



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

SEP 30 2011

REPLY TO THE ATTENTION OF

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Claude Harmon  
Manager HSS&E  
CITGO Petroleum Corporation  
135<sup>th</sup> Street & New Avenue  
Lemont, Illinois 60439

Dear Mr. Harmon:

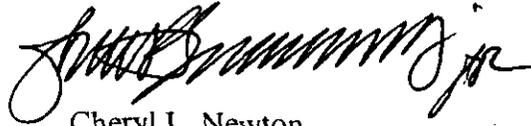
The U.S. Environmental Protection Agency is issuing the enclosed Notice of Violation and Finding of Violation (NOV/FOV) to CITGO Petroleum Corporation's Lemont refinery at 135<sup>th</sup> Street & New Avenue, Lemont, Illinois (CITGO or refinery), under Section 113(a)(1) of the Clean Air Act (the Act), 42 U.S.C. § 7413(a)(1). We find that you are violating Prevention of Significant Deterioration regulations, non-attainment New Source Review requirements, the New Source Performance Standards for Petroleum Refineries, the National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks, Operating Permit requirements under Title V of the Act, the Illinois State Implementation Plan, and the Consent Decree entered January 26, 2005, at your refinery located in Lemont, Illinois.

Section 113 of the Act gives us several enforcement options to resolve these violations, including issuing an administrative compliance order, issuing an administrative penalty order, bringing a judicial civil action, and bringing a judicial criminal action.

We are offering you the opportunity to request a conference with us to discuss the violations identified in this NOV/FOV. A conference should be requested within 10 days following receipt of this notice. This conference will provide you a chance to present information on the identified violations, any efforts you have taken to comply, and the steps you will take to prevent future violations. Please plan for the refinery's technical and management personnel to take part in these discussions. You may have an attorney represent and accompany you at this conference.

The EPA contact in this matter is Mark Ackerman. You may call him at (312) 353-4145 to request a conference. EPA hopes that this notice will encourage CITGO's compliance with the requirements of the Act.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Cheryl L. Newton". The signature is fluid and cursive, with a large initial "C" and "N".

Cheryl L. Newton  
Director  
Air and Radiation Division

cc: Ray Pilapil, Manager  
Compliance and Enforcement Section  
Illinois Environmental Protection Agency

Enclosure

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5**

<b>IN THE MATTER OF:</b>	)	
	)	
<b>CITGO Petroleum Corporation</b>	)	<b>NOTICE OF VIOLATION and</b>
<b>Lemont, Illinois</b>	)	<b>FINDING OF VIOLATION</b>
	)	
	)	<b>EPA-5-11-IL-10</b>
Proceedings Pursuant to	)	
the Clean Air Act	)	
42 U.S.C. § 7401 et seq	)	

**NOTICE AND FINDING OF VIOLATION**

CITGO Petroleum Corporation (you or CITGO) owns and operates a petroleum refinery at 135<sup>th</sup> Street & New Avenue, Lemont, Illinois (CITGO or refinery). The refinery consists of a number of pieces of equipment that generate air pollution and are subject to provisions of the Clean Air Act. This includes a fluidized catalytic cracking unit, sulfur recovery plant, heaters, process tanks and other related equipment.

The U.S. Environmental Protection Agency (EPA) is sending this Notice of Violation and Finding of Violation (NOV/FOV or Notice) to notify you of several items. We find that you constructed major modifications causing significant net emissions increases in carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM), PM less than 10 microns (PM<sub>10</sub>), PM less than 2.5 microns (PM<sub>2.5</sub>), and sulfuric acid mist at a major stationary source in an area that was designated as nonattainment for PM<sub>2.5</sub>, and attainment or unclassifiable for CO, NO<sub>x</sub>, PM, PM<sub>10</sub> and sulfuric acid mist at the time of the modifications, without first obtaining a construction permit meeting the non-attainment New Source Review requirements in the Illinois State Implementation Plan, 40 C.F.R. Part 51, Appendix S, and the Prevention of Significant Deterioration requirements. We find that you failed to properly operate emissions units in accordance with various provisions in the New Source Performance Standards. We find that you exceeded carbon monoxide emission limits in your Title V operating permit. We find that you failed to control the purged liquid from your benzene sampling process in accordance with the National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.

Section 113 of the Act provides you with the opportunity to request a conference with us to discuss the violations alleged in the NOV/FOV. This conference will provide you a chance to present information on the identified violations, any efforts you have taken to comply, and the steps you will take to prevent future violations. Please plan for the facility's technical and management personnel to take part in these discussions. You may have an attorney represent and accompany you at this conference.

## **I. Statutory and Regulatory Background**

1. The Clean Air Act (the Act) is designed to protect and enhance the quality of the nation's air so as to promote the public health and welfare and the productive capacity of its population. Section 101(b)(1) of the Act, 42 U.S.C. § 7401(b)(1).

### **A. The National Ambient Air Quality Standards**

2. Section 108(a) of the Act, 42 U.S.C. § 7408(a), requires the Administrator of EPA to identify and prepare air quality criteria for each air pollutant, emissions of which may endanger public health or welfare, and the presence of which results from numerous or diverse mobile or stationary sources. For each such "criteria" pollutant, Section 109 of the Act, 42 U.S.C. § 7409, requires EPA to promulgate national ambient air quality standards (NAAQS) requisite to protect the public health and welfare.
3. Pursuant to Sections 108 and 109 of the Act, 42 U.S.C. §§ 7408 and 7409, EPA has identified CO, NO<sub>x</sub>, PM, PM<sub>10</sub>, and PM<sub>2.5</sub>, among others, as criteria pollutants, and has promulgated NAAQS for these pollutants. 40 C.F.R. §§ 50.6, 50.7, 50.8, 50.9, 50.10, and 50.11.
4. Under Section 107(d) of the Act, 42 U.S.C. § 7407(d), each state is required to designate those areas within its boundaries where the air quality is better or worse than the NAAQS for each criteria pollutant, or where the air quality cannot be classified due to insufficient data. An area that meets the NAAQS for a particular pollutant is termed an "attainment" area with respect to such pollutant. An area that does not meet the NAAQS for a particular pollutant is termed a "nonattainment" area with respect to such pollutant.
5. An area that cannot be classified as either "attainment" or "nonattainment" with respect to a particular pollutant due to insufficient data is termed "unclassifiable" with respect to such pollutant.
6. At all times relevant to this Notice, Lemont, Illinois, located in Will County, the area in which CITGO is located, has been classified as nonattainment for PM<sub>2.5</sub> (*see*, 70 Fed. Reg. 944 (January 5, 2005), 74 Fed. Reg. 58688 (November 13, 2009), 74 Fed. Reg. 62243 (November 27, 2009)); and has been classified as attainment or unclassifiable for CO, NO<sub>x</sub>, PM and PM<sub>10</sub>.

### **B. The Prevention of Significant Deterioration Program**

7. Part C of Title I of the Act, 42 U.S.C. §§ 7470-7492, sets forth requirements for the prevention of significant deterioration of air quality in those areas designated as either attainment or unclassifiable for purposes of meeting the NAAQS standards. These requirements are designed to protect public health and welfare, to assure that economic growth will occur in a manner consistent with the preservation of existing clean air resources, and to assure that any decision to permit increased air pollution is made only after careful evaluation of all the consequences of such a decision and after public participation in the decision making process. 42 U.S.C. § 7470. These provisions are referred to herein as the "PSD program."

8. Section 165(a) of the Act, 42 U.S.C. § 7475(a), prohibits, among other things, a “major emitting facility” from constructing a “major modification” in any area which is attaining the NAAQS, unless it has obtained a pre-construction permit issued under the PSD regulations that applies “Best Available Control Technology” (BACT) to control emissions from the proposed modified emissions unit, and has conducted an analysis to determine the air quality impacts of the modification. *See also*, 40 C.F.R. § 52.21(a)(2)(iii).
9. Section 169(1) of the Act, 42 U.S.C. § 7479(1), designates petroleum refineries which emit or have the potential to emit 100 tons per year (tpy) or more of any pollutant to be a “major emitting facility.” *See also* 40 C.F.R. § 52.21(b)(1)(i)(a).
10. Section 169(2)(C) of the Act, 42 U.S.C. § 7479(2)(C), defines “construction” to include “modification” (as defined in Section 111(a) of the Act). “Modification” is defined in Section 111(a) of the Act, 42 U.S.C. § 7411(a), to be “any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.” *See also* 40 C.F.R. § 52.21(b)(1)(i)(a).
11. Sections 110(a) and 161 of the Act, 42 U.S.C. §§ 7410(a) and 7471, require each state to adopt a SIP that contains emission limitations and such other measures as may be necessary to prevent significant deterioration of air quality in areas designated as attainment or unclassifiable. The Administrator promulgated regulations at 40 C.F.R. § 51.166 setting forth state implementation plan (SIP) approval requirements for the prevention of significant deterioration of air quality.
12. A state may comply with Sections 110(a) and 161 of the Act, 42 U.S.C. §§ 7410(a) and 7471, by having its own PSD regulations, which must be at least as stringent as those set forth at 40 C.F.R. § 51.166, approved by EPA as part of its SIP. If a state does not have a PSD program that has been approved by EPA and incorporated into its SIP, the federal PSD regulations set forth at 40 C.F.R. § 52.21 may be incorporated by reference into the SIP. 40 C.F.R. § 52.21(a).
13. On August 7, 1980, EPA disapproved Illinois’ proposed PSD program and then incorporated by reference the PSD regulations of 40 C.F.R. § 52.21, except paragraph 40 C.F.R. § 52.21(a)(1), into the Illinois SIP. 40 C.F.R. § 52.738 (45 Fed. Reg. 52676, 52741). On January 29, 1981, EPA delegated to the Illinois Environmental Protection Agency (IEPA) the full authority to implement and enforce the federal PSD program. 46 Fed. Reg. 9584. On December 31, 2002, EPA published revisions to the PSD and non-attainment new source review (NSR) regulations in 40 C.F.R. Parts 51 and 52. 67 Fed. Reg. 80186. These revisions are referred to as “NSR Reform.” On December 24, 2003, EPA issued a final rule incorporating the newly promulgated PSD provisions of NSR Reform into the Illinois SIP. 68 Fed. Reg. 74489. The NSR Reform provisions at 40 C.F.R. § 52.21 were incorporated into and were part of the Illinois SIP at the time of the major modifications alleged in this Notice.

14. The PSD regulations set forth in 40 C.F.R. § 52.21 apply to any “major stationary source” that intends to construct a “major modification” in an attainment or unclassifiable area. 40 C.F.R. § 52.21(i)(2).
15. 40 C.F.R. § 52.21(b)(1)(i)(a) defines “major stationary source” as any stationary source which emits, or has the potential to emit, 100 tons per year or more of any air pollutant subject to regulation under the Act if the stationary source belongs to one of the listed source categories. Petroleum Refining is a listed source category.
16. 40 C.F.R. § 52.21(b)(2)(i) defines “major modification” as any physical change or change in the method of operation of a major stationary source that would result in a significant net emission increase of any pollutant subject to regulation under the Act.
17. 40 C.F.R. § 52.21(b)(3)(i) defines “net emissions increase” as the amount by which the sum of the following exceeds zero: (a) the increase in emissions from a particular physical change or change in the method of operation at a stationary source as calculated pursuant to paragraph (a)(2)(iv) of this section; and (b) any other increases and decreases in actual emissions at the major stationary source that are contemporaneous with the particular change and are otherwise creditable.
18. Under the PSD regulations, a “significant” net emissions increase means an increase in the rate of emissions that would equal or exceed any of the following rates for the following pollutants: 100 tpy of CO, 40 tpy of NO<sub>x</sub>, 25 tpy of PM, 15 tpy of PM<sub>10</sub>, and 7 tpy of sulfuric acid mist. 40 C.F.R. § 52.21(b)(23)(i).
19. The PSD regulations define “actual emissions” as the average rate, in tpy, at which the unit “actually emitted the pollutant during a two-year period which precedes the particular date” and which is representative of normal operation. 40 C.F.R. § 52.21(b)(21)(i)-(ii). In addition, for any emissions unit that “has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.” 40 C.F.R. § 52.21(b)(21)(iv).
20. 40 C.F.R. § 52.21(a)(2)(iv) provides that the requirements of the PSD program will be applied in accordance with the principles set out in paragraphs (a)(2)(iv)(a) through (f).
21. 40 C.F.R. § 52.21(a)(2)(iv)(b) provides that the procedure for calculating (before beginning actual construction) whether a significant emissions increase will occur depends upon the type of emissions units being modified, according to paragraphs (a)(2)(iv)(c) through (f) of this section. Emission units can be either existing or new. 67 Fed. Reg. 80186, at 80198.
22. 40 C.F.R. § 52.21(a)(2)(iv)(c) requires an actual-to-projected-actual applicability test for projects that only involve existing emissions units.
23. 40 C.F.R. § 52.21(a)(2)(iv)(d) requires an actual-to-potential test for projects that only involve construction of a new emissions unit(s).

24. 40 C.F.R § 52.21(a)(2)(iv)(f) requires a hybrid test for projects that involve existing and new emissions units.
25. Under 40 C.F.R § 52.21(a)(2)(iv)(f), using the hybrid test, a significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the emissions increases for each emissions unit, using the method specified in paragraphs (a)(2)(iv)(c) through (d) of this section as applicable with respect to each emissions unit, for each type of emissions unit equals or exceeds the significant amount for that pollutant.
26. 40 C.F.R § 52.21(a)(2)(iii) prohibits the actual construction of a major stationary source or modification without a permit which states that the major stationary source or modification will meet the requirements of 40 C.F.R. § 52.21(j) through (r).
27. Under the PSD regulations, “construction” means “any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit)” that “would result in a change in emissions.” 40 C.F.R. § 52.21(b)(8); *see also* 42 U.S.C. § 7479(2)(C) (“construction” includes the “modification” (as defined in Section 111(a) of the Act, 42 U.S.C. § 7411(a)) of any source or facility).
28. A major stationary source subject to the requirements of paragraphs (j) through (r) must, among other things, perform an analysis of source impacts, perform air quality modeling and analysis, apply BACT, and allow for meaningful public participation in the process. 40 C.F.R. § 52.21(j)-(r).
29. 40 C.F.R. § 52.21(b)(12) defines BACT as an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.
30. No major stationary source to which the requirements of paragraphs (j) through (r) of 40 C.F.R. § 52.21 apply shall begin actual construction of a major modification without a permit that states that the stationary source or modification will meet those requirements (a PSD permit). 40 C.F.R. § 52.21(i)(1).
31. Any owner or operator of a source or modification subject to 40 C.F.R. § 52.21 who constructs or operates a source not in accordance with a PSD application or commences construction without applying for and receiving approval thereunder shall be subject to an enforcement action. 40 C.F.R. § 52.21(r)(1).
32. 40 C.F.R. § 52.23 states, among other things, that failure to comply with any provision of 40 C.F.R. Part 52, or with any approved regulatory provision of a SIP, shall render the person or governmental entity so failing to comply in violation of a requirement of an

applicable implementation plan and subject to enforcement action under Section 113 of the Act.

### **C. The NonAttainment New Source Review Program**

33. Part D of Title I of the Act, 42 U.S.C. §§ 7501-7515, sets forth provisions for New Source Review (NSR) requirements for areas designated as being in nonattainment with the NAAQS standards. These provisions are referred to herein as the “Nonattainment NSR” program. The Nonattainment NSR program is intended to reduce emissions of air pollutants in areas that have not attained NAAQS so that the areas make progress towards meeting the NAAQS.
34. Section 173(a) of the Act, 42 U.S.C. 7503(a), provides, among other things, that construction and operating permits may be issued if, among other things, sufficient offsetting emission reductions have been obtained to reduce existing emissions to the point where reasonable further progress towards meeting the national ambient air quality standards is maintained, and the pollution controls to be employed will reduce emissions to the “lowest achievable emission rate” (LAER).
35. Pursuant to Sections 110 and 172(c)(5) of the Act, 42 U.S.C. §§ 7410 and 7502(c)(5), each state is required to adopt Nonattainment NSR SIP rules that include provisions to require permits that conform to the requirements of Section 173 of the Act, 42 U.S.C. § 7503, for the construction and operation of modified major stationary sources within nonattainment areas. Section 173 of the Act, in turn, sets forth a series of minimum requirements for the issuance of permits for major modifications to major stationary sources within nonattainment areas. EPA promulgated regulations at 40 C.F.R. § 51.165 to implement Nonattainment NSR permit program requirements under Sections 172(c)(5) and 173 of the Act. 51 Fed. Reg. 40669 (November 7, 1986), and subsequent amendments.

### **Illinois New Source Review**

36. On December 17, 1992, EPA approved the Illinois non-attainment NSR SIP rules, 35 Illinois Administrative Code (IAC) Part 203. 57 Fed. Reg. 59928. Illinois submitted and EPA approved revisions to this rule on September 27, 1995 (60 Fed. Reg. 49780) and May 13, 2003 (68 Fed. Reg. 25504).
37. 35 IAC § 203.207(a) defines “major modification” as a physical change, or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant for which the area is designated a nonattainment area.
38. 35 IAC § 203.203 provides that a construction permit is required prior to actual construction of a major new source or major modification, and that the application for the permit must meet the requirements of Part 203, including Subpart C, “Requirements for Major Stationary Sources in Nonattainment Areas”

39. 35 IAC Part 203, Subpart C, at § 203.301(a), defines “lowest achievable emission rate” as, in pertinent part, “the most stringent emission limitation which is achieved in practice by such a class or category of stationary source.”
40. 35 IAC Part 203, Subpart C, at § 203.302(a), provides that the owner or operator of a new major source or major modification shall provide emission offsets equal to or greater than the allowable emissions from the source, or the net increase in emissions from the modification, sufficient to allow the Agency to determine that the source or modification will not interfere with reasonable further progress.
41. 35 IAC § 203.103 defines “actual construction” as initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying of underground pipework, and erection of permanent storage structures.
42. 35 IAC § 203.201 states that in any nonattainment area, no person shall cause or allow the construction of a new major stationary source or major modification that is major for the pollutant for which the area is designated a nonattainment area, except as in compliance with 35 IAC Part 203 for that pollutant.

#### **40 C.F.R. Part 51, Appendix S**

43. On May 16, 2008, EPA promulgated regulations implementing the NSR Program for Particulate Matter Less Than 2.5 Micrometers. 73 Fed. Reg. 28321. The preamble to the final rule provides that because the PM<sub>2.5</sub> nonattainment designations became effective on April 5, 2005 (*see* 70 Fed. Reg. 944 (January 5, 2005)), states were required to issue major Nonattainment NSR permits that address the requirements of Section 173 of the Act as required for PM<sub>2.5</sub> as of the effective date of these regulations, July 15, 2008. The preamble also provides that after July 15, 2008, states are not permitted to implement a Nonattainment NSR program for PM<sub>2.5</sub> using PM<sub>10</sub> as a surrogate for the PM<sub>2.5</sub> Nonattainment NSR requirements. Further, until EPA approves changes to a state’s SIP-approved Nonattainment NSR program to reflect the new requirements under 40 C.F.R. § 51.165, states are to implement a transitional PM<sub>2.5</sub> Nonattainment NSR program under 40 C.F.R. Part 51, Appendix S (as amended by the May 16, 2008 rulemaking). 73 Fed. Reg. at 28342. On January 21, 2011, the IEPA submitted to EPA a “Planned Revision to Illinois’ New Source Review Rules to Address PM<sub>2.5</sub>.” As of the date of this Notice, EPA has not published in the Federal Register any notice pertaining to EPA’s review or approval of IEPA’s planned revisions to its Nonattainment NSR program to address PM<sub>2.5</sub>.
44. 40 C.F.R. § 52.24(k) provides that for an area designated as nonattainment after July 1, 1979, the Emission Offset Interpretative Ruling, 40 CFR Part 51, Appendix S (Appendix S) shall govern permits to construct and operate applied for during the period between the date of designation as nonattainment and the date the NSR permit program meeting the requirements of Part D is approved.

45. On March 8, 2007, EPA finalized revisions to Appendix S to conform the nonattainment permitting rules that apply during the SIP development period following nonattainment designations. The revisions to Appendix S conform the permitting rules to, among other things, the NSR reform provisions. 72 Fed. Reg. 10367.
46. Appendix S at II.A.3 defines “potential to emit” as the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is federally enforceable.
47. Appendix S at II.A.4(i)(b)(1) defines “major stationary source” as any stationary source which emits, or has the potential to emit, 100 tons per year or more of any pollutant subject to regulation under the Act.
48. Appendix S at II.A.5(i) defines “major modification” as any physical change in or change in the method of operation of a major stationary source that would result in: (a) a significant emissions increase of a regulated NSR pollutant and (b) a significant net emissions increase of that pollutant from the major stationary source.
49. Appendix S at II.A.6(i) defines “net emissions increase,” with respect to any regulated NSR pollutant emitted by a major stationary source, as the amount by which the sum of the following exceeds zero: (a) the increase in emissions from a particular physical change or change in the method of operation at a stationary source as calculated pursuant to paragraph IV.J of Appendix S; and (b) any other increases and decreases in actual emissions at the major stationary source that are contemporaneous with the particular change and are otherwise creditable.
50. Appendix S at II.A.10(i) defines “significant” as, in reference to a net emissions increase or the potential of a source to emit the following pollutant, a rate of emissions that would equal or exceed the following rate:  
PM<sub>2.5</sub>: 10 tpy of direct PM<sub>2.5</sub> emissions; 40 tpy of sulfur dioxide emissions.
51. Appendix S at IV.I.1 requires that to determine whether a project constitutes a major modification, the reviewing authority shall apply the principles set out in paragraphs IV.I.1(i) through (v).
52. Appendix S at IV.I.1(ii) provides that the procedure for calculating (before beginning actual construction) whether a significant emissions increase (i.e., the first step of the process) will occur depends upon the type of emissions units being modified, according to paragraphs IV.I.1(iii) through (v).
53. Appendix S at II.A.7 defines “emissions unit” as any part of a stationary source that emits or would have the potential to emit any regulated NSR pollutant. There are two types of emissions units: (a) a new emissions unit is any emissions unit which is (or will be)

newly constructed and which has existed for less than 2 years from the date such emissions unit first operated; (b) an existing emissions unit is any emissions unit that does not meet the definition of a new emissions unit.

54. Appendix S at IV.I.1(iii) requires an actual-to-projected-actual applicability test for projects that only involve existing emissions units.
55. Appendix S at IV.I.1(iv) requires an actual-to-potential test for projects that only involve construction of a new emissions unit(s).
56. Appendix S at IV.I.1(v) requires a hybrid test for projects that involve existing and new emissions units.
57. Under Appendix S at IV.I.1(v), using the hybrid test, a significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the emissions increases for each emissions unit, using the method specified in paragraphs IV.I.1(iii) through (iv) of Appendix S as applicable with respect to each emissions unit, for each type of emissions unit equals or exceeds the significant amount for that pollutant (as defined in paragraph II.A.10 of Appendix S).
58. Appendix S at IV.A specifies that if the reviewing authority finds that the major stationary source or major modification would be constructed in an area designated in 40 CFR 81.300 *et seq.* as nonattainment for a pollutant for which the stationary source or modification is major, approval may be granted only if the following conditions are met:

*Condition 1.* The new source is required to meet an emission limitation which specifies the LAER for each emission unit.

*Condition 2.* The applicant must certify that all existing major sources owned or operated by the applicant (or any entity controlling, controlled by, or under common control with the applicant) in the same State as the proposed source are in compliance with all applicable emission limitations and standards under the Act (or are in compliance with an expeditious schedule which is Federally enforceable or contained in a court decree).

*Condition 3.* Emission reductions (offsets) from existing sources in the area of the proposed source (whether or not under the same ownership) are required such that there will be reasonable progress toward attainment of the applicable NAAQS.

*Condition 4.* The emission offsets will provide a positive net air quality benefit in the affected area.

59. Appendix S at II.A.18 defines “lowest achievable emission rate” as, for any source, the more stringent rate of emissions based on the following: (i) the most stringent emissions limitation which is contained in the implementation plan of any State for such class or category of stationary source, unless the owner or operator of the proposed stationary source demonstrates that such limitations are not achievable; or (ii) the most stringent

emissions limitation which is achieved in practice by such class or category of stationary source. This limitation, when applied to a modification, means the lowest achievable emissions rate for the new or modified emissions units within the stationary source. In no event shall the application of this term permit a proposed new or modified stationary source to emit any pollutant in excess of the amount allowable under applicable new source standards of performance.

60. Appendix S at IV.D requires that the owner or operator of a new or modified major stationary source may comply with any offset requirement in effect under Appendix S for increased emissions of any air pollutant only by obtaining emissions reductions of such air pollutant from the same source or other sources in the same nonattainment area.

## **D. New Source Performance Standards**

### **General Provisions**

61. EPA promulgated the General Provisions of the New Source Performance Standards on December 23, 1971. *See* 36 Fed. Reg. 24877. The General Provisions are codified at 40 C.F.R. § 60.1 *et seq.*
62. 40 C.F.R. 60.11(d) states: “At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.”
63. 40 C.F.R. § 60.13 provides that “[a]ll continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section . . . .” Subsection 60.13(e) provides that “except for system breakdowns, repairs, calibration checks, and zero and span adjustments . . . all continuous monitoring systems shall be in continuous operation . . . .” The requirements of 40 C.F.R. § 60.13 apply to, among other subparts, the continuous monitoring system requirements set forth in 40 C.F.R. Part 40, Subpart J.

### **Subpart J: Petroleum Refineries**

64. EPA promulgated New Source Performance Standards for Petroleum Refineries (NSPS Subpart J) on March 15, 1978. *See* 43 Fed. Reg. 10868. NSPS Subpart J is codified at 40 C.F.R. §§ 60.100 – 60.109.
65. 40 C.F.R. § 60.101(g) provides that “[f]uel gas combustion device means any equipment, such as process heaters, boilers and flares used to combust fuel gas . . . .”
66. 40 C.F.R. § 60.102(a)(1) provides that no owner or operator of any fluid catalytic cracking unit (FCCU) catalyst regenerator subject to the requirements of this subpart shall discharge from the FCCU catalyst regenerator “particulate matter in excess of 1.0 kg/Mg (2.0 lb/ton) of coke burn-off in the catalyst regenerator.”
67. 40 C.F.R. § 60.105(a)(1) and (4) requires that “continuous monitoring systems shall be installed, calibrated, maintained, and operated by the owner or operator subject to the

provisions of this subpart as follows . . . an instrument for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in fuel gases before being burned in any fuel gas combustion device.”

68. 40 C.F.R. § 60.105(a)(1) and (5) requires that “continuous monitoring systems shall be installed, calibrated, maintained, and operated by the owner or operator subject to the provisions of this subpart as follows . . . [f]or Claus sulfur recovery plants with oxidation control systems or reduction control systems followed by incineration subject to § 60.104(a)(2)(i), an instrument for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of SO<sub>2</sub> emissions into the atmosphere.”

**E. National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks**

69. EPA promulgated National Emission Standards for Organic Hazardous Air Pollutants (HON) for Equipment Leaks on April 22, 1994. *See* 59 Fed. Reg. 19568. The HON for equipment leaks is codified at 40 C.F.R. Part 63, Subpart H, § 63.160 *et seq.*
70. 40 C.F.R. § 63.166(b) requires that each sampling connection system be equipped with a closed-purge, closed-loop, or closed-vent system to collect and recycle purged liquid back into a process, capture and transport it to a control device, or collect, store, and transfer it to a waste management unit, a treatment, storage or disposal facility, or a facility that manages municipal or industrial solid waste.

**F. Title V Requirements**

71. Section 502(a) of the CAA, 42 U.S.C. § 7661a(a), provides that no source may operate without a Title V permit after the effective date of any permit program approved or promulgated under Title V of the Act. EPA first promulgated regulations governing state operating permit programs on July 21, 1992. *See* 57 Fed. Reg. 32295; 40 C.F.R. Part 70.
72. EPA promulgated interim approval of the Illinois Title V program on March 7, 1995. *See* 60 Fed. Reg. 12478. EPA promulgated full approval of the Illinois Title V program on November 30, 2001. *See* 40 C.F.R. Part 70, Appendix A. Illinois’ Title V program became effective on this date. *See* 66 Fed. Reg. 62946.
73. The Illinois regulations governing the Title V permitting program are codified at 415 Illinois Compiled Statutes (ILCS) 5/39.5, and are federally enforceable pursuant to Section 113(a)(3).
74. Section 503 of the CAA, 42 U.S.C. § 7661b, sets forth the requirement to submit a timely, accurate, and complete application for a permit, including information required to be submitted with the application.
75. Section 504(a) of the CAA, 42 U.S.C. § 7661c(a), requires that each Title V permit include enforceable emission limitations and standards, a schedule of compliance, and other conditions necessary to assure compliance with applicable requirements, including those contained in a SIP.

76. 40 C.F.R. § 70.1(b) provides that: “All sources subject to these regulations shall have a permit to operate that assures compliance by the source with all applicable requirements.” *See also* 415 ILCS 5/39.5.7.a.
77. 40 C.F.R § 70.2 defines “applicable requirement” to include “(1) Any standard or other requirement provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking under title I of the Act that implements the relevant requirements of the Act, including revisions to that plan promulgated in part 52 of this chapter . . .” *See also* 415 ILCS 5/39.5.1.
78. 40 C.F.R. § 70.7(b) provides that no source subject to 40 C.F.R. Part 70 requirements may operate without a Title V permit as specified in the Act. *See also* 415 ILCS 5/39.5.6.b
79. 40 C.F.R. § 70.5(a) and (c) require timely and complete permit applications for Title V permits with required information that must be submitted and 40 C.F.R. § 70.6 specifies required permit content. *See also* 415 ILCS 5/39.5.5, 39.5.6, and 39.5.7.
80. 40 C.F.R. § 70.5(b) provides that: “Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit.” *See also* 415 ILCS 39.5.5.i.

## **II. Consent Decree and Permitting Background**

### **A. Consent Decree Requirements**

81. On October 6, 2004, CITGO, EPA and the states of Illinois, Louisiana, Georgia and New Jersey, entered into a Consent Decree (CD), Civil Action Number H-04-3883 in the Southern District of Texas, to resolve alleged violations of the Act.

#### **Fluidized Catalytic Cracking Unit (FCCU)**

82. Paragraph 44 of the CD provides that “CITGO will install and commence operation of a WGS [wet gas scrubber] designed to achieve an emission limit of 0.5 pounds of PM per 1000 pounds of coke burn (lb/klb coke burn) on a 3-hour average basis . . .” by no later than December 31, 2007, for the Lemont refinery FCCU.
83. Paragraph 46 of the CD provides that in accordance with NSPS regulations at 40 CFR, Part 60, Subpart J, “CITGO shall comply with an emission limit of 1.0 pounds of PM per 1000 pounds of coke burned on a 3-hour average basis . . .” by no later than December 31, 2007. *See* 40 C.F.R. § 60.102(a)(1).

84. Paragraph 51 of the CD provides that the Lemont refinery FCCU regenerator shall be an “affected facility,” as that term is used in 40 C.F.R. Part 60, Subparts A and J, and comply with the requirements of NSPS Subparts A and J for PM by December 31, 2007.

### **Heaters and Boilers**

85. Paragraph 64 a. of the CD provides that “Upon the Date of Entry, each heater and boiler that combusts refinery fuel gas at the Covered Refineries shall be an affected facility, as that term is used in 40 C.F.R. Part 60, Subparts A and J, and shall be subject to, and comply with the requirements of NSPS Subparts A and J for fuel gas combustion devices, except for those heaters and boilers listed in Appendix E, each of which shall be an affected facility and shall be subject to and comply with the requirements of NSPS Subparts A and J for fuel gas combustion devices by the dates listed in Appendix E.”
86. Appendix E of the CD states that the NSPS applicability and compliance date for Units 114, 115, 116 and 125 at the refinery is July 2005.

### **Sulfur Recovery Plant (SRP) and Tailgas Units (TGUs)**

87. Paragraph 67 b. of the CD provides that “[e]ffective no later than 90 days after installation of one or more TGU(s) to control the emissions from the Lemont Claus trains 119 A and B, as required under Paragraph 69, the SRP [sulfur recovery plant] at the Lemont Refinery shall be an “affected facility” under NSPS, 40 C.F.R. Part 60, Subparts A and J.”
88. Paragraph 67 c. of the CD provides that “[n]otwithstanding Paragraph 67(b), above, effective on the Date of Entry of the Consent Decree until such time as the SRP at the Lemont Refinery is an “affected facility,” the Lemont Claus Trains 121 C and D (‘Lemont Claus Trains’) shall be treated under this Consent Decree as an SRP that is an ‘affected facility’ that must comply with all provisions applicable to such an affected facility under 40 C.F.R. Part 60, Subparts A and J.”
89. Paragraph 69 a. of the CD provides that “CITGO shall install one or more TGU(s) to control the emissions from the Lemont Claus Trains 119A and B by no later than December 31, 2008. . . . that will ensure compliance with SRP NSPS requirements by no later than December 31, 2008.”
90. Paragraph 68 b. of the CD provides that “CITGO shall monitor all emission points (stacks) to the atmosphere for tail gas emissions and shall monitor and report emissions from each of these SRPs as required by 40 C.F.R. §§ 60.7(c), 60.13, and 60.105(a)(5), (6), or (7). During the life of this Consent Decree, CITGO shall conduct emissions monitoring from these SRPs with CEMS at all of the emission points, unless an SO<sub>2</sub> alternative monitoring procedure has been approved by EPA, per 40 C.F.R. § 60.13(i), for any of the emission points.”
91. Paragraph 71 of the CD provides that “CITGO shall continue to route or re-route all sulfur pit emissions at the Lemont . . . refinery so that they are eliminated, controlled, or included and monitored as part of the SRP’s emissions subject to the NSPS Subpart J

limit for SO<sub>2</sub>, 40 C.F.R. § 60.104(a)(2), by no later than the earlier of (i) the first turnaround of the applicable Claus train that occurs on or after October 31, 2004; or (ii) March 30, 2007, provided, however, that if the Lemont Claus Trains 119A and/or 119B elect to route such emissions to the TGU required under Paragraph 69.a, then by the date of such TGU installation.”

### **Netting Credit Requirements**

92. Paragraph 136 of the CD prohibits the generation or use of any emission reductions as netting reductions or emissions offsets in any PSD, major non-attainment or synthetic minor NSR permit, except as provided in Paragraph 137 of the CD.
93. Paragraph 137 of the CD provides that “[n]otwithstanding the general prohibition set forth at Paragraph 136, CITGO may use up to 300 tpy of NO<sub>x</sub>, 300 tpy of SO<sub>2</sub> and 20 tpy of PM from the CD Emission Reductions as credits or offsets in any PSD, major nonattainment and/or synthetic minor NSR permit or permit proceeding occurring after the Date of Lodging of the Consent Decree, provided that the new or modified emissions unit: (1) is being constructed or modified for purposes of compliance with Tier 2 gasoline or low sulfur diesel requirements; and (2) has a federally-enforceable, non-Title V Permit, with the following limits, as applicable: . . . (i) For heaters and boilers, a limit of 0.020 lbs NO<sub>x</sub> per million Btu or less on a 3-hour rolling average basis . . .”

### **B. Construction and Title V Permits**

#### **Construction Permit Number 01030085**

94. IEPA issued Construction Permit Number 01030085 to CITGO on August 21, 2002.
95. IEPA issued Construction Permit Number 01030085 to CITGO for the purposes of modifying and/or constructing the necessary units to allow it to produce lower sulfur gasoline by 2004, as required by the U.S. EPA Tier 2 sulfur gasoline requirements.
96. Permit Condition Number 1.1.6.e requires emission rates from the SRP not to exceed 57.33 tons CO per month and 573.32 tons CO per year.
97. Permit Condition Number 1.1.6.f requires that compliance with the emission limits in 1.1.6.e, shall be determined using a 12-month rolling average on a monthly basis.

#### **Title V Permit Number 96030079**

98. IEPA issued Title V Permit Number 96030079 to CITGO on January 9, 2006.
99. Permit Condition Number 7.5.6.a requires emission rates from the SRP not to exceed 57.33 tons CO per month and 573.32 tons CO per year.
100. Permit Condition Number 7.5.6.b requires that compliance with the emission limits in 7.5.6.a, shall be determined using a 12-month rolling average on a monthly basis.

101. Permit Condition Number 7.5.6.c states that the emissions in 7.5.6.a “were established in Permit 01030085 pursuant to 35 IAC Part 203 and 40 CFR 52.21. These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 and 40 CFR 52.21 [T1].”

### **III. Factual Background**

#### **A. General Provisions**

102. CITGO owns and operates a petroleum refinery at 135<sup>th</sup> Street & New Avenue, Lemont, Illinois. The refinery consists of a number of pieces of equipment that generate air pollution and are subject to provisions of the Clean Air Act. This includes a fluidized catalytic cracking unit, sulfur recovery plant, heaters, process tanks and other related equipment.
103. The CITGO refinery is a petroleum refinery included within the source categories listed at 40 C.F.R. § 52.21(b)(1)(i)(a).
104. CITGO has the potential to emit several regulated NSR pollutants in excess of 100 tpy. Therefore, the CITGO refinery is a major stationary source under the Act.

#### **B. ULSD Project**

105. During or about 2010, CITGO made physical and operation changes to certain process units at the refinery to enable the refinery to produce lower sulfur diesel (ULSD Project). The changes included the construction of two new heaters 590H-1 and 590H-2. The physical and operational changes to the process units arising from the ULSD Project resulted in significant net emissions increases of 234.88 tpy NO<sub>x</sub>, 26.62 tpy of PM<sub>10</sub>, and 31.33 tpy of PM<sub>2.5</sub>.
106. By permit application 07090059, CITGO applied for a construction permit to construct the ULSD Project. CITGO used 300 tpy NO<sub>x</sub>, 300 tpy SO<sub>2</sub>, 20 tpy PM<sub>10</sub> and 20 tpy of PM<sub>2.5</sub> emissions reductions allegedly generated under the CD for purposes of netting in their ULSD permit application number 07090059. The net emissions change in CITGO’s netting analysis with the inclusion of the CD-related emission reductions was -65.12 tpy NO<sub>x</sub>, -457.83 tpy SO<sub>2</sub> and +6.62 tpy PM<sub>10</sub> under the PSD program, and -446.20 tpy NO<sub>x</sub> and +11.33 tpy PM<sub>2.5</sub> under Nonattainment NSR.
107. The CITGO CD requires that, for CD emissions reductions to be used as credits or offsets in permitting, a federally enforceable, non-Title V permit must contain limits for heaters and boilers of 0.020 pounds of NO<sub>x</sub> per million British thermal unit (lb/MMBtu) or less on a three-hour rolling average basis.
108. John Zink, the heater vendor, provided guaranteed emissions of NO<sub>x</sub> to be 0.035 lb/MMBtu for both 590H-1 and 590H-2 based on firing CITGO Lemont’s refinery fuel gas.

109. CITGO's permit issued April 21, 2010, presents limits of 0.040 lb NO<sub>x</sub>/MMBtu for both heaters 590H-1 and 590H-2.
110. Heaters 590H-1 and 590H-2 do not meet the NO<sub>x</sub> emission limit of 0.020 pounds of NO<sub>x</sub> per MMBTU as specified in the CD. Because the heaters do not meet the emission limit requirements of the CD, CITGO was prohibited from using the 300 tpy of NO<sub>x</sub>, 300 tpy of SO<sub>2</sub> and 20 tpy of PM reduction credits for purposes of netting in their ULSD permit application.

### **C. FCCU Wet Electrostatic Precipitator**

111. Paragraph 44 of the CD required CITGO to install a wet gas scrubber (WGS) control device on the FCCU designed to achieve an emission limit of 0.5 pounds of PM per 1000 pounds of coke burned (lb/klb coke burn) on a 3-hour average. In 2006, CITGO installed a WGS with a wet electrostatic precipitator (WESP) on the FCCU.
112. CITGO conducted an emissions test at the WESP outlet associated with the FCCU regenerator, while operating the WESP on March 12, 2008. The results of this test showed PM emissions to be 0.10 lb/klb coke burn on a 3-hour average and SO<sub>3</sub> emissions to be 3.41 pounds per hour (lb/hr).
113. Beginning November 11, 2008, until the 2010 fall turnaround (TAR) was completed on October 17, 2010, the WESP was shut down due to a then unknown failure. CITGO continued to operate the FCCU while the WESP was shut down.
114. The PM emission limit in place at the time the WESP was shut down, and currently in place until an EPA established limit is provided per paragraph 46 of the CD, is the NSPS 1.0 pounds of PM per 1000 pounds of coke burned on a 3-hour average.
115. CITGO conducted an emissions test at the WESP outlet associated with the FCCU regenerator, with the WESP out of service on April 29, 2009. The results of this test showed PM emissions to be 0.44 lb/klb coke burn on a 3-hour average and SO<sub>3</sub> emissions to be 13.93 lb/hr.
116. CITGO conducted an emissions test at the WESP outlet associated with the FCCU regenerator, with the WESP out of service on June 30, and July 1, 2010. The results of this test showed PM emissions to be 1.18 lb/klb coke burn on a 3-hour average.
117. During the fall 2010 TAR, CITGO repaired and restarted the WESP.

### **D. Sulfur Recovery Plant**

#### **Exceedance of CO Emission Limit**

118. During or about 2002 - 2005, CITGO made physical and operational changes to certain process units at the refinery to enable the refinery to comply with lower sulfur gasoline requirements established by the U.S. EPA (Tier 2 Project).

119. IEPA approved CITGO's construction permit application number 01030085 granting CITGO permission to modify and/or construct the necessary process units to allow it to produce lower sulfur gasoline by 2004, as required by the U.S. EPA Tier 2 gasoline requirements.
120. Construction permit condition 1.1.6.e requires emission rates from the SRP not to exceed 57.33 tons of CO per month and 573.32 tons of CO per year. IEPA established the limits to ensure that the Tier 2 Project would not trigger New Source Review.
121. Construction Permit condition 1.1.6.f requires that compliance with the emission limits in 1.1.6.e be determined using a 12-month rolling average on a monthly basis.
122. CITGO's Title V Permit number 96030079 at condition 7.5.6.a limits the carbon monoxide (CO) emissions from the SRP to 57.33 tons of CO per month and 573.32 tpy.
123. Title V permit condition 7.5.6.c states that the emission limits in 7.5.6.a "were established in Permit 01030085 pursuant to 35 IAC Part 203 and 40 CFR 52.21 . . . [to] ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA . . ."
124. CITGO, as self reported in their annual emission report, exceeded both their monthly and annual CO emission rates in 2005, 2006, 2007, and 2008. The table below shows the monthly average emissions of CO and the total annual CO emissions from the SRP that includes trains A, B, C, and D combined.

Year	Total Emission Rate (ton/month)	Total Emission rate (ton/year)
2008	68.38	820.62
2007	68.42	821.09
2006	58.89	706.74
2005	65.18	782.19

### **Sulfur Pit Emissions**

125. EPA conducted an inspection of the Lemont refinery to assess compliance with the Act and the CD on June 7-11, 2010.
126. During a facility tour on June 8, 2010, EPA observed a yellow residue surrounding the top of the air intake piping on SRP train D. This indicates venting of the sulfur pit through the air intake to the atmosphere.

127. Pursuant to paragraphs 67 and 69 of the CD, the SRP became an affected facility under NSPS Subparts A and J by December 31, 2008. Trains C and D of the SRP have been treated by the CD as an affected facility under NSPS Subparts A and J since the date of entry of the CD, October 6, 2004.

**E. CEMS Downtime**

128. CITGO's Units 121C and 121D are sulfur recovery trains and have been treated by the CD as an affected facility under NSPS Subparts A and J since the date of entry of the CD, October 6, 2004.
129. CITGO's Units 114, 115, 116, and 125 are the Crude Unit #2, the light distillate hydrotreater, the naphtha desulfurizer, and the diesel distillate hydrotreater, respectively. All of these units are fuel gas combustion devices and have been affected facilities under NSPS Subparts A and J since July 2005.
130. The table below summarizes the CEMS downtime for CITGO's Units 121C, 121D, 114, 115, 116, and 125 from 2005-2009.

Unit(s)	Time Period	% CEMS Downtime	Pollutant
121C	2005-2009	4.96	SO <sub>2</sub>
121D	2005-2009	4.49	SO <sub>2</sub>
114/116 FG	3 <sup>rd</sup> Quarter 2005-2009	5.96	H <sub>2</sub> S
115/125 FG	3 <sup>rd</sup> Quarter 2005-2009	5.87	H <sub>2</sub> S

**F. Hazardous Organic NESHAP – 40 C.F.R. Part 63, Subpart H, Benzene Purge**

131. CITGO's Title V Permit at condition 7.8.3.d., provides that refinery unit 122, the UDEX unit, is subject to the equipment leak requirements of the HON rule, 40 C.F.R. Part 63, Subpart H.
132. During the June 2010 inspection, EPA observed a CITGO employee take a benzene sample. Some liquid was purged into a separate container before the sample was taken.
133. Pursuant to CITGO's benzene purge handling procedures, the purged liquid is taken to the laboratory with the sample to be tested, and both the purged liquid and the sample eventually get transferred to a separate container. When this container is full it is delivered to a 90-day storage area, where a vacuum truck is used to empty the container and transfer the material into the refinery slop oil system.

134. On February 24, 2011, EPA observed the vacuum truck loading the benzene-containing waste from the container. Photoionization detectors (PIDs) indicated that benzene was being emitted from the vacuum truck's vacuum pump exhaust.
135. THE PID test demonstrates that as the benzene-containing waste is loaded into the vacuum truck, some of the benzene is vaporizing and escaping out of the vacuum truck's vacuum pump exhaust, thus causing the benzene emission observed using the PIDs.
136. The presence of benzene in the vacuum truck's vacuum pump exhaust is credible evidence that some of the benzene sample's purged liquid is escaping to the atmosphere.

#### **IV. Violations**

##### **A. New Source Review**

###### **ULSD Project**

137. The physical and operational changes made to process units under the ULSD Project, as described in Paragraphs 108 - 113, resulted in significant net emissions increases, as defined at 40 C.F.R. §§ 52.21(b)(3)(i) and (b)(23)(i); 35 IAC §§ 203.206(b)(3) and Part 51, Appendix S at II.A.6(i) and II.A.10(i), of NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>, which constitute a major modification of a major stationary source under the provisions referenced above.
138. CITGO failed to obtain a PSD/non-attainment NSR permit for the physical and operational changes made to process units under the ULSD Project, as required by Sections 165(a) and 173(a) of the Act, 40 C.F.R. §§ 52.21 and 51.165, 40 C.F.R. Part 51, Appendix S, IV.A., and the Illinois SIP, including 35 IAC § 203.201.
139. CITGO violated, and continues to violate, Sections 165(a) and 173(a) of the Act, 40 C.F.R. §§ 52.21 and 51.165, 40 C.F.R. Part 51, Appendix S, IV.A., and the Illinois SIP, including 35 IAC § 203.201, by constructing a major modification at the refinery that resulted in a significant net emissions increase of NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> without applying for or obtaining a PSD/non-attainment NSR permit, operating the modified facility without installing BACT and LAER for the control of such pollutants prior to commencing construction of such activities, and continues to operate the refinery without BACT/LAER and obtaining Federally enforceable emission offsets as great or greater as the new or modified source's emissions. CITGO violated and continues to violate these provisions by failing to install the appropriate emission control equipment in accordance with BACT and LAER analyses, certifying that all other major sources that it owns or operates within Illinois are in compliance with the Act, and demonstrating that the benefits of the proposed source or modification significantly outweigh the environmental and social costs imposed as a result of its construction or modification.

###### **FCCU Wet Electrostatic Precipitator**

140. The physical and operational changes made to the FCCU WESP, as described in Paragraphs 114 - 120, resulted in significant net emissions increases, as defined at 40

C.F.R. §§ 52.21(b)(3)(i) and (b)(23)(i), of PM, PM<sub>10</sub> and sulfuric acid mist, which constitute a major modification of a major stationary source.

141. CITGO failed to obtain a PSD permit for the physical and operational changes made to the FCCU WESP, as required by Section 165(a) of the Act, 42 U.S.C. § 7475(a), 40 C.F.R. § 52.21(i)(1) and the Illinois SIP.
142. CITGO violated Section 165(a) of the Act, 42 U.S.C. § 7475(a), 40 C.F.R. § 52.21(i)(1) and the Illinois SIP by changing the method of operation of a major stationary source that resulted in a significant emissions increase of PM, PM<sub>10</sub> and sulfuric acid mist without applying for or obtaining a PSD permit, and operating the modified facility without installing BACT, going through PSD review, and installing appropriate emission control equipment in accordance with a BACT analysis.

#### **Sulfur Recovery Plant – Exceedance of CO Emissions**

143. The physical and operational changes made to the SRP, as described in Paragraph 121 - 127, resulted in significant net emissions increases, as defined at 40 C.F.R. §§ 52.21(b)(3)(i) and (b)(23)(i), of CO, which constitute a major modification of a major stationary source.
144. CITGO failed to obtain a PSD permit for the physical and operational changes made to process unit as required by 40 C.F.R. § 52.21(i)(1) and the Illinois SIP.
145. CITGO violated Section 165(a) of the Act, 42 U.S.C. § 7475(a), 40 C.F.R. § 52.21(i)(1) and the Illinois SIP by constructing a major modification at the refinery that resulted in a significant emissions increase of CO without applying for or obtaining a PSD permit, and operating the modified facility without installing BACT, or going through PSD review, and installing appropriate emission control equipment in accordance with a BACT analysis.

#### **B. New Source Performance Standards**

##### **FCCU Wet Electrostatic Precipitator**

146. As described in Paragraphs 114 - 120, from November 11, 2008 through September 14, 2010, CITGO failed to operate the WESP “air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions,” pursuant to 40 CFR § 60.11(d).
147. As described in Paragraphs 114 - 120, beginning on June 30, 2010, CITGO failed to comply with 1.0 lb PM/klb coke burn on a 3-hour average, in violation of NSPS Subpart J, 40 C.F.R. § 60.102(a)(1).

### **CEMS Downtime**

148. As described in Paragraphs 131 - 133, CITGO failed to continuously operate the CEMS on Unit 121C, Unit 121D, Unit 114/116, and Unit 115/125 in violation of 40 C.F.R. §§ 60.13(e), 60.105(a)(1), (4) and(5).

### **C. NESHAP for Equipment Leaks - Benzene Purge**

149. As described in Paragraphs 134 - 139, CITGO failed to control the emissions of the benzene sample's purged liquid from the vacuum truck's vacuum pump exhaust in violation of 40 C.F.R. Part 63, Subpart H, § 63.166(b).

### **D. Consent Decree**

#### **ULSD Project**

150. As described in Paragraphs 105 - 113, CITGO used netting credits for NO<sub>x</sub>, SO<sub>2</sub> and PM generated from projects conducted or controls required by the CD without having a federally-enforceable NO<sub>x</sub> limit of 0.020 lb/MMBtu on the heaters being modified, in violation of paragraphs 136 and 137 of the CD.

#### **FCCU Wet Electrostatic Precipitator**

151. As described in Paragraphs 113 - 120, beginning on June 30, 2010, CITGO failed to comply with 1.0 lb PM/klb coke burn on a 3-hour average at the FCCU, in violation of paragraph 46 of the CD.

#### **Sulfur Recovery Plant-Sulfur Pit Emissions**

152. As described in Paragraphs 128 - 130, CITGO failed to route or re-route all sulfur pit emissions at the Lemont refinery to eliminate, control, or include and monitor them as part of the SRP's emissions, in violation of paragraph 71 of the CD.

### **CEMS Downtime**

153. As described in Paragraphs 131 - 133, CITGO failed to continuously operate the CEMS on Units 121C, 121D, 114, 115, 116, and 125 in violation of paragraphs 64(a), 67(b), 67(c), and 68(b) of the CD.

### **E. Title V**

#### **ULSD Project**

154. Since August 2010, CITGO has failed to submit a timely and complete Title V permit application for the Lemont refinery with information pertaining to the modification described in Paragraphs 103 - 108 and with information concerning all applicable requirements, including, but not limited to, the requirement to apply, install and operate BACT for NO<sub>x</sub> and PM<sub>10</sub> and LAER with offsets for PM<sub>2.5</sub> and also failed to supplement

or correct the Title V permit applications in violation of Sections 502, 503 and 504 of the Act, 42 U.S.C. §§ 7661a, 7661b and 7661c; the regulations at 40 C.F.R. Part 70, including, but not limited to, 40 C.F.R. §§ 70.1(b), 70.5(a), (b) and (c), and 70.6 and 70.7(b); and the Illinois Title V provisions at 415 ILCS 5/39.5.

#### **FCCU Wet Electrostatic Precipitator**

155. Since November 11, 2008, CITGO has failed to submit a timely and complete Title V permit application for the Lemont refinery with information pertaining to the modification described in Paragraphs 109 - 115 and with information concerning all applicable requirements, including, but not limited to, the requirement to apply, install and operate BACT for PM, and SO<sub>3</sub> and also failed to supplement or correct the Title V permit applications in violation of Sections 502, 503 and 504 of the Act, 42 U.S.C. §§ 7661a, 7661b and 7661c; the regulations at 40 C.F.R. Part 70, including, but not limited to, 40 C.F.R. §§ 70.1(b), 70.5(a), (b) and (c), and 70.6 and 70.7(b); and the Illinois Title V provisions at 415 ILCS 5/39.5.

#### **Sulfur Recovery Plant-Exceedance of CO Emissions**

156. Since January 2006, CITGO has failed to submit a timely and complete Title V permit application for the Lemont refinery with information pertaining to the modification described in Paragraphs 116 - 122 and with information concerning all applicable requirements, including, but not limited to, the requirement to apply, install and operate BACT for CO and also failed to supplement or correct the Title V permit applications in violation of Sections 502, 503 and 504 of the Act, 42 U.S.C. §§ 7661a, 7661b and 7661c; the regulations at 40 C.F.R. Part 70, including, but not limited to, 40 C.F.R. §§ 70.1(b), 70.5(a), (b) and (c), and 70.6 and 70.7(b); and the Illinois Title V provisions at 415 ILCS 5/39.5.
157. From 2005 to 2009, CITGO exceeded both the monthly and yearly CO emission rates at the SRU, in violation of Permit Condition 7.5.6 of Permits 96030079 and 01030085.

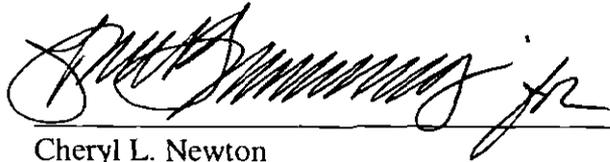
#### **F. Enforcement Provisions**

158. Sections 113(a)(1) and (3) of the Act, 42 U.S.C. § 7413(a)(1) and (3), provide that the Administrator may bring a civil action in accordance with Section 113(b) of the Act, 42 U.S.C. § 7413(b), whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated or is in violation of any requirement or prohibition of, *inter alia*, the PSD requirements of Part C of Title I of the Act, 42 U.S.C. §§ 7470-7492, and regulations thereunder, including 40 C.F.R. § 52.21; Part D of Title I of the Act, §§ 7501-7515, and regulations thereunder, including 40 C.F.R. Part 51, § 51.165 and App. S; Section 111 of the Act, and regulations thereunder, including 40 C.F.R. Part 60, and Subparts A and J; Section 112 of the Act, and regulations thereunder, including 40 C.F.R. Part 63, Subpart H; Title V of the Act, 42 U.S.C. §§ 7661-7661f, or any regulation or permit issued thereunder; and the PSD and NA NSR provisions of the Illinois SIP. *See also* 40 C.F.R. § 52.23.

159. Section 113(b) of the Act, 42 U.S.C. § 7413(b), authorizes the Administrator to initiate a judicial enforcement action for a permanent or temporary injunction, and/or for a civil penalty of up to \$25,000 per day for each violation occurring on or before January 30, 1997; up to \$27,500 per day for each such violation occurring on or after January 31, 1997 and up to and including March 15, 2004; up to \$32,500 per day for each such violation occurring on or after March 16, 2004 through January 12, 2009; and up to \$37,500 per day for each such violation occurring on or after January 13, 2009, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, 40 C.F.R. § 19.4, and 74 Fed. Reg. 626 (Jan. 7, 2009) against any person whenever such person has violated, or is in violation of, *inter alia*, the requirements or prohibitions described in the preceding paragraph.
160. Section 167 of the Act, 42 U.S.C. § 7477, authorizes the Administrator to initiate an action for injunctive relief, as necessary to prevent the construction, modification or operation of a major emitting facility which does not conform to the PSD requirements in Part C of the Act.
161. Section 167 of the Act, 42 U.S.C. § 7477, authorizes the Administrator to initiate an action for injunctive relief, as necessary to prevent the construction, modification or operation of a major emitting facility which does not conform to the non-attainment NSR requirements in Part D of the Act.

9/30/11

Date



Cheryl L. Newton  
Director  
Air and Radiation Division

## CERTIFICATE OF MAILING

I, Tracy Jamison, certify that I sent a Notice and Finding of Violation,  
No. EPA-5-11-IL-10, by Certified Mail, Return Receipt Requested, to:

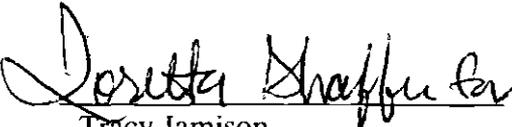
Claude Harmon  
Manager HSS&E  
CITGO Petroleum Corporation  
135<sup>th</sup> Street and New Avenue  
Lemont, Illinois 60439

I also certify that I sent copies of the Notice of Violation and Finding of Violation by  
first-class mail to:

Ray Pilapil, Manager  
Compliance and Systems Management Section  
Illinois Environmental Protection Agency  
1021 North Grand Avenue  
Springfield, Illinois 62702

On the 30 day of September 2011.

CERTIFIED MAIL RECEIPT NUMBER: 7009 1680 0000 7673 8613

  
Tracy Jamison,  
Office Automation Assistant  
AECAB, PAS