

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

IN THE MATTER OF:)
)
CITGO Petroleum Corporation) **NOTICE OF VIOLATION**
Lemont Refinery)
Lemont, Illinois) **EPA-5-01-IL-04**
)
Proceedings Pursuant to)
Section 113(a) (1) of the)
Clean Air Act,)
42 U.S.C. § 7413(a) (1))

NOTICE OF VIOLATION

The Administrator of the United States Environmental Protection Agency (U.S. EPA), is issuing this Notice of Violation under Section 113(a) (1) of the Clean Air Act (Act). U.S. EPA finds that CITGO Petroleum Corporation (Citgo) in violation of the Illinois State Implementation Plan (SIP) rules at 40 C.F.R. § 52.21 which govern the prevention of significant deterioration (PSD) of air quality.

Statutory and Regulatory Background

Prevention of Significant Deterioration

1. On June 19, 1978, U.S. EPA promulgated the prevention of significant deterioration of air quality standards pursuant to Subtitle I, Part C of the Act. These regulations are codified at 40 C.F.R. § 52.21 (43 Fed. Reg. 26403).
2. On April 7, 1980, U.S. EPA delegated to the Illinois Environmental Protection Agency (IEPA) authority to review and process PSD permit applications and to implement the PSD program. 46 Fed. Reg. 9584.
3. On August 7, 1980, U.S. EPA incorporated the provisions of 40 C.F.R. § 52.21(b) through (w) into the Illinois SIP. 45 Fed. Reg. 52741, as amended at 46 Fed. Reg. 9584, codified at 40 C.F.R. § 52.738.

4. 40 C.F.R. § 52.21(b)(1)(i)(a) defines a "major stationary source" as any source, including petroleum refineries, which emits or has the potential to emit, 100 tons per year or more of any pollutant subject to the regulation under the Act.
5. 40 C.F.R. § 52.21(b)(2)(i) defines a "major modification" as any physical change in 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 the regulations under the Act.
6. 40 C.F.R. § 52.21(b)(23)(i) defines "significant" net emissions increase for sulfur dioxide (SO₂) as a rate of emissions which would equal or exceed 40 tons per year of SO₂.
7. 40 C.F.R. § 52.21(i)(1) prohibits the actual construction of a major stationary source or major modification without a permit which states that the major stationary source or modification would meet the requirements of 40 C.F.R. § 52.21 (j) through (r).
8. 40 C.F.R. § 52.21(j) provides that for each pollutant subject to regulation under the Act for which a major modification would result in a significant net emissions increase at the source, the owner or operator of the major modification shall apply Best Available Control Technology (BACT) to each proposed emissions unit at which the increase would occur as the result of physical changes and changes in the methods of operation of the unit.
9. 40 C.F.R. § 52.21(r) states that any owner or operator of a source subject to PSD regulations who operates a source or modification without applying for and receiving approval under the PSD regulations is subject to enforcement action.

Leak Detection and Repair (LDAR)

10. On September 9, 1994, U.S. EPA approved 35 Ill. Admin. Code Part 218 as part of the Illinois SIP. 59 Fed. Reg. 46562. The final rule became effective October 11, 1994.
11. The owner or operator of a petroleum refinery shall, among other things, develop a monitoring program consistent with Section 218.446, conduct a monitoring program consistent with Section 218.447, and record all leaking components which have a volatile organic material (VOM) concentration exceeding 10,000 ppm. 35 Ill. Adm. Code § 218.445(a)-(c).
12. The owner or operator of a petroleum refinery must identify each component consistent with its monitoring program plan. 35 Ill. Admin. Code § 218.445(d).
13. The owner or operator of a petroleum refinery must repair and retest the leaking components as soon as possible within 22 days after the leak is found. 35 Ill. Admin. Code § 218.445 (e).
14. The owner or operator of a petroleum refinery must prepare a monitoring program which, at a minimum, identifies all refinery components and the period in which each will be monitored under Section 218.447. 35 Ill. Admin. Code § 218.446.
15. The owner or operator of a petroleum refinery must conduct a component monitoring program which requires, among other things, a test once between March 1 and June 1 of each year by methods referred to in Section 218.105(g), i.e., 40 C.F.R. Part 60, Appendix A, Method 21. 35 Ill. Admin. Code § 218.447(a)(1).
16. The owner or operator of a petroleum refinery must submit a report to the Agency prior to the first day of both July and September listing all identified leaking components that were not repaired within 22 days. The report must also include the total number of components inspected, the total number of all leaking components awaiting unit turnaround, and the total number of components found leaking. 35 Ill. Admin. Code § 218.449 (a).

Factual Background

Prevention of Significant Deterioration

17. Citgo owns and operates a petroleum refinery located at 135th Street & New Avenue, Lemont, Illinois. As part of the petroleum refinery, Citgo owns and operates a fluid catalytic cracking unit (FCCU). The factual background and findings in this NOV relate to Citgo's FCCU and refinery.
18. Citgo is located in Will County, Illinois, an area designated as unclassifiable for the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide. 40 C.F.R. § 81.314.
19. The FCCU at the Citgo Lemont refinery was constructed in 1968. The Lemont refinery and the FCCU emit or have the potential to emit 100 tons per year or more of a pollutant regulated under the Act, and are "major stationary sources" as defined at 40 C.F.R. § 52.21(b)(1)(i)(a).

In 1989 Citgo modified the FCCU and associated units, thereby triggering the applicability of PSD Rules - Revise FCC Reactor Regenerator Project

20. In the spring of 1989, Citgo modified its FCCU by installing a new feed injection system, modifying the reactor riser to a new design, and debottlenecking the main column & unsat gas plant. This constitutes a physical change in or change in the method of operation of the FCC at the Lemont refinery.
21. The 1989 Revise FCC Reactor Regenerator Project at the existing FCCU at the Lemont refinery resulted in a significant net SO₂ emissions increase of 40 tons per year (tpy) or more.
22. The modification of the main column & unsaturated gas plant was a "major modification" to the existing FCCU and associated units at the Lemont refinery as that term is defined at 40 C.F.R. § 52.21(b)(2).

In 1994 Citgo modified the FCCU and associated units, thereby triggering the applicability of PSD Rules - 1994 FCC Revamp Project

23. In the summer of 1994, Citgo modified its FCCU by installing new regenerator and reactor cyclones, a new vented riser, an LCO Quench System, and main overhead coolers. This constitutes a physical change in or change in the method of operation of the FCC at the Lemont refinery.
24. The 1994 Revamp Project at the existing FCCU at the Lemont refinery resulted in a significant net SO₂ emissions increase of 40 tons per year (tpy) or more.
25. The modification through the 1994 Revamp Project was a "major modification" to the existing FCCU and associated units at the Lemont refinery as that term is defined at 40 C.F.R. § 52.21(b)(2).

Leak Detection and Repair

26. In April 2000, U.S. EPA performed a leak detection inspection at the Lemont refinery.
27. During the April 2000 inspection, U.S. EPA inspectors found 156 valves that Citgo did not monitor as required by the Illinois SIP. While monitoring the valves for leaks, in accordance with methods found in the Illinois SIP, U.S. EPA inspectors found that 37 of the 156 valves were leaking and had VOM readings of over 10,000 ppm.

Findings of Violation

Prevention of Significant Deterioration

Revise FCC Reactor Regenerator Project

28. Citgo commenced operating the FCCU with the 1989 modifications prior to obtaining a PSD permit in accordance with the Act, violating the Illinois SIP rule and 40 C.F.R. § 52.21(i).
29. Citgo failed to employ BACT for SO₂ emissions at the FCCU, violating the Illinois SIP rule, 40 C.F.R. § 52.21(j)(3).

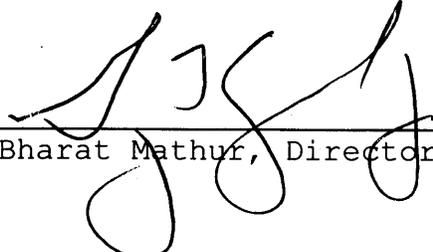
1994 FCC Revamp Project

30. Citgo commenced operating the FCCU with the 1994 modifications prior to obtaining a PSD permit in accordance with the Act, violating the Illinois SIP rule and 40 C.F.R. § 52.21(i).
31. Citgo failed to employ BACT for SO₂ emissions at the FCCU, violating the Illinois SIP rule and 40 C.F.R. § 52.21(j)(3).

Leak Detection and Repair

32. Citgo failed to identify in a manner that is obvious (i.e., physically tag) at least 156 VOM components at the Lemont refinery, violating 35 Ill. Adm. Code § 218.445(d).
33. All of the 156 VOM components referred to in paragraph 27, above, had not been monitored, and were not included in Citgo's monitoring program, violating 35 Ill. Admin. Code § 218.446.

1/19/01
Date


Bharat Mathur, Director ACTING

CERTIFICATE OF MAILING

I, Betty Williams, certify that I sent a Notice of Violation, No. EPA-5-01-IL-04, by Certified Mail, Return Receipt Requested, to:

Claude Harmon, Environmental Manager
CITGO Petroleum Corporation
Lemont Refinery
135th Street and New Avenue
Lemont, Illinois 60439

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

Julie Armitage, Acting Manager
Compliance and Enforcement Section
Bureau of Air
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, Illinois 62702

on the 19th day of January, 2001.

Betty Williams
Betty Williams, Secretary
AECAS, (IL/IN)

CERTIFIED MAIL RECEIPT NUMBER: 70993400 0000 9591 9577