# FACILITY PERMIT TO OPERATE
# EXXONMOBIL OIL CORPORATION

## SECTION D: 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 | Emissions * And Requirments | Conditions |
|---|---|---|---|---|---|
| **Process 7: HYDROCRACKING UNIT** | | | | | P13.1 |
| **System 3: FUEL GAS FILTER SEPARATORS** | | | | | S13.2, S15.1, S31.2 |
| FILTER, SEPARATOR, 3C-201, REFINERY FUEL GAS, VESSEL TYPE, WITH DUAL LOWER BARRELS FOR STORAGE OF THE REMOVED LIQUID, SERVES 4 HEATERS (3F-1A & B, 3F-2A & B), HT: 9 FT 4 IN; DIA: 1 FT 4 IN<br>AN: 471343 (PC/PO) | DX3C | | | | |
| FUGITIVE EMISSIONS, MISCELLANEOUS<br>AN: 471343 (PC/PO) | DX1FUG | | | HAP: (10)[40CFR 63 SUBPART CC, #5A,6-23-2003] | H23.36 |
| **Process 19: AIR POLLUTION CONTROL PROCESS** | | | | | |
| **System 1: REFINERY EMERGENCY RELIEF SYSTEM** | | | | | S13.2, S18.1 |
| FLARE, ELEVATED WITH STEAM INJECTION, EAST, 65F-4, HT: 200 FT; DIA: 4 FT<br>AN: ~~383364~~ 471344 (PC/PO) | C892 | | | CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981] | B61.5, D12.6, D323.2, E193.2, *H23.13*, H23.35, ~~H.1~~ |
| **System 3: COKER OFFGAS/CENTRAL VAPOR RECOVERY COMPRESSOR SYSTEM** | | | | | S7.5, S13.2, S15.1, S15.14, S18.8 |
| COMPRESSOR, 22K-36, VAPOR RECOVERY GAS, RECIPROCATING, 1500 HP MOTOR<br>A/N: ~~450318~~ 471345 (PC/PO) | D981 | | | | E71.6, H23.34 |
| **Process 2: COKING & RESIDUAL CONDITIONING** | | | | | P13.1 |
| **System 9: FUEL GAS FILTER SEPARATORS** | | | | | S13.2, S15.1, S31.x5 |
| FILTER, SEPARATOR, 21J-22, REFINERY FUEL GAS, VESSEL TYPE, WITH A LOWER BARREL FOR STORAGE OF THE REMOVED LIQUID, SERVES 3 HEATERS (21F-6, 21F-7 & 21F-8)<br>AN: 422369 | DX21J | | | | |
| FILTER, SEPARATOR, 22J-28, REFINERY FUEL GAS, VESSEL TYPE, WITH A LOWER BARREL FOR STORAGE OF THE REMOVED LIQUID, SERVES HEATERS 22F-1, 22F-2 & 22F-3<br>AN: 422369 | DX22J | | | | |
| FUGITIVE EMISSIONS, MISCELLANEOUS<br>AN: 422369 | DX2FUG | | | HAP: (10)[40CFR 63 Subpart CC, #5A,6-23-2003] | H23.34 |
| **Process 6: HYDROGEN PRODUCTION UNITS** | | | | | |

* (1) Denotes RE CLAIM emission factor (2) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5)(5A)(5B)Denotes command and control emission limit (6) Denotes air toxic control rule
(7) Denotes NSR applicability limit (8)(8A)(8B) Denotes 40 CFR limit(e g NSPS, NESHAP, etc.)
(9) See App B for Emission Limits (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

# FACILITY PERMIT TO OPERATE
# EXXONMOBIL OIL CORPORATION

## SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

| | | | | | |
|---|---|---|---|---|---|
| **System 6: FUEL GAS FILTER SEPARATORS** | | | | | S13.2, S15.1, S31.X5 |
| FILTER, SEPARATOR, 4C-30, REFINERY FUEL GAS, VESSEL TYPE, SERVES HEATER 4F-1, HT: 10 FT 8 IN; DIA: 2 FT 8 IN<br>AN: 422169 | DX4C | | | | |
| FUGITIVE EMISSIONS, MISCELLANEOUS<br>AN: 422169 | DX3FUG | | | HAP: (10)[40CFR 63 SUBPART CC, #5A,6-23-2003] | H23.34 |
| **Process 16: STEAM GENERATION PROCESS** | | | | | |
| **System 3: FUEL GAS FILTER SEPARATORS** | | | | | S13.2, S15.1, S31.x5 |
| KNOCK OUT POT, 30C-4, FUEL GAS MIX, COMMON TO BOILERS 30F-1 & 30F-2, HT: 8 FT 9 IN; DIA: 3 FT 6 IN<br>AN: 422177 | DX30C-4 | | | | |
| FILTER, SEPARATOR, 30J-3, REFINERY FUEL GAS, VESSEL TYPE, WITH A LOWER BARREL FOR STORAGE OF THE REMOVED LIQUID, SERVES BOILER 30F-1, HT: 6 FT 11 IN; DIA: 1 FT<br>AN: 422177 | DX30J-3 | | | | |
| FILTER, SEPARATOR, 30J-4, REFINERY FUEL GAS, VESSEL TYPE, WITH A LOWER BARREL FOR STORAGE OF THE REMOVED LIQUID, SERVES BOILER 30F-2, HT: 6 FT 11 IN; DIA: 1 FT<br>AN: 422177 | DX30J-4 | | | | |
| FILTER, SEPARATOR, 75J-7, REFINERY FUEL GAS, VESSEL TYPE, WITH A LOWER BARREL FOR STORAGE OF THE REMOVED LIQUID, SERVES BOILER 75F-1<br>AN: 422935 | DX75J-7 | | | | |
| FUGITIVE EMISSIONS, MISCELLANEOUS<br>AN: 422177 | DX4FUG | | | HAP: (10)[40CFR 63 SUBPART CC, #5A,6-23-2003] | H23.34 |

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## PROCESS CONDITIONS

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 |

* (1) Denotes RE CLAIM emission factor (2) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5)(5A)(5B)Denotes command and control emission limit (6) Denotes air toxic control rule
(7) Denotes NSR applicability limit (8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAP, etc.)
(9) See App B for Emission Limits (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

**[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]

**SYSTEM CONDITIONS**

S15.14 The vent gases from all affected devices of this process/system shall be vented as follows:

All sour gases shall be directed to the absorber located in the Fuel Gas Treating Unit (P11/S3), the Unsaturate Gas Plant (P9/S2), or the DEA Absorption System (P11/S5).

This process/system shall not be operated unless the absorber is in full use and has a valid permit to receive vent gases from this system.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]**
[Systems subject to this condition : Process 19, System 3]

S13.2 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|---|---|---|
| VOC | District Rule | 1123 |

[RULE 1123, 12-7-1990]
[Systems subject to this condition : Process 1, System 1, 2, 3, 4, 7; Process 2, System 1, 2, 4, 5, 9; Process 3, System 1; Process 4, System 1, 3, 5; Process 5, System 1, 2; Process 6, System 1, 2, 6; Process 7, System 1, 3; Process 8, System 1, 2, 3, 4, 6; Process 9, System 1, 2, 3, 4, 5, 6; Process 11, System 1, 2, 3, 5, 6, 7, 8, 9, 10, 11; Process 16, System 3; Process 17, System 5, 18; Process 19, System 1, 3, 7; Process 22, System 1]

S15. 1 The vent gases from all affected devices of this process/system shall be vented as follows:

All emergency vent gases shall be directed to a VRS/flare system except Devices IDs D35, D1250, D2145, D57 to D62, D71, D68, D86-D91, D98, D152, D237, D349, D360, D629, D630, D631, D657, D658, D668, D671, D1503-D1505, D1507 that vent to the atmosphere.

This process/system shall not be operated unless the VRS/flare system is in full use and has a valid permit to receive vent gases from this system.

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

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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

[Systems subject to this condition : Process 1, System 1, 2, 3, 4, 7; Process 2, System 1, 2, 4, 5, 9; Process 3, System 1; Process 4, System 1, 3, 5; Process 5, System 1, 2; Process 6, System 1, 2, 6; Process 7, System 1, 3; Process 8, System 1, 2, 3, 4, 6; Process 9, System 1, 2, 3, 4, 5; Process 11, System 1 , 2 , 3 , 5 , 6 , 7 , 8 , 9 , 10 , 11; Process 12, System 1 , 2 , 3 , 4; Process 13, System 1, 2, 3, 4; Process 16, System 3; Process 17, System 5, 8, 11, 18; Process 19, System 3]

S18.1 All affected devices listed under this process/system shall be used only to receive, recover and/or dispose of vent gases routed from the system(s) or process(es) listed below, in addition to specific devices identified in the "connected to" column:

Loading/Unloading Process (Process: 13, System: 1, 2, 3 & 4)
Hydrogen Production (Process: 6, System: 1, 2 & 6)
Gas Production Process (Process: 9, System: 1, 2, 3, 4, 5 & 6)
Catalytic Reforming (Process: 5, System: 1 & 2)
Treating/Stripping Process (Process: 11, System: 1, 2, 3, 5, 6, 7, 8, 9, 10 & 11)
Fluid Catalytic Cracking Unit (Process: 3, System: 1)
Petroleum Miscellaneous Process (Process: 17, System: 5, 8, 11 & 18)
Hydrocracking Unit (Process: 7, System: 1 & 3)
Air Pollution Control Process (Process: 19, System: 3)
Crude Distillation Unit (Process: 1, System: 1, 2, 4 & 7)
Coking and Residual Conditioning (Process: 2, System: 1, 2, 4, 5 & 9)
Hydrotreating Process (Process: 4, System: 1, 3 & 5)
Alkylation Unit (Process: 8, System: 1, 2, 3, 4 & 6)
Sulfur Production Process (Process: 12, System: 1, 2, 3 & 4)
Steam Generation Process (Process: 16, System: 3)

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]
[Systems subject to this condition : Process 19, System 1]

S18.8 All affected devices listed under this process/system shall be used only to receive, recover and/or dispose of vent gases routed from the system(s) or process(es) listed below, in addition to specific devices identified in the "connected to" column:

Loading/Unloading Process (Process: 13, System: 1, 2, 3 & 4)
Catalyst Regeneration Process (Process: 10, System: 1)
Hydrogen Production (Process: 6, System: 1, 2 & 6)
Gasoline Blending (Process: 20, System: 1)
Gas Production Process (Process: 9, System: 1, 2, 3, 4, 5 & 6)
Catalytic Reforming (Process: 5, System: 1 & 2)

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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

Treating/Stripping Process (Process: 11, System: 1, 2, 3 & 5)
Fluid Catalytic Cracking Unit (Process: 3, System: 1)
Petroleum Miscellaneous Process (Process: 17, System: 5, 8, 11 & 18)
Hydrocracking Unit (Process: 7, System: 1 & 3)
Crude Distillation Unit (Process: 1, System: 1, 2, 3 & 4)
Coking and Residual Conditioning (Process: 2, System: 1, 2, 4, 5 & 9)
Hydrotreating Process (Process: 4, System: 1, 3 & 5)
Alkylation Unit (Process: 8, System: 1, 2, 3 & 4)
Dehydrator Unit (Process: 17, System: 16)
Steam Generation Process (Process: 16, System: 3)

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]
[Systems subject to this condition: Process 19, System 3]

B61.5 The operator shall not use (or combust) vent gas containing the following specified compounds:

| Compound | ppm by volume |
|---|---|
| H2S greater than | 160 |

**[RULE 1118, 11-4-2005]**
[Devices subject to this condition : C891, C892, C894, C1558]

D12.6 The operator shall install and maintain a(n) infrared flame detector to accurately indicate the presence of a flame at the pilot light.

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

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; 40CFR 63 Subpart A, 5-16-2007; CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]**
[Devices subject to this condition : C891, C892, C1558]

D323.2 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a bi-weekly basis, at least, unless the equipment did not operate during the entire bi-weekly period. The routine bi-weekly 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

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

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 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: C891, C892, C894]

E71.6 The operator shall only maintain a vacuum pressure of 4 inches Hg or higher in this equipment during normal operations.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]**
[Devices subject to this condition: D981, D982, D983, D984]

E193.2 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: C891, C892, C894, C1558]

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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

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

| Contaminant | Rule | 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 : 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]

H23.34 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|---|---|---|
| VOC | District | Rule 1173 |
| VOC | 40CFR60, SUBPART | GGGa |

This equipment was subject to the applicable requirements of 40CFR60 Subpart GGG per Consent Decree Civil Case No. 05 C 5809 dated 12-13-2005. This equipment is now subject to the applicable requirements of 40CFR60 Subpart GGGa per ExxonMobil's notification to EPA dated 08-24-2009

**[RULE 1173, 5-13-1994;** RULE 1173, 2-6-2009; **40CFR 60 Subpart GGGa, 6-2-2008; CONSENT DECREE CIVIL CASE No. 05 C 5809, 12-13-2005]**
[Devices subject to this condition : D119, D355, D356, D390, D525, D542, D574, D869, D980, D981, D982, D983, D984, D985, D986, D1298, D1475, D1527, D1556, D1740, D1788, D1789, D1790, D1791, D1792, D1793, D1794, D1800, D1803, D1805, D1807, D1808, D1809, D1810, D1811, D1815, D1819, D1825, D1826, D1827, D1828, D1829, D1830, D1831, D1834, D1838, D1839, D1840, D1842, D1844, D1845, D1849, D1850, D1851, D1853, D1860, D1862, D1863, D1864, D1865, D1877, D1888, D1889, D1890, D1891, D1892, D1895, D1936, D1937, D1938, D1939, D1955, D1956, D1957, D1983, D1987, D1988, D2009, D2010, D2231, D2256, D2259, D2330, D2366, D2367, D2368, D2369, D2370, D2371, D2372, D2373, D2374, D2375, D2376, D2377, D2378, D2379, D2380, D2383, Dx2fug – Dx5fug]

H23.35 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|---|---|---|
| SOX | District Rule | 1118 |

**[RULE 1118, 11-4-2005]**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

[Devices subject to this condition: C891, C892, C894, C1558]

H23.36 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|---|---|---|
| VOC | District Rule | 1173 |
| VOC | 40CFR60, SUBPART | GGGa |

[**RULE 1173, 5-13-1994;** RULE 1173, 2-6-2009; **40CFR 60 Subpart GGGa, 6-2-2008**]

[Devices subject to this condition: D2235, D2254, Dx1fug]

S31.2 The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 384499, 385155, 389291, 389292, 411508, 411586, 422931, 435110, 435111 & 471343:

All valves shall be bellow-sealed except in the following applications: valves in heavy liquid service, control valves, instrument piping/tubing valves, valves requiring torsional stem motion, situations where valve failure could pose safety hazard (e.g., drain valves with stems in the horizontal position), retrofit/special application valves with space limitation and valves not commercially available. District shall approve all exceptions to this requirement.

All valves and new major components shall be physically identified in the field with special markings that distinguish the components from non-BACT components. Additionally, all new components shall be identified as BACT components in the record.

All valves shall be inspected monthly using EPA Reference Method 21. The operator may revert to quarterly inspection upon District approval, after two consecutive monthly inspections in which only two percent or less are found to be leaking above 500 ppmv. For leaks greater than 500 ppmv above background, repair shall be attempted within five (5) days of detection. Repair or replacement shall be completed within 15 days, unless demonstrated otherwise.

The operator shall keep records of the monthly inspections, subsequent repairs and reinspections, if any, in a manner approved by the District.

The operator shall provide the following information to the District no later than 60 days after initial startup of the equipment in the system:

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

a) Piping and instrumentation diagrams (or some other equivalent District-approved diagrams) that identify all valves. The operator shall also provide a listing of all valves (bellows and non-bellows) categorized by location, type, size, accessibility, and service; and

b) Recalculation of fugitive emissions based on actual fugitive components installed and removed from service. All valves shall be categorized by tag number, type, size, body material, service, and reason(s) why bellow seal valves were not used.

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

[Systems subject to this condition: Process 4, System 1 , 3; Process 6, System 2; Process 7, System 3; Process 9, System 6; Process 13, System 1 , 3 , 4 , 11; Process 18, System 1]

S31.x5 The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 384499, 385155, 389291, 389292, 411508, 411586, 422931, 435110, 435111, 422369, 422169, 422177, 422935 & 422371:

All valves and major components shall be physically identified in the field with special markings that distinguish the components from non-BACT components. Additionally, all components shall be identified as BACT components in the record.

All valves shall be inspected monthly using EPA Reference Method 21. The operator may revert to quarterly inspection upon District approval, after two consecutive monthly inspections in which only two percent or less are found to be leaking above 500 ppmv. For leaks greater than 500 ppmv above background, repair shall be attempted within five (5) days of detection. Repair or replacement shall be completed within 15 days, unless demonstrated otherwise.

The operator shall keep records of the monthly inspections, subsequent repairs and reinspections, if any, in a manner approved by the District.

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

[Systems subject to this condition: Process 2, System 9; Process 4, System 1 , 3; Process 6, System 2 & 6; Process 9, System 6; Process 13, System 1 , 3 , 4 , 11; Process 16, System 3; Process 17, System 18; Process 18, System 1]

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