

Statutory and Regulatory Background

Designation of Air Quality Control Regions

3. U.S. EPA published an attainment designation list for Ohio on March 3, 1978 (43 Fed. Reg. 8964), in accordance with Sections 107 and 109 of the Clean Air Act.
4. Ohio's designation list was published at 40 C.F.R. § 81.336 and identified Lucas County as non-attainment for the primary National Ambient Air Quality Standards (NAAQS) for total suspended particulate (TSP) and SO₂.
5. Lucas County's designation for SO₂ was modified, in part, on October 5, 1978 (43 Fed. Reg. 46011), to specify the area east of Route 23 and west of the eastern boundary of the Oregon Township is non-attainment for SO₂. The remainder of Lucas County is designated as attainment for SO₂. Lucas County was designated as non-attainment for TSP from 1978 through 1993.

Non-attainment Requirements and the Ohio SIP

6. Part D of the Act, 42 U.S.C. §§ 7501-7515, sets forth state implementation plan requirements for non-attainment areas.
7. On July 2, 1979, pursuant to Part D of the Act, U.S. EPA promulgated 40 C.F.R. § 52.24. 44 Fed. Reg. 38473.
8. On January 16, 1979, pursuant to Part D of the Act, U.S. EPA promulgated 40 C.F.R. Part 51, Appendix S. 44 Fed. Reg. 3282.
9. 40 C.F.R. Part 51, Appendix S, Section IV states that a major stationary source or major modification may be constructed in a non-attainment area only if all of the following conditions are met:
 - A. The new source is required to meet an emission limitation which specifies the lowest achievable emission rate (LAER) for such source.
 - B. The applicant must certify that all existing major sources owned or operated by the applicant in the same state as the proposed source are in compliance with all applicable emission limitations and standards under the Act.

- C. Emission reductions (offsets) from existing sources in the area of the proposed source are required such that there will be reasonable progress toward attainment of the applicable NAAQS.
 - D. The emission offsets will provide a positive net air quality benefit in the affected area.
10. The State of Ohio submitted a State plan for non-attainment areas in accordance with Sections 172 and 173 of the Act, 42 U.S.C. §§ 7502-7503.
 11. U.S. EPA conditionally approved Ohio's plan for non-attainment areas on October 31, 1980 (45 Fed. Reg. 47211), and September 8, 1993 (53 Fed. Reg. 47211). These rules are codified at OAC Rules 3745-31-01 through 3745-31-08.
 12. OAC Rule 3745-31 requires that no construction or operation of a major modification of a major stationary source occur in an area designated as non-attainment without first obtaining a permit under OAC Rule 3745-31, which requires, among other things, compliance with Part D of the Act and the regulations thereunder, including 40 C.F.R. § 52.24 and the Offset Ruling.
 13. Pursuant to OAC Rule 3745-31-02, "no person shall cause, permit, or allow the installation of a new source of air pollutants or . . . permit or allow the modification of any source of air pollutants . . . without first applying for and obtaining a Permit to Install" from the Ohio EPA.
 14. The Ohio SIP provisions identified in paragraphs 12 and 13 are all federally enforceable pursuant to Sections 110 and 113 of the Act, 42 U.S.C. §§ 7410 and 7413.

New Source Performance Standards

15. On March 8, 1974, pursuant to Section 111 of the Act, 42 U.S.C. 7411, U.S. EPA published Standards of Performance for Petroleum Refineries, which are set forth at 40 C.F.R. Part 60, Subpart J; 40 C.F.R. §§ 60.100 et seq. 39 Fed. Reg. 9315.
16. The provisions of 40 C.F.R. Part 60, Subpart J, apply to the following affected facilities in petroleum refineries: fluid catalytic cracking unit catalyst regenerators, fuel gas combustion devices, and all Claus sulfur recovery plants greater than 20 long tons per day that were constructed,

modified or reconstructed after the respective applicability dates. 40 C.F.R. § 60.100(a).

17. The provisions of 40 C.F.R. Part 60, Subpart J, set forth, among other things, emission standards for fluid catalytic cracking unit catalyst regenerators (40 C.F.R. §§ 60.102 and 60.104(b)(1-3)), Claus sulfur recovery plants (40 C.F.R. 60.104(a)(2)), fuel gas combustion devices (40 C.F.R. 60.104(a)(1)), monitoring requirements for affected facilities (40 C.F.R. 60.105), and various record-keeping and reporting requirements for owners and operators of affected facilities (40 C.F.R. § 60.107). 40 C.F.R. § 60.100(e) defines certain terms pertaining to the reconstruction of affected facilities under Subpart J. 40 C.F.R. Part 60, Subpart A, defines "modification" and "reconstruction" under Section 111 of the Act (40 C.F.R. §§ 60.2, 60.14 and 60.15).
18. Pursuant to Section 111 of the Act, 42 U.S.C. § 7411, U.S. EPA published General Provisions for New Stationary Sources at 40 C.F.R. Part 60, Subpart A, on October 15, 1973 (38 Fed. Reg. 28565). Among other things, these provisions include Compliance with Standards and Maintenance Requirements (40 C.F.R. § 60.11).

Factual Background

19. Sun owns and operates a petroleum refinery located at 1819 Woodville Road, Oregon, Ohio (Toledo refinery).
20. The Toledo refinery is located in Lucas County, Ohio, which was designated as non-attainment for TSP from 1978 through 1993 and for SO₂ from 1978 to present.
21. The Toledo refinery is a petroleum refinery which is one of the source categories listed at 40 C.F.R. § 52.24(f)(4)(iii) and 40 C.F.R. Part 51, Appendix S.
22. The Toledo refinery includes the following affected facilities under 40 C.F.R. Part 60, Subpart J: a fluid catalytic cracking unit with a catalyst regenerator (FCCU); a Claus sulfur recovery plant without a tail gas control system (SRP); and fuel gas combustion devices, including a flare identified as the plant 4 flare.
23. The FCCU emits, or has the potential to emit, among other things, at least 100 tons per year of either SO₂ or PM and is a major stationary source under the Act.

24. The SRP emits, or has the potential to emit, among other things, at least 100 tons per year of SO₂ and is a major stationary source under the Act.
25. Among other activities, U.S. EPA conducted an onsite inspection at the Toledo refinery and has requested and reviewed certain documents pursuant to a request for information issued pursuant to Section 114 of the Act.

Physical and Operational Changes to the FCCU

26. During or about October 1985, Sun made physical and operational changes to the FCCU, including, but not limited to, conversion to full burn, changes to the wet gas compressor, air blower, gas plant, design reactor and disengagement system, which resulted in a net significant increase in PM emissions from the FCCU as defined at 40 C.F.R. § 52.24, the Offset Policy and OAC Rule 3745-31, and an increase in the rate of PM emissions.
27. Sun has neither applied for nor obtained construction permits issued in accordance with 40 C.F.R. § 52.24, the Offset Ruling, or OAC Rule 3745-31, nor complied with the emissions limitations and offset requirements in those provisions, for the changes that Sun implemented to the FCCU during or about October 1985.
28. Sun has neither implemented nor complied with the emission limitation, monitoring and reporting requirements of the Standards of Performance for Petroleum Refineries, 40 C.F.R. Part 60, Subpart J, at the FCCU for the changes that Sun implemented at the FCCU during or about October 1985.

Physical and Operational Changes to the SRP

29. During or about 1988 to 1989, Sun commenced projects involving physical and operational changes to the SRP, including, but not limited to, a sour water stripper system upgrade project and a sulfur recovery reliability project, which resulted in reconstruction of the SRP and an increase in the rate of SO₂ emissions from the SRP.
30. During or about 1995, Sun commenced projects involving physical and operational changes to the SRP, including, but not limited to, a sulfur plant revamp project and a tail gas monitoring project, which resulted in a net significant increase in SO₂ emissions from the SRP as defined at 40 C.F.R. § 52.24, the Offset Policy and OAC Rule 3745-31, and

an increase in the rate of SO₂ emissions from the SRP.

31. During or about 1999, Sun commenced projects involving physical and operational changes to the SRP, including, but not limited to, an amine unit reliability project, SRP bypass valves, isolation valves, and incinerator pilots, which resulted in an increase in the rate of SO₂ emissions from the SRP.
32. Sun has neither applied for nor obtained construction permits issued in accordance with 40 C.F.R. § 52.24, the Offset Ruling, or OAC Rule 3745-31, nor complied with the emissions limitations and offset requirements in those provisions for the changes that Sun implemented to the SRP during or about 1995 or 1999.
33. Sun has neither implemented nor complied with the emission limitation, monitoring and reporting requirements of the Standards of Performance for Petroleum Refineries, 40 C.F.R. Part 60, Subpart J and 40 C.F.R. Part 60, Subpart A, at the SRP for the changes that Sun implemented at the SRP during or about 1988-1989, 1995 and 1999.

Physical and Operational Changes to the Plant 4 Flare

34. During or about 1989, Sun commenced projects involving physical and operational changes to the Plant 4 flare, including, but not limited to, changing the flare tip and increasing the flare height, which resulted in reconstruction of the Plant 4 flare system and an increase in the rate of SO₂ emissions from the Plant 4 flare.
35. During or about 1993, Sun commenced projects involving physical and operational changes to the Plant 4 flare, including, but not limited to, changing the flare tip and increasing the flare height, which resulted in reconstruction of the Plant 4 flare system and an increase in the rate of SO₂ emissions from the Plant 4 flare.
36. Sun has neither implemented nor complied with the emission limitation, monitoring and reporting requirements of the Standards of Performance for Petroleum Refineries, 40 C.F.R. Part 60, Subpart J and 40 CFR Part 60, Subpart A, at the SRP for the changes that Sun implemented at the Plant 4 flare during or about 1989 and 1993.

Excessive Flaring from the Plant 4 Flare

37. Sun had at least 55 flaring instances in the period from October 1993 through December 2000 where acid gas, sour water stripper gas or refinery fuel gas was combusted at the Plant 4 flare. The causes and corrective actions identified by Sun for these flaring instances do not constitute good air pollution control practices for minimizing emissions as set forth at 40 C.F.R. § 60.11(d), for the SRP or the Plant 4 flare.

Violations**New Source Review and the Ohio SIP****Fluid Catalytic Cracking Unit with Catalyst Regenerator**

38. The 1985 changes made to the FCCU referenced in paragraph 26 constitute a major modification (as defined at 40 C.F.R. § 52.24) to a major source in an area designated as non-attainment for TSP.
39. Sun's failure to apply for and obtain a construction permit issued in accordance with 40 C.F.R. § 52.24, 40 C.F.R. Part 51, Appendix S and OAC Rules 3745-31-02 and 3745-31-05 when Sun modified the FCCU, constitutes violations of 40 C.F.R. § 52.24, 40 C.F.R. Part 51, Appendix S, and OAC Rules 3745-31-02 and 3745-31-05.
40. Sun's failure to establish appropriate off-sets in accordance with 40 C.F.R. § 52.24, 40 C.F.R. Part 51, Appendix S and OAC Rule 3745-31-05 when Sun modified the FCCU, constitutes violations of 40 C.F.R. § 52.24, 40 C.F.R. Part 51, Appendix S, and OAC Rule 3745-31-05.
41. Sun's failure to apply LAER in accordance with 40 C.F.R. § 52.24, 40 C.F.R. Part 51, Appendix S and OAC Rule 3745-31-05 when Sun modified the FCCU, constitutes violations of 40 C.F.R. § 52.24, 40 C.F.R. Part 51, Appendix S, and OAC Rule 3745-31-05.

Sulfur Recovery Plant

42. The 1995 changes made to the SRP referenced in paragraph 30 constitute major modifications (as defined at 40 C.F.R. § 52.24) to a major source in an area designated as non-attainment for SO₂.

43. Sun's failure to apply for and obtain a construction permit issued in accordance with 40 C.F.R. § 52.24, 40 C.F.R. Part 51, Appendix S and OAC Rules 3745-31-02 and 3745-31-05 when Sun modified the SRP, constitutes violations of 40 C.F.R. § 52.24, 40 C.F.R. Part 51, Appendix S, and OAC Rules 3745-31-02 and 3745-31-05.
44. Sun's failure to establish appropriate off-sets in accordance with 40 C.F.R. § 52.24, 40 C.F.R. Part 51, Appendix S and OAC Rule 3745-31-05 when Sun modified the SRP, constitutes violations of 40 C.F.R. § 52.24, 40 C.F.R. Part 51, Appendix S, and OAC Rule 3745-31-05.
45. Sun's failure to apply LAER in accordance with 40 C.F.R. § 52.24, 40 C.F.R. Part 51, Appendix S and OAC Rule 3745-31-05 when Sun modified the SRP, constitutes violations of 40 C.F.R. § 52.24, 40 C.F.R. Part 51, Appendix S, and OAC Rule 3745-31-05.

New Source Performance Standards

Fluid Catalytic Cracking Unit with Catalyst Regenerator

46. The 1985 changes made to Sun's FCCU referenced in paragraph 26 constitute modifications (as defined at 40 C.F.R. § 60.14) of an existing facility.
47. Sun's failure to comply with the Standards of Performance for Petroleum Refineries as set forth at 40 C.F.R. Part 60, Subpart J, after modifying the FCCU, constitutes violations of 40 C.F.R. Part 60, Subpart J (including but not limited to 40 C.F.R. §§ 60.102 and 60.104(b)(1-3), monitoring requirements for affected facilities at 40 C.F.R. § 60.105, and various record-keeping and reporting requirements for owners and operators of affected facilities at 40 C.F.R. § 60.107).

Sulfur Recovery Plant

48. The changes made to the SRP during projects commenced during 1988 - 1989, referenced in paragraph 29, constitute reconstruction (as defined at 40 C.F.R. §§ 60.15 and 60.100(e)) and modification (as defined at 40 C.F.R. §§ 60.2 and 60.14) of an existing facility.
49. The changes made to the SRP during each of the following periods, 1995 and 1999, constitute modifications (as defined at 40 C.F.R. §§ 60.2, 60.14) to an existing facility.

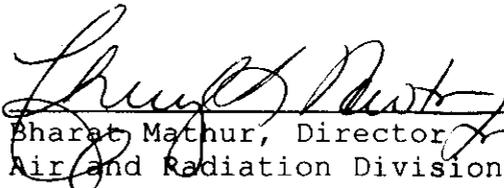
50. Sun's failure to comply with the Standards of Performance for Petroleum Refineries as set forth at 40 C.F.R. Part 60, Subpart J, after modifying and reconstructing the SRP, constitutes violations of 40 C.F.R. Part 60, Subpart J, including, but not limited to, failure to comply with the SO₂ emission limit at 40 C.F.R. § 60.104(a)(2) and failure to monitor and report on excess SO₂ emissions at 40 C.F.R. §§ 60.105 and 60.107.
51. Sun's failure to operate the SRP in accordance with good air pollution control practices for minimizing emissions, as set forth at 40 C.F.R. Part 60, Subpart A, referenced in paragraph 37, after reconstructing and modifying the SRP, constitutes violations of 40 C.F.R. § 60.11(d).

Plant 4 Flare

52. The changes made to the Plant 4 flare during each of the following periods, 1989 and 1993, referenced in paragraphs 34 and 35, constitute modifications (as defined at 40 C.F.R. §§ 60.2 and 60.14) of an existing facility.
53. The changes made to the Plant 4 flare during projects commenced during each of the following periods, 1989 and 1993, referenced in paragraphs 34 and 35, constitute reconstruction (as defined at 40 C.F.R. §§ 60.15 and 60.100(e)) of an existing facility.
54. Sun's failure to comply with the Standards of Performance for Petroleum Refineries as set forth at 40 C.F.R. Part 60, Subpart J, after modifying and reconstructing the Plant 4 flare, constitutes violations of 40 C.F.R. Part 60, Subpart J, including, but not limited to, failure to comply with the emission limitation at 40 C.F.R. 60.104(a)(1) for routine flaring of refinery generated gases.
55. Sun's failure to operate the Plant 4 flare in accordance with good air pollution control practices for minimizing emissions, as set forth at 40 C.F.R. Part 60, Subpart A, referenced in paragraph 37, after reconstructing and modifying the Plant 4 flare, constitutes violations of 40 C.F.R. § 60.11(d).

Date

12/19/01


Bharat Mathur, Director
Air and Radiation Division

CERTIFICATE OF MAILING

I, Shanee Rucker, certify that I sent a Notice of Violation and Finding of Violation issued pursuant to the Clean Air Act, by Certified Mail, Return Receipt Requested, to:

Michael Pollauf, Refinery Manager
Sun Refining & Marketing Company
1819 Woodville Road
Oregon, Ohio 43697-0920

AND

Carolyn L. Green
V.P. for Health, Environmental, Safety and Public Policy
Sunoco, Inc.
1801 Market Street
Philadelphia, PA 19103

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

Karen Granata, Administrator
City of Toledo
Division of Environmental Services
348 South Erie Street
Toledo, Ohio 43602

Don Waltermeyer, APC
Northwest District Office
347 Dunbridge Road
Bowling Green, Ohio 43402

Robert Hodanbosi, Chief
Division of Air Pollution Control
Ohio Environmental Protection Agency
Lazarus Government Center
P.O. Box 1049
Columbus, Ohio 43216-1049

on the 20th day of December, 2001