D90.12

The operator shall continuously 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: D1236, D1239]

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

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

E448.7

The operator shall comply with the following requirements:

The emissions from the boiler may be vented from CO catalyst reactor, economizer, and SCR directly to atmosphere via stack. After the CalOSHA-mandated inspections and other maintenance activities are completed, Boiler must be started up.

A startup or shutdown period shall not exceed 30 non-consecutive hours when the SCR system has no control effect for the subject devices.

Initial startup period of the subject devices shall be permitted to 144 hours per occurrence in each boiler.

The District shall be notified 24 hours in advance of any scheduled startup when SCR has no control effect.

The District shall be notified within 24 hours following any unscheduled startup when SCR has no control effect.

Records should be kept to demonstrate compliance with this condition.

[RULE 2005, **6-3-2011**]
[Devices subject to this condition: D1236, D1241, C1238, C1241]

H23.13

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

Contaminant	Rule	Subpart
H2S	40CFR60, Subpart	J

[40CFR 60 Subpart J, 6-24-2008; CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]
[Devices subject to this condition: D1236, D1239]

H23.33

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

Contaminant	Rule	Subpart
SOx	40CFR60, Subpart	J

[40CFR 60 Subpart J, 6-24-2008; CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]
[Devices subject to this condition: D1236, D1239]

South Coast Air Quality Management District

Form 400-A

Application For Permit To Construct and Permit To Operate

Mail Application To:
P.O. Box 4944
Diamond Bar, CA 91765

Tel: (909) 396-3385
www.aqmd.gov

Section A: Operator Information

1. Business Name of Operator To Appear On The Permit: ExxonMobil Oil Corporation

2. Valid AQMD Facility ID (Available on Permit or Invoice issued by AQMD): 53195

3. Owner's Business Name (only if different from Business Name of Operator):

Section B: Equipment Location

4. Equipment Location Address:
For equipment operated at various locations in AQMD's jurisdiction, provide address of initial site

3700 West 190th Street
Street Address

Torrance CA, 90509 - 2929
City State Zip Code

County: (●) Los Angeles ( ) Orange ( ) San Bernardino ( ) Riverside

Contact Name: Craig Sakamoto

Contact Title: Env. Advisor Phone: (310) 212-1884

Fax: E-Mail:

Section C: Permit Mailing Address

5. Permit and Correspondence Information:
[X] Check here if same as equipment location address

Street Address

City State Zip Code

Contact Name:

Contact Title: Phone:

Fax: E-Mail:

Section D: Application Type

The facility is in (●) RECLAIM ( ) Title V ( ) RECLAIM & Title V Program (please check if applicable)

6. Reason for Submitting Application (Select only ONE):

- ( ) New Construction (Permit to Construct)
- (●) Permitted Equipment Altered/ Modified Without Permit Approval* (30) ?
- ( ) Equipment Operating Without A Permit or Expired Permit*
- ( ) Proposed Alteration/Modification to Permitted Equipment
- ( ) Administrative Change
- ( ) Change of Condition For Permit To Operate
- ( ) Equipment On-Site But Not Constructed or Operational
- ( ) Change of Condition For Permit To Construct
- ( ) Title V Application (Initial, Revisions, Modifications, etc.)
- ( ) Change of Location—Moving to New Site
- ( ) Compliance Plan
- ( ) Facility Permit Amendment
- ( ) Registration/Certification
- ( ) Streamlined Standard Permit

Existing Or Previous Permit/Application Number:
(If you checked any of the items in this column, you MUST provide a existing Permit/Application Number)
(?)

* A Higher Permit Processing Fee applies to those items with an asterisk (Rule 301 (c) (1) (D)

7. Estimated Start Date of Operation/Construction (MM/DD/YYYY):

8. Description of Equipment:
PEERLESS MFG. CO CATALYST REACTOR FOR 30F-1, WITH PLATINUM TYPE CATALYST, WIDTH: 8 FT., 8 IN.; HEIGHT: 15 FT 2-3/8 IN; LENGTH: 2 FT., ¼ IN.

9. Is this equipment portable AND will it be operated at different locations within AQMD's jurisdiction? (●) No ( ) Yes

10. For identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each) 1

11. Are you a Small Business as per AQMD's Rule 102 definition? (10 employees or less and total gross receipts are $500,000 or less, or a not-for-profit training center?) (●) No ( ) Yes

12. Has a Notice of Violation (NOV) or a Notice To Comply (NC) been issued for this equipment?
( ) No ( ) Yes If yes, provide NOV/NC #:

Section E: Facility Business Information

13. What type of business is being conducted at this equipment location? Petroleum Refining

14. What is your businesses primary NAICS Code (North American Industrial Classification System)? 324110

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? (●) No ( ) Yes

16. Are there any schools (K-12) within a 1000-ft. radius of the equipment physical location? (●) No ( ) Yes

Section F: Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

17. Signature of Responsible Official: [signature]

18. Title: Refinery Manager

19. Print Name: Robert Fantom for Maxwell A. Ocansey

20. Date: 8/22/07

Check List
- [ ] Form(s) signed and dated by authorized official
- [ ] Supplemental Equipment Form (400-E-XX or 400-E-GEN)
- [ ] CEQA Form (400-CEQA) attached
- [ ] Payment for permit processing fee attached

Your application will be rejected if any of the above items are missing.

AQMD USE ONLY	APPLICATION/TRACKING #	TYPE	EQUIPMENT CATEGORY CODE:	FEE SCHEDULE:	VALIDATION
	473144	B (C) D	E1	* $ 2944.92	8.24.07

ENG. DATE	ENG. DATE	CLASS	ASSIGNMENT	CHECK/MONEY ORDER	AMOUNT	Tracking #
(A) NT R 3/28/08	A R	I (III) IV	Unit A Engineer	#798162	$19,076.93	

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C17 63975 394

* 2944.92
+ 1474.96 penalty 50%
4867.36 $4424.88

South Coast Air Quality Management District

Form 400-A
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3. Owner's Business Name (only if different from Business Name of Operator):

Section B: Equipment Location

4. Equipment Location Address:
For equipment operated at various locations in AQMD's jurisdiction, provide address of initial site

3700 West 190th Street
Street Address

Torrance — CA, 90509 - 2929
City — State — Zip Code

County: (•) Los Angeles ( ) Orange ( ) San Bernardino ( ) Riverside

Contact Name: Craig Sakamoto

Contact Title: Env. Advisor — Phone: (310) 212-1884

Fax: — E-Mail:

Section C: Permit Mailing Address

5. Permit and Correspondence Information:
[X] Check here if same as equipment location address

Street Address

City — State — Zip Code

Contact Name:

Contact Title: — Phone:

Fax: — E-Mail:

Section D: Application Type

The facility is in (•) RECLAIM ( ) Title V ( ) RECLAIM & Title V Program (please check if applicable)

6. Reason for Submitting Application (Select only ONE):

- ( ) New Construction (Permit to Construct)
- (•) Permitted Equipment Altered/ Modified Without Permit Approval* (30)
- ( ) Equipment Operating Without A Permit or Expired Permit*
- ( ) Proposed Alteration/Modification to Permitted Equipment
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- ( ) Equipment On-Site But Not Constructed or Operational
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- ( ) Facility Permit Amendment
- ( ) Registration/Certification
- ( ) Streamlined Standard Permit

Existing Or Previous Permit/Application Number:
(If you checked any of the items in this column, you MUST provide a existing Permit/ Application Number)
(8) new

* A Higher Permit Processing Fee applies to those items with an asterisk (Rule 301 (c) (1) (D)

7. Estimated Start Date of Operation/Construction (MM/DD/YYYY):
8. Description of Equipment:
PEERLESS MFG. CO CATALYST REACTOR FOR 30F-2, WITH PLATINUM TYPE CATALYST, WIDTH: 8 FT., 8 IN.; HEIGHT: 15 FT 2-3/8 IN; LENGTH: 2 FT., ¼ IN.
9. Is this equipment portable AND will it be operated at different locations within AQMD's jurisdiction? (•) No ( ) Yes
10. For identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each) 1
11. Are you a Small Business as per AQMD's Rule 102 definition? (10 employees or less and total gross receipts are $500,000 or less, or a not-for-profit training center?) (•) No ( ) Yes
12. Has a Notice of Violation (NOV) or a Notice To Comply (NC) been issued for this equipment? ( ) No ( ) Yes If yes, provide NOV/NC #:

Section E: Facility Business Information

13. What type of business is being conducted at this equipment location? Petroleum Refining
14. What is your businesses primary NAICS Code (North American Industrial Classification System)? 324110
15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? (•) No ( ) Yes
16. Are there any schools (K-12) within a 1000-ft. radius of the equipment physical location? (•) No ( ) Yes

Section F: Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

17. Signature of Responsible Official:
18. Title: Refinery Manager
19. Print Name: Albert Fankin for Maxwell A. Ocansey
20. Date: 8/22/07

Check List
- [ ] Form(s) signed and dated by authorized official
- [ ] Supplemental Equipment Form (400-E-XX or 400-E-GEN)
- [ ] CEQA Form (400-CEQA) attached
- [ ] Payment for permit processing fee attached

Your application will be rejected if any of the above items are missing.

AQMD USE ONLY	APPLICATION/TRACKING #	TYPE	EQUIPMENT CATEGORY CODE:	FEE SCHEDULE:	VALIDATION
	473145	B (C) D	81	$ 2949.92	8-24-07
ENG. DATE (A) NT R 3/28/08	ENG. DATE A R	CLASS I II III IV	ASSIGNMENT Unit A Engineer	CHECK/MONEY ORDER # 798162	AMOUNT $9,076.73 / Tracking #

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14,774.96 penalty 50% = $4424.88 8/24/07

320 prev. AN. 63973 494