

South Coast Air Quality Management District

Statement of Basis

Proposed Title V Permit

(Issued for Public Notice: 4/3/09)

Facility Name: ExxonMobil Oil Corporation
Facility ID: 800089
SIC Code: 2911
Facility Address: 3700 West 190th Street
Torrance, CA 90509-2929

Application Number: 340343
Application Submittal Date: March 19, 1998

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1. Introduction and Scope of Permit

Title V is a national operating permit program for major air pollution sources. Facilities that are subject to Title V need to obtain a Title V permit and comply with specific Title V procedures to modify their permits. The Title V permit replaces the facility's other existing permits. The Title V does not necessarily include any new requirements for reducing emissions from sources. The facility permit under Title V does however include new permitting, noticing, recordkeeping, and reporting requirements.

The South Coast Air Quality Management District (AQMD) implements the Title V through its Regulation XXX – Title V Permits, adopted by the AQMD Governing Board to comply with the United States Environmental Protection Agency (EPA) requirements that local air permitting authorities develop a Title V program. Regulation XXX was developed by AQMD with the participation of the public and affected facilities through a series of public workshops, working group meetings, public hearings and other meetings. AQMD also has published a draft of the Technical Guidance Document for Title V (March 2005, Version 4.0) available on the AQMD website at <http://www.aqmd.gov/titlev/TGD.html>.

The Title V major source threshold for a particular pollutant depends on the attainment status of the pollutant in the South Coast Air Basin. The Basin is in attainment with the National Ambient Air Quality Standards (NAAQS) for NO₂, SO₂, CO, and lead. The CO status was re-designated as attainment in June 2007 by the EPA (72 FR 26718). For particulate matter, the status for PM₁₀ is classified as serious non-attainment, and PM_{2.5} is classified a non-attainment. The status for ozone is extreme non-attainment.

The AQMD proposes to issue an initial Title V permit for the refinery operations of ExxonMobil Oil Corporation (ExxonMobil), which are located at 3700 W. 190th Street, Torrance, CA 90509. The refinery is subject to Title V requirements because the company's operations at this location as an aggregate are a major source of pollution as defined in Title V and the facility is subject to certain New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements.

2. Facility Description

The ExxonMobil Torrance facility is a refinery. The company processes crude oil into petroleum products such as gasoline, diesel, jet fuel, fuel oil, liquefied petroleum gases (LPG), sulfur, and petroleum coke. This facility currently has processing capacity of 160,000 barrels of crude oil per day. ExxonMobil operates several processes that separate and transform the crude oil into major components in which some are used as blending stocks to produce final products, and some are used as feedstocks for chemical processes to produce the desired blend stocks that will go into the final products. Some of the major processes employed at the facility are as follows:

Crude and Vacuum Distillation Units

The distillation column is the first processing unit that processes the crude oil into different fractions based on boiling point. It is purely a physical process. The distillation units simply separate the crude oil into streams of light gases, liquid petroleum gases (LPG), and middle distillates (diesel and jet fuel), heavier streams such as gas-oil and residues that are further processed downstream.

Fluid Catalytic Cracking Unit (FCCU)

The FCCU converts light gasoil into low boiling point hydrocarbons. The process is called the "cracking process" because it involves mixing gasoil feed with fluidized catalyst in a reactor under high temperature and pressure to break large chain hydrocarbons into smaller chain hydrocarbons that have lower boiling points. This cracking process produces a large quantity of gasoline blending component and feedstock for the alkylation operations.

Catalytic Reforming

Catalytic reforming process converts low octane liquids to higher octane gasoline blending stocks. The reforming process converts the cycloparaffins into aromatics by dehydrogenation and isomerization and the cracking of ring hydrocarbons.

Hydrocracking

Heavy gasoil is cracked under high pressure and temperature with hydrogen and the presence of a catalyst as into lighter components (lower boiling points), which are used as blending stocks for gasoline and other products.

Alkylation Unit

This unit produces alkylate, a high octane gasoline component by allowing olefin feed stock, such as butylenes, to combine with isobutane in the presence of sulfuric acid.

Hydrogen Plants

Two onsite hydrogen plants produce hydrogen for use in various hydroprocessing operations, such as hydrotreating and hydrocracking.

Hydrotreating

This process unit removes impurities such as sulfur and nitrogen from feed stocks and products. The impurities are removed by converting naturally occurring sulfur and nitrogen compounds into hydrogen sulfide and ammonia over a catalyst at high temperature and pressure in the presence of hydrogen.

Blending

The various process units create blend stocks for gasoline, jet fuel, and diesel. For example, alkylate, reformate, and FCC gasoline are all gasoline blend stocks. The blending unit combines the blend stocks to ensure that all finished products meet state specific gasoline standards.

Coking

Heavy residual oil and recovered oil are thermally cracked at a high temperature to produce light hydrocarbons and petroleum coke, which are stored in coke barns.

In addition to the above major processes, the facility operates other distillation and separation processes, numerous combustion units such as cogeneration facilities, process heaters and boilers that are used in many of the processes, sulfur plants, refinery flares, aqueous ammonia blending, and wastewater treatment systems. The ExxonMobil facility also uses fixed roof tanks, internal floating roof storage tanks, external floating roof storage tanks, and pressurized storage tanks to store crude oil, intermediate and finished products.

3. Construction and Permitting History

The refinery has been in continuous operation since 1929. Since the refinery's construction, numerous permits-to-construct and permits-to-operate have been issued to the refinery by AQMD and its forerunner, the Los Angeles County Air Pollution Control District which was established in 1947. The current permit to operate and/or permit to construct for each permit unit located at the refinery is contained in the Title V permit.

4. Regulatory Applicability Determinations

Applicability determinations (i.e., determinations made by the District with respect to what legal requirements apply to a specific piece of equipment, process, or operation) for this facility have been completed. Applicable legal requirements with which this refinery must comply have been identified in the Title V permit (for example, Sections D, E, H and J of the Title V permit). Federal NSPS requirements of 40 CFR Part 60 apply to certain units at the facility and the permit terms and conditions have been added to Sections D and H of the Title V permit. Federal NESHAP requirements of 40 CFR Part 63 apply to certain units at the facility and the permit terms and conditions have been added to Sections D, H, and J of the Title V permit.

Standards of Performance for New Stationary Sources (NSPS) (40 CFR 60)

Applicability Determinations

All of the equipment in the Title V Permit have been reviewed to determine whether they are subject to any of the NSPSs. With the exception of the equipment specified in Tables 4.1 to 4.3 below, the refinery is generally subject to the following NSPS's:

- 40 CFR 60 Subpart D – Standards of Performance for Fossil-Fuel-Fired Steam Generators for which Construction Commenced After August 17, 1971.
- 40 CFR 60 Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (for which construction, modification, or reconstruction commenced after June 19, 1984);
- 40 CFR 60 Subpart Dc – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (for which construction, modification, or reconstruction commenced after June 9, 1989);
- 40 CFR 60 Subpart GG – Standards of Performance for Stationary Gas Turbines;
- 40 CFR 60 Subpart J – Standards of Performance for Petroleum Refineries;
- 40 CFR 60 Subpart Ja – Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007;
- 40 CFR 60 Subpart K – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973 and Prior to May 19, 1978;
- 40 CFR 60 Subpart Ka – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and Prior to July 23, 1984;
- 40 CFR 60 Subpart Kb – Standards of Performance for Volatile Organic Storage Vessels (Including Petroleum Liquids Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced July 23, 1984;
- 40 CFR 60 Subpart XX – Standard of Performance for Bulk Gasoline Terminals;
- 40 CFR 60 Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After January 14, 1983 and on or before November 7, 2006;
- 40 CFR 60 Subpart GGGa – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After November 7, 2006; and
- 40 CFR 60 Subpart QQQ – Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems.

The above regulations specify standards for applicable equipment or devices at the ExxonMobil refinery based on construction dates, or subsequent modifications. However, it only applies if there is an emission increase associated with the activities as defined by 40 CFR 60.14(a). In addition, for existing equipment or device that undergoes reconstruction with a capital cost of the new components that exceed 50 percent of the fixed capital cost for a new equipment or facility as defined in 40 CFR 60.15(a) and (b) will need to comply with the regulations. Applicability of

the above regulations is based on information in the permit application files or through refinery's responses to AQMD's information requests. Each of the standards listed above, as applicable to the ExxonMobil refinery, is incorporated into the Title V permit.

Alternative Monitoring Plans (AMPs)

The EPA allows facilities to apply for an alternative monitoring plan (AMP) in lieu of meeting the monitoring requirements specified under an individual NSPS. The AMP is based on the authority granted to the EPA under NSPS Subpart A, section 60.13(i), which states that "After receipt and consideration of written application, the administrator may approve alternative procedures to any monitoring procedures or requirements of [Part 60] ...". The EPA, which retains the legal authority to approve these AMPs, has approved AMPs that include adequate monitoring to verify compliance with the emission standard(s) of an NSPS.

The ExxonMobil refinery has received the EPA's approval on several AMPs for their fuel gas combustion devices (FGCDs). These approved AMPs are for the monitoring requirements of H₂S concentration in the fuel gas as specified at §60.104(a)(1), §60.104(b)(2) and 60.105(a)(4) (i-iv), and §60.106(i) of NSPS Subpart J. Specifically, the following FGCDs have received EPA approved AMPs:

- 55F-1 Clean Service Flare
- 72F-2/4 Gas Fired Incinerator
- 19-F-1 Platinum Reformer Reactor Heater No.2
- 50J-30 Resid Loading Rack Incinerator
- 2C-3 FCCU Catalyst Regenerator

A copy of the EPA approved AMPs for these FGCDs are contained as Attachment 1 to this SOB. Some of these AMPs cover more than one of the subject FGCDs. Each of these FGCDs is tagged with a condition that specifies that ExxonMobil must comply with the requirements of the approved AMP for the device.

Non-Applicability Determinations

Tables 4.1 to 4.3 below contain tabulated summaries of negative determinations regarding NSPS applicability.

Table 4.1 Combustion Sources Not Subject to NSPS Requirements

Device ID	Equipment	Regulation	Summary of Non-Applicability Determination
D1511	Boiler	40 CFR 60 Subpart D	This is an unfired Waste Heat Boiler. It does not burn fossil fuel.
C164, D803, D805	Boiler	40 CFR 60, Subparts Db	These boilers were not constructed, reconstructed or modified after 6/19/84.

Device ID	Equipment	Regulation	Summary of Non-Applicability Determination
C626	Incinerator	40 CFR 60, Subparts J	This equipment was not constructed, reconstructed or modified after June 11, 1973.
All Fuel Combustion Devices	-----	40 CFR 60, Subpart Ja	None of the fuel combustion devices at ExxonMobil has been constructed or modified since May 14, 2007.

Table 4.2 Storage Tanks, Loading Racks and Wastewater Systems Not Subject to NSPS Requirements

Device ID	Equipment	Regulation	Summary of Non-Applicability Determination
D68, D629, D657, D681, D683, D690, D691, D692, D693, D694, D695, D696, D687, D698, D699, D700, D701, D702, D703, D704, D706, D708, D709, D710, D712, D713, D714, D715, D716, D718, D719, D720, D721, D722, D723, D724, D725, D726, D727, D728, D729, D730, D731, D732, D733, D734, D735, D736, D737, D739, D740, D741, D742, D743, D744, D745, D746, D747, D748, D749, D750, D751, D752, D753, D754, D755, D756, D757, D758, D759, D760, D761, D762, D763, D764, D765, D766, D767, D768, D769, D770, D771, D772, D773, D774, D775, D776, D777, D778, D779, D830, D831, D832, D915, D935, D1220, D1250, D1428, D1437, D1593, D1747, D1751, D1755, D1763, D1897, D1898, D1924, D1925, D1997, D2001	Storage Tanks	40 CFR 60, Subpart K/Ka/Kb	Tanks were constructed prior to June 11, 1973, and have not been modified or reconstructed since then.
D936, D963, D1417, D1425, D1554, D1639, D1640, D1641, D1642, D1643, D1644, D1645, D1646, D1865, D1655, D1787, D1916, D1917, D1918, D1919, D1920, D1925, D1926, D1927, D1928, D1929, D1930, D2023, D2024, D2025, D2026	Storage Tanks	40 CFR 60, Subpart K/Ka/Kb	Storage capacity below the thresholds for the subject NSPSs.

Device ID	Equipment	Regulation	Summary of Non-Applicability Determination
D711, D 738, D936	Storage Tanks	40 CFR 60, Subpart K/Ka/Kb	Tanks are permitted to store inorganic liquids only.
D42, D780, D781, D782, D783, D784, D785, D786, D787, D788, D789, D790, D791, D792, D793, D794, D795, D796, D797, D798, D799, D800, D801, D802, D1379, D1418, D1439, D1864, D2005	Storage Tanks	40 CFR 60, Subpart K/Ka/Kb	These tanks are pressure vessels designed to operate in excess of 204.9 kPa (15 psig) without emissions to the atmosphere except under emergency conditions.
D609, D610, D738	External Floating Roof Storage Tanks	40 CFR 60, Subpart QQQ (a)(1)	These tanks were constructed prior to the QQQ applicability date of May 4, 1987. No physical changes which would trigger modification or reconstruction have occurred subsequent to the applicability date.
Process Systems: P1S1, P1S2, P1S4, P1S6, P1S7, P1S8, P2S1, P2S4, P2S6, P3S1, P3S2, P3S3, P3S4, P3S5, P3S7, P4S3, P4S4, P4S5, P4S6, P5S1, P5S2, P5S5, P5S4, P5S6, P6S1, P6S3, P7S1, P7S2, P8S1, P8S2, P8S4, P8S6, P9S1, P9S2, P9S6, P11S1, P11S2, P15S7, P16S1, Sections of P2S2, P2S3, P2S5, P2S6, P2S7, P3S6, P4S1, P4S2, P4S7, P6S2, P6S4, P6S5, P11S5, P11S8, P12S1, P12S2, P12S3, P12S5, P16S1, P16S2, P17S2, P17S4, P17S6, P17S11, P18S1, P19S1, P19S3, P19S5, P19S6, P20S1	Oily Water Sewer Drains	40 CFR 60, Subpart QQQ (a)(1)	Wastewater treatment system is not required to comply with 40CFR60 Subpart QQQ because it is subject to 40CFR63 Subpart CC as a Group 1 Wastewater Stream [§63.640(o)]. Also, the individual drain systems were constructed prior to the QQQ applicability date of May 4, 1987. No physical changes which would trigger modification or reconstruction have occurred subsequent to the applicability date.

Table 4.3 Fugitive Components Not Subject to NSPS Requirements

Device ID	Equipment	Regulation	Summary of Non-Applicability Determination
D221, D224, D1276, D1278, D1280, D1273	Compressor	40 CFR 60, Subpart GGG	Hydrogen gas concentration greater than the threshold limit, which is classified as non-VOC service.

Device ID	Equipment	Regulation	Summary of Non-Applicability Determination
D2309, D2310, D2311, D2312, D2313	Compressor	40 CFR 60, Subpart GGG	These components are part of a system that is not in VOC service.
All Fugitive Components and Compressors	-----	40 CFR 60, Subpart GGGa	Process Units/Compressors were constructed prior to November 7, 2007, and have not been modified since then.

None of the equipment in this refinery is subject to the NSPSs listed below:

- 40 CFR 60 Subpart Da - Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978. This refinery does not meet the definition of an electric utility.
- 40 CFR 60 Subpart III- Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes. This refinery does not conduct any SOCMI operations.
- 40 CFR 60 Subpart NNN - Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. The refinery does not conduct any SOCMI operations.
- 40 CFR 60 Subpart RRR - Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical. This refinery does not conduct any SOCMI operations.
- 40 CFR 60 Subpart UU – Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture. The refinery does not produce asphalt.

National Emission Standard for Hazardous Air Pollutants (NESHAP) (40 CFR 61 and 63)

Applicability Determination

All of the equipment in the Title V Permit has been reviewed to determine their NESHAP applicability. With the exception of the equipment specified in Tables 4.4 to 4.13 below, this refinery is generally subject to the following NESHAPs:

- 40 CFR 61 Subpart FF - National Emission Standard for Benzene Waste Operation,
- 40 CFR 63 Subpart CC - National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries,
- 40 CFR 63 Subpart UUU - National Emission Standard for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units, and
- 40 CFR 63 Subpart EEEE - National Emission Standard for Hazardous Air Pollutants for Organic Liquid Distribution,

- 40 CFR 63 Subpart GGGGG – National Emission Standard for Hazardous Air Pollutants for Site Remediation.

Each of these standards, as applicable to the ExxonMobil refinery, is incorporated into the Title V permit. Provided below is a brief description of requirements for each of the above NESHAP regulations. Discussed within each section are the non-applicability determinations for each NESHAP as pertaining to the ExxonMobil refinery.

40 CFR 61 Subpart FF

40 CFR 61 Subpart FF-National Emission Standard for Benzene Waste Operations (Benzene Waste NESHAP or BWON) defines a major source as any chemical manufacturing plant, coke by-product recovery plant, or petroleum refinery with 10 megagram per year (Mg/yr) (11 tons/yr) or more of benzene in the waste streams. The ExxonMobil refinery is a major source that is subject to the control requirements of this regulation.

Summary of Requirements

Under this regulation, a major source must control benzene in non-exempt waste streams that contain 10 parts per million by weight (ppmw) or more of benzene. It requires the removal or destruction of the benzene contained in the waste using a treatment process or waste water treatment system that either a) removes benzene from the waste stream to a level less than 10 ppmw on a flow-weighted annual average basis, b) removes benzene from the waste stream by 99 percent or more on a mass basis, or c) destroys benzene in the waste stream by incinerating the waste in a combustion unit that achieves a destruction efficiency of 99 percent or greater for benzene.

ExxonMobil has currently chosen to comply with the “6 BQ” compliance option at §61.342(e) of this NESHAP. Under §61.342(e), ExxonMobil is allowed an alternative compliance option to meet the control requirements under §61.342(c) and (d). This alternative option requires ExxonMobil to meet or comply with the following requirements:

- The operator shall manage and treat all waste streams, with a flow-weighted annual average water content of less than 10 percent, in accordance with the requirements specified in §61.342(c)(1). It is specified in §61.342(c)(1) that the waste stream must be recycled back to a process or the benzene contained in the waste stream must be removed or destroyed using a treatment process or wastewater treatment system that complies with the standards specified in Section 61.348 [§61.342(e)(1)].
- The operator shall manage and treat or recycle all waste streams (including remediation and process turnaround waste), with a flow-weighted annual average water content of 10 percent or greater, in such a manner that the total quantity of benzene in the treated and untreated aqueous waste streams is less than 6.0 Mg/yr. The benzene in each waste stream shall be quantified in accordance with §61.355(k)(6) [§61.342(e)(2)].

For each stream that is treated to comply with §61.342(e)(1) or §61.342(e)(2), the operator shall comply with the treatment process standard specified in Section 61.348. For waste management

units, which are used to handle or treat waste streams that are treated as specified in §61.348 and/or recycled to a process, the operator shall comply with the following standards:

- Tanks standards. {61.343 and/or 61.351}
- Surface impoundments standards. {61.344}
- Containers standards. {61.345}
- Individual drain system standards. {61.346}
- Oil-water separator standards. {61.347}

Condition P13.1 of the Title V permit is tagged to processes that contain benzene waste streams that are subject to Subpart FF. All of these waste streams are also subject to the recordkeeping and reporting requirements of 40 CFR 61.356 and 61.357, respectively. Waste management units and waste treatment systems that are subject to the individual standards of §61.343 through §61.348 are identified in the permit by the tagging of condition P13.1 to the permit unit at a process level or condition H23.24 the “Conditions” column of an individual device.

Additionally, for all equipment or devices that are subject to the individual standards of this NESHAP, “Benzene: (10) [40CFR 61 Subpart FF_06, 12-4-2003]” are listed in the “Emissions and Requirements” column for that equipment or device. To assist the permit reader, Footnote 8 at the bottom of the permit page directs the person to see the Section J of the permit for the NESHAP/MACT requirements. Section J pages containing the requirements for this NESHAP have “40CFR 61 Subpart FF_06, 12-4-2003” in their headers. As part of the Title V permit software design, “40CFR 61 Subpart FF_06, 12-4-2003” also appears in the table of applicable rules and regulations in Section K of the permit.

If equipment is subject to the 500 ppmv VOC limit of one of the individual standards, this limit is also specified in the “Emissions and Requirements” column. Each of the subject conditions, references, and emission limits are tagged with “40CFR61, Subpart FF”.

Non-applicability Determinations

Determinations for equipment that is not subject to this NESHAP are discussed in this section. The Refinery contains many types of facilities that are potentially subject to 40 CFR 61 Subpart FF. If 40 CFR 61 Subpart FF excludes potentially affected facilities (for example, tanks that do not store waste) then those excluded facilities are not listed in any of the following tables.

Storage Tanks

As mentioned above, all storage tanks that handle or treat waste streams that are treated as specified in §61.348 and/or recycled to a process are subject to the standards specified in §61.343 and/or §61.351. Waste stream is defined in this NESHAP as the waste generated by a particular process unit, product tank, or waste management unit. Examples include waste from process wastewater, product tanks drawdown, sludge and slop oil removed from waste management units, and landfill leachate. The vast majority of storage tanks at the refinery are not subject to the control requirements of this regulation because they store crude oil, intermediate products, final products or other materials that are not waste streams as defined in this regulation.

The table 4.4 shows tanks that store waste streams but are not subject to this NESHAP because they store waste streams that are exempt from the control requirements of this regulation.

Table 4.4 Benzene Waste NESHAP Non-Applicability Determinations for Storage Tanks and Containers

Emission Unit	Summary of Non-Applicability Determination
D609, D610, D738	Storage tanks that store benzene wastes that are subject to Subpart FF but have been elected to be exempted from control requirements since the associated streams are accounted for under the 6 Mg allowable §61.342(e)(2)(i) and counted at the point of generation.

Surface Impoundments

A surface impoundment is defined as a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials, which is designed to hold an accumulation of liquid wastes or waste-containing free liquids. Examples include holding, storage, settling, and aeration pits, ponds, and lagoons. This refinery does not have any surface impoundments.

Containers

Containers are defined as any portable waste management unit in which material is stored, transported, treated, or otherwise handled. Examples include drums, barrels, tank trucks, barges, dumpsters, tank cars, dump trucks, and ships. Mobile sources such as vacuum trucks are not covered by the Title V permit. Portable containers such as drums, barrels, and dumpsters, that only store benzene wastes that are subject to Subpart FF are exempted from control requirements per §61.342 (c)(2) or §61.342 (c)(3). As such, they are also considered exempt equipment under District Rule 219, and are not listed in the Title V permit.

Individual Drain Systems

An individual drain system is defined as the system used to convey waste from a process unit, product storage tank, or waste management unit to a waste management unit. The drain system includes all process drains and common junction boxes, together with their associated sewer lines and other junction boxes, down to the receiving waste management unit. Due to the large number of drain system components at refineries, drain system components are group together in the Title V permit as a single “drain system component” device. The following table contains non-applicability determinations for individual drain systems at the refinery.

Table 4.5 Benzene Waste NESHAP Non-Applicability Determinations for Individual Drain Systems

Emission Unit	Summary of Non-Applicability Determination
All Oily Water Sewer Process Drains	Individual drain systems that collect and transport benzene wastes that are subject to Subpart FF, but have been elected to be exempted from control requirements since the associated streams are accounted for under the 6 Mg allowable §61.342(e)(2)(i) and counted at the point of generation.

Oil-Water Separators

An oil-water separator is defined as a waste management unit, generally a tank or surface impoundment, used to separate oil from water. An oil-water separator consists of the separation unit as well as the forebay and other separator basins, skimmers, weirs, grit chambers, sludge hoppers, and bar screens that are located directly after the individual drain system and prior to additional treatment units such as an air flotation unit, clarifier, or biological treatment unit. Examples include an API separator, parallel-plate interceptor, and corrugated-plate interceptor with associated ancillary equipment.

All of the oil-water separators, as defined in this NESHAP, at the refinery are subject to this NESHAP and are identified in the Title V permit as being subject. Table 4.6 below contains non-applicability determinations for potentially subject waste stream handling equipment at the refinery.

Table 4.6 Benzene Waste NESHAP Non-Applicability Determinations for Oil-Water Separators

Equipment Device ID	Summary of Non-Applicability Determination
D680, D681, D683, D684, D685, D1419	Wastewater treatment plant systems that collect and transport benzene wastes that are subject to Subpart FF but have been elected to be exempted from control requirements since the associated streams are accounted for under the 6 Mg allowable §61.342(e)(2)(i) and counted at the point of generation.

40 CFR 63 Subpart CC

The ExxonMobil refinery is a major source under the definition of 40 CFR 63 Subpart CC (NESHAP for Petroleum Refineries). This federal regulation, which is commonly referred to as the Refinery MACT, seeks to reduce the emissions of eleven air toxics, including benzene, by requiring controls for emissions of air toxics from storage tanks, equipment leaks, process vents, and wastewater collection and treatment system. The ExxonMobil refinery is an existing source under this regulation since its construction commenced prior to July 14, 1994.

Summary of Requirements

The Refinery MACT includes requirements for the following emission sources:

- Storage vessel. {§63.646}
- Wastewater management and treatment equipment {§63.647}
- Equipment leak (fugitive) components {§63.648 & §63.649}
- Miscellaneous process vents {§63.643 - §63.645}
- Gasoline loading racks {§63.650}

The Equipment that is subject to the Refinery MACT has “HAP” listed in the “Emissions and Requirements” column of the device along with a reference to Section J of the permit. For example, Group 1 storage vessels include “HAP: (10) [40CFR 63 Subpart CC, #3A,5-25-2001]” in the “Emissions and Requirements” column. The pages in Section J that contain the requirements for Group 1 storage vessels have “40CFR 63 Subpart CC, #3A,5-25-2001” in their headers. “40CFR 63 Subpart CC, #3A,5-25-2001” appears in the table of applicable rules and regulations in Section K of the permit but this listing does not denote that the facility is subject to any requirements beyond those specified in 40 CFR 63 Subpart CC.

Non-applicability Determinations

The remainder of this section contains a summary of determinations for equipment that is not subject to this regulation.

Storage Vessels

Group 1 storage vessels are subject to the standards specified in §63.346. Group 1 storage vessels are defined as vessels that have a design capacity greater than or equal to 177 cubic meters (46,763 gallons) and store an organic liquid that meets the following specifications:

- maximum true vapor pressure (TVP) greater than or equal to 10.4 kilopascals, and
- annual-average TVP greater than or equal to 8.3 kilopascals, and
- annual-average total organic HAP concentration greater than 4 percent (by weight).

Under this regulation, any storage vessel with a capacity greater than 40 m³ (10,566 gallon) that stores an organic liquid that does not exceed the vapor pressure and HAP-content thresholds outlined above are Group 2 storage vessels and do not need to comply with emission reduction requirements, but are subject to some recordkeeping requirements. Group 2 storage vessels are identified in the permit by the following notation in the “Emissions and Requirements” column: HAP: (10) [40CFR 63 Subpart CC, #2,5-25-2001]. Storage vessels that are not specified in the permit as Group 1 or Group 2 storage vessels are not subject to any requirements under this regulation. The following storage vessels are exempt from all requirements of this regulation because they don’t meet the definition of storage vessels under §63.641:

- pressure storage vessels designed to operate in excess of 204.9 kPa without emissions to the atmosphere,
- tanks with a design capacity less than 40m³,

- tanks not storing an organic liquid,
- storage tanks used to store wastewater, and
- storage tanks used as a bottoms receiver tank.

Tables 4.7 below contains non-applicability determinations for storage vessels that are not identified in the Title V permit as Group 1 or Group 2 storage vessels.

Table 4.7 Refinery MACT Non-Applicability Determinations for Storage Vessels

Note: Some of this equipment may meet multiple exemption criteria. If so, the equipment is listed under all applicable exemptions.

Equipment Device ID	Summary of Non-Applicability Determination
D711, D738, D751, D1439, D1646, D1997, D2001	These devices do not store one or more HAPs.
D936, D963, D1425, D1639, D1640, D1641, D1642, D1643, D1655, D1787	The design storage capacity for these storage vessels is less than 40 m ³ (10,566 gallons).
D1655, D1685, D1787, D1924, D1925	These devices vent to a fuel gas system.
D681, D683, D700, D730, D731, D738, D741, D751, D936, D963, D1425, D1655, D1763, D1787, D1916, D1917, D1918, D1920, D1926, D1927, D1929, D2005, D2023, D2024, D2026	Storage vessel is used to store wastewater, as defined in this regulation.
D42, D780, D781, D782, D783, D784, D785, D786, D787, D788, D789, D790, D791, D792, D793, D794, D795, D796, D797, D798, D799, D800, D801, D802, D1379, D1418, D1439, D1864, D2005	Storage vessel is a pressure storage vessel designed to operate in excess of 204.9 kPa without emissions to the atmosphere.
None	Storage vessel is used as a bottoms receiver tank

Wastewater Streams

In this regulation, wastewater is defined as “water or wastewater that, during production or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product and is discharged into any individual drain system.” The Refinery MACT has requirements for Group 1 and 2 wastewater streams. Group 1 wastewater streams are wastewater streams that have a flow rate of 0.02 liters per minute or greater, a benzene concentration of 10 ppmw or greater, and are not exempt from control requirements under the provisions of 40 CFR 61, Subpart FF. Group 2 wastewater streams are all other waste or wastewater streams that meet the definition of wastewater in this regulation.

As specified at §63.647, Group 1 wastewater streams are subject to the requirements of §61.340 through 61.355 of 40 CFR 61, Subpart FF. Group 2 wastewater streams are subject to recordkeeping requirements only. Group 1 and 2 wastewater streams are identified in the Title V permit with the following notations, respectively, in the “Emissions and Requirements” column

of any equipment that manages or treats a wastewater stream that is subject to this regulation: HAP: (10) [40CFR 63 Subpart CC, #4,5-25-2001] and HAP: (10) [40CFR 63 Subpart CC, #2,5-25-2001].

Tables 4.8 contains non-applicability determinations for equipment that manages wastewater streams that are not identified in the Title V permits as Group 1 or Group 2 wastewater streams.

Table 4.8 Refinery MACT Non-Applicability Determinations for Equipment that Manages Wastewater Streams

Emission Unit	Summary of Non-Applicability Determination
Rule 219 Exempt Tanks Used to Store Water	Manages water or wastewater that does not come into direct contact with or result from the production or use of any raw material, intermediate product, finished product, byproduct or waste product.
None	Manages water or wastewater that comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct or waste product but is not discharged into an individual drain system.

Equipment Leak (Fugitive) Components

Equipment leak is defined in the Refinery MACT as emissions of organic HAPs from a pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, or instrumentation system “in organic HAP service”. Vents from wastewater collection and conveyance systems (including, but not limited to wastewater drains, sewer vents, and sump drains), tank mixers, and sample valves on storage tanks are not equipment leaks. “In organic HAP service” means that the equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP's. There is only one category of equipment leak components in this regulation. Unlike storage vessels, wastewater stream, and miscellaneous process vents, equipment leak components are not categorized by Group 1 and 2.

The refinery contains more than 200,000 individual fugitive components such as valves, connectors, pumps, etc. For this reason, the fugitive components for each permit unit are grouped and identified in the Title V permit by a “fugitive emissions, miscellaneous” device. Grouping the fugitive components into a singular device is a manageable method for identifying regulatory requirements for some or all of the fugitive components in a permit unit. Permit units that contain some fugitive leak components that are subject to Refinery MACT requirements are identified by the notation “HAP: (10) [40CFR 63 Subpart CC, #5A,5-25-2001]” in the “Emissions and Requirements” column for the “fugitive emissions, miscellaneous” device for the permit unit.

Table 4.9 below contains non-applicability determinations for equipment leak (fugitive) components at the refinery

Table 4.9 Refinery MACT Non-Applicability Determinations for Equipment Leak (Fugitive) Components

Emission Unit	Summary of Non-Applicability Determination
D869, D1889, D1988, D2014, D2111, D2123	Permit unit does not contain any fugitive leak components that are in “organic HAP service” as defined at §63.641 of this regulation.

Miscellaneous Process Vents

A fully integrated refinery, such as the subject refinery, has a number of gas streams that are periodically or continuously vented from process units to the atmosphere. These vents, which are referred to as process vents, include gas streams that are discharged directly to the atmosphere, gas streams that are routed to a control device prior to discharge to the atmosphere, or gas streams that are diverted through a product recovery device prior to control or discharge to the atmosphere. Due to the large number of these process vents, requirements for the venting of the majority of these vents are specified in the Title V permit at the system level by S15.x conditions. Routine process vents that are directed to control equipment are specified in the “Connect To” column of the permit.

The Refinery MACT specifies requirements for some of the process vents at a refinery. The regulated vents are called “miscellaneous process vents”. Miscellaneous process vents are defined at §63.641 as “gas streams containing greater than 20 ppmv organic HAP that are continuously or periodically discharged during normal operation of a petroleum refining process unit. According to the definition at §63.641, miscellaneous process vents include vent streams from: caustic wash accumulators, distillation tower condensers/accumulators, flash/knockout drums, reactor vessels, scrubber overheads, stripper overheads, vacuum (steam) ejectors, wash tower overheads, water wash accumulators, blowdown condensers/accumulators, and delayed coker vents. This definition also specifies fourteen (14) different vent stream types that are not miscellaneous process vents. These fourteen (14) vent stream types, which are shown in Table 4.10, make up the vast majority of the atmospheric vents at a refinery.

A Group 1 miscellaneous process vent is a miscellaneous process vent for which the total organic HAP concentration is greater than or equal to 20 ppmv, and the total VOC emissions are greater than or equal to 33 kg/day at the outlet of the final recovery device (if any) and prior to any control device and prior to discharge to the atmosphere. A Group 2 miscellaneous process vent has a total organic HAP concentration of greater than or equal to 20 ppmv and total VOC emissions of less than 33 kg/day at the outlet of the final recovery device (if any) and prior to any control device and prior to discharge to the atmosphere.

Group 1 and 2 miscellaneous process vents are identified in the Title V permit with the following notations, respectively, in the “Emissions and Requirements” column of the equipment from which the vent emanates: HAP: (10) [40CFR 63 Subpart CC, #1,5-25-2001] and HAP: (10) [40CFR 63 Subpart CC, #2,5-25-2001]. Table 4.10 below contains non-applicability determinations for process vents that are not identified in the Title V permit as Group 1 or Group 2 miscellaneous process vents. These non-applicability determinations are based on the definition of miscellaneous process vent in §63.641.

Table 4.10 Refinery MACT Non-Applicability Determinations for Miscellaneous Process Vent

Device ID	Summary of Non-Applicability Determination
Individual vent streams that vent to the refinery vapor recovery and fuel gas treating systems are too numerous to list individually in the permit. Routine vents are permitted through the following system conditions: S15.2, S15.7, S15.8, S15.9, S15.10, S15.11, S15.12, S15.13 and S15.14	Gaseous stream routed to a fuel gas system.
Emergency relief valves are too numerous to list individually in the permit. Emergency vents are permitted through following system conditions: S15.1 and S15.15	Relief valve discharge stream.
D1475, D1527, D1788, D1789, D1790, D1791, D1792, D1794, D1803, D1807, D1808, D1809, D1810, D1811, D1815, D1819, D1825, D1826, D1827, D1828, D1829, D1830, D1831, D1834, D1838, D1839, D1840, D1842, D1844, D1845, D1847, D1849, D1850, D1851, D1853, D1855, D1860, D1862, D1863, D1864, D1865, D1877, D1888, D1890, D1891, D1892, D1895, D1936, D1937, D1938, D1955, D1956, D1957, D1983, D1987, D2010, D2231, D2249, D2254, D2256, D2259, D2351, D2352, D2369, D2370, D2371, D2372, D2373, D2374, D2375, D2376, D2377, D2378, D2379, D2380, D2383	Leak from equipment regulated under §63.648
D63, D136, D200, D224, D277, D278, D300, D302, D303, D304, D308, D312, D313, D331, D370, D387, D392, D453, D454, D455, D461, D469, D579, D580, D581, D582, D583, D586, D589, D603, D606, D608, D613, D614, D615, D616, D617, D628, D633, D637, D640, D643, D654, D656, D657, D662, D980, D985, D986, D933, D1311,	Episodic or non-routine releases such as those associated with startup, shutdown, malfunction, maintenance, depressuring, and catalyst transfer operations.

Device ID	Summary of Non-Applicability Determination
D1330, D1376, D1591, D1912, D1943, D2182, D2183, D2217, D2221, D2222, D2224, D2225, D2226, D2228, D2230, D2232, D2241, D2246, D2247, D2258	
D1512, S1739	Catalytic cracking unit catalyst regeneration vent
D271, D272, D273, D274, D276	Catalytic reforming regeneration vent
D671, D668, D2248, D2390	Sulfur plant vent
S1766, S1953	Vents from control devices such as scrubbers, boilers, incinerators, and electrostatic precipitators applied to catalytic cracking unit catalyst regeneration vents, catalytic reformer regeneration vents, and sulfur plant vents.
D57, D58, D59, D60, D61, D62, D86, D88, D89, D90, D91	Coking unit vent associated with coke drum depressuring at or below a drum outlet pressure of 15 psig, deheading, draining, decoking (coke cutting, or pressure testing after decoking.)
D684, D685, D680, D705, D1773	Emissions from wastewater collection and conveyance systems including, but not limited to, wastewater drains, sewer vents, and sump drains.
D2244, D2245	Hydrogen production plant vents through which CO ₂ is removed from process streams or through which steam condensate produced or treated within the hydrogen plant is degassed or de-aerated.
C165, C166, D221, D1775, D2318	Other process vent streams that have a total organic HAP content of less than 20 ppmv.
Onstream analyzers. This equipment is not listed in the permit.	In situ sampling systems (onstream analyzers).
All storage vessels.	Vent from storage vessel.

Gasoline Loading Operations

Gasoline is defined at §63.641 in this regulation, as “any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater that is used as a fuel for internal combustion engines”. Table 4.11 below contains non-applicability determinations for loading racks at the refinery.

Table 4.11 Refinery MACT Non-Applicability Determinations for Loading Racks

Emission Unit	Summary of Non-Applicability Determination
D644, D675, D919, D1470, D1474, D1767, D1768, D1994, D2006, D2389	Loading rack does not load gasoline as defined at §63.641 of 40 CFR 63 Subpart CC.

40 CFR 63 Subpart UUU

Subpart CC addresses the emissions of air toxics from miscellaneous process vents in petroleum refineries. However, it does not address emissions from process vents on catalytic cracking units, catalytic reforming units, and sulfur recovery units. To address air toxics emissions from these sources, EPA adopted 40 CFR 63 Subpart UUU- National Emission Standard for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units (CCUs), Catalytic Reforming Units (CRUs), and Sulfur Recovery Units (SRUs).

For equipment in the CRU, FCCU, and SRUs with process vents that are subject to Subpart UUU, the regulated pollutant is listed in the “Emissions and Requirements” column. This listing references Section J of the permit, which contains the emission limits and requirements of Subpart UUU. This regulation is not applicable to any process vents in process units other than a CRU, FCCU, or SRU.

The requirements listed in section J are separated by equipment type; “40CFR63 Subpart UUU, #1” lists catalytic reforming unit requirements; catalytic cracking unit requirements are listed in “40CFR63 Subpart UUU, #2”, and “40CFR63 Subpart UUU, #3” lists requirements for sulfur recovery units. In Section K of the permit, the references to Subpart UUU #1, #2, and #3 refer to the Subpart UUU #1, #2, and #3 templates in Section J of the permit.

40 CFR 63 Subpart EEEE

This NESHAP applies to Organic Liquid (Non-Gasoline) Distribution operations that are located at or are part of a major source of HAPs and that are not subject to another part 63 standard such as 40 CFR 63 Subpart CC. Organic liquids as defined at §63.2406 are non-crude oil liquids or mixtures that contain at least 5 percent organic HAP and have an annual average true vapor greater than 0.1 psia and all crude oils downstream of the first point of transfer. The standard covers storage tanks, transfer racks, equipment leak components and transport vehicles that handle organic liquids.

Non-applicability Determinations

Table 4.12 below contains non-applicability determinations for potentially applicable emission units at the refinery.

Table 4.12 Organic Liquid Distribution MACT Non-Applicability Determinations

Emission Unit	Summary of Non-Applicability Determination
All loading/unloading racks at the facility	Transfer operation does not load or unload organic liquid as defined at §63.2406.
All storage tanks and equipment leak components that are specified in the Title V permit to be subject to 40 CFR 63 Subpart CC.	Equipment is subject to 40 CFR 63 Subpart CC.

40 CFR 63 Subpart GGGGG

This NESHAP is applicable to site remediation activities located at facilities that are a major source of HAP emissions and have at least one other source category that is regulated by a part 63 standard. This standard does not cover site remediation activities performed under CERCLA or RCRA. The affected sources would include remediation process vents, remediation material management units (tanks, containers, oil-water separators, transfer systems, etc.), and equipment leak components.

Non-applicability Determinations

The ExxonMobil remedial activity listed under Process 22 of the proposed Title V permit is performed under CERCLA as directed under consent degree No. 90-5-2-1-2121. Thus, as explained above, the requirements of this subpart do not apply.

Other NESHAP Non-applicability Determinations

This refinery is not subject to the NESHAPs listed below.

- 40 CFR 61 Subpart J - National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene. This refinery does not operate any equipment in “benzene service.”
- 40 CFR 61 Subpart Y - National Emission Standards for Benzene Emissions from Benzene Storage Vessels. This refinery does not store or transfer benzene.
- 40 CFR 61 Subpart BB - National Emission Standards for Benzene Emissions from Benzene Transfer Operations. This refinery does not store or transfer benzene.
- 40 CFR 63 Subpart F - National Emission Standards for Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry. This refinery does not conduct any SOCOMI operations.
- 40 CFR 63 Subpart G - National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater. This refinery does not conduct any SOCOMI operations.
- 40 CFR 63 Subpart H - National Emission for Organic Hazardous Air Pollutants for Equipment Leaks. This refinery does not conduct any SOCOMI operations.

- 40 CFR 63 Subpart Q - National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers. This refinery does not use chromium based water treatment chemicals.
- 40 CFR 63 Subpart R - National Emission Standards for Hazardous Air Pollutants for Gasoline Distribution Facilities. ExxonMobil routes all of the vapors from its loading operation to its fuel gas system; therefore, it is exempt from all Subpart R requirements.
- 40 CFR 63 Subpart VV - National Emission Standards for Oil-Water Separators and Organic-Water Separators. This subpart is not applicable because no other subpart of 40 CFR Part 60, 61, or 63 references this subpart.
- 40 CFR 63 Subpart EEE - National Emission Standards for Hazardous Air Pollutants for Hazardous Waste Incinerators. There are no hazardous waste incinerators, cement kilns, or aggregate kilns located at this refinery.
- 40 CFR 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. This subpart does not apply because this refinery does not own or operate stationary reciprocating internal combustion engines that have to meet any emission limits or standards of this subpart.

Compliance Assurance Monitoring (CAM) (40 CFR 64)

This regulation requires facilities of major sources to submit CAM plans to accompany the application for renewal of their respective Title V permits or for complete initial Title V applications submitted after 4/20/98. ExxonMobil submitted the application for this initial TV permit on March 19, 1998 and the application was deemed complete by the District on April 14, 1998. No CAM plans are required at this time.

5. Periodic Monitoring Requirements

Applicable monitoring and operational requirements with which the facility is required to comply are identified in the Title V permit (for example, Section D, F, and J and Appendix B of the Title V permit).

This refinery is subject to RECLAIM monitoring, source test requirements, and other monitoring provisions that are required by federal, state or AQMD laws and regulations. Section F of the permit contains the monitoring and source test permit conditions imposed by Regulation XX. More specifically, it summarizes the monitoring and testing requirements for Major, Large and Process units at NO_x and SO_x RECLAIM facilities. Finally, Compliance Assurance Monitoring (CAM) requirements of 40 CFR Part 64 do not currently apply to any of the permitted emission sources at this facility.

As specified in AQMD Rule 3004(a)(4), the Title V permit includes periodic monitoring conditions for equipment that is subject to SIP-approved, federally enforceable rules, which do not require sufficient monitoring to assure compliance with emission limitations or other requirement of the rule. Permit conditions in Section D and H of the permit that fulfill Title V periodic monitoring requirements are tagged with the following: *Rule 3004(a)(4)-Periodic Monitoring, 12-12-1997*. These periodic monitoring conditions are also tagged with the underlying rule(s) for which the condition is fulfilling the monitoring requirement. In some

cases, existing monitoring conditions that were installed under NSR fulfill the periodic monitoring requirements for other rules or regulations. For these cases, the monitoring condition was tagged with Rule 3004(a)(4) and the underlying rule(s) for which the condition is fulfilling the monitoring requirement.

A draft Periodic Monitoring Guidance document was published by the AQMD in August 1997. A public consultation was held to solicit public input. The final Periodic Monitoring Guideline Document was published by the AQMD in November 1997. This guideline was used to establish the periodic monitoring requirements in the Title V permit. In addition, the AQMD used the CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Requirements in SIP (June 24, 1999) for applicable opacity limits, grain loading limits for material handling equipment, and for sulfur content of fuels. Furthermore, the AQMD used the CAPCOA/ARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP for combustion sources (July 2001). These documents are included in Appendix II.

6. Title V Permit Format

The Title V permit consists of eleven sections and two appendices. Each section is devoted to a particular function as summarized below:

Section A Facility Information

This section contains operator name, facility location and mailing address. It also lists the name of the responsible official and contact person for the facility. Lastly, this section indicates whether Regulation XXX and RECLAIM apply to the facility.

Section B RECLAIM Annual Emission Allocation

This section applies to RECLAIM facilities only and lists NO_x and SO_x allocations for the facility. This facility is subject to both the NO_x and SO_x requirements of RECLAIM.

Section C Facility Plot Plan

This section is reserved for future development of the facility plot plan.

Section D Facility Description and Equipment Specific Conditions

This section describes equipment at the refinery that has been issued permits to operate. It also includes facility-wide operating conditions, emission limitations, the rules for which the emission limits and permit conditions are derived, and the periodic monitoring requirements as appropriate. The description of the process and equipment is structured in the following manner:

Process

A process is the largest grouping of equipment under the Title V permit, which includes all equipment involved in the making of final product from raw feed. A process can end at an intermediate product if the succeeding process is significantly different.

System

A system is the combination of equipment into a unit which is a logical subsystem of a process. A system can be used to identify individual process lines, or it can separate a long process line into separate functions. The main use of this grouping will be to separate a large process into manageable groups.

Equipment

This column describes equipment contained within a system or a process. It contains information necessary to identify equipment and ensure compliance with rules and regulations such as dimensions of a tank, heat input of a heater, horsepower of an engine, etc.. This section also lists the equipment application number (A/N). The A/N is an identification number issued by the AQMD to the application submitted by the applicant for a Permit to Construct or Permit to Operate for a piece of equipment. A facility is required to submit a permit application when it plans to install a new piece of equipment, alter an existing piece of equipment, or modify a permit condition. An A/N in the Title V permit changes each time the AQMD approves a new application.

Device Identification (I.D.) Number

Each piece of equipment is assigned a unique I.D. number. When a piece of equipment is modified it retains its existing I.D. number. However, when it is removed from service, the I.D. number is retired and will not be used to identify another piece of equipment at this facility.

Connected to

This column is used to identify air pollution control equipment that is connected to a specific piece of equipment at the refinery. This column is not intended to show process connection at the refinery.

RECLAIM Source Type/Monitoring Unit

This column is used to identify equipment classification pursuant to the RECLAIM program. The classification of major source, large source and process units are defined in Rule 2012. The equipment classification is assigned to NOx and SOx emission sources subject to RECLAIM. Each classification of equipment is subject to a specific monitoring requirement under RECLAIM.

Emissions and Requirements

This column lists emission limits applicable to each piece of equipment. It also lists the rules from which the limits were derived. If AQMD adopted a rule that has not yet been approved into the State Implementation Plan (SIP), emission limits established by both the SIP-approved and non SIP-approved versions of the rule are included in the permit.

Conditions

This column lists specific permit conditions applicable to the facility, process, system or equipment. A facility level condition applies to the whole facility and is designated by the letter F. The process conditions apply to the entire process and are designated by the letter P. The system conditions apply to the entire system and are designated by the letter S. The equipment (device) level conditions are designated by other letters depending on the category of conditions such as monitoring, recordkeeping, etc. Each permit condition references the law or rule from which the requirements in the condition were derived. If AQMD adopted a rule that has not yet been approved into the SIP, requirements established by both the SIP-approved and non SIP-approved versions of the rule are included in the permit. One category of the device level condition is the periodic monitoring condition.

Section E Administrative Conditions

This section contains general administrative permit conditions that apply to all facilities. The conditions listed in this section apply to all permitted equipment at the facility unless superseded by other conditions listed elsewhere in the Title V permit.

Section F RECLAIM Monitoring & Source Testing Requirements

This section contains monitoring and source testing permit conditions imposed by Regulation XX. It summarizes the monitoring and testing requirements for Major, Large and Process units at RECLAIM facilities.

Section G RECLAIM Recordkeeping & Reporting Requirements

This section contains recordkeeping and reporting requirements specified in Regulation XX. It summarizes the recordkeeping and reporting requirements for RECLAIM sources.

Section H Permit to Construct and Temporary Permit to Operate

The permit format in this section is the same as described for Section D above. However, equipment listed in this section has not been issued permits to operate, but were issued a permit to construct and/or a temporary permit to operate.

Section I Compliance Plans & Schedules

This section lists active compliance plans specified in the SIP-approved rules.

Section J Air Toxics

This section lists permit conditions pertaining to Federal NESHAP/MACT requirements.

Section K Title V Administration

This section lists the Title V administrative conditions. They are the same for all Title V facilities, except for the list of applicable rules table at the end of the section. The table at the end of the section lists all applicable rules referenced in Sections D and H (emission limit and conditions) and any rules that are referenced to the facility. This table also indicates which rules are federally enforceable and which are only enforceable by AQMD.

As part of the AQMD's permit software, the names for the NESHAP templates (40CFR 63 Subpart CC # 1, 2 3A, 4 and 5A; 40 CFR 63 Subpart UUU # 1, 2 and 4; and 40CFR 61 Subpart FF_01) from Section J of the Title V permit also appear in the rules table at the end of this section.

Appendix A NOx and SOx Emitting Equipment Exempt from Written Permit Pursuant to Rule 219

This section lists classes of NOx- and SOx- emitting Rule 219 exempt equipment present at the facilities that are subject to RECLAIM.

Appendix B Rule Emission Limits

Some emission limits that are too complex to be listed in the Emissions and Requirements column of Sections D and H are listed in Appendix B of the Title V permit. Emission limits in this appendix are referenced by an emission type "(9)" in the "Emissions and Requirements" column of the permit.

7. Permit Features**Permit Shield**

A permit shield is an optional part of a Title V permit that gives the facility explicit protection from requirements that do not apply to the facility. A permit shield is a provision in a permit that states that compliance with the conditions of the permit shall be deemed compliance with all identified regulatory requirements. Incorporation of a permit shield into the Title V permit involves submission of applications for change of conditions for each piece of equipment affected by the permit shield. Permit shields are addressed in AQMD Rule 3004 (c). This facility has not applied for a permit shield for any of the equipment at the refinery.

Alternate Operating Scenarios

An alternative operating scenario (AOS) is a set of provisions and conditions in a permit that allow the operator to switch back and forth between alternative modes of operation without submitting an application for a permit revision before each switch. However, each AOS must be evaluated for compliance with AQMD rules and regulations and applicable State and Federal requirements. AOS is addressed in AQMD Rule 3005 (j). This facility has not applied for an AOS for any of the equipment at the refinery.

Emissions Trading

This facility is subject to the NOx and SOx emissions trading requirements under Regulation XX.

Prevention of Significant Deteriorations (PSD) Permits

PSD is a federal program for permitting new and modified sources that emit air pollutants for which the SCAQMD is classified as in attainment with the National Ambient Air Quality Standards (NAAQS). This facility has not been issued a PSD permit by either the EPA or the AQMD.

8. Summary of Emissions and Health Risks

Summary of Refinery Criteria Air Pollutant and Toxic Air Contaminant Emissions

This section contains a summary of the Criteria Air Pollutant (CAP) and Toxic Air Contaminant (TAC) emissions for the refinery as reported in the refinery's Annual Emission Report (AER) for fiscal year 2006-2007.

**Table 8.1 Criteria Pollutant Emissions (tons/year)
from Annual Reported Emissions for Reporting Fiscal Year 2006 – 2007**

Pollutant	Emissions (tons/year)
NOx	776
CO	2441
VOC	626
PM/TSP	503
SOx	422

**Table 8.2 Toxic Air Contaminants Emissions (TAC)
Annual Reported Emissions for Reporting Year 2006 – 2007**

The Following TACs Were Reported	Emissions (lbs/yr)
1,2,4-Trimethylbenzene	307
1,3-Butadiene*	89.3
Acetaldehyde*	1,473
Acrolein*	628
Ammonia	1,059,827
Arsenic*	25.8
Asbestos	0.043

The Following TACs Were Reported	Emissions (lbs/yr)
Benzene*	5,779
Beryllium*	9.97
Cadmium*	61
Carbonyl Sulfide*	294
Chlorine*	622
Chromium (VI)*	0.415
Copper	364
Diesel engine exhaust, particulate matter	9,361
Ethylbenzene*	1,479
Formaldehyde*	3,925
Glycol ethers (and their acetates)	152
Hexane*	8,253
Hydrochloric acid*	51,123
Hydrogen Sulfide*	5,772
Lead (inorganic)*	183
M t-Butylether	3.5
Manganese*	397
Mercury*	161
Methanol*	23,514
Methyl Ethyl Ketone	0.11
Methyl Isobutyl Ketone (Hexone)	38.4
Naphthalene*	332
Nickel*	512
PAHs, total, with components not reported*	51.0
Selenium*	28.9
Styrene	0.24
Sulfuric Acid	26,957
Toluene*	9,080
Xylenes*	4,289
Total TACs	
	1,213,614 lb/yr
Total HAPs	
	118,082 lbs/yr
Maximum Individual HAP (Hydrochloric Acid)	
	51,123 lb/yr

*TACs that are also identified as HAPs.

Health Risk from Toxic Air Contaminants

The ExxonMobil refinery is subject to review by the Air Toxics Information and Assessment Act (AB2588). The Final Facility Health Risk assessment was approved in 2001 with the following risk factors.

Cancer Risk	8.90 in a million
Acute Hazard Index	0.06
Chronic Hazard Index	0.05

9. Compliance History

The ExxonMobil refinery is subject to the terms of a consent decree entered by U.S. District Court in Illinois on December 13, 2005 under Case No. 05 C 5809.

Consent Decree (Civil Action No. 05 C 5809)

In 2000, the United States Environmental Protection Agency (USEPA) initiated a nationwide, broad-based compliance and enforcement initiative involving the petroleum refining industry. As a result of this initiative, the subject Consent Decree is the product of a settlement between ExxonMobil and EPA over alleged violations of certain Clean Air Act and CERCLA/EPCRA provisions. This comprehensive settlement covers ExxonMobil refineries located in Baton Rouge, Louisiana; Baytown, Texas; and Billings, Montana, Beaumont, Texas; Joliet, Illinois; and Torrance, California.

As part of the Consent Decree, ExxonMobil has agreed to install additional air pollution control equipment and implement other enhancements to air pollution management practices at its refineries to reduce air emissions. Specifically for the Torrance Refinery, ExxonMobil agreed to the following:

- Enhancement of the Benzene Waste Operations NESHAP (40CFR61 Subpart FF) program.
- Enhancements of the Leak Detection and Repair (LDAR) program.
- Implementation of new investigative, reporting, and corrective action procedures for flares.
- Certain heaters, boilers, flares, incinerators, SRUs, and FCCU, which were not already subject to 40CFR60 Subpart J, became affected sources subject to this NSPS.
- Sulfur Pit Vapor Incinerator (Device C626): reroute, treat, or shutdown by July 1, 2009.

Paragraphs 141 – 142 of the Consent Decree specify that ExxonMobil shall submit applications to incorporate the “emission limits and standards” required by the Consent Decree into a federally enforceable NSR permit. Paragraph 144 specifies that these emission limits and standards shall be incorporated into the refinery Title V permit in accordance with state Title V rules. Included in Attachment 2 is a table that summarizes the applications submitted for compliance with the requirements of Paragraph 141-142 of the Consent Decree, and their permitting status

Variance

Hearing Board Case No. 1183-414: AQMD Rule 1118 was amended in November of 2005. The ExxonMobil Torrance refinery operates the following three general service flares that are subject to Rule 1118: 65F-3, 65F-4, and 65F-8.

Subsection (g)(3) of the amended rule specifies that owners or operators with flares subject to the rule shall install and operate a flare monitoring system (FMS) by July 1, 2007 to perform monitoring and recording of the parameters specified in the second section of Table 1 of the rule. This monitoring includes gas flow, gas higher heating value (HHV), and total sulfur concentration (TSC) of the gas. Subsections (g)(3) and (j)(1)(C) contain performance

specifications for the monitors. Rule 1118(j)(1)(C) also requires that the accuracy of the flow meter be verified annually according to manufacturer specifications. Additionally, Rule 1118 contains reporting requirements that are based on these monitoring requirements.

At the time of the rule adoption in 2005, technical challenges and issues related to feasibility, reliability, maintainability, accuracy, and safety of the HHV and TSC analyzers had the potential to delay implementation of the specified monitoring systems. Due to these known issues, the AQMD Governing Board adopted a resolution directing AQMD staff to work with the Western States Petroleum Association and its refiner members to resolve outstanding issues. Due to the analyzer related delays, each of the refineries requested and was granted a variance to the requirement to continuously monitoring TSC and HHV by July 1, 2007. The variances gave the refineries until September 1, 2008, to complete the design, acquisition, and installation of the required analyzers.

Pilot projects for the development of TSC and HHV analyzers were completed in March 2008. Based on a determination that the pilot analyzers demonstrated compliance with the technical requirements of Rule 1118, the AQMD approved the tested TSC and HHV analyzers on May 20, 2008. Since the analyzer approval was given later than expected, the refineries petitioned for a modification and extension of the variance. The Hearing Board granted an extension of ExxonMobil's variance until July 16, 2009 for all the three flares (65F-3, 65F-4, and 65F-8).

ExxonMobil has recently filed a new short variance petition for Flare 65F-3 (Case 1183-440) with a hearing date of 04/08/09, for a period covering 4/8/09 to 4/17/09, for installing three hot taps into the common flare header line which send gases to the refinery flares.

Hearing Board Case No. 1183-434 (Short Variance):

Hearing Date:	February 3, 2009
Final Compliance Date:	June 1, 2009

This short variance was granted to allow ExxonMobil to replace the vapor recovery piping. A sulfur pit blower will be taken out of service to allow planned replacement of vapor recovery piping leading to the control device. During this maintenance period, the sulfur pit will not have its designated blower in service which directs the sulfur pit vapors to the incinerator. As per the minute order, if EM cannot comply with this final date, then EM needs to file a regular variance petition by April 15, 2009.

Other Variance

In addition to the above variances, ExxonMobil has filed one (1) variance petition for permitted equipment at its Torrance refinery. The following table gives the scheduled hearing date and a brief description of this variance:

Table 9.1 Pending Variances

Case No.	Hearing Date	Final Compliance Date	Explanation
1183-435	March 26, 2009; Rescheduled to June 25, 2009	June 30, 2009	ExxonMobil applied for a variance to allow the start-up of the main heater in Hydrogen Unit #24. The heater will be shut down to perform preventative maintenance necessary for continued reliable operations.

As required by Rule 3004(a)(10)(C), condition I1.1 has been added to the affected equipment in section D and H of the permit requiring the operator to comply with all the conditions of the variance. The issuance of a regular Variance and/or Stipulated Order of Abatement (SOA) by the AQMD Hearing Board does not affect federal or citizen enforceability of the subject requirements. A copy of the documents related to this regular variance is available on the internet under the AQMD’s “Facility Information Detail” database (FIND, at http://www.aqmd.gov/webappl/fim/prog/hbdisplay.aspx?fac_id=800089).

Order(s) for Abatement

The refinery is not currently subject to any AQMD Orders for Abatement.

Notices to Comply and Notices of Violation

As noted, the refinery has been in continuous operation since the 1929. Since the inception of Los Angeles County Air Pollution Control District in 1947, the refinery has been subject to both self-reporting requirements and AQMD inspections. Further information regarding the facility’s compliance status is available on the internet under the AQMD’s “Facility Information Detail” database (FIND, at http://www.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=800089). As of April 3, 2009, this facility is in compliance with other AQMD Rules and Regulations.

10. Compliance Certification

By virtue of the Title V permit application and issuance of this permit, the reporting frequency for compliance certification for the refinery shall be annual.

11. Appendices

In order to minimize printing, all of the following appendices are available on the AQMD website as shown below. In addition, they will be made available on CDs upon request. Please contact the AQMD contact person identified on the public notice for this facility or call Ngoc Tran at (909) 396-2606 for assistance in finding the information on the website or to obtain a copy of the CD.

- I. Technical Guidance Document For the Title V Permit Program (March 2005, Version 4.0) (<http://www.aqmd.gov/titlev/TGD.html>)
- II. Periodic Monitoring Guidance Documents
 - A. AQMD Periodic Monitoring Guidelines for Title V Facilities (November 1997) (<http://www.aqmd.gov/titlev/pdf/PeriodicMonitoringGuidelines-97.pdf>)

- B. CAPCOA/CARB/EPA Region IX Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP (June 1999) (<http://www.arb.ca.gov/fcaa/tv/tvinfo/pmrec624.pdf>)
- C. CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources (July 2001) (<http://www.arb.ca.gov/fcaa/tv/tvinfo/pmrecoms.pdf>)
- III. Summary Report of Notice of Violations. Further information regarding the facility's compliance status is available on the internet under the AQMD's "Facility Information Detail" database (FIND, at http://www.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=800089).
- IV. Variances and Abatement Orders. Further information regarding the facility's compliance status is available on the internet under the AQMD's "Facility Information Detail" database (FIND, at http://www.aqmd.gov/webappl/fim/prog/hbdisplay.aspx?fac_id=800089).

Attachment 1

Alternative Monitoring Plan (AMP) Approval Letter



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

DEC 18 2006

Meena M. Nainan
Environmental Group Leader
ExxonMobil
Refining & Supply Company
3700 West 190th Street
Torrance, CA 90504-2929

Re: Request for Approval of Alternate Monitoring Plan ("AMP") under 40 C.F.R. § 60.13(i) for the Off-Gas Streams from Tanks 400x30, 400x31, and 510x4 (hereinafter, Tanks) to Flare 55F-1.

Dear Ms. Nainan:

This letter is in response to your letter of June 12, 2006, requesting approval of an AMP for the infrequent off-gas streams from the headspace of the Tanks to Flare 55F-1. The request contains all of the information specified in the policy "Conditions for Approval of [An] Alternative Monitoring Plan for Miscellaneous Refinery Fuel Gas Stream." The United States Environmental Agency ("USEPA"), Region 9 has reviewed the request and has made the final determination as follows:

Regulatory Background

The New Source Performance Standards for Petroleum Refineries ("Petroleum Refinery NSPS"), 40 C.F.R. §§ 60.100 through 60.109, include emission standards and monitoring requirements for fuel gas combustion devices ("FGCDs"). 40 C.F.R. § 60.104(a)(1) requires the owner or operator of a FGCD at a petroleum refinery to burn no refinery fuel gas that contains hydrogen sulfide ("H₂S") in excess of 230 milligrams per dry standard cubic meter (0.10 grain per dry standard cubic foot; 162 parts per million by volume, dry basis). Pursuant to 40 C.F.R. § 60.105(a)(3), the owner or operator of a FGCD subject to 40 C.F.R. § 60.104(a)(1) is required to install, calibrate, maintain, and operate a continuous monitoring system ("CMS") to monitor and record the concentration by volume of sulfur dioxide emitted into the atmosphere. The specifications for the CMS are codified in 40 C.F.R. § 60.105(a)(3)(i-iv).

40 C.F.R. § 60.13(i) also sets forth: "After receipt and consideration of written application, the Administrator may approve alternative procedures to any monitoring procedures or requirements of [Part 60]...."

The EPA issued guidance titled "Alternative Monitoring Plan for NSPS Subpart J Refinery Fuel Gas" ("RFG Guidance"). The RFG Guidance is divided into four subjects: conditions for approval; data requirements; monitoring schedule for approved alternative plans; and general conditions for approved monitoring plans. The RFG Guidance requires that requests

for AMPs include the following information:

- a description of the gas stream to be considered including submission of the appropriate piping diagrams indicating the boundaries of the gas streams/system;
- the affected fuel gas combustion device(s) to be considered;
- an identification of the proposed sampling point for the alternative monitoring;
- a statement that there are no sour gas crossover points into the gas stream/system along with an indication of this in the piping diagram(s); and
- an explanation of the conditions that ensure low amounts of sulfur in the gas stream and supporting test results using appropriate H₂S monitoring.

ExxonMobil's Request

On June 12, 2006, ExxonMobil requested approval of an AMP for the storage tank off-gas streams to Flare 55F-1. Flare 55F-1 serves as a backup pollution control and safety device in the event of overpressure of any of the Tanks. Since the streams from the Tanks are not continuously, Flare 55F-1 is considered an infrequently operated fuel gas combustion device. Tanks 400x30 and 400x31 contain light hydrocrackate and light straight run, respectively. Tank 510x4 contains butane.

ExxonMobil states that three commodities are treated for sulfur removal at various process units and held at low sulfur and hydrogen sulfide contents for blending and product specification purposes. Light hydrocrackate is hydrotreated in the Hydrocracking Unit. A caustic wash in the Gasoline Merox Unit effectively removes most of hydrogen sulfide in the light straight run stream. Almost all of the sulfur in the butane stream is removed by an upstream amine contactor, a caustic prewash contactor, and a merox contactor.

To determine the H₂S concentration of the off-gas streams from these Tanks, ExxonMobil collected 24 samples between August 29, 2005, and September 12, 2005. The measured H₂S concentrations of the samples were consistently below the detection limit of 0.5 ppmv. Only one sample showed the H₂S concentration of 1.5 ppmv.

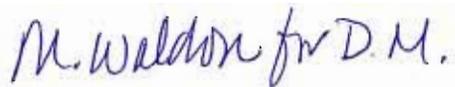
ExxonMobil also certifies that there are no crossover or entry points for H₂S to be introduced into the off-gas streams to Flare 55F-1, as shown in the submitted simplified process flow diagram. ExxonMobil will take drager tube samples from each tank weekly, quarterly, and semi-annually, as allowed in the RFG guidance.

Approval of ExxonMobil's Request

USEPA has determined that the proposed AMP for the off-gas streams from the Tanks to Flare 55F-1 is appropriate. Therefore, the Administrator of USEPA, by authority duly delegated to the undersigned, approves ExxonMobil's proposed AMP for the storage tank off-gas streams to Flare 55F-1 at the ExxonMobil Torrance refinery, as submitted on June 12, 2006. The approval of the proposed AMP does not alter any of the other requirements of New Source Performance Standards, Subparts A and J that may apply to the ExxonMobil Torrance refinery.

If you have any questions regarding this response, please contact John Kim, Air Enforcement Office, at (415) 972-3984.

Sincerely,

A handwritten signature in blue ink that reads "M. Waldon for D.M.".

Douglas K. McDaniel
Chief, Enforcement Office
Air Division

Cc: Dr. Barry R. Wallerstein, SCAQMD



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

DEC 18 2006

Meena Nainan
Environmental Group Leader
ExxonMobil Refining & Supply Company
3700 West 190th St.
Torrance, CA 90504-2929

Dear Ms. Nainan:

On June 12, 2006, ExxonMobil Refining & Supply Company (ExxonMobil) submitted to the United States Environmental Protection Agency (EPA) an Alternative Monitoring Plan (AMP) request for the vent gas from the wastewater treatment system at the ExxonMobil Torrance Refinery (Refinery). The AMP proposes that the wastewater treatment system vent gas does not need to be continuously monitored for hydrogen sulfide (H₂S) content; instead samples of the wastewater treatment system vent gas will be collected at least twice per year and analyzed for H₂S content with colorimetric tubes. For the reasons proposed by ExxonMobil and outlined below, the United States Environmental Protection Agency (EPA) approves the requested AMP.

Regulatory Background

The Standards of Performance for New Stationary Sources (NSPS) Subpart J (Standards of Performance for Petroleum Refineries) at 40 C.F.R. § 60.104(a)(1) requires the owner or operator of a fuel gas combustion device at a petroleum refinery to burn no refinery fuel gas that contains H₂S in excess of 230 milligrams per dry standard cubic meter (0.10 grain per dry standard cubic foot). This limit is equivalent to 160 parts per million (ppm) H₂S. Pursuant to 40 C.F.R. § 60.105(a)(3), the owner or operator of a fuel gas combustion device subject to 40 C.F.R. § 60.104(a)(1) is required to install, calibrate, maintain, and operate a continuous monitoring system (CMS) to monitor and record the concentration by volume of sulfur dioxide emitted to the atmosphere. Alternatively, a CMS to monitor and record the H₂S in fuel gases before being burned in any fuel gas combustion device may be used. Pursuant to 40 C.F.R. § 60.13(i), after receipt and consideration of written application, the Administrator may approve alternative procedures to any monitoring procedures or requirements of [Part 60].

The EPA issued guidance titled "Alternative Monitoring Plan for NSPS Subpart J Refinery Fuel Gas" (RFG Guidance). The RFG Guidance is divided into four subjects: conditions for approval; data requirements; monitoring schedules for approved alternative plans; and general conditions for approved monitoring plans. ExxonMobil's request for an AMP included the information required by the RFG Guidance:

- a description of the gas stream to be considered including submission of the appropriate piping diagrams indicating the boundaries of the gas streams/system;
- the affected fuel gas combustion device(s) to be considered;
- an identification of the proposed sampling point for the alternative monitoring;
- a statement that there are no sour gas crossover points into the gas stream/system (this should also be shown in the piping diagram);
- an explanation of the conditions that ensures low amounts of sulfur in the gas stream and supporting test results using appropriate H₂S monitoring.

ExxonMobil's Request

ExxonMobil submitted supporting information with the AMP request. This information included a statement that the wastewater treatment system vent gas stream is generated from the Refinery's wastewater treatment system and a fuel gas system overview drawing indicating the wastewater treatment system vent gas and the sampling points for the vent gas H₂S content. ExxonMobil stated that there are no entry or crossover points which would allow sour gases to be combined with the wastewater treatment system vent gas that is combusted in the 72F-2 and 72F-4 incinerators. ExxonMobil submitted 2 weeks of sample results (28 samples) using colorimetric tubes that indicate the H₂S content of the wastewater treatment system vent gas stream never exceeded 0.5 ppm, the detection limit of the colorimetric tubes. These results are expected to be representative.

ExxonMobil proposed to sample the H₂S content of the wastewater treatment system vent gas using colorimetric "length of stain" type tubes at least once per week until seven samples have been collected; then once per quarter until seven samples have been collected; then once every six months. If the average plus 3 standard deviations of any of these sample results is greater than 81 ppm (one-half of the NSPS Subpart J limit) then ExxonMobil will notify EPA and sample the wastewater treatment system vent gas twice daily for 2 weeks. ExxonMobil will then test the wastewater treatment system vent gas stream twice per week. The weekly sampling will continue until EPA approves a revised sampling schedule or withdraws approval of this AMP.

Approval of ExxonMobil's Alternative Monitoring Plan

EPA has reviewed ExxonMobil's request for an AMP and has determined that it includes all of the required information. The wastewater treatment system vent gas at the Refinery is inherently low in H₂S and ExxonMobil has submitted fifteen sample results to support this conclusion. There are also no crossover or entry points that would allow for sour gas to be introduced into the wastewater treatment system vent gas stream. Therefore, the Administrator of the EPA, by authority duly-delegated to the undersigned, approves ExxonMobil's request for an AMP.

If you have any questions regarding this approval please contact Charles Aldred, Air Enforcement Office, at (415) 972-3986 or aldred.charles@epa.gov.

Sincerely,

Handwritten signature in blue ink that reads "M. Walden for D.M.".

Douglas K. McDaniel
Chief, Air Enforcement Office

cc: Ed Pupka, SCAQMD



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

MAR 31 2006

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APR 10 2006

EXXONMOBIL CORP
SAFETY, HEALTH & ENVIRONMENTAL

Paul Krishna
Environmental Group Leader
ExxonMobil Refining & Supply Company
3700 West 190th Street
Torrance, CA 90504-2929

RE: Request for Approval of Alternate Monitoring Plan ("AMP") under 40 C.F.R. § 60.13(i) for the Semi-Regenerative Reformer Regeneration Gas Stream to Platinum Reformer Heater 19F-1

Dear Mr. Krishna:

This letter is in response to your letter of October 5, 2005, requesting approval of an AMP for the semi-regenerative reformer regeneration gas stream routed to the combustion chamber of the 288 MMBtu/hr Platinum Reformer No. 2 Heater 19F-1 (hereinafter, Heater 19F-1). The request contains all of the information specified in the policy "Conditions for Approval of [An] Alternative Monitoring Plan for Miscellaneous Refinery Fuel Gas Stream." ExxonMobil Refining & Supply Company ("ExxonMobil") also provided additional information through an e-mail on February 8, 2006. The United States Environmental Agency ("USEPA"), Region 9 has reviewed the request and has decided to approve the AMP based on the information submitted on October 5, 2005, and February 8, 2006.

Regulatory Background

The New Source Performance Standards for Petroleum Refineries ("Petroleum Refinery NSPS"), 40 C.F.R. §§ 60.100 through 60.109, include emission standards and monitoring requirements for fuel gas combustion devices ("FGCDs"). 40 C.F.R. § 60.104(a)(1) requires the owner or operator of a FGCD at a petroleum refinery to burn no refinery fuel gas that contains hydrogen sulfide ("H₂S") in excess of 230 milligrams per dry standard cubic meter (0.10 grain per dry standard cubic foot; 162 parts per million by volume, dry basis). Pursuant to 40 C.F.R. § 60.105(a)(3), the owner or operator of a FGCD subject to 40 C.F.R. § 60.104(a)(1) is required to install, calibrate, maintain, and operate a continuous monitoring system ("CMS") to monitor and record the concentration by volume of sulfur dioxide emitted into the atmosphere. The specifications for the CMS are codified in 40 C.F.R. § 60.105(a)(3)(i-iv).

40 C.F.R. § 60.13(i) also sets forth: "After receipt and consideration of written application, the Administrator may approve alternative procedures to any monitoring procedures or requirements of [Part 60]...."

Mr. Paul Krishna
Environmental Group Leader
ExxonMobil Refining & Supply Company
Page 2

ExxonMobil's Request

On October 5, 2005, ExxonMobil requested approval of the AMP for the semi-regenerative reformer regeneration gas stream to Heater 19F-1. The Platinum Reformer No. 2 is a semi-regenerative reformer as the catalyst within the reactor goes through a 2 to 5 day regeneration ("Regen") process every 12 to 18 months.

During the Regen process, the spent catalyst is exposed to air at high temperature to burn off the coke that has deposited on the surface of the catalyst during the run cycle. The combustion of the coke converts any sulfur compounds into SOx. The gas stream from the combustion of the coke is sent to a high pressure separator which works as a caustic scrubber to remove chlorides in the stream. The scrubber also removes any remaining H₂S and most of the SOx from the stream. The stream is then routed to the combustion chamber of Heater 19F-1.

ExxonMobil states that reformer feeds are hydrotreated to a specification of less than 0.5 ppmw sulfur and nominally monitored daily to prevent sulfur poisoning of the catalyst. To determine the H₂S concentration of the gas stream, ExxonMobil collected 12 samples during the August 2005 Regen process. The samples were taken at 4-hour intervals from the start to the end of the process in which the semi-regenerative reformer catalyst regeneration gas stream is sent to the combustion zone of Heater 19F-1. These samples demonstrated that the H₂S concentration of the stream is inherently low and stable. The measured H₂S concentrations of the samples were consistently below the detection limit of 0.5 ppmv.

On February 8, 2006, ExxonMobil amended the request by proposing to conduct H₂S detector tube sampling at least once every calendar day whenever the semi-regenerative reformer regeneration gas is routed to the combustion chamber of Heater 19F-1 for at least 12 hours.

Approval of ExxonMobil's Request

USEPA has determined that the proposed AMP for the catalytic reformer regeneration gas stream to Heater 19F-1 is appropriate. Therefore, the Administrator of USEPA, by authority duly delegated to the undersigned, approves ExxonMobil's proposed AMP for the reformer regeneration gas stream to Heater 19F-1 at the ExxonMobil Torrance refinery. The approval of the proposed AMP does not alter any of the other requirements of New Source Performance Standards, Subparts A and J that may apply to the ExxonMobil Torrance refinery.

Mr. Paul Krishna
Environmental Group Leader
ExxonMobil Refining & Supply Company
Page 3

If you have any questions regarding this response, please contact John Kim, Air Enforcement Office, at (415) 972-3984.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. McDaniel', with a long horizontal flourish extending to the right.

Douglas K. McDaniel
Chief, Enforcement Office
Air Division

cc: Dr. Barry R. Wallerstein, SCAQMD



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

DEC 18 2006

Meena Nainan
Environmental Group Leader
ExxonMobil Refining & Supply Company
3700 West 190th St.
Torrance, CA 90504-2929

Dear Ms. Nainan:

On June 12, 2006, ExxonMobil Refining & Supply Company (ExxonMobil) submitted to the United States Environmental Protection Agency (EPA) an Alternative Monitoring Plan (AMP) request for the vent gas from the residuum (resid) loading arms at the ExxonMobil Torrance Refinery (Refinery). The AMP proposes that the resid vent gas does not need to be continuously monitored for hydrogen sulfide (H₂S) content; instead samples of the resid vent gas will be collected at least twice per year and analyzed for H₂S content with colorimetric tubes. For the reasons proposed by ExxonMobil and outlined below, the United States Environmental Protection Agency (EPA) approves the requested AMP.

Regulatory Background

The Standards of Performance for New Stationary Sources (NSPS) Subpart J (Standards of Performance for Petroleum Refineries) at 40 C.F.R. § 60.104(a)(1) requires the owner or operator of a fuel gas combustion device at a petroleum refinery to burn no refinery fuel gas that contains H₂S in excess of 230 milligrams per dry standard cubic meter (0.10 grain per dry standard cubic foot). This limit is equivalent to 160 parts per million (ppm) H₂S. Pursuant to 40 C.F.R. § 60.105(a)(3), the owner or operator of a fuel gas combustion device subject to 40 C.F.R. § 60.104(a)(1) is required to install, calibrate, maintain, and operate a continuous monitoring system (CMS) to monitor and record the concentration by volume of sulfur dioxide emitted to the atmosphere. Alternatively, a CMS to monitor and record the H₂S in fuel gases before being burned in any fuel gas combustion device may be used. Pursuant to 40 C.F.R. § 60.13(i), after receipt and consideration of written application, the Administrator may approve alternative procedures to any monitoring procedures or requirements of [Part 60].

The EPA issued guidance titled "Alternative Monitoring Plan for NSPS Subpart J Refinery Fuel Gas" (RFG Guidance). The RFG Guidance is divided into four subjects: conditions for approval; data requirements; monitoring schedules for approved alternative plans; and general conditions for approved monitoring plans. ExxonMobil's request for an AMP included the information required by the RFG Guidance:

- a description of the gas stream to be considered including submission of the appropriate piping diagrams indicating the boundaries of the gas streams/system;
- the affected fuel gas combustion device(s) to be considered;
- an identification of the proposed sampling point for the alternative monitoring;
- a statement that there are no sour gas crossover points into the gas stream/system (this should also be shown in the piping diagram);
- an explanation of the conditions that ensures low amounts of sulfur in the gas stream and supporting test results using appropriate H₂S monitoring.

ExxonMobil's Request

ExxonMobil submitted supporting information with the AMP request. This information included a statement that the resid vent gas stream is generated from the Refinery's resid loading arms and a fuel gas system overview drawing indicating the resid vent gas and the sampling points for resid vent gas H₂S content. The resid loading arms transfer resid to trucks for off-site destinations. ExxonMobil stated that there are no entry or crossover points which would allow sour gases to be combined with the resid vent gas that is combusted in the C1776 thermal oxidizer. ExxonMobil stated that the use of a H₂S scavenger in the resid storage tanks before it is pumped to the loading racks will prevent H₂S from being liberated into the resid vent gas. ExxonMobil submitted 15 sample results using Draeger tubes that indicate the H₂S content of the resid vent gas stream never exceeded 0.2 ppm, the detection limit of the colorimetric tubes. These results are expected to be representative.

ExxonMobil proposed to sample the H₂S content of the resid vent gas using colorimetric "length of stain" type tubes at least once per week until seven samples have been collected; then once per quarter until seven samples have been collected; then once every six months. If the average plus 3 standard deviations of any of these sample results is greater than 81 ppm (one-half of the NSPS Subpart J limit) then ExxonMobil will notify EPA and sample the resid vent gas on a daily basis for 2 weeks. ExxonMobil will then test the resid vent gas stream once per week. The weekly sampling will continue until EPA approves a revised sampling schedule or withdraws approval of this AMP.

Approval of ExxonMobil's Alternative Monitoring Plan

EPA has reviewed ExxonMobil's request for an AMP and has determined that it includes all of the required information. The resid vent gas at the Refinery is inherently low in H₂S and ExxonMobil has submitted fifteen sample results to support this conclusion. There are also no crossover or entry points that would allow for sour gas to be introduced into the resid vent gas stream. Therefore, the Administrator of the EPA, by authority duly-delegated to the undersigned, approves ExxonMobil's request for an AMP.

If you have any questions regarding this approval please contact Charles Aldred, Air Enforcement Office, at (415) 972-3986 or aldred.charles@epa.gov.

Sincerely,

A handwritten signature in blue ink that reads "M. Walden for DM." The signature is written in a cursive style.

Douglas K. McDaniel
Chief, Air Enforcement Office

cc: Ed Pupka, SCAQMD



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

APR 7 2003

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

Loan Tran
Environmental Supervisor
ExxonMobil Refining and Supply Company
3700 West 190th Street
Torrance, California 90509-2929

RECEIVED

APR 10 2003

EXXONMOBIL CORP
SAFETY, HEALTH & ENVIRONMENTAL

Dear Mr. Tran:

We reviewed your December 12, 2002 submittal to the U.S. Environmental Protection Agency, Region 9 for alternative sulfur oxides (SO_x) testing at ExxonMobil's fluid catalytic cracking unit (FCCU) catalyst regenerator at the Torrance, CA refinery. As we understand it, your facility is subject to the New Source Performance Standards for petroleum refineries (40 CFR 60, Subpart J). Under the 40 CFR 60.106(i)(12) alternative method option, you proposed to use a sulfur dioxide (SO₂) continuous emission monitoring system (CEMS) to measure sulfur dioxide as an alternative to the required daily 3-hour Methods 1, 2, 3, and 8 tests for SO_x. The CEMS you are proposing to use is also regulated under the South Coast Air Quality Management District's RECLAIM program which requires it to undergo routine relative accuracy test audits (RATA) and quarterly cylinder gas audits.

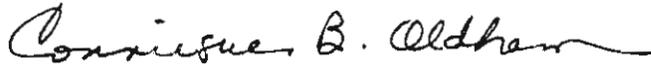
In cases where SO₂ CEMSs are allowed to measure SO_x, it must be shown that the SO₃ component of SO_x is either insignificant or can be accounted for. This is important for facilities that use DeSOx catalysts to reduce sulfur emissions because SO₃ is produced as an intermediary component in the catalytic pathway. Your FCCU does not use DeSOx catalysts, but rather processes the feed through a hydrotreater which achieves approximately 70 percent denitrification, 95 percent desulfurization, and 100 percent olefin conversion in addition to saturating aromatics and removing metals.

The data you submitted from six previous RATA, conducted between April 2000 and October 2002, employing Method 6 indicate regenerator SO_x emissions in the 8-15 ppm range. In each test, the average SO₂ concentration for the CEMS was always higher than the concentration obtained by Method 6. We believe this shows that SO₃ levels from your regenerator are insignificant when the hydrotreating process is used.

We believe your proposal will adequately measure sulfur emissions from the FCCU regenerator and therefore approve your use of the RECLAIM SO₂ CEMS in place of daily Method 1, 2, 3, and 8 measurements. The CEMS must be operated according to the monitoring requirements of 40 CFR 60.13. Each hourly average must be used to calculate a 24-hour average which is then used to calculate the SO_x emission rate and SO_x emissions per 1,000 kg of coke burn-off on a daily basis instead of a test run basis as described in 60.106(i)(9) and (10). The daily SO_x emissions per 1,000 kg of coke burn-off is then used to calculate the 7-day average SO_x emissions per 1,000 kg of coke burn-off as described in 60.106(i)(11).

This approval is contingent upon continual operation of the hydrotreater and is applicable only to ExxonMobil's FCCU catalyst regenerator at the Torrance, CA refinery. If you have questions or would like to discuss the matter further, please call Foston Curtis at (919) 541-1063, or you may e-mail him a message at curtis.foston@epa.gov.

Sincerely,



Conniesue B. Oldham, Ph.D., Group Leader
Source Measurement Technology Group

cc: Shaun Burke, OECA
Foston Curtis (D205-02)
Patrick Foley, OECA
Steve Frey, Region 9
Terry Harrison (D205-02)
John Kim, Region 9
Stanley Tong, Region 9

Attachment 2

Consent Decree: Applications Submittal and Status

ExxonMobil Consent Decree – Applications Submittal and Status

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

ExxonMobil Consent Decree – Applications Submittal and Status

#	AN	Equipment	Device ID	Process/ System	Status
45	455106	Heater 2F-2	D920	P3S4	PO issued 03/30/07
46	455108	FCCU CO Boiler 2F-3	C164	P3S2	Cancelled & consolidated into R1105.1 Project AN 458744, PC issued 03/27/07
47	455104	FCCU Regenerator 2C-3	D151	P3S1	Cancelled & consolidated into R1105.1 Project AN 458743, PC issued 03/27/07 (subsequent AN 485908, PC issued 12/09/08)
48	475236	MEROX Fuel Gas Treating	D1324	P11S12	PC issued 10/30/08 for Phase I – “H2S vapor treatment/re-route project”
49	475234	Sulfur Storage Pit 28R-137	D1375	P12S6	
50	475232	Sulfur Truck Loading System	D644	P13S6	
51	432510	Sulfur Vapor Collection	D2391	P13S7	
52	475231	Carbon Adsorber, H2S Reduction	C2393	P13S8	
53	477259	Carbon Adsorber, H2S Reduction	C2394	P13S8	
54	483878	Waste Gas Incinerator 28F-11	C626	P13S8	