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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 11, 2010

LaDonna Castañuela, Chief Clerk
Texas Commission on Environmental Quality
P.O. Box 13087, MC 105
Austin, Texas 78711-3087

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY
2010 JUN 11 PM 1:39
CHIEF CLERKS OFFICE

Re: CITGO Refining and Chemical Company, Permit Nos. 9604A and PSD-TX-653M1
TCEQ Docket No. 2010-0556-AIR

Dear Ms. Castañuela:

Enclosed please find a copy of the following documents for inclusion in the background material for this permit application:

- Final Draft Permit (the permit special conditions and the Maximum Allowable Emission Rate Table (MAERT))
- The preliminary determination summary
- The summary of the technical review of the permit application
- The modeling audit memorandum
- The compliance summary of the applicant.

If you have any questions, please do not hesitate to call me at extension 0891.

Sincerely,

Amy L. Browning
Staff Attorney
Environmental Law Division

Enclosure

SPECIAL CONDITIONS

Permit Numbers 9604A and PSDTX653M1

EMISSION STANDARDS

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating conditions specified in this permit. (2/03)
2. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing volatile organic compounds (VOC) at a concentration of greater than 1 percent are not authorized by this permit unless authorized on the maximum allowable emission rates table. Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions. (2/03)

OPERATIONAL LIMITATIONS, WORK PRACTICES, AND PLANT DESIGN

3. The fresh feed charge rate to the fluid catalytic cracking unit (FCCU) shall not exceed the values listed in this special condition.
 - A. Prior to modification with supplemental air blowers (Prior to FCCU Optimization): Daily maximum of 71,493 barrels per day. Annual average of 67,509 barrels per day, calculated as a 12-month rolling average at the end of each calendar month.
 - B. After modification with supplemental blowers (Post FCCU Optimization): Daily maximum of 81,600 barrels per day Annual average of 75,000 barrels per day, calculated as a 12-month rolling average at the end of each calendar month

Records of daily charge rate and 12-month rolling average calculations shall be maintained.
(PSD) (XX/10)

4. The No. 2 FCCU Regenerator sulfur dioxide (SO₂) emissions shall be limited as follows:
 - A. Prior to modification of the FCCU regenerator with the supplemental air blowers (Prior to FCCU Optimization); SO₂ emissions in the FCCU regenerator/ESP stack shall be limited to a one-hour average of 300 parts per million by dry volume (ppmvd), corrected to 0 percent (%) excess oxygen.
 - B. During the first year following the modification of the FCCU regenerator with the supplemental air blowers (During FCCU Optimization); SO₂ emissions shall be limited to the following:

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One-hour average of 300 ppmvd, corrected to 0% excess oxygen
One-month and annual rolling average of 50 ppmvd, corrected to 0% excess oxygen.

- C. After the first year following modification of the FCCU regenerator through addition of supplemental air blowers (Post FCCU Optimization); SO₂ emissions shall be limited to a 12-month rolling average of 25 ppmvd corrected to 0% excess oxygen and a 7-day rolling average of 50 ppmvd corrected to 0% excess oxygen. **(PSD) (XX/10)**
5. Within 30 days after the modification of the FCCU regenerator with the supplemental air blowers, the permit holder shall notify the Texas Commission on Environmental Quality (TCEQ) Regional Office of the date that the FCCU begins initial operation with the supplemental air blowers. At any time during the first year following such modification, the permit holder may notify TCEQ it has ceased operation of the supplemental blowers. Following such notification, sulfur dioxide (SO₂) emissions shall again be limited to a one-hour average of 300 ppmvd corrected to 0% excess oxygen and the No.2 FCCU feed rate shall be limited to a daily maximum of 71,493 BBL/day and a 12-month rolling average of 67,509 bbl/day. The permit holder shall remove the supplemental air blowers within 60 days of making such notification. **(PSD)(XX/10)**
6. Carbon monoxide (CO) emissions from the FCCU regenerator/ESP stack shall not exceed 100 parts per million by volume, dry (ppmvd) at 0% excess oxygen (O₂) on a 365-day rolling average basis and 500 ppmvd at 0% excess oxygen (O₂) on a 1-hour average basis. **(7/05)**
7. Emissions of nitrogen oxides (NO_x) from the FCCU regenerator/ESP stack shall not exceed 20 ppmvd at 0% excess O₂ on a 365-day rolling average basis and 40 ppmvd at 0% excess O₂ on a seven-day rolling average basis. **(PSD) (10/07)**
8. The non-sulfate (noncondensable), front half particulate matter emissions from the FCCU regenerator/ESP Stack (Emission Point No. [EPN] 31-PR-1) shall not exceed one pound per 1,000 pounds of coke burn-off.

Unless the holder of the permit submits, within four years of permit issuance, FCCU Regenerator Stack (EPN 31-PR-1) total particulate matter (condensable and noncondensable) and sulfuric acid stack testing results and an accompanying proposal demonstrating the need for a higher allowable emissions basis considering the emissions performance of the electrostatic precipitator, then revised allowable emissions shall be based from that point forward on the following default emission factors:

$$F_{PM} = 1.0 \text{ lb/1000 lb coke burn}$$
$$F_{AM} = 0.5 \text{ lb/1000 lb coke burn}$$

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Where:

F_{PM} = total particulate matter emission factor (lb/1000 lb coke burn)

F_{AM} = acid mist emission factor (lb/1000 lb coke burn)

If the holder of the permit does submit such a proposal for a higher allowable emissions basis, then the proposal shall be subject to review and approval by the TCEQ Executive Director. Once the basis has been established, either by default or by completion of the TCEQ Executive Director's review of the alternative proposal, the allowable emissions shall be calculated based on the total particulate matter and sulfuric acid emission factors (lb per 1000 lb coke burn) as follows;

H_{PM} = particulate matter (PM) hourly allowable emissions (lb/hr) = 47,458 lb coke/hr x F_{PM}

H_{AM} = H_2SO_4 hourly allowable emissions (lb/hr) = 46,639 lb coke/hr x F_{AM}

A_{PM} = PM annual allowable emissions tons per year (tpy) = 8,760 hr/year x $H_{PM}/2,000$ lb/ton

A_{AM} = sulfuric acid (H_2SO_4) annual allowable emissions (tpy) = 8,760 hr/year x $H_{AM}/2,000$ lb/ton (PSD)(XX/10)

Storage Tanks:

9. Storage tanks are subject to the following requirements. These conditions shall not apply:
 - (1) where the VOC has an aggregate partial pressure of less than 0.5 pound per square inch, absolute (psia) at the maximum feed temperature or 95°F, whichever is greater, or (2) to storage tanks smaller than 25,000 gallons.
 - A. An internal floating roof or equivalent control shall be installed on all tanks. The floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof: (1) a liquid-mounted seal, (2) two continuous seals mounted one above the other, or (3) a mechanical shoe seal.
 - B. An open-top tank containing an floating roof (external floating roof tank) which uses double seal or secondary seal technology shall be an approved control alternative to an internal floating roof tank provided the primary seal consists of either a mechanical shoe seal or a liquid-mounted seal, and the secondary seal is rim-mounted. A weather shield is not approvable as a secondary seal unless specifically reviewed and determined to be vapor-tight.

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- C. For any tank equipped with a floating roof, the permit holder shall perform the visual inspections and seal gap measurements as specified in Title 40 Code of Federal Regulations § 60.113b (40 CFR § 60.113b) Testing and Procedures (as amended at 54 FR 32973, August 11, 1989) to verify fitting and seal integrity. Records shall be maintained of the dates seals were inspected and seal gap measurements made, results of inspections and measurements made (including raw data), and actions taken to correct any deficiencies noted.
- D. The floating roof design shall incorporate sufficient floatation to conform to the requirements of American Petroleum Institute (API) Code 650, dated November 1, 1998, except that an internal floating cover need not be designed to meet rainfall support requirements and the materials of construction may be steel or other materials.
- E. Uninsulated tank exterior surfaces exposed to the sun shall be white or aluminum. Storage tanks must be equipped with permanent submerged fill pipes.
- F. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all storage tanks during the previous calendar month and the past 12-month rolling period. The records shall include tank identification number, control method used, tank capacity in gallons, name of the material stored, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia, VOC throughput for the previous month and year-to-date. Records of VOC monthly average temperature are not required to be kept for unheated tanks which receive liquids that are at or below ambient temperatures.

Emissions for tanks shall be calculated using the TCEQ publication titled "Technical Guidance Package for Chemical Sources-Storage Tanks." (XX/10)

Loading:

- 10. Annual throughput for each compound is limited to the following through the loading racks. No other product is authorized by this permit.

<u>Compound</u>	<u>Millions of Gallons/rolling 12 months</u>
Gasoline	190
Diesel	84

Records of the 12-month rolling average of the annual rack throughput for each product shall be maintained. (7/05)

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11. The permit holder shall maintain and update monthly an emissions record which includes calculated emissions of VOC from all loading operations over the previous rolling 12-month period. The record shall include the loading spot, control method used, quantity loaded in gallons, name of the liquid loaded, vapor molecular weight, liquid temperature in degrees Fahrenheit, liquid vapor pressure at the liquid temperature in psia, liquid throughput for the previous month and rolling 12 months to date. Records of VOC temperature are not required to be kept for liquids loaded from unheated tanks which receive liquids that are at or below ambient temperatures. Emissions shall be calculated using the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Loading Operations." (XX/10)
12. All lines and connectors shall be visually inspected for any defects prior to hookup. Lines and connectors that are visibly damaged shall be removed from service. Operations shall cease immediately upon detection of any liquid leaking from the lines or connections.
13. All truck rack gasoline loading emissions shall be collected and sent to the Cumene Flare (EPN 446). (2/03)
14. Loading emissions from the cumene flare are limited to 10 milligrams per liter of gasoline transferred. (2/03)
15. Each tank truck shall pass annual leak-tight testing as follows:
 - A. The permittee shall not allow any tank truck to be filled or emptied unless the tank being filled or emptied has passed a leak-tight test within the last year as evidenced by a prominently displayed certification affixed near the Department of Transportation certification plate which shows:
 - (1) The date the tank truck last passed the leak-tight test required by this condition; and
 - (2) The identification number of the tank truck.
 - B. Tank-tightness testing shall be conducted as follows:
 - (1) Tank-tightness testing shall be performed in accordance with 40 CFR Part 63, Subpart R.

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- (2) The owner or operator of the tank truck shall maintain records of all certification testing and repairs.
 - (3) The record of each certification test required by this condition shall, as a minimum, contain:
 - a. Company name.
 - b. Date and location where the test was carried out.
 - c. Name and title of the person conducting the test.
 - d. Tank identification number.
 - e. Initial test pressure and the time of the reading.
 - f. Final test pressure and the time of the reading.
 - g. Initial vacuum and the time of the reading.
 - h. Final vacuum and the time of the reading.
 - (4) Copies of all records required by this condition shall be maintained. (2/03)
16. The Cumene Flare (EPN 446) shall be designed and operated in accordance with the following requirements:
- A. The only stream authorized by this permit to be sent to the flare is the truck rack gasoline loading stream.
 - B. The combined assist natural gas and waste stream to the flare shall meet the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity under normal, maintenance, and upset flow conditions. Flare testing per 40 CFR § 60.18(f) may be requested by the Texas Commission on Environmental Quality (TCEQ) Corpus Christi Regional Office to demonstrate compliance with this condition.
 - C. The flare shall be operated with a flame present at all times and have a constant pilot flame. The pilot flame shall be monitored by a thermocouple or an infrared monitor and pilot flame monitoring.
 - D. The flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours.
 - E. During nitrogen sweeps, a nitrogen/fuel gas ratio shall be maintained in the flared stream at or below 7 parts nitrogen to 3 parts fuel gas. (2/03)

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INITIAL DEMONSTRATION OF COMPLIANCE

17. 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 regenerator/ESP Stack, Source 31-PR-1. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and the testing operation at his expense.

A. The TCEQ Corpus Christi Regional Office shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.

The notice shall include:

- (1) 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.

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 submitting the test reports. Testing shall be performed per U.S. Environmental Protection Agency (EPA) Test Method (TM) 6 for SO₂, TM 7 for NO_x, and TM 8 for H₂SO₄.

A written description of any deviation from sampling procedures specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ at or prior to the pretest meeting. The TCEQ Corpus Christi Regional Director shall approve or disapprove of any deviation from specified sampling procedures. Requests to waive testing for any pollutant specified in B of this condition shall be submitted to the TCEQ Air Permits Division. Test waivers and alternate or equivalent procedure proposals for New Source Performance Standards (NSPS) testing which must have the EPA approval shall be submitted to the TCEQ Corpus Christi Regional Director.

B. Air contaminants to be emitted from the FCCU regenerator/ESP stack to be tested for include (but are not limited to) SO₂, H₂SO₄, and NO_x.

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- C. Sampling shall occur within 60 days after the facilities achieve maximum production, but not later than 180 days after initial start-up of the facilities and at such other times as may be required by the Executive Director of the TCEQ. Requests for additional time to perform sampling shall be submitted to the TCEQ Corpus Christi Regional Office. Additional time to comply with the requirements of 40 CFR Part 60 and 40 CFR Part 61 cannot be granted.
- D. One copy of the final sampling report shall be forwarded to the TCEQ within 30 days after sampling is completed. Sampling reports shall comply with the provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Corpus Christi Regional Office.
(PSD)

This condition has been rolled in from the original Prevention of Signification Deterioration (PSD) permit. The above testing was performed on December 10, 1985, and does not need to be redone due to the consolidation of permits.

ON-GOING DEMONSTRATION OF COMPLIANCE

18. The concentrations of SO₂ and O₂ in the FCCU regenerator/ESP stack shall be continuously monitored and recorded. The SO₂ and O₂ continuous emission monitoring system (CEMS) shall be subjected to quality-assurance procedures which shall, as a minimum, include daily zero and span of the analyzer. This monitoring data shall be maintained in accordance with conditions of 40 CFR Part 60, Appendix A, and 30 TAC Chapter 101. In addition, the SO₂ concentration on a dry, air-free basis shall be reduced to hourly averages every month. Quality assured (or valid) data must be generated when the FCCU regenerator 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. If the total measurements missed due to monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration exceeds five percent of the time (in minutes) that the FCCU regenerator operated over the previous rolling 12-month period, the measurements missed shall be estimated using engineering judgement and the methods used recorded. Additionally, if the total measurements missed due to monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration exceeds 5 percent of the time (in minutes) that the FCCU regenerator operated over the previous rolling 12-month period, options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Director. **(PSD) (7/05)**

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19. The concentration of CO in the FCCU regenerators/ESP stack shall be continuously monitored and recorded. The CO CEMS shall be subjected to quality-assurance procedures which shall, as a minimum, included daily zero and span of the analyzer. This monitoring data shall be maintained in accordance with the recordkeeping requirements of 40 CFR Part 60, Appendix A, and 30 TAC Chapter 101. In addition, CO concentrations shall be reduced to hourly averages every month. Quality-assured (or valid) data must be generated when the FCCU regenerator 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. If the total measurements missed due to monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration exceeds 5 percent of the time (in minutes) that the FCCU regenerator operated over the previous rolling 12-month period, the measurements missed shall be estimated using engineering judgement and the methods used recorded. Additionally, if the total measurements missed due to monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration exceeds five percent of the time (in minutes) that the FCCU regenerator operated over the previous rolling 12-month period, options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Director. (7/05)
20. The NO_x continuous emission monitor shall be operated in the FCCU regenerator/ESP stack. A daily zero and span calibration shall be included on the monitor. The monitoring data shall be maintained in accordance with provisions of 40 CFR Part 60, Appendix A, and 30 TAC Chapter 101. For purposes of recordkeeping, the NO_x concentration on a dry, air-free basis shall be reduced to hourly averaged every month. Quality-assured (or valid) data must be generated when the FCCU regenerator 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. If the total measurements missed due to monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration exceeds 5 percent of the time (in minutes) that the FCCU regenerator operated over the previous rolling 12-month period, the measurements missed shall be estimated using engineering judgement and the methods used recorded. Additionally, if the total measurements missed due to monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration exceeds five percent of the time (in minutes) that the FCCU regenerator operated over the previous rolling 12-month period, options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Director. (PSD) (7/05)
21. Piping, Valves, Connectors, Pumps, and Compressors in VOC Service - Intensive Directed Maintenance - 28MID

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 requirements of paragraphs F and G shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 psia at 68°F or (2) to piping and valves two inches nominal size and smaller or (3) operating pressure is at least 5 kilopascals (0.725 pound per square inch) below ambient pressure. Equipment excluded from this condition shall be identified in a list to be made available upon request.

The exempted components may be identified by one or more of the following methods:

- (1) piping and instrumentation diagram (PID);
 - (2) a written or electronic database or electronic file;
 - (3) color coding;
 - (4) a form of weatherproof identification; or
 - (5) designation of exempted process unit boundaries.
- B. Construction of new and reworked piping, valves, pump systems, agitators, 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. New and reworked buried connectors shall be welded.
- 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. Difficult-to-monitor and unsafe-to-monitor valves, as defined by 30 TAC Chapter 115, shall be identified-in a list to be made available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in subparagraph A above.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be 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.

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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 an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period: the line or valve must have a cap, blind flange, plug, or second valve installed; or the permit holder shall verify that there is no leakage from the open-ended line or valve. The open-ended line or valve shall be monitored on a weekly basis in accordance with the applicable NSR permit condition for fugitive emission monitoring except that a leak is defined as any VOC reading greater than background. Leaks must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve. The results of this weekly check and any corrective actions taken shall be recorded.

- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer with a directed maintenance program. 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.

A check of the reading of the pressure-sensing device to verify disc integrity shall be performed weekly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph.

An approved gas analyzer shall conform to requirements listed in Method 21 of 40 CFR Part 60, Appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs are being monitored, the response factor shall be calculated for the average composition of the

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process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than 10 using methane, then the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

A directed maintenance program shall consist of the repair and maintenance of components assisted simultaneously by the use of an approved gas analyzer such that a minimum concentration of leaking VOC is obtained for each component being maintained. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair shall be maintained. Replaced components shall be re-monitored within 15 days of being placed back into VOC service. Replaced components shall be re-monitored within 15 days of being placed back into VOC service.

- G. All new and replacement pumps, compressors and agitators shall be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. These seal systems need not be monitored and 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.

All other pump, compressor and agitator seals emitting VOC shall be monitored with an approved gas analyzer at least quarterly.

- H. Damaged or leaking valves, connectors, compressor seals, pump seals, and agitator seals 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. 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 that would create more emissions than the repair would eliminate, 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. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC § 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days

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until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shutdown as calculated in accordance with 30 TAC § 115.782(c)(1)(B)(i)(I), the TCEQ Regional Manager and any local programs shall be notified and may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.

- I. In lieu of the monitoring frequency specified in paragraph F, valves in gas and light liquid service may be monitored on a semiannual basis if the percent of valves leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

Valves in gas and light liquid service may be monitored on an annual basis if the percent of valves leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.

If the percent of valves leaking for any semiannual or annual monitoring period is 0.5 percent or greater, the facility shall revert to quarterly monitoring until the facility again qualifies for the alternative monitoring schedules previously outlined in this paragraph.

- J. The percent of valves leaking used in paragraph I shall be determined using the following formula:

$$(V_l + V_s) \times 100 / V_t = V_p$$

Where:

V_l = the number of valves found leaking by the end of the monitoring period, either by Method 21 or sight, sound, and smell.

V_s = the number of valves for which repair has been delayed and are listed on the facility shutdown log.

V_t = the total number of valves in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including nonaccessible and unsafe-to-monitor valves.

V_p = the percentage of leaking valves for the monitoring period.

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- K. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.
 - L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source performance Standard, or an applicable National Emission Standards for Hazardous Air Pollutants and does not constitute approval of alternative standards for these regulations. (XX/10)
22. The permit holder shall notify the TCEQ Region 14 the start and end dates for each of the phases (modification and post-modification phases) described in this permit.

Dated XXX, 2010

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

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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**
Prior to FCCU Optimization Period:				
31-PR-1	Regenerator/ESP Stack	VOC	2.3	10.0
		NO _x (PSD)	185.5	93.4
		CO	282.3	247.3
		SO ₂ (PSD)	274.0	1198.0
		PM	89.8	393.3
		PM (front)	32.7	143.0
		H ₂ SO ₄ (PSD)	52.3	229.0
During FCCU Optimization Period:				
31-PR-1	Regenerator/ESP Stack	VOC	9.0	41.4
		NO _x (PSD)	188.7	81.2
		CO	287.2	247.3
		SO ₂ (PSD)	394.1	282.8
		PM/PM ₁₀	94.9	408.6
		H ₂ SO ₄ (PSD)	47.5	204.3
		Post FCCU Optimization Period:		
31-PR-1	Regenerator/ESP Stack	VOC	9.0	41.4
		NO _x (PSD)	188.7	81.2
		CO	287.2	247.3
		SO ₂ (PSD)	394.1	141.4
		PM/PM ₁₀	94.9	408.6
		H ₂ SO ₄ (PSD)	47.5	204.3

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
446	Cumene Process Flare	VOC	11.00	7.93
		NO _x	0.62	0.43
		CO	4.46	3.08
		SO ₂	1.10	0.79
521	Truck Loading Rack	VOC	8.10	7.24
642	Tank 1029	VOC	3.20	9.00
643	Tank 1030	VOC	4.63	12.88
644	Tank 1031	VOC	5.00	14.11
645	Tank 1032	VOC	0.19	0.65
667A	Tank 1016	VOC	3.69	8.47
692	Tank 201	VOC	1.87	4.04
693	Tank 202	VOC	1.87	4.04
694	Tank 211	VOC	1.59	3.27
695	Tank 212	VOC	1.59	3.27
696	Tank 221	VOC	1.65	3.72
697	Tank 222	VOC	1.56	3.47
698	Tank 223	VOC	1.62	3.53
699	Tank 224	VOC	1.59	2.72
704	Tank 301	VOC	3.68	10.25

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
705	Tank 302	VOC	3.77	10.25
706	Tank 401	VOC	3.69	10.50
707	Tank 402	VOC	2.05	5.39
708	Tank 403	VOC	2.05	5.39
767	Tank 56	VOC	1.35	3.72
768	Tank 57	VOC	2.03	4.86
774	Tank 82	VOC	5.67	15.89
775	Tank 83	VOC	5.67	15.89
F341	Number 2 FCCU Fugitives (4)	VOC	34.73	152.12
F343	Number 2 FCCU Spent Catalyst Truck Loading	PM/PM ₁₀	0.12	0.01

- (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
 NO_x - total oxides of nitrogen
 CO - carbon monoxide
 SO₂ - sulfur dioxide
 PM₁₀ - particulate matter less than 10 microns in diameter
 PM - particulate matter, suspended in the atmosphere, including PM (front) and H₂SO₄
 PM (front) - non-sulfate PM collected in front-half of PM test collection device
 H₂SO₄ - sulfuric acid PM collected in back-half of PM test collection device
- (4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

* Emission rates are based on the following 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 XXX, 2010

PRELIMINARY DETERMINATION SUMMARY

CITGO Refining and Chemicals Company LP

Permit No. 9604A and PSD-TX-653M1

I. APPLICANT

CITGO Refining And Chemicals Company LP
PO Box 9176
Corpus Christi, Texas 78469

II. PROJECT LOCATION

No 2 FCCU Expansion, East Plant
1801 Nueces Bay Blvd
Corpus Christi, Texas 78469

III. PROJECT DESCRIPTION

CITGO submitted this amendment to authorize an expansion of the No. 2 Fluid Catalytic Cracking Unit (FCCU) at their East Plant. The proposed throughput levels for this expansion project are as follows: Daily maximum of 81,600 barrels/day and annual average of 75,000 barrels/day. CITGO proposes to do the following modifications to No.2 FCCU to facilitate the FCCU expansion:

- 1) Add portable air blowers to increase air flow to the FCCU regenerator by 5-10%,
- 2) Increase cooling tower flow to the existing fractionation system to increase heat removal through the use of a modified cooling tower.

For this expansion project, CITGO proposes to utilize feed desulfurization and SO_x reducing catalyst additives to control sulfur dioxide emissions from the FCCU Regenerator/Electrostatic Precipitator (ESP) stack (EPN 31-PR-1). CITGO is currently performing preliminary trials (pursuant to the Consent Decree requirements) with SO_x reducing catalyst additives to demonstrate that SO₂ emissions can be kept at or below the TCEQ BACT levels at the current throughput levels (Daily maximum throughput of 71,493 barrels/day and annual average throughput of 67,509 barrels per day).

CITGO can not commit to achieve the TCEQ BACT levels for SO₂ immediately after the physical modifications are completed for this proposed amendment project. Instead, following modification, CITGO needs an additional 12 months optimization experience with the SO_x reducing catalyst additives at the higher throughput levels they are proposing. CITGO is confident that following the one-year optimization period, the No.2 FCCU will meet the TCEQ BACT at the higher throughput levels.

After the one-year optimization period, if it is determined that CITGO can not achieve the TCEQ BACT for SO₂ at the higher throughput, CITGO will uninstall the modifications and revert back to the current permit levels. This requirement is placed in Special Condition No.5 of the proposed permit.

IV. FEDERALLY APPLICABLE EMISSIONS

Sulfur dioxide (SO₂) will decrease by a total of 696.59 tpy due to this PSD project. This decrease is due to the lowering of BACT levels for SO₂ by use of feed desulfurization and SOx reducing catalyst additives. Project net increase of NOx for PSD review purposes is 15.37 tpy. Project increase for NOx is mainly from the FCCU Regenerator/ESP. Project net increase of VOC, CO and PM/PM₁₀ are 34.25 tpy, 185.24 tpy, and 183.93 tpy, respectively. Project VOC, CO and PM/PM₁₀ increase for PSD purposes is mainly from the FCCU Regenerator/ESP. There will also be small increases from the other upstream or downstream affected EPNs such as various tanks, cooling tower (EPN F297) and SRU (EPN 412). Project H₂SO₄ increase for the PSD purposes is 29.13 tpy and this increase will happen at the FCCU Regenerator/ESP.

V. FEDERAL APPLICABILITY

The proposed changes discussed above will result in increases of criteria pollutants except SO₂.

Pollutant	Project Increases	Project Net	Contemp. Emissions	Net Emissions	NA Trigger	PSD Trigger
NOx	15.27	15.37	NA	15.37	NA	40
SO ₂	-702.82	-696.59	NA	-696.59	NA	40
VOC	31.42	34.25	NA	34.25	NA	40
PM/PM ₁₀	180.70	183.93		Full PSD review done w/o netting	NA	25/15
H ₂ SO ₄	29.13	29.13		Full PSD review done w/o netting	NA	7
CO	185.23	185.24		Full PSD review done w/o netting	NA	100

For NOx, SO₂ and VOC, project net change was less than the netting trigger level of 40 tpy, therefore, netting was not required and PSD review was not needed. For CO,

PM/PM₁₀, and H₂SO₄, project net change was more than the netting trigger level, therefore contemporaneous netting was required. CITGO decided not to do contemporaneous netting to find out if they net out. Instead, they decided to do full PSD review. This project triggered federal Prevention of Significant Deterioration (PSD) review for CO, PM/PM₁₀ and acid mist (H₂SO₄) since the net emissions exceed the PSD review trigger levels.

VI. CONTROL TECHNOLOGY REVIEW

FCCU Regenerator/ESP Stack (EPN 31-PR-1):

The proposed emission limits, control methods and monitoring methods for the No.2 FCCU are outlined below for each criteria pollutant:

Sulfur Dioxide (SO₂):

As described in Special Condition 4 of the draft permit, during the one-year FCCU Optimization period, CITGO proposes 300 ppmvd (1-hour average) and 50 ppmvd (one-month and annual rolling average) as the BACT limit. During this one-year period, CITGO will utilize the emission control technologies of feed desulfurization and SO_x reducing catalysts. After the one-year optimization period (post-modification period), CITGO proposes to achieve an SO₂ emission limit of 25 ppmvd (12-month rolling average) and an SO₂ emission limit of 50 ppmvd (7-day average). CITGO's proposals for the post optimization period match the emission rates achieved by most of the other refineries found in the EPA's RACT/BACT/LAER (RBLC) database. Most of those refineries achieve the described emission rates using wet gas scrubbers. Since CITGO already has an upgraded and enlarged Electrostatic Precipitator (ESP), CITGO proposes to achieve the same rates utilizing the existing system of feed desulfurization and addition of SO_x reducing catalysts. Upgrade to the ESP was done by Standard Permit authorization No. 74326 in 2005.

Particulate Matter (PM/PM₁₀):

CITGO performed a Tier-3 cost analysis and demonstrated that it is not cost effective to meet the TCEQ BACT for total PM using their existing ESP. As described in Special Condition 8 of the draft permit, CITGO proposes a non-sulfate, front half particulate matter emission limit for the FCCU Regenerator/ESP Stack of 1 lb/1000 lbs of coke burn which is the NSPS Subpart J limit. This is equivalent to 2 lbs total PM/1000 lbs of coke burn. TCEQ BACT is 1 lb total PM/1000 lbs of coke burn. The refineries found on the RBLC permit database meet this TCEQ BACT using the wet gas scrubbers. CITGO makes a point explaining that they operate an upgraded ESP, not a wet gas scrubber and they do not have operating experience long enough to commit to the BACT limit of 1 lb total PM/1000 lbs coke burn with the ESP control at the proposed higher throughput rate. CITGO also makes a point that the performance of the system at the increased throughput rate can not be evaluated until authorization for the throughput increase is approved. Upon modification, CITGO proposes to monitor the PM from the ESP stack and commit to the BACT limit within four years unless CITGO submits PM testing results and an

accompanying proposal demonstrating the need for a higher PM limit. If CITGO makes such a proposal, it will be subject to the TCEQ review. CITGO expects that the use of SO_x reduction catalysts to minimize SO₂ emissions will minimize emissions of sulfuric acid mist, a back-half condensable component of PM.

Sulfuric Acid (H₂SO₄) Mist:

CITGO performed a Tier-3 cost analysis and demonstrated that it is not cost effective to meet the TCEQ BACT for total acid mist using their existing ESP. As described in Special Condition 8 of the draft permit, CITGO proposes a total acid mist emission rate from the FCCU Regenerator/ESP Stack of 1 lb/1000 lbs of coke burn. CITGO makes a point that the performance of the system for acid mist emissions at the increased throughput rate can not be evaluated until authorization for the increase is approved. Upon modification, CITGO proposes to monitor the acid mist from the ESP stack and commit to a limit of 0.5 lb acid mist/1000 lb coke burn, within four years unless CITGO submits acid mist testing results and an accompanying proposal demonstrating the need for a higher acid mist limit. If CITGO makes such a proposal, it will be subject to the TCEQ review. CITGO expects that the use of SO_x reduction catalyst to minimize SO₂ emissions will also minimize emissions of sulfuric acid mist which is the back-half condensable component of PM.

Nitrogen Oxides (NO_x):

As described in Special Condition 7 of the draft permit, NO_x emissions from the FCCU Regenerator/ESP stack will meet the TCEQ BACT limit of 20 ppmvd (365-day rolling average) and 40 ppmvd (7-day rolling average). These limits match the NO_x emission limits for most of the refineries on the RBLC permit database.

Carbon Monoxide (CO):

As described in Special Condition 6 of the draft permit, CITGO proposes a CO emission limit of 100 ppmv (365-day rolling average) and 500 ppmvd (hourly average). This meets the TCEQ BACT and matches the CO emission limits for most of the refineries on the RBLC permit database.

Volatile Organic Compounds (VOC):

The allowable VOC emission increase from the FCCU Regenerator will be due to the combustion of coke that accumulates on the catalyst during the coke burn cycle. CITGO proposes a VOC limit of 10 ppmvd on both hourly and annual basis which meets the TCEQ BACT and matches the VOC emission limit for some of the refineries on the RBLC permit database.

Affected Tanks:

The increase in throughput at the No.2 FCCU will result in increased feed and product tank throughput. Although actual VOC emissions will increase due to additional throughput of storage tanks upstream and downstream of the FCCU, the resulting tank

throughputs and emissions will be within the allowable levels authorized by the current permits. Therefore, a control technology review is not needed for affected tanks. Pending permit application No.80693 for East Plant will consolidate all of the East Plant tanks into one permit.

Cooling Tower (EPN F297):

There will be 2,000 gpm additional cooling water need to cool the fractionation column associated with FCCU No. 2 expansion. This cooling tower is currently covered by Permit No. 2697A although not individually listed in that permit's MAERT. In order to meet this 2000 gpm additional demand, a new cooling tower cell will be added through an unregistered PBR pursuant to 30 TAC 106.371. CITGO will incorporate this PBR into Permit 2697A at the next renewal or amendment. The emission increase due to adding 2,000 gpm additional capacity at this affected source is included in the PSD review applicability analysis for this project.

Spent Catalyst Handling (EPN F343):

Spent catalyst is loaded onto trucks approximately once per week and there are very small PM emissions from this loading which have not been previously quantified in the permit. CITGO proposes to minimize these emissions during catalyst loading activities through use of a "sock" placed over the discharge vent of the truck. PM emissions associated with loading spent FCCU catalyst is calculated based on the emission factors in AP-42, Chapter 13.2.4.2.

VII. AIR QUALITY ANALYSIS

The air quality impact analysis was performed using the U.S. Environmental Protection Agency-approved dispersion models to predict the worst-case impact due to the proposed project.

Although annual SO₂ emissions will decrease by 1056.6 tpy, there will be an hourly increase for SO₂. Therefore, a project related State Property Line analysis was conducted for SO₂. As shown in the following table, the modeling results indicated that GLCmax for SO₂ for averaging time of 1-hr is equal to 19 µg/m³ which is less than the Deminimis level for SO₂ of 20.42 µg/m³.

Project-Related Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	De Minimis ($\mu\text{g}/\text{m}^3$)
SO ₂	1-hr	19.0	20.4

CITGO also conducted screen modeling for refinery distillate. Predicted project related maximum off-property GLCmax ($\mu\text{g}/\text{m}^3$) was 1.0 which is much less than the 10% ESL level. Therefore, no further review was needed.

VIII. NATIONAL AMBIENT AIR QUALITY STANDARDS ANALYSIS

Since hourly SO₂ emission rate is increasing, it required a NAAQS review. Modeling Results for State NAAQS are indicated in the following table.

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	De Minimis ($\mu\text{g}/\text{m}^3$)
SO ₂	3-hr	17	25
	24-hr	11	5

Since the predicted ground level concentration of SO₂ (3-hr) is less than the deminimis levels, no further review was necessary. Further State NAAQS review was necessary for SO₂ (24-hr) and the results are tabulated in the table below.

Total Concentrations for State NAAQS (Concentrations>De Minimis)

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	Background ($\mu\text{g}/\text{m}^3$)	Total Conc. ($\mu\text{g}/\text{m}^3$)	Standard ($\mu\text{g}/\text{m}^3$)
SO ₂	24-hr	11	220	231	365

The screening background concentration for SO₂ from Nueces County was used in the modeling demonstration. This is conservative. An ambient SO₂ monitor, EPA AIRS monitor 483550032 (3810 Huisache Street, Corpus Christi, Nueces County) is located within 100 meters of the site. The highest monitored 24-hr concentration from 2008 was 118 $\mu\text{g}/\text{m}^3$. The modeling results show that no exceedance of the SO₂ NAAQS exists.

Annual emissions of SO₂ and NO₂ were not modeled. Per the modeling report, these annual emissions are being reduced.

This project triggered PSD review for CO, PM/PM₁₀ and H₂SO₄. PSD modeling for H₂SO₄ is not done since there is no PSD standard for it. The PSD modeling results shown in the table below indicate no exceedance of the de minimis levels for PSD review.

Results for PSD AOI Modeling for PM₁₀ and CO

Pollutant	Averaging Time	GLCmax (µg/m ³)	De Minimis (µg/m ³)
PM ₁₀	24-hr	2	5
	Annual	0.2	1
CO	1-hr	27	2000
	8-hr	19	500

IX. INCREMENT ANALYSIS

The modeling results show an increment analysis is not needed.

X. AIR QUALITY MONITORING

Modeling results for PSD Monitoring Significance is as follows:

Pollutant	Averaging Time	GLCmax (µg/m ³)	Significance (µg/m ³)
PM ₁₀	24-hr	2	10
CO	8-hr	19	575

As shown in the above table, predicted modeling impacts for CO and PM₁₀ are lower than the PSD significance levels. No preapplication monitoring is necessary.

XI. ADDITIONAL IMPACTS ANALYSIS

CITGO performed an Additional Impacts Analysis on future growth, soil, vegetation and visibility as part of the PSD air quality analysis.

No related industrial or commercial growth is expected from the modifications due this project. Therefore, no growth related air pollution impact is anticipated. A PSD air quality analysis of emissions from the project demonstrated compliance with the NAAQS. There is no significant impact expected on the soils and vegetation surrounding the plant site. Visibility in the vicinity of the site is not expected to be impacted by the proposed modifications. The nearest Class I area is Big Bend National Park, over 470 km away, therefore, no adverse impacts are expected in the Class I area.

XII. AIR TOXICS REVIEW

Pollutant	Averaging Period	GLCmax ($\mu\text{g}/\text{m}^3$)	2 Percent of State Standard ($\mu\text{g}/\text{m}^3$)
SO ₂	1-hour	19	20.42
Refinery Distillates	1-hour	1.5	20
H ₂ SO ₄	1-hr & 24-hr	NA	
H ₂ S	30-min	NA	
TSP	1-hr & 3-hr	NA	

A detailed discussion of SO₂ and refinery distillates can be found in Section VII of this document. There are no increases in permit allowables for H₂SO₄ and H₂S, therefore, a state property line analysis was not needed for those. TSP (Total Suspended Particulate) includes PM/PM₁₀ which is the particulate pollutant represented in the application, not the TSP. There is a permit allowable increase represented for PM/PM₁₀, however, there are no state property line standards for PM/PM₁₀ in effect, therefore, modeling of PM/PM₁₀ for state property line standard is not done. Modeling for PM/PM₁₀ is done for PSD purposes and the results are shown in Section VIII.

XIII. CONCLUSION

The TCEQ analysis of this amendment application indicates that the project will not endanger National Ambient Air Quality Standards (NAAQS) and will meet the best available control technology (BACT) requirements. In addition, there will be no adverse effects on soils, vegetation or visibility. The distance to the nearest Class I area is sufficient to preclude any adverse impacts from this major source. Therefore, the TCEQ Executive Director proposes a preliminary determination of approval for CITGO to begin construction and operation of their No.2 FCCU with modifications according to the proposed permit.

Permit Amendment Source Analysis and Technical Review

Company	CITGO Refining And Chemicals Company LP	Permit Number	9604A/PSD-TX-653M1
City	Corpus Christi	Project Number	130098
County	Nueces	Account Number	NE-0027-V
Project Type	Amend	Regulated Entity Number	RN102555166
Project Reviewer	Dr. Ozden Tamer, Ph.D., P.E.	Customer Reference Number	CN600127922
Site Name	No 2 FCCU Expansion		

Project Overview

CITGO Refining and Chemicals Company, LP., (CITGO) submitted this amendment to authorize modification of parts of the No.2 Fluidized Catalytic Cracker Unit (FCCU) at their East Plant to facilitate expansion of the No. 2 FCCU. CITGO's specific proposals include:

- 1) Add portable air blowers to increase air flow to the FCCU regenerator by 5-10%; and,
- 2) Increase cooling tower flow to the existing fractionation system to increase heat removal through the use of a modified cooling tower.

This project will increase the nominal throughput of No.2 FCCU from the current daily maximum of 71,493 barrels/day (bbl/day) to an estimated daily maximum of 81,600 bbl/day. The 12-month rolling average throughput will increase from the current level of 67,509 bbl/day to 75,000 bbl/day.

This project triggered PSD review for CO, PM/PM₁₀ and sulfuric acid mist.

TCEQ BACT limit for SO₂ emissions from FCCU is 25 ppmvd (12-month rolling average, corrected to 0% excess oxygen) and 50 ppmvd (7-day rolling average, corrected to 0% excess oxygen). CITGO has a Consent Decree which allows CITGO an 18 month catalyst additive optimization period to achieve these limits at the current permit's throughput levels. Therefore, CITGO is currently performing testing with SO_x reducing catalyst additives to demonstrate that SO₂ emissions can be kept at or below these BACT levels at the current throughput levels. Per the consent decree, CITGO completed this demonstration on December 31, 2009. The results of the demonstration reported to the EPA.

For the No.2 FCCU expansion project at the higher throughput rate, CITGO proposes to utilize feed desulfurization and the same or similar SO_x reducing catalyst additives to control sulfur dioxide (SO₂) emissions from the Fluidized Catalytic Cracker Unit (FCCU) Regenerator/Electrostatic Precipitator (ESP) (EPN 31--PR-1). However, CITGO can not commit to achieve the TCEQ BACT levels for SO₂ immediately after the proposed modification. Instead, following modifications, CITGO will need a 12 months optimization experience with the SO_x reducing catalyst additives at the higher throughput levels proposed.

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Source Analysis & Technical Review

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For the 12 month optimization period, CITGO proposes to achieve SO₂ emissions of 50 ppmvd (one-month and annual rolling average, corrected to 0% oxygen). According to CITGO, the one-year optimization period is necessary to ensure the FCCU meets the permit limitations while the SO_x reducing catalyst amount and effectiveness are tested and optimized at the increased throughput under varying operational conditions. CITGO is confident that following the one-year optimization period, the No.2 FCCU will meet the TCEQ BACT of 25 ppmvd (annual average) and 50 ppmvd (7-day average)] at the increased throughput. After the one-year optimization period, if it is determined that CITGO can not achieve the TCEQ BACT at the higher throughput, CITGO will uninstall the modifications and revert back to the current permit levels. This is made a permit condition (SC. No.5). If BACT is met during the testing period, the throughput increase proposed in this expansion project will be permanent.

Permit's MAERT is organized to indicate the emission rates from three different phases: 1) pre-modification phase, 2) optimization phase, 3) post-modification phase (permanent operation). Supposing that the BACT is met during the testing period, the allowable emission changes due to this expansion project will be as follows: NO_x: - 12.2 tpy; VOC: 31.4 tpy; SO₂: - 1056.6 tpy; PM/PM₁₀: 15.3 tpy; H₂SO₄: -24.7 tpy. As seen from these totals, there is a moderate increase of VOC and PM, however, there will be a substantial decrease of SO₂ and moderate decreases of NO_x and H₂SO₄ as a result of this amendment if the modifications in this amendment becomes permanent.

TCEQ received an untimely public comment letter with a contested hearing request on September 10, 2007. Since more than 2 years have passed from the permit application submittal date and some significant representation changes were made during the elapsed time, TCEQ requested CITGO to submit an updated stand-alone revised amendment application. CITGO submitted the required stand-alone revised permit application on July 15, 2009 to include all of their revised proposals since the first public notice and public review of the amendment application in 2007. A copy of this recent stand-alone application is sent to the TCEQ Region 14 and the EPA Region 6 and it will be made part of the record during the public comment period for the 2nd public notice.

Discussion on APWL Chemical Benzene:

The total actual downstream benzene emission increase due to this project is 6.7 lb/yr. This is calculated based on the 0.83% benzene concentration (weight%) in gasoline vapor. However, there will be no allowable emission increase for benzene. Therefore, no further air toxics review for benzene was required during permit processing. In the beginning of the year 2010, Nueces County was removed from the Air Pollutant Watch List for benzene.

Compliance History Evaluation - 30 TAC Chapter 60 Rules

A compliance history report was reviewed on:	4/14/10
Compliance period:	9/1/04 to 8/31/09
Site rating & classification:	3.24, average
Company rating & classification:	3.06, average
If the rating is 40<RATING<45, what was the outcome, if any, based on the findings in the formal report:	NA
Has the permit changed on the basis of the compliance history or rating?	No

**Permit Amendment
Source Analysis & Technical Review**

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Public Notice Information - 30 TAC Chapter 39 Rules

Rule Citation	Requirement	
39.403	Is Public Notice Required?	Yes
	Date Application Received:	June 13, 2007
	Date Administratively Complete:	June 28, 2007
	Small Business Source?	No
	Date Leg Letters mailed:	June 28, 2007
39.603	Date Published:	July 25, 2007
	Publication Name:	Corpus Christi Caller Times
	Pollutants:	NO _x , CO, PM/PM ₁₀ , VOC, SO ₂ and H ₂ SO ₄ mist
	Date Affidavits/Copies Received:	August 23, 2007
	Is bilingual notice required?	No
	Language:	NA
	Date Published:	NA
	Publication Name:	NA
	Date Affidavits/Copies Received:	NA
	Date Certification of Sign Posting / Application Availability Received:	Sept.6, 2007
39.604	Public Comments Received?	Yes
	Hearing Requested?	Yes
	Meeting Request?	No
	Date Meeting Held:	NA
	Date Response to Comments sent to OCC:	Public comment letter was untimely, NA
	Request(s) withdrawn?	No
	Date Withdrawn:	NA
	Consideration of Comments:	Yes, although untimely, the comments were addressed in an RTC after the second public notice comment period is over
39.419	Is 2nd Public Notice required?	Yes
	Date 2nd Public Notice Mailed:	September 16, 2009
39.603	Preliminary Determination:	Issue
	Date Published:	November 3, 2009
	Publication Name:	Corpus Christi Caller Times
	Pollutants:	NO _x , CO, PM/PM ₁₀ , VOC, SO ₂ and H ₂ SO ₄ mist
	Date Affidavits/Copies Received:	November 12, 2009
	Is bilingual notice required?	No
	Language:	Spanish
	Date Published:	NA
	Publication Name:	There are no Spanish language paper, NA
	Date Affidavits/Copies Received:	December 9, 2009
Date Certification of Sign Posting / Application Availability Received:	December 9, 2009	

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Rule Citation	Requirement	
	Public Comments Received?	No
	Meeting Request?	No
	Date Meeting Held:	NA
	Hearing Request?	No
	Date Hearing Held:	NA
	Request(s) withdrawn?	NA
	Date Withdrawn:	NA
	Consideration of Comments:	NA
39.421	Date RTC, Technical Review & Draft Permit Conditions sent to OCC:	March 4, 2010
	Request for Reconsideration Received?	
	Final Action:	
	Are letters Enclosed?	

Construction Permit & Amendment Requirements - 30 TAC Chapter 116 Rules

Rule Citation	Requirement	
116.111(a)(2)(G)	Is the facility expected to perform as represented in the application?	Yes
116.111(a)(2)(A)(i)	Are emissions from this facility expected to comply with all TCEQ air quality Rules & Regulations, and the intent of the Texas Clean Air Act?	Yes
116.111(a)(2)(B)	Emissions will be measured using the following method: CEMS at ESP stack for NOx, CO, SO₂	
	Comments on emission verification:	None
116.111(a)(2)(D)	Subject to NSPS? Subparts A & J	Yes
116.111(a)(2)(E)	Subject to NESHAP? Subparts &	No
116.111(a)(2)(F)	Subject to NESHAP (MACT) for source categories? Subparts A, CC & UJU	Yes
116.111(a)(2)(H)	Nonattainment review applicability? NNSR does not apply to Nueces County where the CITGO East Plant is located.	No
116.111(a)(2)(I)	PSD applicability? Project emission increases for CO, PM/PM ₁₀ and H ₂ SO ₄ mist were higher than the significance levels, therefore, PSD netting was triggered. CITGO did not do netting analysis to find out if the project will net out. Instead, CITGO decided to do full PSD review for these pollutants. The rest of the pollutants; VOC, NOx and SO ₂ did not trigger netting.	Yes
116.111(a)(2)(L)	Is Mass Emissions Cap and Trade applicable to the new or modified facilities? If yes, did the proposed facility, group of facilities, or account obtain allowances to operate:	No
		NA
116.140 - 141	Permit Fee: \$ 75,000	Fee certification: Yes

Title V Applicability - 30 TAC Chapter 122 Rules

Rule Citation	Requirement	
122.10(13)(A)	Is the site a major source under FCAA Section 112(b)?	Yes
	Does the site emit 10 tons or more of any single HAP?	Yes
	Does the site emit 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?	No

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122.602	Periodic Monitoring (PM) applicability: Facility's Title V permit has the periodic monitoring requirements.
122.604	Compliance Assurance Monitoring (CAM) applicability: Compliance assurance monitoring applies to PM and Opacity from the FCCU Regenerator's Electrostatic Precipitator. These CAM requirements are included in the facility's Title V permit. The draft NSR permit has compliance assurance monitoring requirements from the FCCU Regenerator/ESP stack for NOx, CO, SO ₂ and O ₂ .

Request for Comments

Received From	Program/Area Name	Reviewed By	Comments
Region:	14	Micole Gonzales	There were the following minor comments made on the permit wording: 1) In SC. 8, indicate that nonsulfate means noncondensable, 2) In SC.9F, change the wording "past consecutive 12 month period" to "past 12-month rolling period" to be consistent with the rest of the permit, 3) Add a condition to notify the Region of the start-up and end dates of the different phases of the permit.
City:	Corpus Christi		
County:	Nueces		
Toxicology:			NA, No Toxicology review needed
Compliance:			
Legal:			
Comment resolution and/or unresolved issues:			Addressed Region's comments by doing the following: 1) In SC.8, added the wording "noncondensable" after the word "nonsulfate", 2) In SC. 9F, changed the wording to read "past 12 month rolling period", 3) Added SC. 22 for notification of different phases of the permit to the Region.

Process/Project Description:

Hydrotreated, unhydrotreated and/or purchased gas oil is processed in the Fluid Catalytic Cracker Unit (FCCU) to catalytically crack into lighter components. The products consisting of lighter components are either further processed or sent to other units. The bulk of the products are blended into fuels.

The FCCU consists of catalytic, fractionation and gas concentration sections. The catalytic section employs a zeolitic catalyst (process catalyst) which is fluidized to continuously circulate from the reactor to the regenerator. The heavy gas oil feed starts to crack immediately upon contact with the catalyst into smaller molecules and the vapors fluidize the catalyst. The vapors are separated from the catalyst in the reactor and are sent to the fractionator. Main fractionation column products are slurry, heavy cycle oil, light cycle oil, FCC naphtha and overhead vapor. For this expansion project, additional cooling water from the upgraded cooling tower will be routed to the fractionator to enable additional heat removal.

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The spent catalyst with coke deposits on it is sent from the reactor to the stripper where entrained hydrocarbon vapors are stripped with steam back to the reactor. The stripped spent catalyst is then sent to the regenerator where it is mixed with air from the blower. Portable air blowers driven by electric motors will be added as part of this project to increase the air flow to regenerator from approximately 130,000 scfm to 140,000 scfm. The coke on the spent catalyst burns off with air to CO and CO₂. Spent catalyst is periodically withdrawn from the regenerator and replaced with fresh catalyst. Regenerator flue gas flows into a two stage cyclone assembly at the top of the regenerator to separate particulate matter from the gases. Particulate matter falls back into the regenerator while the gas leaves the regenerator, goes through a heat recovery train and finally goes to the Electrostatic Precipitator (ESP), where fine particulate matter is removed, and the uncaptured gases and fine particulate matter go out of the stack to the atmosphere. The ESP was upgraded and enlarged in 2005 by Std. Permit authorization No. 74326.

CITGO is currently testing SO_x reducing catalyst additives to control SO₂ emissions in accordance with EPA Consent Decree requirements. SO_x reducing catalyst additive is added to the regenerator along with fresh zeolitic catalyst. The catalyst is conveyed pneumatically from the SO_x catalyst container to the regenerator. The additive circulates through the FCCU along with the zeolitic catalyst. The additive is removed from the system along with spent zeolitic catalyst. Finally, the fine particles entrapped in the stack gas are captured by the ESP.

A detailed project description is given under the Project Overview Section of this review.

Pollution Prevention, Sources, Controls and BACT- [30 TAC 116.111(a)(2)(C)]

FCCU Regenerator/ESP Stack (EPN 31-PR-1):

The proposed emission limits, control methods and monitoring methods for the No.2 FCCU are outlined below for each criteria pollutant:

Sulfur Dioxide (SO₂):

As described in Special Condition 4 of the draft permit, during the one-year FCCU Optimization period, CITGO proposes 300 ppmvd (1-hour average, corrected to 0% excess oxygen) and 50 ppmvd (1-month and annual rolling average, corrected to 0% excess oxygen) as the BACT limit. During this one-year period, CITGO will utilize the emission control technologies of feed desulfurization and SO_x reducing catalysts. After the one-year optimization period (post-modification period), CITGO proposes to achieve an SO₂ emission limit of 25 ppmvd (12-month rolling average, corrected to 0% excess oxygen) and an SO₂ emission limit of 50 ppmvd (7-day rolling average, corrected to 0% excess oxygen). CITGO's proposals for the post optimization period match the emission rates achieved by most of the other refineries found in the EPA's RACT/BACT/LAER (RBL) database. Most of those refineries achieve the described emission rates using wet gas scrubbers. Since CITGO already has an upgraded and enlarged Electrostatic Precipitator (ESP), CITGO proposes to achieve the same rates utilizing the existing system of feed desulfurization and addition of SO_x reducing catalysts. Upgrade to the ESP was done by Standard Permit authorization No. 74326 in 2005.

Particulate Matter (PM/PM₁₀):

CITGO performed a Tier-3 cost analysis and demonstrated that it is not cost effective to meet the TCEQ BACT for total PM using their existing ESP.

As described in Special Condition 8 of the draft permit, CITGO proposes a non-sulfate, front half particulate matter emission limit for the FCCU Regenerator/ESP Stack of 1 lb/1000 lbs of coke burn which is the NSPS Subpart J limit. This is equivalent to 2 lbs total PM/1000 lbs of coke burn. TCEQ BACT is 1 lb total PM/1000

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lbs of coke burn. The refineries found on the RBLC permit database meet this TCEQ BACT using the wet gas scrubbers. CITGO makes a point explaining that they operate an upgraded ESP, not a wet gas scrubber and they do not have operating experience to commit to the BACT limit of 1 lb total PM/1000 lb coke burn with the ESP control at the proposed higher throughput rate. CITGO also points out that the performance of the system at the increased throughput rate can not be evaluated until authorization for the throughput increase is approved. Upon modification, CITGO proposes to monitor the PM from the ESP stack and commit to the BACT limit within four years unless CITGO submits PM testing results and an accompanying proposal demonstrating the need for a higher PM limit. If CITGO makes such a proposal, it will be subject to the TCEQ review. CITGO expects that the use of SO_x reduction catalysts to minimize SO₂ emissions will minimize emissions of sulfuric acid mist, a back-half condensable component of PM.

Sulfuric Acid (H₂SO₄) Mist:

CITGO performed a Tier-3 cost analysis and demonstrated that it is not cost effective to meet the TCEQ BACT for acid mist using their existing ESP.

As described in Special Condition 8 of the draft permit, CITGO proposes a total acid mist emission rate from the FCCU Regenerator/ESP Stack of 1 lb/1000 lbs of coke burn. CITGO makes a valid point explaining that the performance of the system for acid mist emissions at the increased throughput rate can not be evaluated until authorization for the increase is approved. Upon modification, CITGO proposes to monitor the acid mist from the ESP stack and commit to a limit of 0.5 lb acid mist/1000 lbs coke burn, within four years unless CITGO submits acid mist testing results and an accompanying proposal demonstrating the need for a higher acid mist limit. If CITGO makes such a proposal, it will be subject to the TCEQ review. CITGO expects that the use of SO_x reduction catalyst to minimize SO₂ emissions will also minimize emissions of sulfuric acid mist which is the back-half condensable component of PM.

Nitrogen Oxides (NO_x):

As described in Special Condition 7 of the draft permit, NO_x emissions from the FCCU Regenerator/ESP stack will meet the TCEQ BACT limit of 20 ppmvd (365-day rolling average, corrected to 0% excess oxygen) and 40 ppmvd (7-day rolling average, corrected to 0% excess oxygen). These limits match the NO_x emission limits for most of the refineries on the RBLC permit database.

Carbon Monoxide (CO):

As described in Special Condition 6 of the draft permit, CITGO proposes a CO emission limit of 100 ppmv (365-day rolling average, corrected to 0% excess oxygen) and 500 ppmvd (hourly average, corrected to 0% excess oxygen). This meets the TCEQ BACT and matches the CO emission limits for most of the refineries on the RBLC permit database.

Volatile Organic Compounds (VOC):

The allowable VOC emission increase from the FCCU Regenerator will be a result of the combustion of coke that accumulates on the catalyst during the coke burn cycle. CITGO proposes a VOC limit of 10 ppmvd on both hourly and annual basis which meets the TCEQ BACT and matches the VOC emission limit for some of the refineries on the RBLC permit database.

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Affected Tanks:

The increase in throughput at the No.2 FCCU will result in increased feed and product tank throughput. Although actual VOC emissions will increase due to additional throughput of storage tanks upstream and downstream of the FCCU, the resulting tank throughputs and emissions will be within the allowable levels authorized by the current permits. Therefore, a control technology review is not needed for affected tanks. Pending permit application No.80693 for East Plant will consolidate all of the East Plant tanks into one permit. The project emission increase due to these affected tanks is included in the PSD review applicability analysis for this project.

Cooling Tower (EPN F297):

There will be 2,000 gpm additional cooling water need to cool the fractionation column associated with FCCU No. 2 expansion. This cooling tower is currently covered by Permit No. 2697A although not individually listed in that permit's MAERT. In order to meet this 2000 gpm additional demand, a new cooling tower cell will be added through an unregistered PBR pursuant to 30 TAC 106.371. CITGO will incorporate this PBR into Permit 2697A at the next renewal or amendment. The emission increase due to adding 2,000 gpm additional capacity at this affected source is included in the PSD review applicability analysis for this project.

Spent Catalyst Handling (EPN F343):

Spent catalyst is loaded onto trucks approximately once per week and there are very small PM emissions from this loading which have not been previously quantified in the permit. CITGO proposes to minimize these emissions through use of a "sock" placed over the discharge vent of the truck during catalyst loading activities. PM emissions associated with loading spent FCCU catalyst is calculated based on the emission factors in AP-42, Chapter 13.2.4.2.

Impacts Evaluation - 30 TAC 116.111(a)(2)(J)

Was modeling conducted?	Yes	Type of Modeling:	AERMOD in refined screening mode
Will GLC of any air contaminant cause violation of NAAQS?			No
Is this a sensitive location with respect to nuisance?			No
[§116.111(a)(2)(A)(ii)] Is the site within 3000 feet of any school?			Yes
Additional site/land use information:			

Summary of Modeling Results

The air quality impact analysis was performed using the U.S. Environmental Protection Agency-approved dispersion models to predict the worst-case impact due to the proposed project.

Although the annual SO₂ emissions are decreasing significantly, the hourly SO₂ levels are proposed to go up. Consequently, a project related state Property Line analysis was conducted for SO₂. The modeling results indicated that GLCmax for SO₂ for averaging time of 1-hr is equal to 19 µg/m³ which is slightly less than the Deminimis level for SO₂ of 20.42 µg/m³.

Although no further review was necessary, CITGO compared the sitewide modeling results including the project to the SO₂ property line standard as well. Previous sitewide modeling results for State Property Line had indicated GLCmax for SO₂ for averaging time of 1-hr is equal to 553 µg/m³. CITGO added the previous

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site-wide modeling results of 553 $\mu\text{g}/\text{m}^3$ to the maximum predicted project concentration of 19 $\mu\text{g}/\text{m}^3$ for this project. The total GLCmax for SO_2 is 572 $\mu\text{g}/\text{m}^3$ which is much less than the SO_2 property line standard of 1021 $\mu\text{g}/\text{m}^3$, therefore, CITGO is compliant with the standard.

CITGO also conducted health effects modeling for refinery distillate. Predicted project related maximum off-property GLCmax ($\mu\text{g}/\text{m}^3$) was 1.5 which is much less than the 10% ESL level. Therefore, no further review is required.

SO_2 Modeling Results for State NAAQS showed that GLCmax for 3-hr averaging period is less than de minimis, therefore, no further review was necessary. GLCmax for 24-hr period was more than de minimis, therefore, further State NAAQS review was necessary for SO_2 (24-hr). Total concentration of SO_2 for State NAAQS is calculated to be 231 $\mu\text{g}/\text{m}^3$ which is less than the State NAAQS standard of 365 $\mu\text{g}/\text{m}^3$, therefore, no further review is needed.

CITGO also conducted PSD AOI (Prevention of Significant Deterioration Area of Impact) modeling for PM_{10} and CO. The details of the results are tabulated in the PDS (Preliminary Determination Summary) document. The results show that GLCmax are less than the de minimis levels and PSD Monitoring Significance levels. A PSD modeling for H_2SO_4 is not conducted since there is not a PSD standard for H_2SO_4 .

Permit Concurrence and Related Authorization Actions

Is the applicant in agreement with special conditions?	Yes
Company representative(s):	David Edge (Consultant, RPS Group)
Contacted Via:	Meeting, Phone, e-mail
Date of contact:	Many times during amendment processing. Last Contact: 9/22/09
Other permit(s) or permits by rule affected by this action:	No
List permit and/or PBR number(s) and actions required or taken:	

M. O. Tamer	4/14/10		
Project Reviewer	Date	Team Leader/Section Manager/Backup	Date

Table 3. Modeling Results for Minor NSR NAAQS AOI			
Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	De Minimis ($\mu\text{g}/\text{m}^3$)
SO ₂	3-hr	17	25
	24-hr	11	5

Annual emissions of SO₂ and NO₂ were not modeled. Per the modeling report, these annual emissions are being reduced.

Table 4. Total Concentrations for Minor NSR NAAQS (Concentrations > De Minimis)					
Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	Background ($\mu\text{g}/\text{m}^3$)	Total Conc. = [Background + GLCmax] ($\mu\text{g}/\text{m}^3$)	Standard ($\mu\text{g}/\text{m}^3$)
SO ₂	24-hr	11	220	231	365

The screening background concentration for SO₂ from Nueces County was used in the modeling demonstration. This is conservative. An ambient SO₂ monitor, EPA AIRS monitor 483550032 (3810 Huisache Street, Corpus Christi, Nueces County), is located within 100 meters of the site. The highest monitored 24-hr concentration from 2008 was 118 $\mu\text{g}/\text{m}^3$.

Table 5. 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	2	5
	Annual	0.2	1
CO	1-hr	27	2000
	8-hr	19	500

The applicant performed an Additional Impacts Analysis as part of the PSD air quality analysis. The Additional Impacts Analysis is appropriate.

Ozden Tamer, Ph.D., P.E.

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September 17, 2009

Modeling Audit – CITGO Refining and Petrochemicals Company, L.P.

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

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

Maximum allowable hourly emission rates were used for the short-term and annual averaging time analyses.

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

The building input data were not consistent with the aerial photography. The buildings were shifted approximately 45 meters to the northwest. However, the results should not be significantly affected since the point sources and receptor grid were shifted uniformly, and the source-to-building and source-to-receptor distance relationships are maintained.

One building, SCOT, was modeled with an incorrect building height. Modeling conducted by the ADMT indicates that this will not significantly affect the results.

6.0 Meteorological Data.

Surface Station and ID: Corpus Christi, TX (Station #: 12924)

Upper Air Station and ID: Brownsville, TX (Station #: 12919)

Meteorological Dataset: 1988 for State Reviews

1985, 1986, 1988, 1990, 1991 for PSD Review

Profile Base Elevation: 56 meters

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

Some receptors on the southwest side of the property were modeled on-site. This is conservative.

8.0 Model Used and Modeling Techniques. AERMOD (Version 07026) was used in a refined screening mode.

Compliance History Report

Customer/Respondent/Owner-Operator:	CN600127922 Citgo Refining and Chemicals Company L.P.	Classification: AVERAGE	Rating: 3.06
Regulated Entity:	RN102555166 CITGO CORPUS CHRISTI REFINERY EAST PLANT	Classification: AVERAGE	Site Rating: 3.24

ID Number(s):			
	AIR NEW SOURCE PERMITS	REGISTRATION	91706
	AIR NEW SOURCE PERMITS	REGISTRATION	92382
	AIR NEW SOURCE PERMITS	REGISTRATION	91621
	AIR NEW SOURCE PERMITS	PERMIT	2494A
	AIR NEW SOURCE PERMITS	PERMIT	2695A
	AIR NEW SOURCE PERMITS	PERMIT	2697A
	AIR NEW SOURCE PERMITS	PERMIT	2699A
	AIR NEW SOURCE PERMITS	PERMIT	2700A
	AIR NEW SOURCE PERMITS	PERMIT	2703A
	AIR NEW SOURCE PERMITS	PERMIT	2704A
	AIR NEW SOURCE PERMITS	PERMIT	2705A
	AIR NEW SOURCE PERMITS	PERMIT	2706A
	AIR NEW SOURCE PERMITS	PERMIT	2708A
	AIR NEW SOURCE PERMITS	PERMIT	3119A
	AIR NEW SOURCE PERMITS	PERMIT	3123A
	AIR NEW SOURCE PERMITS	PERMIT	3390A
	AIR NEW SOURCE PERMITS	PERMIT	3857A
	AIR NEW SOURCE PERMITS	PERMIT	4728A
	AIR NEW SOURCE PERMITS	PERMIT	5418A
	AIR NEW SOURCE PERMITS	PERMIT	6722A
	AIR NEW SOURCE PERMITS	PERMIT	8653A
	AIR NEW SOURCE PERMITS	PERMIT	9604A
	AIR NEW SOURCE PERMITS	REGISTRATION	10733A
	AIR NEW SOURCE PERMITS	REGISTRATION	12005A
	AIR NEW SOURCE PERMITS	PERMIT	2709A
	AIR NEW SOURCE PERMITS	PERMIT	4979A
	AIR NEW SOURCE PERMITS	PERMIT	19044
	AIR NEW SOURCE PERMITS	PERMIT	20156
	AIR NEW SOURCE PERMITS	PERMIT	21303
	AIR NEW SOURCE PERMITS	PERMIT	21358
	AIR NEW SOURCE PERMITS	PERMIT	21706
	AIR NEW SOURCE PERMITS	PERMIT	22312
	AIR NEW SOURCE PERMITS	PERMIT	22418
	AIR NEW SOURCE PERMITS	REGISTRATION	23834
	AIR NEW SOURCE PERMITS	REGISTRATION	28092
	AIR NEW SOURCE PERMITS	REGISTRATION	30099
	AIR NEW SOURCE PERMITS	REGISTRATION	42533
	AIR NEW SOURCE PERMITS	PERMIT	46637
	AIR NEW SOURCE PERMITS	PERMIT	46641
	AIR NEW SOURCE PERMITS	PERMIT	46640
	AIR NEW SOURCE PERMITS	PERMIT	46642
	AIR NEW SOURCE PERMITS	REGISTRATION	47656
	AIR NEW SOURCE PERMITS	REGISTRATION	49265
	AIR NEW SOURCE PERMITS	ACCOUNT NUMBER	NE0027V
	AIR NEW SOURCE PERMITS	PERMIT	6748
	AIR NEW SOURCE PERMITS	REGISTRATION	10309
	AIR NEW SOURCE PERMITS	REGISTRATION	56720
	AIR NEW SOURCE PERMITS	AFS NUM	4835500003
	AIR NEW SOURCE PERMITS	REGISTRATION	71021
	AIR NEW SOURCE PERMITS	REGISTRATION	90292
	AIR NEW SOURCE PERMITS	REGISTRATION	53921
	AIR NEW SOURCE PERMITS	REGISTRATION	54775
	AIR NEW SOURCE PERMITS	EPA ID	PSDTX653M1
	AIR NEW SOURCE PERMITS	PERMIT	72654
	AIR NEW SOURCE PERMITS	REGISTRATION	74515
	AIR NEW SOURCE PERMITS	REGISTRATION	74376
	AIR NEW SOURCE PERMITS	REGISTRATION	75017
	AIR NEW SOURCE PERMITS	REGISTRATION	75340
	AIR NEW SOURCE PERMITS	EPA ID	PSDTX831
	AIR NEW SOURCE PERMITS	REGISTRATION	76930
	AIR NEW SOURCE PERMITS	REGISTRATION	76737

AIR NEW SOURCE PERMITS	REGISTRATION	76742
AIR NEW SOURCE PERMITS	REGISTRATION	76880
AIR NEW SOURCE PERMITS	REGISTRATION	76883
AIR NEW SOURCE PERMITS	REGISTRATION	77066
AIR NEW SOURCE PERMITS	REGISTRATION	77680
AIR NEW SOURCE PERMITS	REGISTRATION	77094
AIR NEW SOURCE PERMITS	REGISTRATION	77050
AIR NEW SOURCE PERMITS	REGISTRATION	78081
AIR NEW SOURCE PERMITS	REGISTRATION	78541
AIR NEW SOURCE PERMITS	REGISTRATION	78522
AIR NEW SOURCE PERMITS	REGISTRATION	78851
AIR NEW SOURCE PERMITS	REGISTRATION	78850
AIR NEW SOURCE PERMITS	REGISTRATION	78195
AIR NEW SOURCE PERMITS	REGISTRATION	79234
AIR NEW SOURCE PERMITS	REGISTRATION	79760
AIR NEW SOURCE PERMITS	REGISTRATION	80407
AIR NEW SOURCE PERMITS	PERMIT	80693
AIR NEW SOURCE PERMITS	REGISTRATION	80521
AIR NEW SOURCE PERMITS	REGISTRATION	80564
AIR NEW SOURCE PERMITS	PERMIT	80801
AIR NEW SOURCE PERMITS	REGISTRATION	83336
AIR NEW SOURCE PERMITS	REGISTRATION	83016
AIR NEW SOURCE PERMITS	REGISTRATION	86253
AIR NEW SOURCE PERMITS	REGISTRATION	83882
AIR NEW SOURCE PERMITS	REGISTRATION	83913
AIR OPERATING PERMITS	ACCOUNT NUMBER	NE0027V
AIR OPERATING PERMITS	PERMIT	1423
INDUSTRIAL AND HAZARDOUS WASTE GENERATION	EPA ID	TXD051161990
INDUSTRIAL AND HAZARDOUS WASTE GENERATION	SOLID WASTE REGISTRATION # (SWR)	30532
INDUSTRIAL AND HAZARDOUS WASTE STORAGE	PERMIT	50160
INDUSTRIAL AND HAZARDOUS WASTE STORAGE	PERMIT	50160
WASTEWATER	PERMIT	WQ0000467000
WASTEWATER	PERMIT	TPDES0006211
WASTEWATER	PERMIT	TX0006211
IHW CORRECTIVE ACTION	SOLID WASTE REGISTRATION # (SWR)	30532
INDUSTRIAL AND HAZARDOUS WASTE POST CLOSURE	PERMIT	50160
AIR EMISSIONS INVENTORY	ACCOUNT NUMBER	NE0027V

Location: 1801 NUECES BAY BLVD, CORPUS CHRISTI, TX, 78407

TCEQ Region: REGION 14 - CORPUS CHRISTI

Date Compliance History Prepared: May 26, 2010

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

Compliance Period: September 01, 2004 to August 31, 2009

TCEQ Staff Member to Contact for Additional Information Regarding this Compliance History
 Name: Beecher cameron Phone: 239 - 1495

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/operator of the site during the compliance period? Yes
3. If Yes, who is the current owner/operator?

OWNOPR	<u>Citgo Refining and Chemicals Company L.P.</u>
OWNOPR	<u>Champlin Refining Company</u>
4. If Yes, who was/were the prior owner(s)/operator(s) ?

OWNOPR	<u>Citgo Petroleum Corporation</u>
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5. When did the change(s) in owner or operator occur?

10/01/2007	OWNOPR	<u>Citgo Petroleum Corporation</u>
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6. Rating Date: 9/1/2009 Repeat Violator: NO

Components (Multimedia) for the Site :

A. Final Enforcement Orders, court judgements, and consent decrees of the state of Texas and the federal government.

- Effective Date: 08/31/2007 ADMINORDER 2007-0170-AIR-E
Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
5C THC Chapter 382, SubChapter D 382.085(b)
Rqmt Prov: TCEQ Air Permit 5418A General Conditions PERMIT
Description: Failed to prevent unauthorized emissions. Specifically, 20 pounds of the Hazardous Air Pollutant benzene was released from the UDEX Unit Fugitives during an emissions event that began June 21, 2006 and lasted five minutes.
- Effective Date: 12/20/2007 ADMINORDER 2007-0594-AIR-E
Classification: Moderate
Citation: 30 TAC Chapter 111, SubChapter A 111.111(a)(1)(C)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter D 382.085(b)
Rqmt Prov: 3123A, SC 1 PERMIT
Permit No. 3123A, Special Condition 3 PERMIT
Description: Failed to prevent an unauthorized emissions event that occurred on November 15, 2006.
- Effective Date: 06/15/2009 ADMINORDER 2008-1793-AIR-E
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: 9604A / Special Condition No. 1 PA
Description: Failed to prevent unauthorized emissions.
- Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter F 101.201(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: [FOP No. O-1423] STC 2 OP
Description: Failed to submit a final emissions event report within two weeks after the end of the event (Incident No. 111222). Specifically, the event occurred and ended on July 16, 2008 and the report was due by July 30, 2008, but was not submitted until July 31, 2008.
- Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 111, SubChapter A 111.111(a)(1)(B)
30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: [3390A] SC 1 & MAERT PERMIT
[9604A/PSD-TX-653] SC 1 & MAERT PERMIT
[FOP No. O-1423] STC 31 OP
FOP No. O-01423, SC 1.A. PERMIT
Description: Failed to prevent unauthorized emissions and to limit opacity to 20 percent.
- Classification: Minor
Citation: 30 TAC Chapter 101, SubChapter F 101.211(b)(1)(H)
30 TAC Chapter 101, SubChapter F 101.211(b)(1)(I)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: FOP No. O-01423, SC 2.G. PERMIT
Description: Failed to list all compounds and total quantities associated with a startup activity.
- Effective Date: 08/23/2009 ADMINORDER 2002-0290-AIR-E
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.6(a)(1)
5C THSC Chapter 382 382.085(b)
Description: Failure to notify TNRCCs regional office within 24 hours after the discovery of two upset events, both of which occurred on August 8, 2001.
- Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)(2)(G)
Rqmt Prov: Not specified PERMIT

Description: Failure to obtain regulatory authority or meet the description requirements for upset emissions resulting from two separate events which occurred on August 8, 2001.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
5C THC Chapter 382, SubChapter A 382.085(b)

Description: Failure to demonstrate compliance with the Maximum Allowable Emission Rate of Permit No. 3123A. Specifically, the CO Boiler failed to demonstrate compliance with the Carbon Monoxide emission rate, as demonstrated in a compliance test conducted on January 30, 2004.

Classification: Major

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Special Condition 1 PERMIT

Description: Failure to satisfy all demonstration criteria as listed under 30 TAC § 101.222 or comply with the allowable emission rates specified in the Maximum Allowable Emission Rate Table during the emissions event which occurred on May 26, 2004.

Effective Date: 08/23/2009

ADMINORDER 2004-1279-AIR-E

Classification: Major

Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 111, SubChapter A 111.111(a)(1)(C)
30 TAC Chapter 116, SubChapter B 116.115(c)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT J 60.102(a)(2)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT J 60.103(a)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Special Condition 1 PERMIT
Special Conditions 1 ,8 ,11, 15 PERMIT

Description: Failed to prevent unauthorized emissions from the No. 2 FCCU on October 28, 2003.

Effective Date: 08/31/2009

ADMINORDER 2008-1193-AIR-E

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: 3119A PERMIT

Description: Failed to prevent unauthorized emissions.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)(1)
5C THSC Chapter 382 382.085(b)

Description: Failed to submit the initial notification of Incident No. 102832 within 24 hours of discovery.

Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter F 101.201(b)
30 TAC Chapter 101, SubChapter F 101.201(c)
30 TAC Chapter 101, SubChapter F 101.201(g)
5C THSC Chapter 382 382.085(b)

Description: Failed to list all compounds and quantities associated with Incident No. 102832 in the final report.

Effective Date: 08/31/2009

ADMINORDER 2008-0273-IHW-E

Classification: Moderate

Citation: 30 TAC Chapter 335, SubChapter A 335.4

Description: Failure to prevent the discharge of industrial solid waste.

Classification: Minor

Citation: 30 TAC Chapter 335, SubChapter A 335.6

Description: Failure to comply with notification requirements.

Classification: Minor

Citation: 30 TAC Chapter 335, SubChapter A 335.10(b)
30 TAC Chapter 335, SubChapter A 335.10(d)(1)
40 CFR Chapter 262, SubChapter I, PT 262, SubPT B 262.20(a)
40 CFR Chapter 262, SubChapter I, PT 262, SubPT B 262.23(a)

Description: Failure to comply with manifesting requirements.

Classification: Moderate

Citation: 30 TAC Chapter 335, SubChapter C 335.69(a)(1)(A)
30 TAC Chapter 335, SubChapter E 335.112(a)(8)
40 CFR Chapter 262, SubChapter I, PT 262, SubPT C 262.34(a)(1)(i)
40 CFR Chapter 265, SubChapter I, PT 265, SubPT I 265.171

Description: Failure to maintain a hazardous waste container in good condition.

Classification: Moderate
Citation: 30 TAC Chapter 335, SubChapter C 335.69(a)(1)(A)
30 TAC Chapter 335, SubChapter E 335.112(a)(8)
40 CFR Chapter 262, SubChapter I, PT 262, SubPT C 262.34(a)(1)(i)
40 CFR Chapter 265, SubChapter I, PT 265, SubPT I 265.173(b)
Description: Failure to properly manage a hazardous waste container.
Classification: Moderate
Citation: 40 CFR Chapter 265, SubChapter I, PT 265, SubPT B 265.15(d)
Description: Failure to conduct inspections of hazardous waste containers.

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.)

1	09/15/2004	(298570)
2	09/16/2004	(334411)
3	09/28/2004	(283343)
4	10/12/2004	(335820)
5	10/29/2004	(352243)
6	11/19/2004	(336653)
7	11/19/2004	(336845)
8	11/19/2004	(339890)
9	11/19/2004	(339919)
10	11/19/2004	(341541)
11	11/22/2004	(341305)
12	11/23/2004	(352244)
13	11/30/2004	(341912)
14	12/20/2004	(352242)
15	12/20/2004	(381902)
16	12/30/2004	(342227)
17	01/21/2005	(345684)
18	01/24/2005	(381903)
19	02/03/2005	(348348)
20	02/23/2005	(381900)
21	03/08/2005	(453246)
22	03/11/2005	(372798)
23	03/24/2005	(373888)
24	03/24/2005	(374168)
25	03/28/2005	(374190)
26	03/28/2005	(381901)
27	04/26/2005	(419743)
28	05/06/2005	(378559)
29	05/23/2005	(419744)
30	06/03/2005	(392988)
31	06/03/2005	(393464)
32	06/16/2005	(395438)
33	06/23/2005	(419745)
34	07/07/2005	(395347)
35	07/18/2005	(393465)
36	07/22/2005	(440879)
37	08/18/2005	(405799)
38	08/22/2005	(402137)
39	08/26/2005	(440880)
40	09/20/2005	(440881)
41	10/11/2005	(434051)
42	10/25/2005	(468522)
43	11/16/2005	(405717)

44	11/17/2005	(436667)
45	11/28/2005	(468523)
46	12/01/2005	(435829)
47	12/22/2005	(468524)
48	01/02/2006	(450793)
49	01/02/2006	(450794)
50	01/24/2006	(468525)
51	02/09/2006	(453193)
52	02/21/2006	(451197)
53	02/24/2006	(468521)
54	03/07/2006	(454499)
55	03/08/2006	(458417)
56	03/20/2006	(498260)
57	03/27/2006	(459448)
58	04/06/2006	(459050)
59	04/13/2006	(459661)
60	04/13/2006	(459665)
61	04/18/2006	(455371)
62	04/24/2006	(498261)
63	05/23/2006	(498262)
64	05/24/2006	(467417)
65	06/05/2006	(466364)
66	06/06/2006	(467393)
67	06/23/2006	(498263)
68	07/19/2006	(482242)
69	07/21/2006	(484425)
70	07/24/2006	(520275)
71	08/09/2006	(572255)
72	08/17/2006	(520276)
73	08/21/2006	(489885)
74	08/21/2006	(520277)
75	08/22/2006	(487181)
76	08/24/2006	(482569)
77	08/31/2006	(483126)
78	09/13/2006	(510995)
79	09/25/2006	(520278)
80	10/12/2006	(514095)
81	10/12/2006	(514878)
82	10/12/2006	(514897)
83	10/16/2006	(515256)
84	10/18/2006	(510953)
85	10/18/2006	(515782)
86	10/24/2006	(544597)
87	11/15/2006	(516860)
88	11/15/2006	(518976)
89	11/27/2006	(544598)
90	11/29/2006	(512162)
91	12/19/2006	(544599)
92	12/21/2006	(534104)
93	12/29/2006	(534672)
94	01/04/2007	(516900)
95	01/08/2007	(512157)
96	01/22/2007	(544600)
97	02/12/2007	(539381)
98	02/16/2007	(540236)
99	02/18/2007	(540855)
100	02/22/2007	(575434)
101	02/26/2007	(538209)
102	03/20/2007	(538211)

103	03/26/2007	(575435)
104	04/04/2007	(554293)
105	04/23/2007	(575436)
106	04/23/2007	(575440)
107	04/25/2007	(540902)
108	05/04/2007	(558318)
109	05/08/2007	(558508)
110	05/16/2007	(575437)
111	05/25/2007	(561868)
112	06/01/2007	(559013)
113	06/21/2007	(563744)
114	06/22/2007	(575438)
115	07/13/2007	(562870)
116	07/13/2007	(564523)
117	07/13/2007	(567064)
118	07/23/2007	(575439)
119	08/17/2007	(565565)
120	08/20/2007	(607562)
121	08/27/2007	(573505)
122	08/31/2007	(572127)
123	09/14/2007	(570950)
124	09/24/2007	(607563)
125	10/02/2007	(594482)
126	10/03/2007	(608617)
127	10/17/2007	(596344)
128	10/22/2007	(481761)
129	10/22/2007	(619546)
130	11/26/2007	(619547)
131	11/28/2007	(598481)
132	12/27/2007	(619548)
133	01/18/2008	(598045)
134	02/02/2008	(594422)
135	02/11/2008	(617736)
136	02/11/2008	(617821)
137	02/25/2008	(672070)
138	03/25/2008	(672071)
139	04/01/2008	(639935)
140	04/17/2008	(689998)
141	04/28/2008	(653240)
142	05/19/2008	(689999)
143	05/20/2008	(670835)
144	05/27/2008	(657010)
145	05/29/2008	(657015)
146	06/04/2008	(642002)
147	06/17/2008	(636408)
148	06/20/2008	(690000)
149	06/20/2008	(690001)
150	07/02/2008	(671093)
151	08/20/2008	(710775)
152	08/29/2008	(683983)
153	09/22/2008	(710776)
154	09/22/2008	(710777)
155	10/16/2008	(705092)
156	10/20/2008	(727516)
157	10/21/2008	(702325)
158	10/21/2008	(704422)
159	10/30/2008	(720824)
160	11/06/2008	(701557)
161	11/18/2008	(704866)

162 11/20/2008 (727514)
 163 12/05/2008 (708653)
 164 12/05/2008 (708803)
 165 12/09/2008 (709439)
 166 12/22/2008 (727515)
 167 12/23/2008 (721416)
 168 01/23/2009 (723003)
 169 02/12/2009 (750304)
 170 02/26/2009 (709542)
 171 03/12/2009 (736356)
 172 03/18/2009 (750305)
 173 04/06/2009 (739450)
 174 04/16/2009 (768394)
 175 04/17/2009 (739042)
 176 05/01/2009 (739330)
 177 05/21/2009 (768395)
 178 06/22/2009 (679939)
 179 06/22/2009 (804750)
 180 07/03/2009 (749313)
 181 07/09/2009 (761190)
 182 07/20/2009 (804751)
 183 08/20/2009 (804752)
 184 08/24/2009 (763946)
 185 08/24/2009 (765442)
 186 08/26/2009 (765255)
 187 08/26/2009 (765357)
 188 08/27/2009 (767703)
 189 08/28/2009 (765992)

E. Written notices of violations (NOV). (CCEDS Inv. Track. No.)

Date: 11/19/2004 (341305) CN600127922
 Self Report? NO Classification: Minor
 Citation: 30 TAC Chapter 111, SubChapter A 111.111(a)(1)(B)
 30 TAC Chapter 116, SubChapter B 116.115(c)
 Special Condition No. 3 PERMIT
 Description: Failure to satisfy all demonstrations criteria as listed under 30 Tex. Admin. Code §
 101.222 and gain authority for emissions released from an event that occurred
 on April 14, 2004, TCEQ incident No. 37963.
 Date: 11/29/2004 (341912) Classification: Minor
 Self Report? NO
 Citation: 30 TAC Chapter 327 327.3(b)
 Description: The regulated entity failed to notify the TCEQ of a reportable incident as soon as
 possible, but no later than 24 hours. The CASA Line Filter at CITGO East in
 Corpus Christi, Texas released approx. 10 barrels of 2-Oil to the ground on
 09/18/04, however, CITGO personnel did not notify the TCEQ until 09/28/04.
 Date: 12/29/2004 (342227) CN600127922
 Self Report? NO Classification: Moderate
 Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)(4)
 Description: Failure to submit all additional or more detailed information requested for TCEQ
 STEERS No. 39028 within the time frame established in the request. Information
 requested to be submitted by September 22, 2004 was received on November
 24, 2004.
 Self Report? NO Classification: Moderate
 Citation: 30 TAC Chapter 101, SubChapter F 101.201(b)(12)
 Description: All additional information necessary to evaluate the emissions event (TCEQ
 STEERS No. 39028) which occurred on or about May 4, 2004 was not provided
 in the final record.
 Self Report? NO Classification: Moderate
 Citation: 30 TAC Chapter 101, SubChapter F 101.201(f)
 Description: Failure to submit in writing an analysis of the probable cause of an emissions
 event (TCEQ STEERS No. 39028) within 60 days from the date of the request.
 Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 111, SubChapter A 111.111(a)(1)(C)
 Description: Failure to prevent the occurrence of visible emissions with an opacity of greater than 20% averaged over a six- minute period for emissions released from the No. 2 FCCU during an emissions event (TCEQ STEERS No. 39028) that occurred on or about May 4, 2004.
 Self Report? NO Classification: Moderate
 Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
 30 TAC Chapter 116, SubChapter B 116.115(c)
 40 CFR Chapter 60, SubChapter C, PT 60, SubPT J 60.102(a)(2)
 Description: Failure to maintain compliance with applicable requirements specified in New Source Performance Standards (NSPS) for Petroleum Refineries 40 Code of Federal Regulations (CFR) Part 60 Subpart J.
 Date: 03/31/2005 (419743) CN600127922
 Self Report? YES Classification: Moderate
 Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
 TWC Chapter 26 26.121(a)
 Description: Failure to meet the limit for one or more permit parameter
 Date: 07/18/2005 (393465) CN600127922
 Self Report? NO Classification: Moderate
 Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
 TPDES Permit No. 00467-003 PERMIT
 Description: Failure to comply with the 0.5 mg/l daily maximum permit limit for BTEX.
 Self Report? NO Classification: Minor
 Citation: 30 TAC Chapter 319, SubChapter A 319.4
 TPDES Permit No. 00467-003 PERMIT
 Description: Failure to meet minimum self-monitoring requirements for sample collection and laboratory analysis.
 Self Report? NO Classification: Moderate
 Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
 TPDES Permit No. 00467-001 PERMIT
 Description: Failure to comply with the maximum pH permit limit of 9.0 su (standard units).
 Date: 12/31/2005 (468525) CN600127922
 Self Report? YES Classification: Moderate
 Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
 TWC Chapter 26 26.121(a)
 Description: Failure to meet the limit for one or more permit parameter
 Date: 08/24/2006 (482569) CN600127922
 Self Report? NO Classification: Moderate
 Citation: TPDES Permit No. WQ0000467-001 PERMIT
 TWC Chapter 26 26.121(a)(1)
 Description: Failure to prevent an unauthorized discharge of approximately 6 barrels of slop oil into the Corpus Christi Inner Harbor.
 Date: 08/31/2006 (483126) CN600127922
 Self Report? NO Classification: Moderate
 Citation: 30 TAC Chapter 335, SubChapter C 335.69(a)
 40 CFR Chapter 262, SubChapter I, PT 262, SubPT C 262.34(a)
 Description: Failure to meet accumulation time limits as required for storage of hazardous waste without a permit.
 Self Report? NO Classification: Moderate
 Citation: 30 TAC Chapter 335, SubChapter C 335.69(a)(1)(A)
 30 TAC Chapter 335, SubChapter E 335.112(a)(8)
 40 CFR Chapter 262, SubChapter I, PT 262, SubPT C 262.34(a)(1)(i)
 40 CFR Chapter 265, SubChapter I, PT 265, SubPT I 265.174
 Description: Failure to inspect all container storage areas as required.
 Self Report? NO Classification: Moderate
 Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
 PP III.D. OP
 Description: Failure to inspect Permitted Units as per permit requirements.
 Date: 11/28/2006 (512162) CN600127922
 Self Report? NO Classification: Moderate
 Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)(1)
 30 TAC Chapter 335, SubChapter A 335.4
 Description: Failure to prevent discharge of industrial or other waste into or adjacent to any water in the state.
 Date: 03/31/2007 (575436) CN600127922

Self Report? YES Classification: Moderate
 Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
 TWC Chapter 26 26.121(a)
 Description: Failure to meet the limit for one or more permit parameter
 Date: 05/31/2007 (575438) CN600127922

Self Report? YES Classification: Moderate
 Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
 TWC Chapter 26 26.121(a)
 Description: Failure to meet the limit for one or more permit parameter
 Date: 07/31/2007 (607562) CN600127922

Self Report? YES Classification: Moderate
 Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
 30 TAC Chapter 305, SubChapter F 305.125(1)
 Description: Failure to meet the limit for one or more permit parameter
 Date: 08/17/2007 (565565) CN600127922

Self Report? NO Classification: Moderate
 Citation: TWC Chapter 26 26.121(a)(1)
 Description: Failure to prevent an un-permitted discharge of commingled process
 wastewater, storm water, cooling tower blow-down, and fire water via outfall
 003

Self Report? NO Classification: Minor
 Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
 TPDES Permit No. 00467-001 PERMIT
 Description: Failure to comply with the daily maximum effluent permit limit for biochemical
 oxygen demand (BOD) and chemical oxygen demand (COD) for 12/2005 at outfall
 001.

Self Report? NO Classification: Minor
 Citation: 30 TAC Chapter 319, SubChapter A 319.4
 TPDES Permit No. 00467-003 PERMIT
 Description: Failure to analyze total chrome at storm water outfall 003 for the month of
 November 2005. On 11/26/2005, a discharge occurred at outfall 003 with a
 corresponding rain event. A sample was collected during the discharge for
 laboratory analyses of the required permit parameters. The in-house laboratory
 did not perform the total chromium analysis due to a laboratory error.

Self Report? NO Classification: Minor
 Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
 TPDES Permit No. 00467-003 PERMIT
 Description: Failure to comply with the daily maximum effluent permit limit for oil and grease for
 07/2007 at outfall 003.
 Date: 08/31/2007 (572127) CN600127922

Self Report? NO Classification: Moderate
 Citation: 19044, SC 2E PERMIT
 20156, SC 1E PERMIT
 21303, SC 5E PERMIT
 21706, SC 6E PERMIT
 2695A, Special Condition 10E PERMIT
 2697A, SC 9E PERMIT
 2703A, SC 5E PERMIT
 2708A, SC 8E PERMIT
 30 TAC Chapter 101, SubChapter A 101.20(1)
 30 TAC Chapter 101, SubChapter A 101.20(3)
 30 TAC Chapter 113, SubChapter C 113.130
 30 TAC Chapter 115, SubChapter D 115.322(4)
 30 TAC Chapter 116, SubChapter B 116.115(c)
 30 TAC Chapter 122, SubChapter B 122.143(4)
 3123A, SC 7E PERMIT
 3857A, 13E PERMIT
 40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-6(a)(1)
 40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.167(a)(1)
 46640, SC 6E PERMIT
 46641, SC 14E PERMIT
 5418A, SC 8E PERMIT
 6722A, SC 10E PERMIT
 72654, SC 3E PERMIT
 9604A/PSD-TX-653, SC18E PERMIT

Description: FOP O-01423, Special Term & Condition 1A OP
Failure to equip each open-ended valve or line with a cap, blind flange, plug, or a second valve. According to the TCEQ Enforcement Initiation Criteria, this is a Category C violation, Subcategory 10.

Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)

30 TAC Chapter 115, SubChapter D 115.322(2)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-1(a)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-2(c)(2)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-3(g)(2)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-7(d)(2)
FOP O-01423, Special Term & Condition 1A OP

Description: Failure to make a first attempt at repair within five days.

Self Report? NO Classification: Moderate
Citation: 21303, SC 5H PERMIT

2697A, SC 9I PERMIT
2703A, 5I PERMIT
2708A, SC 8I PERMIT
30 TAC Chapter 115, SubChapter D 115.322(2)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
46640, SC 6I PERMIT
46641, SC 14I PERMIT
5418A, SC 8I PERMIT
6722A, SC 10I PERMIT
9604A/PSD-TX-653, SC 18H PERMIT
FOP O-1423, Special Term & Condition 1A OP

Description: Failure to make an effective repair or delay of repair placement within the appropriate time limits.

Date: 09/30/2007 (619546) CN600127922

Self Report? YES Classification: Moderate

Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 305, SubChapter F 305.125(1)

Description: Failure to meet the limit for one or more permit parameter

Date: 10/03/2007 (608617) CN600127922

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
30 TAC Chapter 305, SubChapter F 305.125(17)

Description: NON-RPT VIOS FOR MONIT PER OR PIPE

Date: 08/29/2008 (683983) CN600127922

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 122, SubChapter B 122.143(4)
30 TAC Chapter 122, SubChapter B 122.145(2)(A)
30 TAC Chapter 122, SubChapter B 122.146(5)(D)
General Terms & Conditions (GT & C) OP

Description: Failure to include all instances of deviation in Deviation Reports (DRs) which were submitted on March 21, 2007, September 17, 2007 and March 17, 2008 (DR2, DR3 and DR4, respectively). Additionally, by failing to include or reference pertinent deviations in DR2, DR3, and DR4, the company failed to certify an accurate PCC for each of the periods ending February 19, 2007 and February 19, 2008.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
General Condition (GC) 8 & SC 5 PA

Description: Failure to comply with the VOC short term emission rate in the MAERT for the combined Crude and Vacuum Units. The number of one-hour periods in deviation reports are described in the following: 1. DR1 - Crude Unit - 109 periods in pages 235-237; Vacuum Unit -25 periods in pages 143-144; 2. DR2 - Crude Unit - 209 periods in pages 43-45; Vacuum Unit- page 46. Note: The company has reduced the number of exceedances of the VOC short-term rate since February 2007.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)

5C THSC Chapter 382 382.085(b)
 SC 4 & SC 6 PA

Description: Failure to demonstrate compliance with the CO and NOx concentrations of 500 ppm and 60 ppm, respectively, for the FCCU regenerator stack (EPN 31-PR-1). On various days from January 15, 2006 through February 2007, hourly records requested on February 28, 2008 indicated concentrations of CO above permitted limits. Additionally, on August 23 and 24, 2007, the 24-hr rolling average of NOx exceeded the permitted concentration limit in SC 6.

Self Report? NO **Classification:** Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
 5C THSC Chapter 382 382.085(b)
 SC 6 PA

Description: Failure to maintain the rolling 12-month loading limits of alkylate and C5/Platformate at marine Docks 1 and 2. According to records provided on March 4, 2008, alkylate and C5/Platformate exceeded the permitted loading limits of 1.6 million and 1.2 barrels per year, respectively. Alkylate loading was exceeded from April through December 2006. The C5/Platformate loading limit was exceeded all of CY 2006 and January 2007.

Self Report? NO **Classification:** Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
 5C THSC Chapter 382 382.085(b)
 SC 3 PA

Description: Failure to maintain the NOx emissions limit below the permitted rate of 0.08 lbs NOx /MMBtu. The emissions limit was exceeded in 27 periods between January 2, 2006 and April 30, 2007. The duration of each period varied from 1 hour to 29 hours. Records of exceedances for 2006 and 2007 were provided on March 4 and March 5, 2008. Exceedances were represented in DR1 (page 150) and DR2 (pages 41 and 42).

Self Report? NO **Classification:** Minor
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
 5C THSC Chapter 382 382.085(b)
 SC 11E & SC12 PA

Description: Failure to include fuel certification statements in quarterly reports and failed to submit a 3Q07 fuel certification report. Additionally, a semiannual report for the second half of 2007 (2H07) was incomplete. The third quarter report for 2007 (3Q07) report was not submitted. Since only the 4Q07 report was submitted, the partial 2H07 was deemed incomplete.

Self Report? NO **Classification:** Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
 30 TAC Chapter 116, SubChapter H 116.814
 5C THSC Chapter 382 382.085(b)
 SC5, SC8F & SC8H PA

Description: Failure to monitor 1520 components in accordance with the 28MID fugitive monitoring program. According to SC 5, the 28 MID program was to be implemented 180 days after the permit issuance date of October 9, 2003. Additionally, it was determined that Pump No 85-P-105B (FEMS tag No 56233) was not repaired in three instances in 2006 and 2007 when the pump seal leak rate exceeded 500 ppm.

Self Report? NO **Classification:** Moderate
Citation: 30 TAC Chapter 106, SubChapter A 106.6(b)
 30 TAC Chapter 116, SubChapter H 116.814
 5C THSC Chapter 382 382.085(b)
 GC1 & SC 9G PA

Description: Failure to maintain the annual VOC throughputs limits for Tank No. 3101 in calendar year 2006 (CY 06) and Tank No. 3102 in CY 07. Additionally, based on a rolling 12-month period, storage vessels 1001, 1017, and 1031 exceeded the annual emissions limitation for December 2006. Tanks 1001, 1017, 1025, 1028, 3101, and 3102 exceed their emissions limit for various months in CY 07.

Self Report? NO **Classification:** Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
 30 TAC Chapter 116, SubChapter H 116.814
 SC 2, SC 12, & SC 13 PA

Description: Failure to conduct emissions evaluations of engine performance on three engines (Nos. 4, 5, 6) within 60 days of upgrading engine controls. Additionally, the emission controls project on the Platformer Reactor Heater (EPNs 82, 83, and 84) was completed on December 6, 2002. The SC 2 required completion by October

31, 2002.

Self Report? NO Classification: Minor

Citation: 30 TAC Chapter 113, SubChapter C 113.340
40 CFR Chapter 63, SubChapter C, PT 63, SubPT AA 63.654(f)(6)
5C THSC Chapter 382 382.085(b)
GT&C; ST&C 1 OP

Description: Failure to report in the appropriate Notice of Compliance Status (NOCS) report or Periodic Report (PR) that 13 internal floating roof (IFR) storage vessels had achieved compliance in various periods from October 20, 1998 (tank No. 1030) to June 9, 2004 (tank No. 223).

Self Report? NO Classification: Minor

Citation: 30 TAC Chapter 113, SubChapter C 113.340
40 CFR Chapter 63, SubChapter C, PT 63, SubPT AA 63.654(g)
5C THSC Chapter 382 382.085(b)
ST&C 1 OP

Description: Failure to submit two Periodic Reports (PRs) for the first half 2002 (1H02) and 1H03, 60 days after the end of each 6-month period. The affected reports were due August 29, 2002 and August 29, 2003, respectively. The 1H02 report was submitted August 20, 2004, and the 1H03 report on August 19, 2004.

Self Report? NO Classification: Minor

Citation: 30 TAC Chapter 113, SubChapter C 113.340
40 CFR Chapter 63, SubChapter C, PT 63, SubPT AA 63.646(a)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.120(b)(1)(i)
5C THSC Chapter 382 382.085(b)
ST&C 1 OP

Description: Failure to conduct a 5 year primary seal inspection on external floating roof (EFR) storage tank No. 928 within the time allotted by rule. Records provided on August 12, 2008, documented an inspection conducted on June 15, 2007. The required inspection was due to be performed no later than February 18, 2007.

Self Report? NO Classification: Minor

Citation: 30 TAC Chapter 113, SubChapter C 113.780
40 CFR Chapter 63, SubChapter C, PT 63, SubPT UUU 63.1575(b)(3)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT UUU 63.1575(b)(4)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT UUU 63.1575(c)(2)
5C THSC Chapter 382 382.085(b)
ST&C 1 OP

Description: Failure to postmark or deliver a compliance report (CR) required by § 63.1575(a) no later than January 31, 2007, as specified in § 63.1575(b)(4). Additionally, the company failed to certify a CR submitted on July 29, 2005 as required by § 63.1575(c)(2). Also, the company failed to submit a certified report for the period of July 1 through September 5, 2005.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 106, SubChapter A 106.6(b)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
SC 3 PA

Description: Failure to operate the C4SHP Unit at less than a permitted total feed rate of 199,551 pounds per hour (pph) of C4 olefin (raffinate). Specifically, DR1 (pages 98-102) describes at least 296 hours, on various days from March 24 through June 3, 2006, where the feed rate exceeded the permitted rate. Records received on March 11, 2008 state the amount of each exceedance. A PBR registration (No. 79234) was issued by the Agency on July 5, 2006, allowed an increase in the feed rate to 258,839 pph.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 116, SubChapter H 116.814
5C THSC Chapter 382 382.085(b)
SC 13 PA

Description: Failure to comply with the NOx emissions standard of 0.05 lbs NOx /MMBtu during normal operations. The Platformer Reactor Heaters (EPNs 82, 83, 84) operated numerous instances in exceedance of the NOx emission rate in numerous.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 116, SubChapter B 116.115(b)
30 TAC Chapter 116, SubChapter B 116.115(c)

5C THSC Chapter 382 382.085(b)
SC1, SC2, & SC4 PA

Description: Failure to maintain compliance with the 250 ppm limit of in-stack concentration of sulfur dioxide at both tail gas incinerators (TGIs). Additionally, the company failed to demonstrate compliance with all MAERT short-term allowables (except sulfur dioxide) at times when the hourly fired duties of the incinerators were exceeded (11.4 MMBtu/hr and 15.0 MMBtu/hr for the TGI 1 and 2, respectively).

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
40 CFR Part 60, Subpart A 60.18
5C THSC Chapter 382 382.085(b)
SC 2 PA
SC 4 PA

Description: Failure to operate the CPI Flare and Fluor Flare at all times and to maintain a constant pilot flame. Additionally, the company failed to maintain in operation the system that senses the pilot flame at each of the flares as directed by the permit and 40 CFR 60.18 (f)(2).

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 113, SubChapter C 113.340
30 TAC Chapter 116, SubChapter B 116.115(c)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT Y 63.564(e)(2)
5C THSC Chapter 382 382.085(b)
GC 8 & SC 9 PA

Description: Failure to maintain a minimum operating temperature of 1495 degrees Fahrenheit at the Dock 1 and 2 Marine Emissions Control (MEC) vapor combustor (EPN MEC). Additionally, failure to demonstrate compliance with the 98 % destruction efficiency for VOC (SC 9) and the MAERT short-term allowables when the minimum temperatures are not maintained.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 106, SubChapter A 106.6(b)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
SC 2 PA

Description: Failure to comply with the fired duty rates (hourly and annual basis) for the Crude Heater (11H-1). In 2007, the fired duty rate averaged on an annual basis was 438 MMBtu/hr. The authorized rate is 411 MMBtu/hr. Additionally, the authorized short term firing rate of 475 MMBtu per hour was exceeded in the following periods as follows: 1. DR1 Crude Unit - pages 238-239; 2. DR3 - page 32.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
SC 4 PA

Description: Failure to comply with the throughput limit of 15 million barrels per year for Tank No. 5005. In 2006, the throughput for the affected storage vessel was 18.3 million barrels. The throughput exceedance was recorded on page 126 of DR1.

Self Report? NO Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 113, SubChapter C 113.780
40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.7(d)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT UUU 63.1575(c)
5C THSC Chapter 382 382.085(b)
ST & C 1 OP

Description: Failure to include SRU TGI 1 and TGI 2 excess emissions incidents in either the NSPS Summary Reports for the first quarter (1Q07) or the Periodic Report for the first half of 2007 (1H07). The March 14 and March 19, 2007, SO2 excursions at the SRU were not represented in applicable reports.

Self Report? NO Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 115, SubChapter D 115.322(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-6(a)(1)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.167(a)(1)
5C THSC Chapter 382 382.085(b)
SC 6E PA

Description: Failure to equip each open-ended valve or lines with a cap, blind flange, plug, or second valve. Specifically, it was reported in DR3 that there were a total of 129

open-ended lines or valves (OELs) discovered at 12 permitted units in a period from February 26 through August 14, 2007 (reference DR3-LDAR section - pages 83-136). The DR4 described a total of 60 OELs discovered at 11 permitted units in a period from August 28, 2007 through February 19, 2008.

Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 113, SubChapter C 113.130
30 TAC Chapter 115, SubChapter D 115.322(2)
30 TAC Chapter 116, SubChapter B 116.115(c)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-2(c)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.168(f)(1)
5C THSC Chapter 382 382.085(b)
SC 8I PA

Description: Failure to repair hydrocarbon leaks at components in a fugitive monitoring program within the time allotted by the applicable rule and permit SC. In a period from October 15, 2007 through February 19, 2008, the DR4 report stated that a total of 34 components in nine permitted units remained leaking after the repair period allotted by rule expired. Note: Affected components were subsequently repaired.

Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
ST & C No. 30 OP

Description: Failure to comply with the requirements of the Periodic Monitoring Summary (PMS) storage vessel No. 64-TK0013 and units in Title V Group ID No. GRP1STACK (EPN MEC) and No. GRP2STACK (EPNs 252 and 292).

Self Report? NO Classification: Minor
Citation: 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.354(d)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.357(d)(6)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.357(d)(7)
ST & C No. 10 OP

Description: Failure to submit a certification that all required inspections have been conducted in accordance with the requirements of Subpart FF. Additional noncompliance items were: 1. The facility could not demonstrate that daily monitoring readings were being conducted per § 61.354(d) at the Docks 1 and 2 collection sump (085-SUMP-005) carbon absorption system. 2. The quarterly reports to comply with § 61.357(d)(6) and (d)(7) for the 1Q03 and 2Q03 were submitted late.

Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT QQQ 60.692-2(e)
5C THSC Chapter 382 382.085(b)
ST & C No. 8 OP

Description: Failure to maintain a sealed cover on a downstream refinery wastewater collection box (sump). Specifically, a refinery wastewater collection tank (former API oil-water separator) was discovered on March 27, 2008, with contents open to the atmosphere due to a broken cover.

Date: 10/30/2008 (720824) CN600127922

Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
30 TAC Chapter 305, SubChapter F 305.125(17)

Description: NON-RPT VIOS FOR MONIT PER OR PIPE

Date: 12/09/2008 (709439) CN600127922

Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter F 101.211(c)
5C THSC Chapter 382 382.085(b)

Description: Failed to submit complete final records for facility startup activities no later than two weeks after the end of the activities. Specifically, complete final records for STEERS Incident No.'s 112189, 112209, 112213, 112216, 112217, 112219, and 112226, with information that had changed from prior notifications, were not submitted within two weeks after the end of the activities.

Date: 07/31/2009 (804752) CN600127922

Self Report? YES Classification: Moderate
Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 305, SubChapter F 305.125(1)

Description: Failure to meet the limit for one or more permit parameter

Date: 08/26/2009 (765357) CN600127922

Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 113, SubChapter C 113.130
30 TAC Chapter 115, SubChapter D 115.322(2)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-2(c)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-6(a)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-7(d)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.163(c)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.164(g)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.168(f)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.174(d)
40 CFR Part 60, Subpart VV 60.482-4
5C THSC Chapter 382 382.085(b)
NSR Permit No. 19044, SC No. 2.I PERMIT
NSR Permit No. 2697A, SC No. 9.I PERMIT
NSR Permit No. 2706A, SC No. 1.I PERMIT
NSR Permit No. 46640, SC No. 6.I PERMIT
NSR Permit No. 5418A, SC Nos. 8.I & 9.H PERMIT
O-01423, STC No. 1.E OP

Description: Failure to repair hydrocarbon leaks at components in a fugitive monitoring program within the time allotted by the applicable rule and permit Special Condition. Specifically, CITGO Refining and Chemicals Company, L.P. failed to conduct a first attempt at repair within 5 calendar days and/or effectively repair a component within 15 calendar days after a leak was detected for thirty-three components on nine permitted units.

Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 113, SubChapter C 113.130
30 TAC Chapter 115, SubChapter D 115.322(4)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-6(a)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.167(a)
5C THSC Chapter 382 382.085(b)
NSR Permit No. 20156, SC No. 1.E PERMIT
NSR Permit No. 2708A, SC No. 8.E PERMIT
NSR Permit No. 3123A, SC No. 7.E PERMIT
NSR Permit No. 46640, SC No. 6.E PERMIT
NSR Permit No. 5418A, SC No. 8.E PERMIT
NSR Permit No. 6722A, SC No. 10.E PERMIT
O-01423, STC No. 31 OP

Description: Failure to equip each open-ended valve or line with a cap, blind flange, plug, or second valve. Specifically, CITGO Refining and Chemical Company, L.P. discovered 35 open-ended lines or valves on seven permitted units from February 20, 2008 to February 19, 2009.

Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 113, SubChapter C 113.340
30 TAC Chapter 115, SubChapter B 115.112(b)(2)(A)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT AA 63.646(f)(1)
5C THSC Chapter 382 382.085(b)
O-01423, STC No. 1.E OP

Description: Failure to maintain a closed cover or lid on storage vessels. Specifically, CITGO Refining and Chemicals Company, L.P. did not utilize a gauge pole float from August 24, 2008 to September 10, 2008 on Tank 851-T3 and from August 19, 2008 to September 10, 2008 on Tank 851-T34.

Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.13(d)(1)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT Db 60.48b(e)
5C THSC Chapter 382 382.085(b)
O-01423, STC No. 31 OP

Permit No. 22312/PSD-TX-831, SC No. 10 PERMIT
Description: Failure to conduct calibration drift for a continuous emission monitoring system (CEMS) at least once daily. Specifically, the CEMS at Utility Boiler 61-B3E did not calibrate from 1100 hours on February 27, 2008 to 1100 hours on February 28, 2008 due to a faulty gas regulator.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 113, SubChapter C 113.120
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT AA 63.643(a)(2)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT Y 63.563(b)(4)(ii)
5C THSC Chapter 382 382.085(b)
NSR Permit No. 3857A, SC No. 8 PERMIT
O-01423, STC Nos. 20.B & 31 OP

Description: Failure to demonstrate compliance with ninety-eight percent destruction efficiency at Marine Emissions Control (MEC) vapor combustors 73-VC447, 73-VC448, and 73-VC449 by maintaining a minimum operating temperature of 1495 degrees Fahrenheit. Specifically, CITGO Refining and Chemicals Company, L.P. failed to maintain the minimum baseline temperature at the MEC vapor combustors on twenty-seven occasions, occurring from March 2, 2008 to November 7, 2008, due to various operational causes.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 113, SubChapter C 113.120
40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.119(b)(1)
5C THSC Chapter 382 382.085(b)

Description: Failure to maintain the floatation of a storage vessel's internal floating roof on the liquid surface of the stored material at all times. Specifically, the internal floating roof of Tank 854-T401 sank on September 9, 2008. Additionally, CITGO reported thirty-eight instances for Tank 82-T605 and forty-two instances for Tank 82-T608 in which the internal floating roofs for the tanks could not be verified to be floating on the liquid surface of the tanks' s stored material.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
NSR Permit No. 466640, MAERT No. 670 PERMIT
NSR Permit No. 5418A, MAERT No. 742 PERMIT
NSR Permit No. 9604A, MAERT No. 697 PERMIT
O-01423, STC No. 31 OP

Description: Failure to comply with the emission values stated in the Maximum Allowable Emission Rates Table. Specifically, CITGO Refining and Chemicals Company, L.P. exceeded the 3.63 tons per year emission rate for Tank No. 1, for calendar years 2007 and 2008. Additionally, CITGO exceeded the 3.47 tons per year rolling 12-month annual emissions rate for Tank 222. CITGO also exceeded the rolling 12-month annual emissions rate of 0.44 tons per year for Tank 1009 in May 2008, in June 2008, and in July 2008.

Date: 08/31/2009 (804753) CN600127922

Self Report? YES Classification: Moderate

Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 305, SubChapter F 305.125(1)

Description: Failure to meet the limit for one or more permit parameter

F. Environmental audits.

Notice of Intent Date: 06/24/2004 (334400)

Disclosure Date: 12/21/2004

Viol. Classification: Major

Citation: 30 TAC Chapter 101, SubChapter F 101.201(g)

Description: Failure to report emission events.

Notice of Intent Date: 06/02/2005 (403329)

Disclosure Date: 12/01/2005

Viol. Classification: Moderate

Citation: 30 TAC Chapter 115, SubChapter D 115.326(2)

40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-2

40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.181(c)

Description: Failed to control 63 open-ended lines by cap, plug, blind, or double block valves.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 115, SubChapter D 115.326(2)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-2
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.181(c)

Description: Failure to maintain records of weekly visual inspections documenting inspection of non-leaking pumps.

Viol. Classification: Minor

Citation: 30 TAC Chapter 115, SubChapter D 115.326(2)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT R 60.181(d)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.486(c)

Description: Failure to properly complete DOR forms.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 115, SubChapter D 115.326
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.487
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.182

Description: Failure to submit monitoring reports on time and Reports did not contain all information required by the regulations.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 115, SubChapter D 115.322
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-1
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-7
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.162
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.168

Description: Failure to tag components in the ADP and BTX units.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.487(b)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.182(d)

Description: The 5 to 15 day report submitted in July 2005 generated by the fugitive software had inaccurate or not probable dates that reported excessive deviations.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)(2)(H)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.487(c)(2)(v)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.182(d)(2)(v)

Description: Failure to identify compressor leaks in semi-annual report for 2004 MACT or HON units.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)(2)(H)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.487(c)(3)

Description: Failure to include complete downtime information in several MACT reports for the East Plant.

Viol. Classification: Minor

Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)(2)(H)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.487(c)(2)(vii)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.182(d)(2)(xiii)

Description: Failure to include reason for delay of repair on the 2004 HON and MACT semiannual reports.

Notice of Intent Date: 08/08/2007 (639331)

No DOV Associated

G. Type of environmental management systems (EMSs).

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