



FACILITY PERMIT TO OPERATE EXXONMOBIL OIL CORPORATION

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS
The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emission* And Requirements	Conditions
Process 3: FLUID CATALYTIC CRACKING UNIT					P13.1
System 1: FCCU, CRACKING SYSTEM					S4.1, S13.2, S15.1, S42.2
REGENERATOR, 2C-3, HEIGHT: 45 FT ; DIAMETER: 37 FT 2 IN WITH A/N: 458743 512799 Permit to Construct Issued: 03/27/07 INJECTOR, FCCU CYCLE OIL/HYDROTREATED GAS OIL INJECTOR, HOPPER, CO PROMOTER CATALYST, 2G-19, D: 2 FT, H: 4 FT 4 IN <u>INJECTOR, CATALYST ADDITIVES (GRACE DAVISON OLEFINSMAX ZSM-5), CO PROMOTER (GRACE DAVISON CP-5), BASE CATALYST (GRACE DAVISON GENESIS-2634), BASE CATALYST (SINOPEC RIPP ZDOS-T), BASE CATALYST (GRACE DAVISON ALCYON-U411)</u>	D151	C164 C165 C166 C1590 C1772 C2283 C2284 C2314	NOX: MAJOR SOURCE**; SOX: MAJOR SOURCE**	CO: 500 PPMV (8) [40CFR 60 Subpart J, 6-24-2008; CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]; CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; HAP: (10) [40CFR 63 Subpart UUU, #2, 4-20-2006]; NH3: 10 PPMV (5) [RULE 1105.1, 11-7-2003]; NOX: 20 PPMV (8) [CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]; NOX: 40 PPMV (8A) [CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]; NOX: 140 PPMV (8B) [CONSENT DECREE CIVIL CASE No. 05 C 5809 12-13-2005]; PM: (9) [RULE 404, 2-7-1986; RULE 405, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; PM: 1 LB(S)/1000 LBS (8) [40 FR 60 Subpart J, 6-24-2008]; PM10: 0.005 GRAINS/SCF (5) [RULE 1105.1, 11-7-2003]; PM10: 2.8 LBS/1000 BLS (5A) [RULE 1105.1, 11-7-2003]; PM10: 3.6 LBS/HR (5B) [RULE 1105.1,11-7-2003]; SOX: 25 PPMV (8) [CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]; SOX: 50 PPMV (8A) [40CFR 60 Subpart J, 6-24-2008; CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]	A63.4, A99.1, A99.2, A99.3, A195.2, A195.3, A195.4, A195.5, A195.6, A195.7, A195.8, D29.3, D82.2, D82.5, D90.4, E193.18, E193.20, E448.2, H23.17, K67.14, K67.15



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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emission* And Requirements	Conditions
Process 3: FLUID CATALYTIC CRACKING UNIT					P13.1
System 2: FCCU AIR POLLUTION CONTROL EQUIPMENT					
ELECTROSTATIC PRECIPITATOR, 2D-2, PLATE-WIRE, DRY, NEGATIVE CORONA, 2 CHAMBERS, 3 FIELDS, 3 T/R SETS, 12 CELLS, BUELL, IN SERIES WITH 2D-1, IDLE MODE, 18 FT L, 57 FT 6 IN W, 30 FT H, 300 KVA WITH A/N: 485909 -512801 Permit to Construct Issued: 12/09/08 AMMONIA INJECTION, GRID 1, UPSTREAM OF ESP 2D-1 HOPPER, CATALYST DUST, 8 TOTAL	C166	D151 D2404			C12.1, C12.2, D29.4, D90.8, D90.9, D90.10, D90.11, D323.1, E102.2, E193.10, E193.19, K40.6, K67.10, K67.16
ELECTROSTATIC PRECIPITATOR, 2D-1, PLATE-WIRE, DRY, NEGATIVE CORONA, 2 CHAMBERS, 2 FIELDS, 2 T/R SETS, 12 CELLS, BUELL, IN SERIES WITH 2D-2, IDLE MODE, 18 FT L, 37 FT 6 IN W, 30 FT H, 140 KVA WITH A/N: 485909 -512801 Permit to Construct Issued: 12/09/08 AMMONIA INJECTION, GRID 1, UPSTREAM OF ESP 2D-1 HOPPER, CATALYST DUST, 8 TOTAL	C165	D151 D2404			C12.1, C12.2, D29.4, D90.8, D90.9, D90.10, D90.11, D323.1, E102.2, E193.10, E193.19, K40.6, K67.10, K67.16
ELECTROSTATIC RECIPITATOR, 2D-3X 2D-17, PLATE-RDE, DRY, NEGATIVE CORONA, 2 CHAMBERS, 6 FIELDS, 12 T/R SETS, 24 CELLS, HRC, IN PARALLEL WITH 2D-4X 2D-18, 54 FT L, 80 FT W, 36 FT H, 1380 KVA WITH A/N: 485910 512802 Permit to Construct Issued: 12/09/08 AMMONIA INJECTION, GRID 2, UPSTREAM OF ESPS 2D-3X 2D-17 & 2D-4X 2D-18	C2283	D151 D2404			



**FACILITY PERMIT TO OPERATE
EXXONMOBIL OIL CORPORATION**

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS
The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emission* And Requirements	Conditions
Process 3: FLUID CATALYTIC CRACKING UNIT					P13.1
System 2: FCCU AIR POLLUTION CONTROL EQUIPMENT					
HOPPER, CATALYST DUST, 24 TOTAL	C2283	D151 D2404			C12.2, D29.4, D90.8, D90.9, D90.10, D90.11, D323.1, E102.2, E193.18, E193.19, K67.16
ELECTROSTATIC PRECIPITATOR, 2D-4X 2D-18, PLATE-RDE, DRY, NEGATIVE CORONA, 2 CHAMBERS, 6 FIELDS, 12 T/R SETS, 24 CELLS, HRC, IN PARALLEL WITH 2D-3X 2D-17, 54 FT L, 80 FT W, 36 FT H, 1380 KVA WITH A/N: 485911 512803 Permit to Construct Issued: 12/09/08 AMMONIA INJECTION, GRID 2, UPSTREAM OF ESPS 2D-3X 2D-17 & 2D-4X 2D-18 HOPPER, CATALYST DUST, 24 TOTAL	C2284	D151 D2404			C12.2, D29.4, D90.8, D90.9, D90.10, D90.11, D323.1, E102.2, E193.18, E193.19, K67.16
Process 3: FLUID CATALYTIC CRACKING UNIT					P13.1
System 8: FCCU BASE CATALYST/CATALYST ADDITIVE INJECTING SYSTEM					
BULK MATERIAL LOADING STATION, MULTI-LOADING SYSTEM, CABINET, GRACE DAVISON MODEL MLS-2452-AWC, SERIAL # LL130, WITH AUTOMATIC PROGRAMMABLE LOGIC CONTROLLER, W: 6 FT, L: 10 FT, H: 9 FT WITH A/N: 483507 510467 Permit to Construct Issued: 11/26/08 EDUCTOR, VACUUM PRODUCER, 4 HOSES TO DRAW CATALYST FROM STORAGE BIN TO CATALYST COLLECTOR, WITH 2 DUST FILTERS	D2395	C2397		PM: (9) [RULE 404, 2-7-1986; RULE 405, 2-7-1986]	B27.1, <u>C1.67</u> , E71.13, K171.18



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The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emission* And Requirements	Conditions
Process 3: FLUID CATALYTIC CRACKING UNIT					P13.1
System 8: FCCU BASE CATALYST/CATALYST ADDITIVE INJECTING SYSTEM					
SCREEN, DUST/CATALYST COLLECTOR, OPEN/CLOSE VALVE TO DIRECT CATALYST TO TRANSFER POT POT, TRANSFER, PRESSURIZED, PRD SET AT 125 PSIG, 6 CF CAPACITY, WITH 3 CATALYST LOAD CELLS FOR WEIGHT MEASURING & RECORDING, WITH SUPPORT LEGS EJECTOR, PRESSURIZING CATALYST FROM TRANSFER POT TO REGENERATOR VIA A COMMON HOSE					
FILTER, CARTRIDGE TYPE, CATALYST DUST, 2 IN PARALLEL, CLEMTEX, MODEL FA376094, EACH OD:1 FT 2 IN, ID:9 FT 6 IN, H:2 FT 6 IN, WITH AUTOMATIC AIR PULSE CLEANING, 260 SQ.FT. A/N: 483504 510467 Permit to Construct Issued: 11/26/08	C2397	D2395			C6.4, D29.6, D322.3, D323.1, E102.1

Conditions:

P13.1 All devices under this process are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
HAPs	40CFR61, SUBPART	FF

[40CFR 61 Subpart FF, 12-4-2003]

[Processes subject to this condition : 1, 2, 3, 4, 5, 7, 8, 9, 11, 12, 13, 14, 15, 20, 22, 23]

A63.4 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
Visible emissions	Less than or equal to 30 Percent opacity



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The operator shall comply with the terms and conditions set forth below:

[40CFR 60 Subpart J, 6-24-2008]

[Devices subject to this condition : D151, D2404]

A99.1 The 2.8 lb/1000 bbl fresh feed PM10 emission limit(s) shall only apply when the fresh feed to the FCCU is 105 thousand barrels per day or less.

For the purposes of this condition, PM10 emissions shall be defined as filterable PM10 collected on the cyclone exit, probe and filters of the applicable test methods referenced in the Rule.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1105.1, 11-7-2003]

[Devices subject to this condition : D151, D2404]

A99.2 The 0.005 gr/dscf PM10 emission limit(s) shall only apply when the flow rate is 320,000 dscfm or less.

For the purposes of this condition, PM10 emissions shall be defined as filterable PM10 collected on the cyclone exit, probe and filters of the applicable test methods referenced in the Rule.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1105.1, 11-7-2003]

[Devices subject to this condition : D151, D2404]

A99.3 The 3.6 Lbs/hr PM10 emission limit(s) shall only apply when the fresh feed exceeds 105 thousand barrels per day and the flow rate exceeds 320,000 dscfm.

For the purposes of this condition, PM10 emissions shall be defined as filterable PM10 collected on the cyclone exit, probe and filters of the applicable test methods referenced in the Rule.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.



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The operator shall comply with the terms and conditions set forth below:

[RULE 1105.1, 11-7-2003]

[Devices subject to this condition : D151, D2404]

A195.2The 10 PPMV NH₃ emission limit(s) is averaged over consecutive 60 minutes at 3% oxygen, dry basis.

[RULE 1105.1, 11-7-2003]

[Devices subject to this condition : D151, C1772, D2404]

A195.3The 20 PPMV NO_x emission limit(s) is averaged over 365-day rolling and at 0% oxygen.

For the purposes of this condition, this limit is a long term limit which applies at all times.

[CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]

[Devices subject to this condition : D151, D2404]

A195.4The 40 PPMV NO_x emission limit(s) is averaged over 7-day rolling and at 0% oxygen.

For the purposes of this condition, this limit is a short term limit which applies at all times except during startup, shutdown, or malfunction.

[CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]

[Devices subject to this condition : D151, D2404]

A195.5The 140 PPMV NO_x emission limit(s) is averaged over 24-hour rolling and at 0% oxygen.

For the purposes of this condition, this limit is not to exceed 14 days per occurrence, when the SCR is shutdown because the waste heat boiler 2F-7 is shutdown for inspection per California Code of Regulations, Title 8, Section 770(b).

[CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]

[Devices subject to this condition : D151, D2404]

A195.6The 25 PPMV SO_x emission limit(s) is averaged over 365-day rolling and at 0% oxygen.



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The operator shall comply with the terms and conditions set forth below:

For the purposes of this condition, this limit is a long term limit which applies at all times.

[CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]

[Devices subject to this condition : D151, D2404]

A195.7 The 50 PPMV SOX emission limit(s) is averaged over 7-day rolling and at 0% oxygen.

For the purposes of this condition, this limit is a short term limit which applies at all times except during startup, shutdown, or malfunction.

[CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]

[Devices subject to this condition : D151, D2404]

A195.8 The 500 PPMV CO emission limit(s) is averaged over hourly rolling and at 0% oxygen.

For the purposes of this condition, this limit is a short term limit which applies at all all times except during startup, shutdown, or malfunction.

[CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]

[Devices subject to this condition : D151, D2404]

B27.1 The operator shall not use materials containing any toxic air contaminants (TACs) identified in the SCAQMD Rule 1401, as amended 06-05-2009.

[RULE 1401, 6-5-2009]

[Devices subject to this condition : .. D2395..]

C1.67 The operator shall limit the loading rate to no more than 24000 lb(s) in any one day.

For the purpose of this condition, loading rate shall be defined as the total loading of of base catalyst (GRACE Davison Genesis-2634), base catalyst (Sinopec Ripp ZDOS-T), base catalyst (GRACE ALCYON-U411), catalyst additives (GRACE Davison Olefinsmax ZSM-5), CO promoter (GRACE Davison CP-5), and SOx reducing catalyst (GRACE Davison Super DESOX).

[RULE 1303(b)(2)-Offset, 5-10-1996]



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The operator shall comply with the terms and conditions set forth below:

[Devices subject to this condition : D2395]

C6.4 The operator shall use this equipment in such a manner that the differential pressure being monitored, as indicated below, does not exceed 4 inches HG.

To comply with this condition, the operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the filter.

[RULE 1303(a)(1)-BACT, 5-10-1996]

[Devices subject to this condition : C2397]

C12.1 The operator shall use this equipment in such a manner that the daily average secondary voltage and current (or total power input) and total primary current being monitored as indicated below are greater than or equal to the values in the most recent source test which demonstrated compliance with the emission limits.

The operator shall install and maintain a continuous monitoring and recording system to accurately measure and record the:

1. primary and secondary current.
2. primary and secondary voltage.
3. spark rate.

at each ESP field. In addition, the operator shall keep records, in a manner approved by the District, for each of these parameters.

If the daily average ESP total power input falls below the level measured in the most recent source test which demonstrated compliance with the emission limit, a source test shall be performed within 90 days at the new minimum daily average ESP total power level. The source test shall be performed for the FCCU regenerator (Device D151) according to the requirements specified in Permit Condition D29.3.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001; RULE 404, 2-7-1986; RULE 405, 2-7-1986; RULE 409, 8-7-1981]

[Devices subject to this condition : C165, C166]



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The operator shall comply with the terms and conditions set forth below:

C12.2 The operator shall use this equipment in such a manner that the ESP daily average voltage and secondary current (or total power input) being monitored as indicated below are greater than or equal to the average value in the most recent source test which demonstrated compliance with the emission limits.

The operator shall install and maintain a continuous monitoring and recording system to accurately measure and record the:

1. Total flue gas inlet temperature to ESPs.
2. Total flue gas flow rate.
3. Current across each ESP.
4. Voltage across each ESP.

at each ESP field, in accordance with the approved plan. In addition, the operator shall keep records, in a manner approved by the District, for each of these parameter.

If the daily average ESP total power input falls below the level measured in the most recent source test which demonstrated compliance with the emission limit, a source test shall be performed within 90 days at the new minimum daily average ESP total power level. The source test shall be performed for the FCCU regenerator (Device D151) according to the requirements specified in Permit Condition D29.4.

[RULE 1105.1, 11-7-2003]

[Devices subject to this condition : C165, C166, C2283, C2284]

D29.3 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

The test(s) shall be conducted at least annually.

The test shall be conducted when the equipment is operating under normal conditions.



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The operator shall comply with the terms and conditions set forth below:

Source test result shall be submitted to the District no later than 60 days after the source test was conducted.

Source test results shall include the following parameters: FCCU feed rate; catalyst recirculation rate; coke burn rate; oxygen content of exhaust gases; exhaust flow rate; exhaust gas moisture content; the flue gas temperature at the outlet of the ESP; and the average current, voltage, and spark rate at each of the ESP fields.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 404, 2-7-1986; RULE 405, 2-7-1986; RULE 409, 8-7-1981]

[Devices subject to this condition : D151, D2404]

D29.4 The operator shall conduct source test(s) for the pollutant(s) identified below. Pollutant (s) to be tested

Pollutant (s) to be tested	Required Test Method(s)	Averaging Time	Test Location
PM10 emissions	District Method 5.2(filterables compliance, condensables information)	District-approved averaging time District-approved averaging time	Outlet
PM10 emissions	District Method 5.2 Modified with EPA Method 201A Cyclor (filterables compliance, condensables information)	District-approved averaging time District-approved averaging time	Outlet
PM10 emissions	District Method 5.2 with Previously Determined PM10 to PM Ratio Applied (filterables compliance, condensables information)	District-approved averaging time	Outlet
PM10 emissions	EPA Method 5 (filterables compliance)	District-approved averaging time	Outlet



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The operator shall comply with the terms and conditions set forth below:

	and District Method 5.2 (condensables information)		
NH3 emissions	District method 207.1	1 hour	Outlet
NOX emissions	District method 100.1	1 hour	Outlet
SOX emissions	District method 100.	1 hour	Outlet
CO Emissions	District Method 100. or 10.1	1 hour	Outlet
VOC emissions	District Method 25.1 or 25.3	1 hour	Outlet

The operator shall choose any of the PM10 test methods as indicated above to comply with Rule 1105.1 requirements and the test results of any of the selected test methods shall be used to determine compliance with Rules 404 and 405.

The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after initial startup of the new ESP's. The AQMD engineer shall be notified in writing of the date and time of the test at least 10 days prior to the test.

The test shall be conducted in accordance with AQMD approved source test protocol. The protocol shall be submitted to the AQMD no later than 45 days before the proposed test date and shall be approved by the AQMD before test commences.

The test shall be conducted with the following operating modes of the ESPs:

1. Two new ESPs C2283 & C2284 are in full operating mode (two old ESPs C165 & C166 in idle mode).
2. One new ESP in full operating mode & two old ESPs in full operating mode with 1/2 flue gas flow rate @ 160,000 dscfm.
3. One new ESP in full operating mode and two old ESPs in idle mode with 1/2 flue gas flow rate @ 160,000 dscfm.

The test shall be conducted when the FCCU is operating with at least 80 percent of total FCCU feed rate (or 84 thousand barrels per day of total FCCU feed) with two ESPs in full operating mode.



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The operator shall comply with the terms and conditions set forth below:

The test shall be conducted when the FCCU is operating with at least 40 percent of total FCCU feed rate (or 42 thousand barrels per day of total FCCU feed) with one new ESP in full operating mode.

The test shall be conducted at least every year with three different operating modes after initial source test.

The operator shall provide the sampling port(s) at the inlet of the ESPs (C2283 & C2284) in accordance with AQMD Method 1.1 - "Sample and Velocity Traverses for Stationary Source" and shall obtain a final approval from the AQMD for this sampling port(s) installation and operation, which should be included in the source test protocol.

The test shall be conducted to determine the control efficiency of the ESPs in each mode.

Source test results shall include the following parameters in each mode: FCCU feed rate in KBD; catalyst recirculation rate in TPM; fresh catalyst (make-up & additive rate in TPD; coke burn rate in lb/hr; oxygen & moisture content of exhaust gases; exhaust gas flow rate in dscfm; flue gas temperature at the inlet of the ESP; ammonia injection rate (at ESPs inlet & SCR inlet); and the average current in amps, voltage in volts & spark rate at each ESP field in use.

A source test report shall be submitted to the AQMD no later than 60 days after the source test was completed.

[RULE 1105.1, 11-7-2003; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 404, 2-7-1986; RULE 405, 2-7-1986; RULE 407, 4-2-1982; RULE 409, 8-7-1981; 40CFR60 Subpart J, 6-24-2008; CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]

[Devices subject to this condition : C165, C166, C1772, C2283, C2284]

D29.6 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 filter
PM10 emissions	Approved District method	1 hour	Outlet of the filter



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The operator shall comply with the terms and conditions set forth below:

The initial test(s) shall be conducted within 120 days after achieving maximum production rate, but no later than 180 days after initial start-up.

The test(s) shall be conducted at least annually if the equipment is utilized more than 30 days in a calendar year.

The test shall be conducted when this equipment is operating at least 80 percent of the maximum allowable capacity.

Report of the test and operating condition of the equipment shall be submitted to the District within 60 days after the test.

The District shall be notified of the date and time of the test at least 10 days prior to the test.

The operator shall submit a test protocol to the District at least 60 days prior to the initial testing. The initial and annual tests shall be conducted according to the approved test protocol or any subsequent approved revisions.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 3004(a) (4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : C2397]

D82.2 The operator shall install and maintain a CEMS to measure the following parameters:
CO concentration in ppmv Oxygen concentration in percent volume.

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

[Devices subject to this condition : D151, C164, D2404]

D82.5 The operator shall install and maintain a CEMS to measure the following parameters:

NOX concentration in ppmv.

SOX concentration in ppmv.

Oxygen concentration in percent volume.

The NO_x and SO_x CEMS shall be certified prior to the startup of the new ESPs with a range covering the emission limits.



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The operator shall comply with the terms and conditions set forth below:

[RULE 2004, 5-11-2001; RULE 2011, 5-6-2005; RULE 2012, 5-6-2005; CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]

[Devices subject to this condition : D151, D2404]

D90.4 The operator shall continuously monitor the opacity at stack according to the following specifications:

The operator shall use opacity meter 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 : D151, D2404]

D90.8 The operator shall continuously monitor the temperature in degree F of the flue gas at the inlet to the ESP according to the following specifications:

The operator shall monitor once every 15 minutes.

The operator shall automatically record electronically the above parameter at least one measurement every hour. These records shall be maintained for at least five years and made available to AQMD personnel upon request.

The continuous monitor shall be installed and operated whenever the ESP is operating in accordance with the monitoring plan as approved by the AQMD.

Monitoring and recording of this parameter shall not be required during periods of routine maintenance or malfunction of the monitoring and recording devices.

The temperature monitor shall have a minimum range from 500 to 800 degrees F and be accurate to within plus or minus 5 percent and shall be inspected for replacement, if needed, at least once every 12 months.

[RULE 1105.1, 11-7-2003]

[Devices subject to this condition : C165, C166, C2283, C2284]



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The operator shall comply with the terms and conditions set forth below:

D90.9 The operator shall continuously monitor the flow rate in scfm (wet) of the flue gas at the inlet to the ESP according to the following specifications:

The monitoring shall be conducted in accordance with the monitoring plan as approved by the AQMD.

[RULE 1105.1, 11-7-2003]

[Devices subject to this condition : C165, C166, C2283, C2284]

D90.10 The operator shall continuously monitor the ESP total power input across the ESP according to the following specifications:

The operator shall monitor once every 15 minutes.

The operator shall automatically record electronically the above parameter at least one measurement every hour. These records shall be maintained for at least five years and made available to AQMD personnel upon request.

The continuous monitor shall be installed and operated whenever the ESP is operating in accordance with the monitoring plan as approved by the AQMD. Monitoring and recording of this parameter shall not be required during periods of routine maintenance or malfunction of the monitoring and recording devices.

The power monitor shall have a range from 0 to 1500 mA and 0 to 100 KV per transformer/rectifier set, which shall be accurate to within plus or minus 5 percent and shall be calibrated at least once every 12 months.

[RULE 1105.1, 11-7-2003]

[Devices subject to this condition : C165, C166, C2283, C2284]

D90.11 The operator shall continuously monitor the NH₃ injection rate in lb/hr at the inlet to the ESP according to the following specifications:

The monitoring shall be conducted in accordance with the monitoring plan as approved by the AQMD.

[RULE 1105.1, 11-7-2003]

[Devices subject to this condition : C165, C166, C2283, C2284]



FACILITY PERMIT TO OPERATE EXXONMOBIL OIL CORPORATION

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

D323.1 The operator shall conduct an inspection for visible emissions from all stacks and other other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a semi-annual basis, at least, unless the equipment did not operate during the entire semi-annual period. The routine semi-annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

in accordance with the reporting requirements in Section K of this permit

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

[**RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001**]

[Devices subject to this condition : C165, C166, C2283, C2284, C2397]

E71.13 The operator shall not operate this equipment if the existing Catalyst Loading System is in operation.



FACILITY PERMIT TO OPERATE EXXONMOBIL OIL CORPORATION

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

[RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition : D2395]

E102.1 The operator shall discharge dust collected in this equipment only into closed containers.

[RULE 1303(a)(1)-BACT, 5-10-1996]

[Devices subject to this condition : C2397]

E102.2 The operator shall discharge dust collected in this equipment only into closed containers.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : C165, C166, C2283, C2284]

E193.18 The operator shall construct, operate, and maintain this equipment according to the following specifications:

The operator shall comply with all mitigation measures stipulated by the AQMD Final Environmental Impact Report dated March 23, 2007 [CA PRC CEQA, 11-23-1970].

[Devices subject to this condition : D151, C2283, C2284, D2404]

E193.19 The operator shall operate and maintain this equipment as follows:

Whenever the ESP system (Devices C165, C166, C2283, and C2284) is in operation and venting the FCCU Regenerator catalyst dust exhaust, the operator shall maintain in operation the following modes.

1. Two ESPs C2283 & C2284 in full operating mode (two ESPs C165 & C166 in idle mode), or
2. One ESP (C2283 or C2284) in full operating mode and two ESPs C165 & C166 in full operating mode with 1/2 flue gas flow rate @ 160,000 dscfm, or
3. One ESP (C2283 or C2284) in full operating mode, and two ESPs C165 & C166 in idle mode with 1/2 flue gas flow rate @ 160,000 dscfm.



FACILITY PERMIT TO OPERATE EXXONMOBIL OIL CORPORATION

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

The operator shall not operate the FCCU if emissions from the FCCU to the atmosphere exceed the following limits for filterable PM10: 0.005 gr/dscf or 2.8 lb per 1000 bbl fresh feed.

The operator shall not operate any of the modes, if the source test results of Condition D29.4 show the PM10 and/or NH3 emissions exceed the rule limits, after May 30, 2009.

[RULE 1105.1, 11-7-2003]

[Devices subject to this condition : C165, C166, C2283, C2284]

E193.20 The operator shall operate and maintain this equipment according to the following specifications:

All vent gases under normal operating conditions shall be vented to one of the devices identified in the "connected to" column in the order described in this facility permit.

To comply with this condition, the operator shall replace two emergency bypass stacks (2F-3 East and West) with an enclosed ducting connecting the ESPs C2283 & C2284 to the 2F-7 stack as for emergency venting.

[RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition : D151, D2404]

E448.2 The operator shall comply with the following requirements:
The operator shall maintain in operation the following modes:

1. CO boiler C164 in maintenance mode: The emissions from the regenerator/cyclones may be vented directly to ESPs system and bypass CO boiler C164 during required maintenance of the CO boiler.

2. CO boiler C164 in unfired mode: When ESP C2283 or C2284 is in maintenance mode, the emissions from the regenerator/cyclones shall be vented to the CO boiler C164, which may be operated in the unfired or waste heat boiler mode.

The above modes shall not be in operation when the expander cleaning system (walnut shells injection period) is in operation.

The District shall be notified 24 hours in advance of any scheduled maintenance and unfired mode of the CO boiler.



FACILITY PERMIT TO OPERATE EXXONMOBIL OIL CORPORATION

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

The District shall be notified within 24 hours after any unscheduled maintenance and unfired mode of the CO boiler.

An annual report shall be submitted to the District which includes a summary of the number of hours the CO boiler was operated in each mode, a description of maintenance, all scheduled and unscheduled work performed for each mode, CO concentration in PPM and hourly CO emissions calculated based on 40CFR 60 Subpart J monitoring data during each mode. The report shall be submitted within 90 days from the end of the calendar year.

The operator shall not operate the FCCU if the CO emissions from the FCCU to the atmosphere exceed the 500 ppmv limits set forth in 40CFR60 Subpart J and Consent Decree.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; 40CFR 60 Subpart J, 6-24-2008]

[Devices subject to this condition : D151, C164, D2404]

H23.17 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
CO	40CFR60, SUBPART	J
PM	40CFR60, SUBPART	J
Visible Emissions	40CFR60, SUBPART	J
SOX	40CFR60, SUBPART	J

[40CFR 60 Subpart J, 6-24-2008]

[Devices subject to this condition : D151, D2404]

K67.14 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Required maintenance of the CO boiler.

Duration of the maintenance and unfired mode of the CO boiler.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition : D151, C164, D2404]



FACILITY PERMIT TO OPERATE EXXONMOBIL OIL CORPORATION

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

K67.15 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Duration of the planned startup and shutdown of the FCCU.

[RULE 1105.1, 11-7-2003]

[Devices subject to this condition : D151, D2404]

K67.16 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Truck outhauls of the hopper.

[RULE 1105.1, 11-7-2003]

[Devices subject to this condition : C165, C166, C2283, C2284]

K171.18 The operator shall provide to the District the following items:

Update and complete P&ID drawings of the loading equipment shall be submitted to the District within 60 days after permit issuance date.

Designate one hose, out of four hoses, to draw the SO_x reducing catalyst (GRACE Davison Super DESOX) in the loading system. This designated hose shall be expired once the Rule 441 Research Operations Permit is cancelled.

Records shall be kept when using all four filling hoses and records when using the existing catalyst loading system.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D2395]



**FACILITY PERMIT TO OPERATE
EXXONMOBIL OIL CORPORATION**

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS
The operator shall comply with the terms and conditions set forth below:

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