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Agenda Date: November 7, 2007
Applicant: ExxonMobil Oil Corporation
Proposed Permit No.: 46534 & PSD-TX-992M1
Program: Air
TCEQ Docket No.: 2007-1460-AIR

Documents with this transmittal are indicated below:

- Final Draft Permit, including any special provisions or conditions
- Maximum Allowable Emission Rate Table (MAERT)
- The summary of the technical review of the permit application.
- The compliance summary of the applicant.
- Modeling Audit Reports – ExxonMobil Oil Corporation 4/3/07 & 5/2/07

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1. This permit covers only those emissions from the points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and the facilities covered by this permit are authorized to emit only the air contaminants on that table subject to the emission rate limits and other conditions specified in this permit.

FEDERAL APPLICABILITY

2. The fluid catalytic cracking unit (FCCU) facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations in Title 40 Code of Federal Regulations (40 CFR) Part 60, Subparts A and J, on Standards of Performance for New Stationary Sources promulgated for Petroleum Refineries. Entry of the EPA consent decree and compliance with the relevant monitoring requirements of the consent decree for the FCCU shall satisfy the notice requirements of 40 CFR § 60.7(a) and the initial performance test requirements of 40 CFR § 60.8(a).

For all periods of operations, the permit holder shall ensure that the FCCU catalyst regenerator complies with the applicable emissions limitations imposed by New Source Performance Standards (NSPS) Subpart J, as specified by the first paragraph of this special condition, except during periods of start-up, shutdown, or malfunction, as defined by 40 CFR § 60.2. At all times, including periods of start-up, shutdown, and malfunction, the permit holder shall, to the extent practicable, maintain and operate the FCCU catalyst regenerator and any associated air pollution control equipment in a manner consistent with good air pollution. This paragraph does not authorize start-up, shutdown, and maintenance activities and emissions under 30 TAC Chapter 101 or 30 TAC Chapter 116. Upset and malfunction emissions are not authorized by this paragraph and are still subject to the applicable 30 TAC Chapter 101 requirements. (6/06) (EPA CD 12/13/2005 paragraph 43)

3. These facilities in the north plant flare gas recovery unit (FGRU), except Compressor K-404, shall comply with the applicable requirements of Title 30 Texas Administrative Code (30 TAC) § 113.340, including the referenced requirements contained in 40 CFR Part 63, Subpart CC. (1/05)

OPERATIONAL PRACTICES

4. The maximum allowable concentration of the following pollutants in the FCCU flue gas vent stack shall not exceed the following: (PSD) (EPA CD 12/13/2005 paragraphs 26b and 39)

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Carbon Monoxide (CO) 500 parts per million by volume dry (ppmvd) corrected to 0 percent oxygen (O₂) on a one hour average basis

Sulfur Dioxide (SO₂) 200 ppmv hourly average

25 ppmvd at 0 percent O₂ on a 365-day rolling average basis

50 ppmvd at 0 percent O₂ on a 7-day rolling average basis

Nitrogen Oxides (NO_x) 408 ppmv, hourly average prior to April 1, 2008

200 ppmv rolling 12-month average prior to April 1, 2008

200 ppmvd at 0 percent O₂ hourly average commencing April 1, 2008

100 ppmvd at 0 percent O₂ rolling 7-day average commencing April 1, 2008

50 ppmvd at 0 percent O₂ 365-day rolling average commencing April 1, 2008

Ammonia 7 ppmv hourly average (7/07)

5. Consistent with NSPS regulations at 40 CFR Part 60, Subpart J, emissions from the FCCU stack shall not exceed 1.0 pound of particulate matter (PM) per 1,000 pounds of coke burned. Front-half and back-half catches shall be used to determine compliance with the pound per hour (MAERT). Compliance with the 1 lb/1,000 lb coke burnoff shall be demonstrated through front-half catch only. **(PSD) (6/06) (EPA CD 12/13/2005 paragraph 34)**
6. The opacity of emissions from the FCCU stack shall not exceed 15 percent averaged over a six-minute period. Compliance shall be demonstrated through the use of EPA 40 CFR Part 60, Method 9 for Visual Determination of the Opacity of Emissions from Stationary Sources. Opacity requirements are met by US EPA approved alternate monitoring plan held on-site. **(6/06) (EPA CD 12/13/2005 paragraphs 26b and 39)**

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7. The FCCU Regenerator Scrubber liquid to gas ratio shall be continuously monitored and be maintained greater than the minimum one hour average value observed in the last satisfactory stack test performed in accordance with Special Condition No. 13.

The flow rates shall be recorded every six minutes as six-minute averages. The gas flow rate monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least annually, whichever is more frequent, and shall be accurate to within 2 percent of span or 5 percent of the design value.

The liquid flow rate shall be determined using system pump rate curves and monitoring pump discharge pressure. The pressure monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or at least annually, whichever is more frequent, and shall be accurate to within 5 percent of span or 5 percent of the design value. Any changes to the scrubber system equipment or piping that would be expected to change the pump suction pressure or back pressure on the pump, or relevant changes to the pumps must be reviewed and approved by TCEQ APD prior to scrubber operation.

Quality assured (or valid) data must be generated when the FCCU is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the FCCU operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgement and the methods used recorded. (7/07) (PSD)

8. The holder of this permit shall keep daily records of the quantity of gas produced from the FGRU permitted facility. The outlet of the north fuel gas mixing drum shall be monitored continuously for hydrogen sulfide (H_2S). The H_2S CEM shall meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. Records shall be maintained for at least two years at the plant site and shall be made available to TCEQ personnel upon request. (1/05)

PROCESS FUGITIVE MONITORING

9. Piping, Valves, Connectors, Pumps, and Compressors in Volatile Organic Compounds (VOC) Service in the FCCU - 28VHP

Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment:

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- A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pound per square inch, absolute (psia) at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 pound per square inch (psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list to be made available upon request.
- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves, as defined by 30 TAC Chapter 115, shall be identified in a list to be made available upon request.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring after initial installation or replacement, all new or reworked connections shall be gas-tested or hydraulically-tested at no less than normal operating pressure and adjustments made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve. Except during sampling, the second valve shall be closed.

- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

An approved gas analyzer shall conform to requirements listed in 40 CFR § 60.485(a)-(b).

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Replaced components shall be re-monitored within 15 days of being placed back into VOC service.

- G. Except as may be provided for in the special conditions of this permit, all pump and compressor seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.
- H. Damaged or leaking valves or connectors found to be emitting VOC in excess of 500 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump and compressor seals found to be emitting VOC in excess of 2,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired.
- I. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. At the discretion of the TCEQ Executive Director or his designated representative, early unit shutdown or other appropriate action may be required based on the number and severity of tagged leaks awaiting shutdown.
- J. The results of the required fugitive instrument monitoring and maintenance program shall be made available to the TCEQ Executive Director or his designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of physical inspections are not required unless a leak is detected.
- K. Alternative monitoring frequency schedules of 30 TAC §§ 115.352 through 115.359 or National Emission Standards for Organic Hazardous Air Pollutants, 40 CFR Part 63, Subpart H, may be used in lieu of Items F through G of this condition.

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L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, NSPS, or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS) and does not constitute approval of alternative standards for these regulations.

10. Process drains in the FCCU shall be monitored for leaks on a quarterly basis in accordance with the monitoring requirements of Special Condition No. 9. The definition of a leak for a process drain is 10,000 ppmv. If a leak is detected, the holder of this permit shall conduct corrective actions to eliminate the leak (flush the drain, repair the water trap, etc). Records of all leaking drains and repairs shall be maintained on-site for a period of two years and made available to representative of the TCEQ upon request.

11. Piping, Valves, Pumps, and Compressors in Ammonia Service

A. Audio, olfactory, and visual checks for ammonia leaks within the operating area shall be made every four hours.

B. Immediately, but no later than one hour upon detection of a leak, plant personnel shall take the following actions:

- (1) Isolate the leak.
- (2) Commence repair or replacement of the leaking component.
- (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request. (7/07)

12. Piping, Valves, Flanges, Connectors, Pumps and Compressors in VOC Service in the FGRU -28RCT (1/05)

A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure equal to or less than 0.044 psia at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list to be made available upon request.

B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable ANSI, API, ASME, or equivalent codes.

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- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves, as defined by 30 TAC Chapter 115, shall be identified in a list to be made available upon request.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring after initial installation or replacement, all new or reworked connections shall be gas-tested or hydraulically-tested at no less than normal operating pressure and adjustments made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve. Except during sampling, the second valve shall be closed.

- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

An approved gas analyzer shall conform to requirements listed in 40 CFR § 60.485(a)-(b).

Replaced components shall be re-monitored within 15 days of being placed back into VOC service.

- G. Except as may be provided for in the special conditions of this permit, all pump and compressor seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system.

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Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.

- H. Damaged or leaking valves or connectors found to be emitting VOC in excess of ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump and compressor seals found to be emitting VOC in excess of 10,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired.
- I. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. At the discretion of the TCEQ Executive Director or designated representative, early unit shutdown or other appropriate action may be required based on the number and severity of tagged leaks awaiting shutdown.
- J. The results of the required fugitive instrument monitoring and maintenance program shall be made available to the TCEQ Executive Director or designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of physical inspections are not required unless a leak is detected.
- K. Fugitive emission monitoring required by 30 TAC Chapter 115 may be used in lieu of Items F through I of this condition.
- L. Compliance with the requirements of this condition does not assure compliance with requirements of an applicable NSPS or an applicable NESHAPS and does not constitute approval of alternative standards for these regulations.

INITIAL DETERMINATION OF COMPLIANCE

13. The holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the FCCU Scrubber Stack (EPN 06STK_003). The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate EPA Reference Methods.

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- A. The appropriate TCEQ Regional Office shall be notified not less than 45 days prior to sampling. The notice shall include:
- (1) Proposed date for pretest meeting.
 - (2) Date sampling will occur.
 - (3) Name of firm conducting sampling.
 - (4) Type of sampling equipment to be used.
 - (5) Method or procedure to be used in sampling.
 - (6) Description of any proposed deviation from the sampling procedures specified in this permit or TCEQ/EPA sampling procedures.
 - (7) Procedure/parameters to be used to determine worst case emissions (such as production rate, temperature for incinerators, etc. These set operating parameters to be monitored and operating limits in other permit conditions) during the sampling period.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for the test reports. The TCEQ Regional Director or the TCEQ Office of Compliance and Enforcement (OCE), Compliance Support Division must approve any deviation from specified sampling procedures.

- B. Air contaminants emitted from the FCCU Scrubber stack to be tested for include (but are not limited to) CO, NO_x, SO₂, VOC, PM, sulfuric acid, ammonia, and O₂. Opacity shall be determined by a trained observer. Compliance with PM and SO₂ shall be demonstrated through the use of the EPA Method 5B in conjunction with Method 8.
- C. Sampling shall occur within 60 days after initial start-up of the facilities (sample completed on May 10 and 11, 2004); 60 days after achieving the maximum operating rate following the installation of the SCR system, but no later than 180 days after initial start-up of the SCR system; and at such other times as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate regional office.

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- D. During initial stack test, the plant shall operate at maximum production rates. Primary operating parameters that enable determination of production rate shall be monitored and recorded during the stack test. These parameters shall be determined at the pretest meeting and shall be stated in the sampling report. If the plant is unable to operate at maximum rates during testing, then additional stack testing may be required if: (1) production increases above the production rate achieved during testing and would cause emissions to exceed the values on the allowable table on a direct proportional basis or (2) production rates are increased more than 10 percent above the rate at which testing was performed.
- E. During subsequent stack tests (including test after the installation of SCR), the FCCU shall operate at the maximum feed rate and sulfur loading, and the regenerator at maximum exhaust flow rate during stack emission testing. The SCR inlet temperature and scrubber liquid to gas ratio must be monitored when taking sample data. These operating and control parameters and any others that affect the emission rate shall be monitored and recorded during the stack test. The initial (post SCR installation) stack test must be performed with the SCR inlet temperature less than 680°F. Any additional parameters shall be determined at the pretest meeting and shall be stated in the sampling report. Permit conditions and parameter limits may be waived during stack testing performed under this condition if the proposed condition/parameter range is identified in the test notice specified in paragraph A and accepted by the TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.

During subsequent operations, if the FCCU feed rate or sulfur loading, or the regenerator exhaust flow rate exceed those recorded during the test period, stack sampling shall be performed at the new operating conditions within 120 days. This sampling may be waived by the TCEQ Air Section Manager for the region.

- F. Copies of the final sampling report shall be forwarded to the offices below within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions entitled "Chapter 14, Contents of Sampling Reports" of the TCEQ Sampling Procedures Manual.

The reports shall be distributed as follows:

- One copy to the TCEQ Beaumont Regional Office.
- One copy to the TCEQ Compliance Support Division in Austin.

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- G. The permit holder shall submit a permit alteration request to lower the FCCU PM and/or sulfuric acid allowable emission rates if the initial sample results following the SCR installation indicate a PM emission rate less than 152.4 pounds per hour or a sulfuric acid emission rate less than 57 pounds per hour. If the PM emission rate is less than 152.4 pounds per hour, the PM allowable emission rates shall be reduced to 152.4 pounds per hour and 641.3 tons per year. If the sulfuric acid mist emission rate is less than 57 pounds per hour, the annual sulfuric acid emission rate limit shall be reduced to 8,760 times the stack test results or 194 tons per year, which ever is greater. The hourly emission rate limit shall be reduced to 1.5 times the sampling result. **(7/07) (PSD)**

CONTINUOUS DETERMINATION OF COMPLIANCE

14. The holder of this permit shall install, calibrate, maintain and operate a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of CO, NO_x, SO₂, and O₂ from the FCCU Scrubber Stack (EPN 06STK_003). The CEMS shall be installed, calibrated and certified in accordance with 40 CFR § 60.13 and 40 CFR Chapter 60, Appendices A and F and the applicable performance specification test of 40 CFR Part 60, Appendix B. If the CEMS is moved and reinstalled because of the installation of control equipment, then it will need to be recalibrated and recertified. **(EPA CD 12/13/2005 paragraphs 21, 32 and 42)**
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B. The TCEQ Compliance Support Division shall approve the design and performance specifications, the field tests, installation requirements, and the data analysis and reporting requirements proposed for the ammonia CEMS.
- B. The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: Unless Appendix F is otherwise required by the NSPS, state law or regulation or a permit or approval, in lieu of the requirements of 40 CFR Part 60, Appendix F 5.1.1, 5.1.3 and 5.1.4, the permit holder may conduct: (1) either a relative accuracy audit

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(RAA) or a relative accuracy test audit (RATA) once every three years and a cylinder gas audit (CGA) each calendar quarter in which a RAA or RATA is not performed. An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of ± 15 percent accuracy and any CEMS downtime shall be reported to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.

- C. The monitoring data shall be reduced to hourly average concentrations at least once everyday, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in lb/hr at least once everyday and cumulative TPY on a 12-month rolling average at least once every month.
 - D. All monitoring data and quality-assurance data shall be maintained by the source for a period of two years and shall be made available to the TCEQ Executive Director or his designated representative upon request. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
 - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
 - F. The permit holder shall install and operate a sulfuric acid mist CEMS if a monitor and approved EPA Performance Specification is available prior to the start of operation of the SCR system. **(PSD) (7/07)**
15. The permit holder shall continuously monitor ammonia emissions from EPN 06STK_003 using one of the following methods:
- A. Install and operate two NO_x CEMS, one located between the CO boiler and the SCR system and the other located downstream of the SCR system, which are used in association with NH_3 injection rate and the following calculation procedure to estimate NH_3 slip.

$$\text{NH}_3 \text{ slip, ppmvd} = (a - (b \times c / 1,000,000)) \times 1,000,000 / b) \times d$$

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where:

- a = ammonia injection rate (lb/hr)/17 (lb/lb-mole);
- b = dry exhaust gas flow rate (lb/hr)/29 (lb/lb-mole);
- c = change in measured NO_x concentration, ppmvd, across catalyst; and
- d = correction factor.

The correction factor shall be derived during compliance testing by comparing the measured and calculated ammonia slip. The ammonia inject rate and exhaust gas flow rate shall be recorded at least every 15 minutes and be recorded as hourly averages. Each flow monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least annually, whichever is more frequent, and shall be accurate to within 2 percent of span or 5 percent of the design value. The dry exhaust gas flow rate may be monitored in FCC scrubber exhaust stack.

- B. Install and operate a dual stream system of NO_x CEMS at the exit of the FCCU scrubber. One of the exhaust streams would be routed, in an unconverted state, to one NO_x CEMS and the other exhaust stream would be routed through a NH₃ converter to convert NH₃ to NO_x and then to a second NO_x CEMS. The NH₃ slip concentration shall be calculated from the delta between the two NO_x CEMS readings (converted and unconverted).

All CEMS specified in this condition must meet the requirements of Special Condition No. 14. Quality-assured (or valid) data must be generated when waste gas is directed to the SCR system. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time that waste gas is directed to the SCR system over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgement and the methods used recorded. (7/07)

- 16. The hourly average SCR inlet temperature shall not exceed that maintained during the last satisfactory stack test completed in accordance with Special Condition No. 13. The hourly average SCR inlet temperature shall be maintained below 680°F prior to the completion of the stack test following the initial operation of the SCR system.

The SCR inlet temperature shall be continuously monitored and recorded when waste gas is directed to the SCR system. The temperature measurement device shall reduce the temperature readings to an hourly averaging period and record it at that frequency. The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ±0.75 percent of the temperature being measured expressed in degrees Celsius or ±2.5°C.

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Quality assured (or valid) data must be generated when waste gas is directed to the SCR system. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time that waste gas is directed to the SCR system over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgement and the methods used recorded. (7/07) (PSD)

17. The following requirements apply to capture systems for the CO boiler, SCR system, and FCCU scrubber.

A. Complete either of the following once a year:

- (1) Inspect any fan and verify proper operation and inspect the capture system to verify there are no cracks, holes, tears, and other defects once a year; or
- (2) Verify there are no fugitive emissions escaping from the capture system by performing a visible emissions observation for a period of at least six minutes in accordance with 40 CFR Part 60, Appendix A, Test Method 22.

B. Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or

Once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.

C. For any bypass of a control device, comply with either of the following requirements:

- (1) Install a valve position indicator that records and verifies zero flow at least once every fifteen minutes on each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or
- (2) Once a month, inspect the valves, verifying the position of the valves and the condition of the car seals prevent flow out the bypass.

A deviation shall be reported if the monitoring or inspections indicate bypass of a control device with the exception of the following:

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The CO boiler may be bypassed once every three years for a boiler inspection. The SCR system may be bypassed during the subsequent CO boiler restart. All permit emission and concentration limits apply during these periods except for the 100 ppmvd at 0 percent O₂ rolling 7-day average for NO_x.

- D. If any of the above inspections is not satisfactory, the permit holder shall promptly take necessary corrective action. **(7/07) (PSD)**

CONSENT DECREE REQUIREMENTS

18. Effective December 31, 2005, the permit holder shall not burn fuel oil in any combustion unit except during periods of natural gas curtailment. Nothing herein is intended to limit or shall be interpreted as limiting: the use of torch oil in an FCC regenerator to assist in starting, restarting, maintaining hot standby or maintaining regenerator heat balance or combustion of acid soluble oil in a combustion device. A permit amendment shall be filed and approved by the TCEQ Executive Director prior to the combustion of acid soluble oil in a combustion device authorized in this permit. Any permit by rule(s) may not be used to authorize the combustion of acid soluble oil in a combustion device authorized in this permit. **(6/06) (EPA CD 12/13/2005 paragraph 60)**
19. The combustion of gases generated by start-up, shutdown, upset or malfunction or a refinery process unit or released to a flaring device as a result of relief valve leakage or other emergency malfunction is exempt from the requirement to comply with 40 CFR § 60.104(a)(1). This paragraph does not authorize start-up, shutdown, and maintenance activities and emissions under 30 TAC Chapter 101 or 30 TAC Chapter 116. Upset and malfunction emissions are not authorized by this paragraph and are still subject to the applicable 30 TAC 101 requirements. **(6/06) (EPA CD 12/13/2005 paragraph 74)**
20. The CO, NO_x, PM, and SO₂ emissions caused by or attributable to the start-up, shutdown, or malfunction of the FCCU and or during periods of malfunction of the FCCU's NO_x control system, WGS, third stage cyclones, or electrostatic precipitator or CO control system will not be used in determining compliance with the following limits, provided during such periods the permit holder implements good air pollution control practices to minimize emissions.

CO 500 parts per million by volume dry (ppmvd) corrected to zero percent oxygen (O₂) on a one-hour average basis (EPA consent decree requirement only)

SPECIAL CONDITIONS

Permit Numbers 46534 and PSD-TX-992M1

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NO_x 100 ppmvd at zero percent O₂ rolling 7-day average commencing April 1, 2008

PM 1 lb PM/1000 lb coke burned (EPA consent decree requirement only)

SO₂ 50 ppmvd at 0 percent O₂ on a 7-day rolling average basis

The permit CO and PM limits apply at all times, any deviations from those limits resulting in unauthorized emissions are subject to the emissions event reporting and recordkeeping requirements in 30 TAC Chapter 101. Nothing in this special condition shall be construed to relieve the permit holder of any obligation under any federal, state or local law, regulation or permit to report emissions during periods of start-up, shutdown, or malfunction or to document the occurrence and/or cause of start, shutdown or malfunction event. Emissions during any such period of startup, shutdown or malfunction shall either be: (i) monitored with CEMs as provided in Special Condition No. 14; or (2) monitored in accordance with an alternative monitoring plan approved by EPA pursuant to the consent decree if it is necessary to bypass the FCCU's main stack during the particular period of start-up, shutdown, or malfunction. **(7/07) (EPA CD 12/13/2005 paragraphs 20, 31, 36 and 41)**

REPORTING

21. Excess emission reports from the FCCU shall be submitted to the TCEQ Beaumont Regional Office no less than semi-annually. This condition does not supercede the requirements of 30 TAC Chapter 101. In addition, this permit does not authorize any emissions above the MAERT. At a minimum, each excess report shall contain:
 - A. Reporting of all excess emissions.
 - B. Reporting of all episodes of CEMS downtime.
 - C. Identification of reasons for excess emissions and CEMS downtime as well as a description of all corrective and preventative actions taken.
 - D. Periods of CGA exceedances as required by Special Condition No. 14B.

Dated _____

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 46534 and PSD-TX-992M1

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

AIR CONTAMINANTS DATA

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates * | |
|---------------------------|-----------------------------------------------------------------|-----------------------------|------------------|-------|
| | | | lb/hr | TPY** |
| 06STK_003 | FCCU Scrubber Stack (6) | VOC | 12.17 | 53.3 |
| | | NO _x | 984.0 | 2275 |
| | | CO (5) | 911.0 | 3774 |
| | | SO ₂ | 832.9 | 431.2 |
| | | PM (5) | 140.0 | 608.8 |
| | | sulfuric acid mist (5) | 41.7 | 181.5 |
| | FCCU Scrubber Stack (7) | VOC | 12.17 | 53.3 |
| | | NO _x | 598.7 | 619.9 |
| | | CO (5) | 911.0 | 3774 |
| | | SO ₂ | 832.9 | 431.2 |
| | | PM (5) (8) | 198.7 | 655.8 |
| | | sulfuric acid mist (5) | 93.3 | 250.0 |
| | | ammonia | 9.74 | 42.7 |
| | | | | |
| 06FUG_001 | FCCU Fugitives (4) | VOC | 9.84 | 43.10 |
| | | ammonia | 0.05 | 0.20 |
| 14FUG_001 | North Plant Flare Gas Recovery Unit Process Fugitives (4) | H ₂ S | 0.04 | 0.17 |
| | | VOC | 4.25 | 18.63 |

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

- (1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
- (2) Specific point source names. For fugitive sources, use an area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1 (30 TAC § 101.1)
NO_x - total oxides of nitrogen
CO - carbon monoxide
SO₂ - sulfur dioxide
PM - particulate matter, suspended in the atmosphere, including PM₁₀
PM₁₀ - particulate matter equal to or less than 10 microns in diameter, condensable and noncondensable (including sulfuric acid mist). Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) These emissions are permitted under PSD as well as State reviews.
- (6) Hourly and annual emission rate limits prior to April 1, 2008 except for annual NO_x emissions rate limit which is effective until April 1, 2009.
- (7) Hourly and annual emission rate limits as of April 1, 2008, except for annual NO_x emissions rate limit which is effective on April 1, 2009.
- (8) These allowable emission rates also apply during all periods of planned maintenance, start-up, and shutdown whether demonstrated under 30 TAC Chapter 101 or authorized in another state permit or permit by rule. This permit does not authorize any planned maintenance, start-up, and shutdown emissions.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

_____ Hrs/day _____ Days/week _____ Weeks/year or 8,760 Hrs/year

** Compliance with annual emission limits is based on a rolling 12-month period.

Dated _____

Construction Permit Amendment Review Analysis & Technical Review

| | | | |
|-------------------|--------------------------------------|-------------------------|-------------|
| Company: | Exxonmobil Oil Corporation | Permit No.: | 46534 |
| City: | Beaumont | Record No.: | 126702 |
| County: | Jefferson | Account No.: | JE-0067-I |
| Project Type: | CAMD | Regulated Entity No.: | RN102450756 |
| Project Reviewer: | Dr. Kurt Kind | Customer Reference No.: | CN600920748 |
| Facility Name: | Fluidized Catalytic Cracker Unit SCR | | |

Authorization Checklist

Will a new policy/precedent be established? (ED signature required if yes) No

Is a state or local official opposed to the permit?(ED signature required if yes) No

Is waste or tire derived fuel involved? (ED signature required if yes) No

Are waste management facilities involved?(ED signature required if yes) No

Will action on this application be posted on the Executive Director's agenda? yes

Have any changes to the application been required to increase protection of public health and the environment during the review? . yes

Project Overview

Exxonmobil is amending this permit to authorize construction of a selective catalytic reduction (SCR) system to control emissions of nitrogen oxides (NOx) from their fluidized catalytic cracking (FCC) unit. This installation is required by an Environmental Protection Agency (EPA) consent decree and will significantly reduce NOx emissions while increasing emissions of condensable particulate matter (PM), sulfuric acid, and ammonia. There is no modification of the FCC so only the SCR system and the pollutants it emits were reviewed for BACT.

A sulfuric acid emission rate limit will be added to the pre-SCR emission rate limits for the FCC scrubber because sulfuric acid is a federally regulated new source review (NSR) pollutant with its own significance level for PSD review. The current permit limits do not list sulfuric acid separately from PM emissions (it is included in the condensable portion of PM). The sulfuric acid and PM allowable emission rates will increase with the operation of the SCR system. The current sulfur dioxide annual emission rate will be reduced to reflect concentration limits in the consent decree. These allowable emission changes are summarized below.

Pre-SCR Changes

| | lb/hr | tpy |
|----------------|-------|-------|
| sulfur dioxide | 0 | -2418 |

Post SCR Changes

| | lb/hr | tpy |
|--------------------|-------------|-----------|
| NOx | -385.3 | -1655 |
| PM (sulfuric acid) | 58.7 (51.6) | 47 (78.5) |
| ammonia | 9.7 | 42.7 |

The proposed increases in PM and sulfuric acid allowable emissions are based on very conservative assumptions due to the limited information available regarding the performance of SCR systems in this type of service. The allowable emission rates will be reduced if stack testing confirms that actual emission rates are significantly below the proposed allowable emission rates. For example, this adjustment would lower the PM emission increase to 32.5 tpy.

EPA made informal comments on the draft permit during the second comment period. A footnote was added to the MAERT indicating that the PM limits must not be exceeded even including periods of MSS. ExxonMobil is authorizing site MSS emissions with an amendment to permit 49138 but this requirement was added here because any increase in these emission rates would require full NAAQS and increment modeling. EPA (Bonnie Braganza) indicated that EPA was satisfied with my response to her comments. She later requested that a sulfuric acid mist CEMS be required if one became available prior to startup. That requirement was added to Special Condition (SC) 14.

There was a hearing request received during the second public notice comment period.

Review Analysis & Technical Review

Permit No. 46534/PSD-TX-992M1

Regulated Entity No. RN102450756

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Compliance History

In compliance with 30 TAC Chapter 60, a compliance history report was prepared on: 2/13/07
Site rating? 3.01 (average by default) Company rating? 2.7
Is the permit recommended to be denied or has the permit changed on the basis of compliance history or rating? no

Public Notice Information

§39.403 Public notification required? yes
A. Date application received: January 05, 2007 Date Administrative Complete: 1/24/07
B. Small Business source? no
§39.418 C. Date 1st Public Notice /Admin Complete/Legislators letters mailed: 1/24/07
§39.603 D. Pollutants: sulfuric acid mist
E. Date Published: 2/1/07 in Beaumont Enterprise
Date Affidavits/Copies received: 2/23/07
F. Bilingual notice required? yes
Language: Spanish
Date Published: 2/5/07 in La Voz
Date Affidavits/Copies received: 2/23/07
§39.604 G. Certification of Sign Posting / Application availability yes
H. Public Comments Received? no
§39.419 2nd Public Notification required? yes
A. Date 2nd Public Notice mailed: 5/21/07
B. Preliminary determination approve
§39.603 C. Pollutants: sulfuric acid mist, PM, and ammonia
D. Date Published: 5/27/07 in Beaumont Enterprise
Date Affidavits/Copies received: 6/6/07
E. Bilingual notice required? yes
Language: Spanish
Date Published: 6/1/07 in La Voz
Date Affidavits/Copies received: 6/6/07
F. Public Comments Received? yes
Meeting requested? no
Hearing requested? yes
Was/were the request(s) withdrawn? no
§39.420 G. Consideration of Comments:
RTC, Technical Review & Draft Permit Conditions sent to OCC: RTC to legal on 7/11
H. Final action: Letters enclosed? yes

Emission Controls

§116.111(a)(2)(G) Is the facility expected to perform as represented in the application? yes
§116.140 Permit Fee: \$75,000 Fee certification provided? n/a

Sampling and Testing

§116.111(a)(2)(A)(i) Are the emissions expected to comply with all TCEQ air quality rules, and the Texas Clean Air Act? yes
§116.111(a)(2)(B) Will emissions be measured? yes
Method: Ammonia through NOx CEMS, injection rate, and stack sample. PM and sulfuric acid mist with stack sample, parameter monitoring.

Federal Program Applicability

§116.111(a)(2)(D) Compliance with applicable NSPS expected? yes
Subparts A and J
§116.111(a)(2)(E) Compliance with applicable NESHAP expected? n/a

Review Analysis & Technical Review

- §116.111(a)(2)(F) Compliance with applicable MACT expected? yes
Subparts CC and UUU
- §116.111(a)(2)(H) Is nonattainment review required? no
 - A. Is the site located in a nonattainment area? yes
 - B. Is the site a federal major source for a nonattainment pollutant? yes
 - C. Is the project a federal major source for a nonattainment pollutant by itself? n/a
 - D. Is the project a federal major modification for a nonattainment pollutant? no
 - 1. Did the project emission increases for nonattainment trigger netting? no
 - 2. If yes, attach Table 1N & 9N. If no, explain: no potential for increase in VOC or NOx
- 116.111(a)(2)(I) Is PSD applicable? yes, for PM and sulfuric acid mist
 - A. Is the site a federal major source (100/250 tons/yr)? yes
 - B. Is the project a federal major source by itself? n/a
 - C. Is the project a federal major modification? yes
 - 1. Did project emission increases trigger netting? yes
 - 2. Was contemporaneous increase significant? yes

Mass Cap and Trade Applicability

- §116.111(a)(2)(L) Is Mass Cap and Trade applicable? no

Title V Applicability

- §122.10(13)(A) Is the site a major source under FCAA Section 112(b)? yes
 - (i). The site emits 10 tons or more of any single HAP? yes
 - (ii). The site emits 25 tons or more of a combination yes
- §122.10(13)(C) Does the site emit 100 tons or more of any air pollutant? yes
- §122.10(13)(D) Is the site a non-attainment major source? yes

Request for Comments

Region: 10 Reviewed by: Doug Dusang

Process Description

The FCCU usually operates in partial burn mode and it is followed by a CO boiler and a wet gas scrubber. The SCR system will be installed between the CO boiler and the scrubber.

Sources, Controls, Source Reduction and BACT [§116.111(a)(2)(C)]

The SCR system has the potential to increase emissions of sulfuric acid mist (and therefore condensable PM) and ammonia. Ammonia slip will be maintained at less than 7 ppmv. Ammonia emissions will be continuously monitored using NOx CEMS upstream and downstream of the SCR and the ammonia injection rate. SCR exhaust flow will be measured at the scrubber stack due to the duct configuration.

Sulfuric acid mist will be minimized by maintaining SCR temperature less than 680F which is the physical constraint of the CO boiler (future modifications are planned to allow for better control of this parameter). This temperature must be monitored and recorded. The FCC scrubber has limited effectiveness for controlling condensable PM due to the small particle size. It is estimated to be between 50 and 70 percent effective. Scrubber L/G must be continuously monitored. The use of pump curves is allowed for measuring the liquid flow rate, consistent with their EPA approved AMP.

Exxonmobil did a top down analysis of other control options and found them to be technically impractical or economically unreasonable. Ammonia fugitive emissions are monitored with an AVO program. A disaster review was performed for anhydrous ammonia when cogeneration units were constructed at the site. This system will use that ammonia source and will not affect the disaster potential.

These controls are BACT. The following changes were made to the permit conditions:

Review Analysis & Technical Review

Permit No. 46534/PSD-TX-992M1

Regulated Entity No. RN102450756

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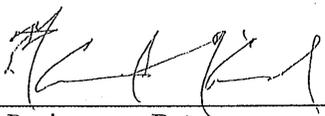
| <u>old SC</u> | <u>new SC</u> | <u>Change</u> |
|---------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | 4 | Added consent decree NOx limits (and one hour limit to reflect proper operation of SCR) and ammonia concentration limit. |
| 7 | 7 | Updated to reflect required L/G monitoring for PM control. |
| | 11 | Added AVO program for ammonia. |
| 12 | | Construction complete so it was removed. |
| 13 | 13 | Added sampling requirement for post-SCR operation. Requires that sulfuric acid and PM emission limits be reduced if sampling results confirm (corrected PM increase based on 0.5 percent conversion of SO2 to SO3 in SCR). |
| 14 | 14 | Added requirement for sulfuric acid mist CEMS if one becomes available prior to SCR startup. |
| | 15 | Added condition for continuous ammonia monitoring. |
| | 16 | Added condition for monitoring and maintaining temperature of exhaust gas to SCR system. |
| | 17 | Added CAM collection system condition. Allows for CO boiler shutdown once every 3 years for required inspection. SCR must also be taken off line during the inspection. |
| 15,16 | 18,19 | Moved. |
| 17 | 20 | Corrected this condition and also identified that BACT requirements in the permit conditions are not waived. |
| 18 | 21 | Moved. |

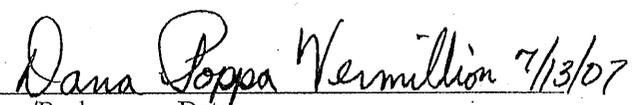
Impacts Evaluation

1. Was modeling done? yes Type? screen and refined
2. Will GLC of any air contaminant cause violation of NAAQS? no
3. Is this a sensitive location with respect to nuisance? no
4. Is the site within 3000 feet of any school? no
5. Toxics Evaluation: Ammonia emissions were screen modeled and the resulting concentrations were 2 ug/m3 which is less than 10 percent of the ESL (170 ug/m3).

Miscellaneous

1. Is applicant in agreement with special conditions? yes, L. Dresser on 7/9
2. Other permit(s) affected by this action? no

 7/11/07

 7/13/07

Project Reviewer Date

Team Leader/Section Manager/Backup

Date

Compliance History

| | | | | |
|-------------------------------------|----------------------------------------------|-------------------------------------|-------------------------|--------------------|
| Customer/Respondent/Owner-Operator: | CN600920748 | ExxonMobil Oil Corporation | Classification: AVERAGE | Rating: 2.67 |
| Regulated Entity: | RN102450756 | EXXONMOBIL BEAUMONT REFINERY | Classification: AVERAGE | Site Rating: 15.38 |
| ID Number(s): | INDUSTRIAL AND HAZARDOUS WASTE GENERATION | EPA ID | | TXD990797714 |
| | INDUSTRIAL AND HAZARDOUS WASTE GENERATION | SOLID WASTE REGISTRATION # (SWR) | | 30587 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 655 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 1202 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 1519 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 3913 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 7018 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 7208 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 7760 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 10291 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 11306 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 12139 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 12817 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 13120 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 15261 |
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| | AIR NEW SOURCE PERMITS | PERMIT | | 31227 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 33642 |
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| | AIR NEW SOURCE PERMITS | PERMIT | | 47815 |
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| | AIR NEW SOURCE PERMITS | PERMIT | | 49135 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 49138 |
| | AIR NEW SOURCE PERMITS | PERMIT | | 49142 |

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| AIR NEW SOURCE PERMITS | PERMIT | 49143 |
| AIR NEW SOURCE PERMITS | PERMIT | 49145 |
| AIR NEW SOURCE PERMITS | PERMIT | 49596 |
| AIR NEW SOURCE PERMITS | ACCOUNT NUMBER | JE00671 |
| AIR NEW SOURCE PERMITS | PERMIT | 52713 |
| AIR NEW SOURCE PERMITS | PERMIT | 52733 |
| AIR NEW SOURCE PERMITS | PERMIT | 52926 |
| AIR NEW SOURCE PERMITS | PERMIT | 53561 |
| AIR NEW SOURCE PERMITS | EPA ID | PSDTX768M1 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 74241 |
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| AIR NEW SOURCE PERMITS | REGISTRATION | 72166 |
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| AIR NEW SOURCE PERMITS | REGISTRATION | 54963 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 55175 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 55220 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 55233 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 76388 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 75794 |
| AIR NEW SOURCE PERMITS | PERMIT | 75302 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 75736 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 55737 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 75426 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 75572 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 75845 |
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| AIR NEW SOURCE PERMITS | REGISTRATION | 75508 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 76054 |
| AIR NEW SOURCE PERMITS | AFS NUM | 4824500018 |
| AIR NEW SOURCE PERMITS | PERMIT | 56259 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 70001 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 70003 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 70104 |
| AIR NEW SOURCE PERMITS | PERMIT | 56617 |
| AIR NEW SOURCE PERMITS | PERMIT | 49134 |
| AIR NEW SOURCE PERMITS | PERMIT | 48623 |
| AIR NEW SOURCE PERMITS | PERMIT | 49125 |
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| AIR NEW SOURCE PERMITS | REGISTRATION | 70376 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 70541 |
| AIR NEW SOURCE PERMITS | PERMIT | 70613 |
| AIR NEW SOURCE PERMITS | EPA ID | PSDTX768M |
| AIR NEW SOURCE PERMITS | EPA ID | PSDTX932 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 70794 |
| AIR NEW SOURCE PERMITS | PERMIT | 70805 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 71024 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 70983 |
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| AIR NEW SOURCE PERMITS | REGISTRATION | 71277 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 71302 |
| AIR NEW SOURCE PERMITS | EPA ID | PSDTX992 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 71378 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 105370 |
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| AIR NEW SOURCE PERMITS | PERMIT | 55522 |
| AIR NEW SOURCE PERMITS | PERMIT | 56434 |
| AIR NEW SOURCE PERMITS | PERMIT | 56428 |
| AIR NEW SOURCE PERMITS | PERMIT | 52240 |
| AIR NEW SOURCE PERMITS | PERMIT | P802 |
| AIR NEW SOURCE PERMITS | PERMIT | 52300 |
| AIR NEW SOURCE PERMITS | PERMIT | 52284 |
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| AIR NEW SOURCE PERMITS | PERMIT | 54486 |

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| AIR NEW SOURCE PERMITS | PERMIT | 71741 |
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| AIR NEW SOURCE PERMITS | REGISTRATION | 74993 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 74994 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 74995 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 74997 |
| AIR NEW SOURCE PERMITS | PERMIT | 75054 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 75133 |
| AIR NEW SOURCE PERMITS | PERMIT | 75132 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 75143 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 75172 |
| AIR NEW SOURCE PERMITS | PERMIT | 75180 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 75267 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 75281 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 75279 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 75329 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 75308 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 75350 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 76467 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 76471 |
| AIR NEW SOURCE PERMITS | EPA ID | PSDTX799 |
| AIR NEW SOURCE PERMITS | EPA ID | PSDTX802 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 76779 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 76838 |
| AIR NEW SOURCE PERMITS | PERMIT | 76869 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 77009 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 77363 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 77375 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 77460 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 77712 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 77844 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 77932 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 78100 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 78190 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 78247 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 78250 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 78290 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 78475 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 78516 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 78609 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 78676 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 78792 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 78799 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 78982 |

| | | |
|----------------------------------------------------|-------------------------------------|--------------|
| AIR NEW SOURCE PERMITS | REGISTRATION | 79185 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 79506 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 79620 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 79641 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 79853 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 80037 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 80078 |
| AIR NEW SOURCE PERMITS | PERMIT | 80203 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 80495 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 80461 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 80595 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 80819 |
| AIR NEW SOURCE PERMITS | EPA ID | PSDTX992M1 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 80978 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 81188 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 81398 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 81505 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 82073 |
| AIR NEW SOURCE PERMITS | REGISTRATION | 82299 |
| WASTEWATER | PERMIT | WQ0003426000 |
| WASTEWATER | PERMIT | TPDES0118737 |
| WASTEWATER | PERMIT | TX0118737 |
| AIR OPERATING PERMITS | PERMIT | 1999 |
| AIR OPERATING PERMITS | PERMIT | 1356 |
| AIR OPERATING PERMITS | PERMIT | 1871 |
| AIR OPERATING PERMITS | ACCOUNT NUMBER | JE00671 |
| AIR OPERATING PERMITS | PERMIT | 2037 |
| AIR OPERATING PERMITS | PERMIT | 1870 |
| AIR OPERATING PERMITS | PERMIT | 1998 |
| AIR OPERATING PERMITS | PERMIT | 2000 |
| AIR OPERATING PERMITS | PERMIT | 2036 |
| AIR OPERATING PERMITS | PERMIT | 2039 |
| AIR OPERATING PERMITS | PERMIT | 2040 |
| AIR OPERATING PERMITS | PERMIT | 2041 |
| AIR OPERATING PERMITS | PERMIT | 2042 |
| AIR OPERATING PERMITS | PERMIT | 2043 |
| AIR OPERATING PERMITS | PERMIT | 2044 |
| AIR OPERATING PERMITS | PERMIT | 2045 |
| AIR OPERATING PERMITS | PERMIT | 2046 |
| AIR OPERATING PERMITS | PERMIT | 2047 |
| AIR OPERATING PERMITS | PERMIT | 2048 |
| AIR OPERATING PERMITS | PERMIT | 2049 |
| AIR OPERATING PERMITS | ACCOUNT NUMBER | JE00671 |
| AIR OPERATING PERMITS | PERMIT | 1356 |
| AIR OPERATING PERMITS | PERMIT | 1870 |
| AIR OPERATING PERMITS | PERMIT | 1871 |
| AIR OPERATING PERMITS | PERMIT | 1998 |
| AIR OPERATING PERMITS | PERMIT | 1999 |
| AIR OPERATING PERMITS | PERMIT | 2000 |
| AIR OPERATING PERMITS | PERMIT | 2036 |
| AIR OPERATING PERMITS | PERMIT | 2037 |
| AIR OPERATING PERMITS | PERMIT | 2039 |
| AIR OPERATING PERMITS | PERMIT | 2040 |
| AIR OPERATING PERMITS | PERMIT | 2041 |
| AIR OPERATING PERMITS | PERMIT | 2042 |
| AIR OPERATING PERMITS | PERMIT | 2043 |
| AIR OPERATING PERMITS | PERMIT | 2044 |
| AIR OPERATING PERMITS | PERMIT | 2046 |
| AIR OPERATING PERMITS | PERMIT | 2047 |
| AIR OPERATING PERMITS | PERMIT | 2048 |
| AIR OPERATING PERMITS | PERMIT | 2049 |
| INDUSTRIAL AND HAZARDOUS WASTE PROCESSING | EPA ID | TXD990797714 |
| INDUSTRIAL AND HAZARDOUS WASTE PROCESSING | SOLID WASTE REGISTRATION # (SWR) | 30587 |
| STORMWATER | PERMIT | TXR06K942 |
| INDUSTRIAL AND HAZARDOUS WASTE COMPLIANCE PLANS | PERMIT | 50139 |
| IHW CORRECTIVE ACTION | SOLID WASTE REGISTRATION # (SWR) | 30587 |

| | | |
|----------------------------------------|--------|-------|
| INDUSTRIAL AND HAZARDOUS WASTE STORAGE | PERMIT | 50139 |
| INDUSTRIAL AND HAZARDOUS WASTE STORAGE | PERMIT | 50139 |
| INDUSTRIAL AND HAZARDOUS WASTE STORAGE | PERMIT | 50139 |

Location: 1795 BURT ST, BEAUMONT, TX, 77701 Rating Date: September 01 06 Repeat Violator: NO

TCEQ Region: REGION 12 - HOUSTON

Date Compliance History Prepared: June 29, 2007

Agency Decision Requiring Compliance History: Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.

Compliance Period: June 29, 2007 to June 29, 2002

TCEQ Staff Member to Contact for Additional Information Regarding this Compliance History

Name: Kurt Kind Phone: 1337

Site Compliance History Components

- | | |
|----------------------------------------------------------------------------------------------|-----|
| 1. Has the site been in existence and/or operation for the full five year compliance period? | Yes |
| 2. Has there been a (known) change in ownership of the site during the compliance period? | No |
| 3. If Yes, who is the current owner? | N/A |
| 4. If Yes, who was/were the prior owner(s)? | N/A |
| 5. When did the change(s) in ownership occur? | N/A |

Components (Multimedia) for the Site :

- A. Final Enforcement Orders, court judgements, and consent decrees of the state of Texas and the federal government.
N/A
- B. Any criminal convictions of the state of Texas and the federal government.
N/A
- C. Chronic excessive emissions events.
N/A
- D. The approval dates of investigations. (CCEDS Inv. Track. No.)
- E. Written notices of violations (NOV). (CCEDS Inv. Track. No.)
- F. Environmental audits.
- G. Type of environmental management systems (EMSs).
N/A
- H. Voluntary on-site compliance assessment dates.
N/A
- I. Participation in a voluntary pollution reduction program.
N/A
- J. Early compliance.
N/A

Sites Outside of Texas
N/A

Texas Commission On Environmental Quality

INTEROFFICE MEMORANDUM

To: Kurt Kind, P.E., Ph.D. Date: May 2, 2007
Chemical Section

Thru: Robert Opiela, Team Leader
Air Dispersion Modeling Team (ADMT) 4280 5/2/07

From: David P. Bigham *DB*
ADMT

Subject: Modeling Audit - ExxonMobil Oil Corporation (RN102450756)

1.0 Project Identification Information.

Permit Application Number: 46534
NSR Project Number: 126702
ADMT Project Number: 2561
NSRP Document Number: 343471
County: Jefferson

Modeling Report: Submitted by Sage Environmental Consulting, April 2007, on behalf of ExxonMobil Oil Corporation.

2.0 Report Summary. The modeling analysis is acceptable for the review types and pollutants summarized below.

| Table 1. Modeling Results for PSD AOI | | | |
|---------------------------------------|----------------|-------------------------------------|-----------------------------------------|
| Pollutant | Averaging Time | GLCmax ($\mu\text{g}/\text{m}^3$) | De Minimis ($\mu\text{g}/\text{m}^3$) |
| PM ₁₀ | 24-hr | < 5 | 5 |
| | Annual | < 1 | 1 |

3.0 Land Use. Medium roughness and elevated terrain were used in the modeling analysis. These selections are consistent with the topographic map and aerial photography. The selection of medium roughness appears to be reasonable.

4.0 Modeling Emissions Inventory. The modeled emission point and area source parameters and rates were consistent with the modeling report. The source characterizations used to represent the sources were appropriate. An annualized emission rate was used for the annual averaging time for EPN 06STK _003. The maximum hourly emission rate was used for the annual averaging time for all other sources, which is a conservative approach.

5.0 Building Wake Effects (Downwash). Input data to Building Profile Input Program Prime (Version 04274) is consistent with the aerial photography, plot plan, and modeling report.

Texas Commission On Environmental Quality

INTEROFFICE MEMORANDUM

To: Kurt Kind, Ph.D., P.E. Date: April 3, 2007
Chemical Section

Thru: Robert Opiela, Team Leader
Air Dispersion Modeling Team (ADMT)

From: Keith Zimmermann, P.E., and David Bigham
ADMT

Subject: Modeling Audit – ExxonMobil Oil Corporation (RN102450756)

1.0 Project Identification Information.

Permit Application Number: 46534
NSR Project Number: 126702
ADMT Project Number: 2540
NSRP Document Number: 341877
County: Jefferson

Modeling Report: Submitted by IEA Environmental Services, March 2007, on behalf of ExxonMobil Oil Corporation.

2.0 Report Summary. The modeling analysis is acceptable for the review type and pollutant summarized below.

| Pollutant | Averaging Time | GLCmax ($\mu\text{g}/\text{m}^3$) | Standard ($\mu\text{g}/\text{m}^3$) |
|-------------------------|----------------|-------------------------------------|---------------------------------------|
| H_2SO_4 | 1-hr | 15 | 50 |
| | 24-hr | 6 | 15 |

3.0 Land Use. Medium roughness and flat terrain were used in the modeling analysis. These selections are consistent with the topographic maps and aerial photography. The selection of medium roughness appears to be reasonable.

4.0 Modeling Emissions Inventory. The modeled emission point source parameters and rates were consistent with the modeling report. The source characterizations used to represent the sources were appropriate.

5.0 Building Wake Effects (Downwash). Input data to Building Profile Input Program Prime (Version 04274) is consistent with the aerial photography, plot plan and modeling report.

Kurt Kind, Ph.D., P.E.

Page 2 of 2

April 3, 2007

Modeling Audit - ExxonMobil Oil Corporation

6.0 Meteorological Data.

Surface Station and ID: Beaumont/Port Arthur, TX (Station #: 12917)

Upper Air Station and ID: Lake Charles, LA (Station #: 03937)

Meteorological Dataset: 1988

7.0 Receptor Grid. The grid modeled was extensive enough in density and spatial coverage to capture representative maximum ground-level concentrations.

8.0 Model Used and Modeling Techniques. AERMOD (Version 04300) was used in the refined screening mode.